Check Sheet

Company Name: Weiss Lithograph Co. Inc.
Permit Number: AC06-183175 ↳ PRESSES NOS. 22 & 23
PSD Number: BROWARD CO.
Permit Engineer:

Application:

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

Cross References:
- ☑ A006-164202
- ☐ AO 3751-7
- ☐ -6
- -5
- -4
- -3
- -2
- -1

Intent: & REVISED

- ☑ Intent to Issue
- ☑ Notice of Intent to Issue
- ☑ Technical Evaluation
- ☒ BACT or LAER Determination
- ☑ Unsigned Permit
  - Correspondence with:
    - ☐ EPA
    - ☐ Park Services
    - ☐ Other
- ☑ Proof of Publication
  - ☐ Petitions - (Related to extensions, hearings, etc.)
  - ☐ Waiver of Department Action
  - ☒ Other

AO 06-38351
AO 06-44132
AO 06-35994
AO 06-22601

Final Determination:

- ☑ Final Determination
- ☑ Signed Permit
- ☒ BACT or LAER Determination
  - ☐ Other

Post Permit Correspondence:

- ☐ Extensions/Amendments/Modifications
- ☐ Other

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

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

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

3. Article Addressed to:
Mr. Doug Rasmussen
Superintendent
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, FL 33020

4. Article Number
P 407 852 650

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X [signature]

7. Date of Delivery
4-15-91

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

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

P 407 852 650

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Doug Rasmussen, A. D. Weiss	
Street and No. 2025 McKinley Street	
P.O., State and ZIP Code Hollywood, FL 33020	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 4-11-91 Permit: AC 06-183175	

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

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Doug Rasmussen, Superintendent
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

April 11, 1991

Enclosed is construction permit AC 06-183175 for A. D. Weiss Lithograph Co., Inc. to construct/install two new web offset presses at their facility in Hollywood, Broward County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

I. Goldman, SE District
D. Banu, Broward County
H. J. Bauch, P.E., SEEC, Inc.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of buisness on 4-11-91.

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.

Clerk

4-11-91
Date

Final Determination

A. D. Weiss Lithograph Co., Inc.
Broward County
Hollywood, Florida

Construction Permit Number:

AC 06-183175

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

April 4, 1991

Final Determination

The Technical Evaluation and Preliminary Determination (TE/PD) for the permit to construct/install two new web offset presses at A.D. Weiss Lithograph Company, Inc.'s facility in Hollywood, Broward County, Florida, was distributed on January 10, 1991. The Notice of Intent to Issue was published in the Ft. Lauderdale News/Sun Sentinel on February 9, 1991. Copies of the TE/PD were available for public inspection at the Department's Southeast District office and Bureau of Air Regulation office.

Comments are noted on the Department's Intent to Issue and they are as follows:

1. Since the afterburner system is essentially an incinerator, then the visible emissions (VE) standard pursuant to F.A.C. Rule 17-2.600(1)(a)1. is applicable and more stringent than the VE standard pursuant to F.A.C. Rule 17-2.610(2). Therefore, the following will be changed:

Specific Condition No. 11:

From: The KATEC thermal afterburner is subject to the visible emissions standard of "less than 20% opacity" pursuant to F.A.C. Rule 17-2.610(2). Initial and annual compliance tests shall be conducted using EPA Method 9 pursuant to Table 700-1, F.A.C. Rule 17-2.700, and 40 CFR 60, Appendix A (July, 1989 version).

To: The KATEC thermal afterburner is subject to F.A.C. Rule 17-2.600(1)(a)1., which imposes a visible emissions standard of no visible emissions (5 percent opacity) except that visible emissions not exceeding 20 percent opacity are allowed for up to three minutes in any one hour period. Initial and annual compliance tests shall be conducted using DER Method 9 in accordance with Table 700-1 and F.A.C. Rule 17-2.700.

2. Daniella Banu, with the Broward County Environmental Quality Control Board-Air Section suggested that the expiration date be extended to allow additional time for installation and testing. The following will be changed:

Expiration Date:

From: April 30, 1992
To: July 31, 1992

Attachment to be Incorporated:

11. Final Determination dated April 4, 1991.

The final action of the Department will be to issue the construction permit, No. AC 06-183175, as proposed and with the above changes and attachment incorporated.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

Permit Number: AC 06-183175
Expiration Date: July 31, 1992
County: Broward
Latitude/Longitude: 26°01'31"N
80°08'51"W
Project: Construction of Presses Nos. 22 and 23

This permit is issued under the provisions of Chapter 403, Florida Statutes, Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4, and 40 CFR (July, 1989 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of two new presses with dryer enclosures (Nos. 22 and 23) and an associated and shared TEC Systems Inc. KATEC thermal afterburner system; also, the minimum capture (dryer enclosures) and destruction (afterburner) efficiencies will be 75.0% (inks and process solvents) and 95.0%, respectively. The project also includes the removal from service of existing presses Nos. 2, 3, 4 and 14; and, the facility will undergo a formulation change to reduce the VOC content of the inks from an average of 68.0% to 39.1%. The project will occur at the applicant's existing facility. The UTM coordinates are Zone 17, 585.3 km East and 2878.6 km North.

The Source Industrial Code is:
o 2752 Lithographic Commercial Printing Facility
The Source Classification Code is:
o 4-05-004-11 Lithographic Tons Solvent in Ink

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

Attachments are listed below:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1) received June 28, 1990.
2. Mr. H. J. Bauch's letter received August 31, 1990.
3. Mr. Bruce P. Miller's letter with enclosure ("Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency) dated May 15, 1990.
4. Interoffice Memorandum dated November 6, 1990, from Mr. Bruce Mitchell.
5. Technical Evaluation and Preliminary Determination dated November 9, 1990.

ATTACHMENTS cont.

6. "Facility Quick Look" received from Mr. Tom Tittle on November 19, 1990.
7. Interoffice Memorandum received from Mr. Tom Tittle on November 26, 1990.
8. Memorandum received from Ms. Daniela Banu on December 10, 1990.
9. Interoffice Memorandum dated January 4, 1991, from Mr. Bruce Mitchell.
10. Technical Evaluation and Preliminary Determination dated January 10, 1991.
11. Final Determination dated April 4, 1991.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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. Neither 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 is not 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.

GENERAL CONDITIONS:

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor 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 provide the Department with the following information:

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

GENERAL CONDITIONS:

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for 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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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 17-4.120 and 17-730.300, F.A.C., 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

GENERAL CONDITIONS:

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and,
- the results of such analyses.

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

SPECIFIC CONDITIONS:

1. Continuous operation is permitted (i.e., 8760 hrs/yr).

2. Total VOC emission from presses 22 and 23 shall not exceed 5.4 lbs/hr (23.6 TPY), which is based on minimum capture and destruction efficiencies of 75.0% (inks and process solvents) and 95.0%, respectively, pursuant to F.A.C. Rule 17-2.620(1). Total allowable VOC emissions from the KATEC thermal afterburner shall not exceed 0.7 lb/hr (3.0 TPY).

3. The initial and annual demonstration of the capture efficiency of each dryer enclosure shall be conducted using the U.S. EPA's "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency" (attached). The permittee shall notify the Department's Southeast District in writing of the protocol that will be used for the capture efficiency demonstration purpose at least 60 days prior to compliance testing.

SPECIFIC CONDITIONS:

4. Initial and annual compliance tests for the actual destruction efficiency (comparison of the inlet and outlet concentrations) of the KATEC thermal afterburner shall be conducted using EPA Method 25A, pursuant to F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A (July, 1989 version). Pursuant to F.A.C. Rule 17-2.700(3), alternate test methods may be approved by the Department.

5. A material balance scheme shall be used to assess and report the annual (verifiable monthly) VOC/solvent emissions associated with clean-up. Each month, a material balance scheme will be initiated to account for the VOC/solvents received, any control measures used (must be quantifiable), and any VOC/solvents shipped off the facility by a properly licensed hauler.

6. The Department's Southeast District shall be notified in writing at least 15 days prior to conducting compliance tests pursuant to F.A.C. Rule 17-2.700(2).

7. Test reports shall be submitted to the Department's Southeast District no later than 45 days after the last sampling run of each test is completed pursuant to F.A.C. Rule 17-2.700(7).

8. This project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1989 version).

9. The sources are subject to the applicable provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

10. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

11. Pursuant to F.A.C. Rule 17-2.600(1)(a)1., the KATEC thermal afterburner is subject to the visible emissions standard of "no visible emissions" (5 percent opacity) except that visible emissions not exceeding 20 percent opacity are allowed for up to three minutes in any one hour period. Initial and annual compliance tests shall be conducted using DER Method 9 pursuant to Table 700-1 and F.A.C. Rule 17-2.700.

SPECIFIC CONDITIONS:

12. An annual operating report shall be submitted to the Department's Southeast District office by March 31 of each calendar year accounting for the annual VOC/solvent emissions, which shall at a minimum include source test results, quantifiable fugitive VOC emissions and clean-up VOCs/solvent emissions.

13. Any modification pursuant to F.A.C. Rule 17-2.100, Modification, shall be submitted to the Department's the Bureau of Air Regulation office for approval.

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

15. An application for an operation permit must be submitted to the Department's Southeast District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever comes first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed, noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 10th day
of April, 1991

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood

FROM: ~~C~~ Clair BA Fancy

DATE: April 9, 1991

SUBJ: Approval of Construction Permit AC 06-183175
A.D. Weiss Lithograph Co., Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct/install two new web offset presses (Nos. 22 and 23) with dryer enclosures and a shared thermal afterburner system at their facility in Hollywood, Broward County, Florida.

Comments were received during the public notice period and are addressed in the Final Determination.

Day 90, after which the permit would be issued by default, is April 11, 1991.

I recommend your approval and signature.

CHF/BM/t

attachments

OK/ Thank you

4-10-91

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood

FROM: ~~C~~ BA Clair Fancy

DATE: April 4, 1991

SUBJ: Approval of Construction Permit AC 06-183175
A.D. Weiss Lithograph Co., Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct/install two new web offset presses (Nos. 22 and 23) with dryer enclosures and a shared thermal afterburner system at their facility in Hollywood, Broward County, Florida.

Comments were received during the public notice period and are addressed in the Final Determination.

I recommend your approval and signature. when is day 90?

CHF/BM/t

attachments

Barry - Correct & Return ASAP

4-8-90

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: July 31, 1992

SPECIFIC CONDITIONS:

4. Initial and annual compliance tests for the actual destruction efficiency (comparison of the inlet and outlet concentrations) of the KATEC thermal afterburner shall be conducted using EPA Method 25A, pursuant to F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A (July, 1989 version). Other test methods may be used as long as prior Department approval has been granted in writing.

5. A material balance scheme shall be used to assess and report the annual (verifiable monthly) VOC/solvent emissions associated with clean-up. The material balance scheme will account for the VOC/solvents received, any control measures used (must be quantifiable), and any VOC/solvents shipped off the facility by a properly licensed hauler.

6. The Department's Southeast District shall be notified in writing at least 15 days prior to conducting compliance tests pursuant to F.A.C. Rule 17-2.700(2).

7. Test reports shall be submitted to the Department's Southeast District no later than 45 days after the last sampling run of each test is completed pursuant to F.A.C. Rule 17-2.700(7).

8. This project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1989 version).

9. The sources are subject to the applicable provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

10. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

11. Pursuant to F.A.C. Rule 17-2.600(1)(a)1., the KATEC thermal afterburner is subject to the visible emissions standard of "no visible emissions" (5 percent opacity) except that visible emissions not ~~exceeding 20~~ percent opacity are allowed for up to three minutes in any one hour period. Initial and annual compliance tests shall be conducted using DER Method 9 pursuant to Table 700-1 and F.A.C. Rule 17-~~2.700~~.

implies clock hour.
one hour or sixty minutes?

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: July 31, 1992

SPECIFIC CONDITIONS:

12. An annual operating report shall be submitted to the Department's Southeast District office by March 31 of each calendar year accounting for the annual VOC/solvent emissions, which shall minimally include source test results, quantifiable fugitives and clean-up VOCs/solvents.

13. Any modification pursuant to F.A.C. Rule 17-2.100, Modification, shall be submitted to the Department's ~~Southeast District office and the~~ Bureau of Air Regulation (BAR) office for approval.

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

15. An application for an operation permit must be submitted to the Department's Southeast District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever comes first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed, noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

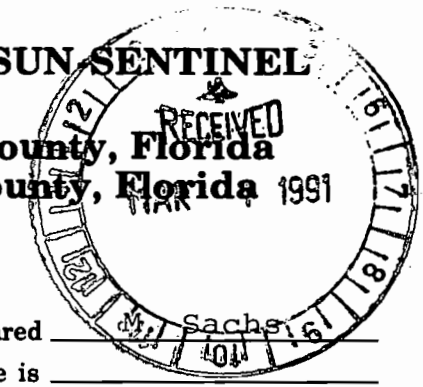
_____
STEVE SMALLWOOD, P.E., Director
Division of Air Resources Management

FORT LAUDERDALE NEWS/SUN-SENTINEL

Published Daily

Fort Lauderdale, Broward County, Florida

Boca Raton, Palm Beach County, Florida



STATE OF FLORIDA
COUNTY OF BROWARD/PALM BEACH

Before the undersigned authority personally appeared M. Sachs

who on oath says that he is Classified Supervisor **of the Fort Lauderdale News/Sun-Sentinel, Daily newspapers published in Broward/Palm Beach County, Florida that the attached copy of advertisement, being a** Notice of Intent **in the matter of** A.D. Lithograph

in the _____ **Court, was published in said newspaper in the issues of** February 9, 1991

Affiant further says that the said Fort Lauderdale News/Sun-Sentinel are newspapers published in said Broward/Palm Beach County, Florida, and that the said newspapers have heretofore been continuously published in said Broward/Palm Beach County, Florida, each day, and have been entered as second class matter at the post office in Fort Lauderdale, in said Broward County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspapers.

Sworn to and subscribed before me this 26th **day of** February **A.D. 19**91

(SEAL) Notary Public, State of Florida
My Commission Expires Aug. 22, 1992
Bonded Thru Troy Fain, Insurance Inc.

Notary Public

cc: B. Mitchell
A. Linero, BCNAP
S. Brooks, SE Dist

PASTE C IERE

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

The Department of Environmental Regulation gives notice of its intent to issue a permit to A.D. Lithograph Co., Inc., 2025 McKinley Street, Hollywood, Florida 33020, to construct/install two new presses (Nos. 22 and 23) with dryer enclosures. The new presses will share a TEC Systems Inc. KATEC thermal afterburner system. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation change. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this intent to issue for the reasons stated in the revised Technical EValuation and Preliminary Determination.

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

The petition shall contain the following information:

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

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

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

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

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

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

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

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

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

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

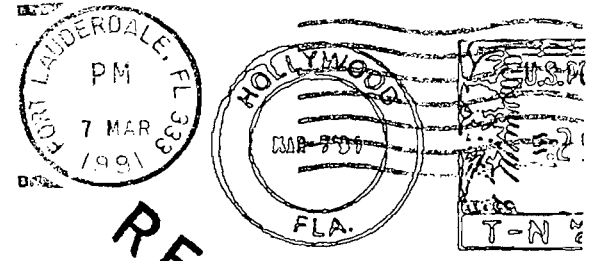
Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, FL 33406

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

February 9, 1991

A. D. WEISS
LITHOGRAPH COMPANY, INC.
2025 McKINLEY ST.
HOLLYWOOD, FLORIDA 33020

DIVISION OF
ST. IVES GROUP PLC



RECEIVED
MAR 11 1991
DER BAQM

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULA
TWIN TOWERS OFFICE BLDG
2600 BLAIR STONE ROAD
TALLAHASSEE, FL 32399-2400

ATTN: C.H.FANCY, PE
CHIEF BUREAU OF AIR REGULATION

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

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

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

3. Article Addressed to:

Mr. Doug Rasmussen, Supt.
A. D. Weiss Lithograph Co.
2025 McKinley Street
Hollywood, FL 33202

4. Article Number

P 407 852 919

Type of Service:

- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X

6. Signature — Agent

X [signature]

7. Date of Delivery

1-14-91

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

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

P 407 852 919

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. Doug Rasmussen,	
Street and No. A.D. Weiss Litho. 2025 McKinley St.	
P.O., State and ZIP Code Hollywood, FL 33020	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 1-11-91 Permit: AC 06-183175	

☆U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

File Copy

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Sec.

January 10, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Doug Rasmussen, Superintendent
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

Dear Mr. Rasmussen:

Attached is one copy of the revised Technical Evaluation and Preliminary Determination and proposed permit for A. D. Weiss Lithograph Co., Inc. to construct/install two new presses (Nos. 22 and 23) with dryer enclosures. The new presses will share a TEC Systems Inc. KATEC thermal afterburner system. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation change.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

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

CHF/BM/plm

Attachments

c: I. Goldman, SE District
A. Linero, Broward County
H. J. Bauch, P.E., SEEC, Inc.
Reading File
Bruce Mitchell 1-11-91 BM

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

DER File No. AC 06-183175

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue an air construction 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 revised Technical Evaluation and Preliminary Determination.

The applicant, A. D. Weiss Lithograph Co., Inc., applied on June 28, 1990, to the Department of Environmental Regulation for a permit to construct/install two new presses (Nos. 22 and 23) with dryer enclosures. The new presses will share a TEC Systems Inc. KATEC thermal afterburner system. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation change. The proposed project will occur at the applicant's existing facility located in Hollywood, Broward County, Florida.

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

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

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

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

The Petition shall contain the following information:

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

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

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

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

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

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

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

I. Goldman, SE District
A. Linero, Broward County
H. J. Bauch, P.E., SEEC, Inc.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT to ISSUE and all copies were mailed before the close of business on 1-11-91.

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.

Kim Doben — Clerk

1-11-91 — Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to A. D. Weiss Lithograph Co., Inc., 2025 McKinley Street, Hollywood, Florida 33020, to construct/install two new presses (Nos. 22 and 23) with dryer enclosures. The new presses will share a TEC Systems Inc. KATEC thermal afterburner system. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation change. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the revised Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

Department of Environmental Regulation
Southeast District
1900 S. Congress Ave., Suite A
West Palm Beach, Florida 33406

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

Revised
Technical Evaluation
and
Preliminary Determination

R. R. Donnelly & Sons Company
Volusia County
South Daytona, Florida

Construction Permit No.
AC 06-183175

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

January 10, 1991

I. Application

A. Applicant

A. D. Weiss Lithograph Company, Inc.
2025 McKinley Street
Hollywood, Florida 33020

B. Project

The applicant intends to replace four web offset lithographic presses (Nos. 2, 3, 4, and 14) and associated dual pass Offen dryers with two new presses (Nos. 22 and 23) with dryer enclosures. The new presses will share a TEC Systems Inc. KATEC thermal afterburner system. Also, the VOC content of the inks will be reduced from an average of 68.0% to 39.1% by formulation change. The project will occur at the applicant's facility located in Broward County, Florida.

The UTM coordinates are Zone 17, 585.3 km East and 2878.6 km North.

C. Process and Controls

The substrate (paper) is fed off of a roll (bound) and through a series of ink roller cylinders. Then, the printed material is fed through a heated dryer enclosure, which cures the paper of the VOCs and sets the ink. The paper is then cooled, cut and folded.

The VOCs released in the heated dryer enclosures have been vented to the atmosphere from the existing presses. The proposed new presses (Nos. 22 and 23) will have an associated and shared TEC Systems Inc. KATEC thermal afterburner, which has a maximum projected destruction efficiency of 97.5%. The projected maximum VOC capture efficiency of each dryer enclosure is 76.7%. The incinerator and dryers will be operated on natural gas.

D. The Source Industrial Code is:

o 2752 Lithographic Commercial Printing Facility

The Source Classification Code is:

o 4-05-004-11 Lithographic Tons Solvent in Ink

II. Rule Applicability

The project is subject to preconstruction review pursuant to Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4 and 40 CFR (July, 1989 version).

W/TEC 5-366 Summit Dryer Enc

The application package was deemed complete on July 6, 1990. A waiver of the 90-day clock was received on August 31, 1990, and was extended to, and included, November 27, 1990. Due to additional information received from the company via phone, the DER's Southeast District and Broward County, the Department's Intent to Issue of November 9, 1990, is being revised.

The existing facility is a major emitting facility for VOCs in accordance with F.A.C. Rule 17-2.100(115). VOCs are defined in accordance with F.A.C. Rule 17-2.100(217).

The existing facility is located in Broward County, an area designated nonattainment for ozone pursuant to F.A.C. Rule 17-2.410(b).

The new ink formulation change from an average VOC content of 68.0% to 39.1% will provide a net decrease in VOC emissions to the existing facility of 328.9 TPY. However, the emissions decrease associated with the formulation change is not considered creditable because the lower VOC content inks are available and competitive with existing inks and it meets the intent of "reasonable further progress" toward attaining the ambient air quality standards from existing and modified facilities located in a nonattainment area.

Since there is no specific emission limiting standard for these type of sources contained in F.A.C. Rules 17-2.650 or 17-2.660 (EPA Region IV concurs), the proposed new sources will be permitted in accordance with F.A.C. Rules 17-2.610 and 17-2.620. Based on the proposed maximum capture and destruction efficiencies of 76.7% and 97.5%, respectively, the Department will establish minimum capture and destruction efficiencies of 75.0% (inks & process solvents) and 95.0%, respectively, pursuant to F.A.C. Rule 17-2.620(1). Therefore, the total allowable VOC emissions from presses 22 and 23 shall not exceed 5.4 lbs/hr (23.6 TPY). The total allowable VOC emissions from the KATEC thermal afterburner shall not exceed 0.7 lb/hr (3.0 TPY).

With the removal of four existing sources (Presses Nos. 2, 3, 4 and 14), contemporaneous creditable VOC emissions for these sources are 36.3 TPY. The projected total potential VOC emissions for the new presses, Nos. 22 and 23, are 23.6 TPY. The net VOC change is -12.7 TPY. Therefore, the modification is considered a minor modification to a major facility, and the potential VOC emissions are subject to review in accordance with F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

Pursuant to F.A.C. Rule 17-2.620(2), objectionable odors shall not be allowed off of the facility's property.

Pursuant to F.A.C. Rule 17-2.610(2), visible emissions shall be less than 20% opacity.

The proposed project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1989 version). Also, the new presses are subject to the applicable provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

Initial and annual compliance tests on the KATEC thermal afterburner shall be conducted using EPA Method 9 (visible emissions) and EPA Method 25A (VOC destruction efficiency) in accordance with Table 700-1, F.A.C. Chapter 17-2, and 40 CFR 60, Appendix A (July, 1989 version). Other test methods may be used as long as prior Department approval has been granted in writing.

The actual VOC capture efficiency of each dryer enclosure will have to be demonstrated and is to compare the outlet concentration to the inlet concentration. The initial and annual demonstration of the capture efficiency of each press shall be conducted using the permittee's selected protocol from the U.S. EPA's document titled "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency" (see permit Attachments). The permittee will have to notify the Department's Southeast District in writing at least 60 days prior to conducting any compliance test(s) as to which capture efficiency testing protocol will be used.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

The pollutant that is regulated from the new presses is VOC. The sources are also subject to a visible emissions standard. The following table will display the applicable emissions standards and limitations:

Table 1

Source	Pollutant	Emission Standards and Limitations
Presses 22 and 23	VOC	total of 5.4 lbs/hr, 23.6 TPY
KATEC Thermal Afterburner	VOC	total of 0.7 lb/hr, 3.0 TPY
	VE	< 20% opacity

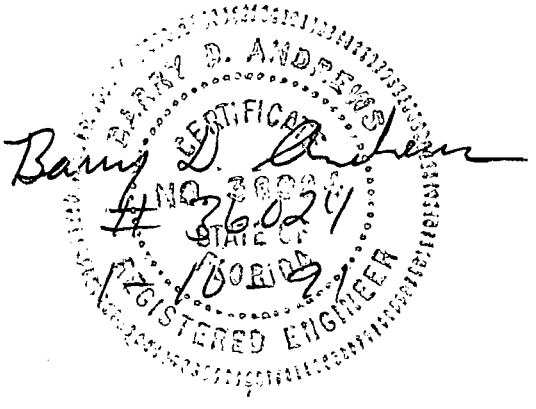
Note: o Continuous operation is permitted (i.e., 8760 hrs/yr).
o Emissions are based on minimum capture and destruction efficiencies of 75.0% and 95.0%, respectively.

B. Air Quality Analysis

Based on a technical review of the project, an air quality analysis was not required.

IV. Conclusion

Based on the information provided by A. D. Weiss Lithography Company, Inc., the Department has reasonable assurance that the proposed construction of two new presses (Nos. 22 & 23), the removal from service of four existing presses (Nos. 2, 3, 4, & 14), and the ink formulation change at the facility, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

PERMITTEE:
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

Permit Number: AC 06-183175
Expiration Date: April 30, 1992
County: Broward
Latitude/Longitude: 26°01'31"N
80°08'51"W
Project: Construction of Presses Nos. 22 and 23

This permit is issued under the provisions of Chapter 403, Florida Statutes, Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4, and 40 CFR (July, 1989 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of two new presses with dryer enclosures (Nos. 22 and 23) and an associated and shared TEC Systems Inc. KATEC thermal afterburner system; also, the minimum capture (dryer enclosures) and destruction (afterburner) efficiencies will be 75.0% (inks and process solvents) and 95.0%, respectively. The project also includes the removal from service of existing presses Nos. 2, 3, 4 and 14; and, the facility will undergo a formulation change to reduce the VOC content of the inks from an average of 68.0% to 39.1%. The project will occur at the applicant's existing facility. The UTM coordinates are Zone 17, 585.3 km East and 2878.6 km North.

The Source Industrial Code is:
o 2752 Lithographic Commercial Printing Facility
The Source Classification Code is:
o 4-05-004-11 Lithographic Tons Solvent in Ink

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

Attachments are listed below:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1) received June 28, 1990.
2. Mr. H. J. Bauch's letter received August 31, 1990.
3. Mr. Bruce P. Miller's letter with enclosure ("Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency) dated May 15, 1990.
4. Interoffice Memorandum dated November 6, 1990, from Mr. Bruce Mitchell.
5. Technical Evaluation and Preliminary Determination dated November 9, 1990.

ATTACHMENTS cont.

6. "Facility Quick Look" received from Mr. Tom Tittle on November 19, 1990.
7. Interoffice Memorandum received from Mr. Tom Tittle on November 26, 1990.
8. Memorandum received from Ms. Daniela Banu on December 10, 1990.
9. Interoffice Memorandum dated January 4, 1991, from Mr. Bruce Mitchell.
10. Technical Evaluation and Preliminary Determination dated January 10, 1991.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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. Neither 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 is not 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.

GENERAL CONDITIONS:

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor 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 provide the Department with the following information:

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

GENERAL CONDITIONS:

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for 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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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 17-4.120 and 17-30.300, F.A.C., 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

GENERAL CONDITIONS:

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and

records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

SPECIFIC CONDITIONS:

1. Continuous operation is permitted (i.e., 8760 hrs/yr).

2. Total VOC emission from presses 22 and 23 shall not exceed 5.4 lbs/hr (23.6 TPY), which is based on minimum capture and destruction efficiencies of 75.0% and 95.0%, respectively, pursuant to F.A.C. Rule 17-2.620(1). Total allowable VOC emissions from the KATEC thermal afterburner shall not exceed 0.7 lb/hr (3.0 TPY).

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: April 30, 1992

SPECIFIC CONDITIONS:

3. The initial and annual demonstration of the capture efficiency of each dryer enclosure shall be conducted using the U.S. EPA's "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency" (attached). The permittee shall notify the Department's Southeast District in writing of the protocol that will be used for the capture efficiency demonstration purpose at least 60 days prior to compliance testing.

4. Initial and annual compliance tests for the actual destruction efficiency (comparison of the inlet and outlet concentrations) of the KATEC thermal afterburner shall be conducted using EPA Method 25A, pursuant to F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A (July, 1989 version). Other test methods may be used as long as prior Department approval has been granted in writing.

5. A material balance scheme shall be used to assess and report the annual (verifiable monthly) VOC/solvent emissions associated with clean-up. The material balance scheme will account for the VOC/solvents received, any control measures used (must be quantifiable), and any VOC/solvents shipped off the facility by a properly licensed hauler.

6. The Department's Southeast District shall be notified in writing at least 15 days prior to conducting compliance tests pursuant to F.A.C. Rule 17-2.700(2).

7. Test reports shall be submitted to the Department's Southeast District no later than 45 days after the last sampling run of each test is completed pursuant to F.A.C. Rule 17-2.700(7).

8. This project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1989 version).

9. The sources are subject to the applicable provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

10. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

11. The KATEC thermal afterburner is subject to the visible emissions standard of "less than 20% opacity" pursuant to F.A.C. Rule 17-2.610(2). Initial and annual compliance tests shall be conducted using EPA Method 9 pursuant to Table 700-1, F.A.C. Rule 17-2.700, and 40 CFR 60, Appendix A (July, 1989 version).

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: April 30, 1992

SPECIFIC CONDITIONS:

12. An annual operating report shall be submitted to the Department's Southeast District office by March 31 of each calendar year accounting for the annual VOC/solvent emissions, which shall minimally include source test results, quantifiable fugitives and clean-up VOCs/solvents.

13. Any modification pursuant to F.A.C. Rule 17-2.100, Modification, shall be submitted to the Department's Southeast District office and the Bureau of Air Regulation (BAR) office for approval.

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

15. An application for an operation permit must be submitted to the Department's Southeast District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever comes first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed, noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: File: A. D. Weiss Lithograph Co., Inc.
AC 06-183175

FROM: Bruce Mitchell

DATE: January 4, 1991

SUBJ: Calculations

1. Creditable VOC Emissions

   a. Presses #4 and #14

      5.6 #/hr x 39.1% = 2.2 lbs/hr, 9.6 TPY

   b. Presses #2 and #3

      15.6 #/hr x 39.1% = 6.1 lbs/hr, 26.7 TPY

      Total: 36.3 TPY

2. Capture and Destruction Efficiencies

   a. Minimum of 75.0% Capture - Dryer Enclosures

      18.8 lbs/hr x 0.75 = 14.1 lbs/hr
      18.8 - 14.1 = 4.7 lbs/hr, 20.6 TPY

   b. Minimum of 95.0% Destruction - Afterburner

      14.1 lbs/hr x 0.95 = 13.4 lbs/hr
      14.1 - 13.4 = 0.7 lb/hr, 3.0 TPY

      Total: 23.6 TPY

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, FL 33315
(305) 765-4900

MEMORANDUM

DATE: DECEMBER 5, 1990

TO: BRUCE MITCHELL, DER TALLAHASSEE

FROM: DANIELA BANU, BROWARD COUNTY EQCB Daniela Banu.

REFERENCE: A. D. WEISS LITHOGRAPH COMPANY, INC.
AC 06-183175

1. SOURCE DESCRIPTION

After the completion of this project the facility will consist of:

Press #1	Existing	Blue Haze Control Unit
Press #5	Existing	No VOC Control
Press #6	New	Incinerator
Press #7	Existing	Blue Haze Control Unit
Press #8	Existing	Blue Haze Control Unit
Press #9	Existing	Blue Haze Control Unit
Press #10	Existing	Blue Haze Control Unit
Press #11	Existing	Blue Haze Control Unit
Press #15	New	Incinerator

2. VOC EMISSION CALCULATIONS

Attachment #1 contains the VOC emission calculations for each press. The document was prepared by Jim Bauch for A. D. Weiss. The handwritten corrections are mine.

Based on information from the manufacturer, the Blue Haze Control Unit destruction efficiency is 85 - 98%, depending upon ink usage and the type of solvent used. A 92% average is more representative than 98.8% used by J. Bauch.

I have some reservations regarding the VOC capture efficiency and destruction efficiency supporting documents. The values used to calculate emissions are based on assumptions that need to be verified prior to issuance of the operation permit. Please keep the capture efficiency and destruction efficiency determination as conditions in their permit.

3. For your information, the Blue Haze Control Unit is described in Attachment #2.

4. The permit Specific Conditions should require the permitee to submit copies of notifications, reports, etc. to SEFDER and BCEQCB.

5. The permitee should be subject to Annual Operation Report requirement.

ATTACHMENT # 1

PRESS # 1 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	1,088.83	#/HR	4,755.99	TONS/YR
Ink :	23.44	#/HR	102.37	TONS/YR
Total	1,112.27	#/HR	4,858.36	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(23.44) = 15.94 #/HR 69.61 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7 %

VOC Captured = (.767)(15.94) = 12.23 #/HR 53.40 TONS/YR

Percent Escape = 23.3 %

VOC Escaped = (.233)(15.94) = 3.71 #/HR 16.22 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %

VOC Destroyed of Captured VOC = (.988)(12.23) = 12.08 #/HR 52.77 TONS/YR

Percent Not Destroyed of Captured VOC = 1.2 %

VOC Not Destroyed of Captured VOC = (.012)(12.23) = 0.15 #/HR 0.64 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %

VOC Captured and Destroyed = (.767)(.988)(15.94) = 12.08 #/HR 52.77 TONS/YR

Percent Emitted = 24.2 %

VOC Emitted = (.767)(.012)(15.94) + 3.71 = ~~3.86~~ 4.69 #/HR ~~16.85~~ 20.48 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(23.44) =	9.14 #/HR	39.93 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(9.14) =	7.01 #/HR	30.63 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(9.14) =	2.13 #/HR	9.30 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92%		
VOC Destroyed of Captured VOC = (.988)(7.01) =	6.93 #/HR	30.25 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(7.01) =	0.08 #/HR	0.37 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(9.14) =	6.93 #/HR	30.25 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(9.14) + 2.13 =	~~2.21~~ 2.69 #/HR	~~9.67~~ 11.75 TONS/YR

PRESS # 2 Removed from Service

Process input rate:

Paper:	315.67	#/HR	1,378.85	TONS/YR
Ink :	6.79	#/HR	29.68	TONS/YR
Total	322.46	#/HR	1,408.53	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(6.79) =	4.62	#/HR	20.17 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7 %			
VOC Captured = (.767)(4.62) =	3.54	#/HR	15.48 TONS/YR
Percent Escape = 23.3 %			
VOC Escaped = (.233)(4.62) =	1.08	#/HR	4.70 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %			
VOC Destroyed of Captured VOC = (0)(3.54) =	0.0	#/HR	0.0 TONS/YR
Percent Not Destroyed of Captured VOC = 100 %			
VOC Not Destroyed of Captured VOC = (1.00)(3.54) =	3.54	#/HR	15.48 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %			
VOC Captured and Destroyed = (.767)(0)(4.62) =	0.0	#/HR	0.0 TONS/YR
Percent Emitted = 100 %			
VOC Emitted = (.767)(1.00)(4.62) + 1.08 =	4.62	#/HR	20.17 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(0) =	0.0 #/HR	0.0 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(0) =	0.0 #/HR	0.0 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent not destroyed of Captured VOC = 100 %		
VOC not Destroyed of Captured VOC = (1.00)(0) =	0.0 #/HR	0.0 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.233)(1.00)(0) + 0 =	0.0 #/HR	0.0 TONS/YR

PRESS # 3 Removed from Service

Process input rate:

Paper:	409.63	#/HR	1,789.28	TONS/YR
Ink :	8.82	#/HR	38.51	TONS/YR
Total	418.45	#/HR	1,827.79	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .		
(0.68)(8.82) =	6.00 #/HR	26.19 TONS/YR
VOC Reduction Rates . . .		
Enclosure Efficiency:		
Percent Capture = 76.7 %		
VOC Captured = (.767)(6.00) =	4.60 #/HR	20.10 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(6.00) =	1.40 #/HR	6.11 TONS/YR
Destruction Efficiency:		
Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(4.60) =	0.0 #/HR	0.0 TONS/YR
Percent Not Destroyed of Captured VOC = 100 %		
VOC Not Destroyed of Captured VOC = (1.00)(4.60) =	4.60 #/HR	20.10 TONS/YR
Total VOC Emissions:		
Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(6.00) =	0.00 #/HR	0.00 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.767)(1.00)(6.00) + 1.40 =	6.00 #/HR	26.19 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(0) =	0.0 #/HR	0.0 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(0) =	0.0 #/HR	0.0 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.0 #/HR	
Percent not destroyed of Captured VOC = 100 %		
VOC not Destroyed of Captured VOC = (1.00)(0) =	0.0 #/HR	0.0 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.233)(1.00)(0) + 0 =	0.0 #/HR	0.0 TONS/YR

PRESS # 4 Removed from Service

Process input rate:

Paper:	213.32	#/HR	931.82	TONS/YR
Ink :	4.59	#/HR	20.06	TONS/YR
Total	217.91	#/HR	951.88	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(4.59) =	3.12	#/HR	13.63 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7 %			
VOC Captured = (.767)(3.12) =	2.39	#/HR	10.45 TONS/YR
Percent Escape = 23.3 %			
VOC Escaped = (.233)(3.12) =	0.73	#/HR	3.18 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %			
VOC Destroyed of Captured VOC = (0)(2.39) =	0.0	#/HR	0.0 TONS/YR
Percent Not Destroyed of Captured VOC = 100 %			
VOC Not Destroyed of Captured VOC = (1.00)(2.39) =	2.39	#/HR	10.45 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %			
VOC Captured and Destroyed = (.767)(0)(3.12) =	0.00	#/HR	0.00 TONS/YR
Percent Emitted = 100 %			
VOC Emitted = (.767)(1.00)(3.12) + 0.73 =	3.12	#/HR	13.63 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(0) =	0.0 #/HR	0.0 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(0) =	0.0 #/HR	0.0 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent not destroyed of Captured VOC = 100 %		
VOC not Destroyed of Captured VOC = (1.00)(0) =	0.0 #/HR	0.0 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.233)(1.00)(0) + 0 =	0.0 #/HR	0.0 TONS/YR

PRESS # 5 Pollution Control Device: Dual Pass Offen Dryer — no VOC controls

Process input rate:

Paper:	205.73	#/HR	898.65	TONS/YR
Ink :	4.43	#/HR	19.34	TONS/YR
Total	210.16	#/HR	917.99	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .		
(0.68)(4.43) =	3.01 #/HR	13.16 TONS/YR
VOC Reduction Rates . . .		
Enclosure Efficiency:		
Percent Capture = 76.7 %		
VOC Captured = (.767)(3.01) =	2.31 #/HR	10.08 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(3.01) =	0.70 #/HR	3.06 TONS/YR
Destruction Efficiency:		
Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(2.31) =	0.0 #/HR	0.0 TONS/YR
Percent Not Destroyed of Captured VOC = 100 %		
VOC Not Destroyed of Captured VOC = (1.00)(2.31) =	2.31 #/HR	10.08 TONS/YR
Total VOC Emissions:		
Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(3.01) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.767)(1.00)(3.01) + 0.70 =	3.01 #/HR	13.16 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(4.43) =	1.73 #/HR	7.55 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(1.73) =	1.33 #/HR	5.80 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(1.73) =	0.40 #/HR	1.76 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(1.33) =	0.0 #/HR	0.0 TONS/YR
Percent not destroyed of Captured VOC = 100 %		
VOC not Destroyed of Captured VOC = (1.00)(1.33) =	1.33 #/HR	5.80 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(1.73) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.767)(1.00)(1.73) + 0.40 =	1.73 #/HR	7.54 TONS/YR

PRESS # 6 Pollution Control Device: KATEC Thermal Afterburner

Process input rate:

Paper:	1,100.00	#/HR	4,804.80	TONS/YR
Ink :	24.00	#/HR	104.83	TONS/YR
Total	1,124.00	#/HR	4,909.63	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .		
(0.68)(0) =	0.00 #/HR	0.00 TONS/YR
VOC Reduction Rates . . .		
Enclosure Efficiency:		
Percent Capture = 0 %		
VOC Captured = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Escape = 0 %		
VOC Escaped = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Destruction Efficiency:		
Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Not Destroyed of Captured VOC = 0 %		
VOC Not Destroyed of Captured VOC = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Total VOC Emissions:		
Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (0)(0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Emitted = 0 %		
VOC Emitted = (0)(0)(0) + 0 =	0.00 #/HR	0.00 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(24.00) =	9.36 #/HR	40.88 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(9.36) =	7.18 #/HR	31.36 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(9.36) =	2.18 #/HR	9.53 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 99.8 % 97.7 %		
VOC Destroyed of Captured VOC = (.998)(7.18) =	7.17 #/HR	31.30 TONS/YR
Percent not destroyed of Captured VOC = 0.2 %		
VOC not Destroyed of Captured VOC = (0.002)(7.18) =	0.01 #/HR	0.06 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 76.5 %		
VOC Captured and Destroyed = (.767)(.998)(9.36) =	7.16 #/HR	31.30 TONS/YR
Percent Emitted = 23.5 %		
VOC Emitted = (.767)(.002)(9.36) + 2.18 =	~~2.19~~ 2.36 #/HR	~~9.53~~ 10.30 TONS/YR

PRESS # 7 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	517.42 #/HR	2,260.09	TONS/YR
Ink :	11.14 #/HR	48.64	TONS/YR
Total	528.56 #/HR	2,308.73	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(11.14) =	7.58 #/HR	33.09 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7 %		
VOC Captured = (.767)(7.58) =	5.81 #/HR	25.38 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(7.58) =	1.77 #/HR	7.71 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(5.81) =	5.74 #/HR	25.07 TONS/YR
Percent Not Destroyed of Captured VOC = 1.2 %		
VOC Not Destroyed of Captured VOC = (.012)(5.81) =	0.07 #/HR	0.30 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(7.58) =	5.74 #/HR	25.07 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(7.58) + 1.77 =	~~1.84~~ 2.23 #/HR	~~8.04~~ 9.74 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(11.14) =	4.34 #/HR	18.96 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(4.34) =	3.34 #/HR	14.54 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(4.34) =	1.01 #/HR	4.42 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(3.34) =	3.30 #/HR	14.41 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(3.34) =	0.04 #/HR	0.18 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(4.34) =	3.30 #/HR	14.41 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(4.34) + 1.01 =	~~1.05~~ 1.28 #/HR	~~4.59~~ 5.59 TONS/YR

PRESS # 8 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	355.07	#/HR	1,550.93	TONS/YR
Ink :	7.64	#/HR	33.38	TONS/YR
Total	362.71	#/HR	1,584.31	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .		
(0.68)(7.64) =	5.20 #/HR	22.69 TONS/YR
VOC Reduction Rates . . .		
Enclosure Efficiency:		
Percent Capture = 76.7 %		
VOC Captured = (.767)(5.20) =	3.99 #/HR	17.42 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(5.20) =	1.21 #/HR	5.29 TONS/YR
Destruction Efficiency:		
Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(3.99) =	3.94 #/HR	17.22 TONS/YR
Percent Not Destroyed of Captured VOC = 1.2 %		
VOC Not Destroyed of Captured VOC = (.012)(3.99) =	0.05 #/HR	0.21 TONS/YR
Total VOC Emissions:		
Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(5.20) =	3.94 #/HR	17.22 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(5.20) + 1.21 =	~~1.26~~ 1.53 #/HR	~~5.49~~ 6.68 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(7.64) =	2.98 #/HR	13.01 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(2.98) =	2.29 #/HR	9.98 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(2.98) =	0.69 #/HR	3.03 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(2.29) =	2.26 #/HR	9.88 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(2.29) =	0.03 #/HR	0.12 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(2.98) =	2.26 #/HR	9.88 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(2.98) + 0.69 =	~~0.72~~ 0.87 #/HR	~~3.14~~ 3.81 TONS/YR

PRESS # 9 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	415.66	#/HR	1,815.61	TONS/YR
Ink :	8.95	#/HR	39.08	TONS/YR
Total	424.61	#/HR	1,854.69	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .			
(0.68)(8.95) =	6.09	#/HR	26.58 TONS/YR
VOC Reduction Rates . . .			
Enclosure Efficiency:			
Percent Capture = 76.7 %			
VOC Captured = (.767)(6.09) =	4.67	#/HR	20.40 TONS/YR
Percent Escape = 23.3 %			
VOC Escaped = (.233)(6.09) =	1.42	#/HR	6.20 TONS/YR
Destruction Efficiency:			
Percent Destroyed of Captured VOC = ~~98.8~~ 92 %			
VOC Destroyed of Captured VOC = (.988)(4.67) =	4.61	#/HR	20.15 TONS/YR
Percent Not Destroyed of Captured VOC = 1.2 %			
VOC Not Destroyed of Captured VOC = (.012)(4.67) =	0.06	#/HR	0.24 TONS/YR
Total VOC Emissions:			
Percent Captured and Destroyed = 75.8 %			
VOC Captured and Destroyed = (.767)(.988)(6.09) =	4.61	#/HR	20.15 TONS/YR
Percent Emitted = 24.2 %			
VOC Emitted = (.767)(.012)(6.09) + 1.42 =	~~1.48~~ 1.79	#/HR	~~6.45~~ 7.82 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(8.95) =	3.49 #/HR	15.25 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(3.49) =	2.68 #/HR	11.69 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(3.49) =	0.81 #/HR	3.55 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92%		
VOC Destroyed of Captured VOC = (.988)(2.68) =	2.65 #/HR	11.57 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(2.68) =	0.03 #/HR	0.14 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(3.49) =	2.65 #/HR	11.57 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(3.49) + 0.81 =	~~0.84~~ 1.02 #/HR	~~3.68~~ 4.45 TONS/YR

PRESS # 10 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	536.41	#/HR	2,343.02	TONS/YR
Ink :	11.55	#/HR	50.43	TONS/YR
Total	547.96	#/HR	2,393.45	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .			
(0.68)(11.55) =	7.85	#/HR	34.31 TONS/YR
VOC Reduction Rates . . .			
Enclosure Efficiency:			
Percent Capture = 76.7 %			
VOC Captured = (.767)(7.85) =	6.02	#/HR	26.30 TONS/YR
Percent Escape = 23.3 %			
VOC Escaped = (.233)(7.85) =	1.83	#/HR	7.99 TONS/YR
Destruction Efficiency: 92%			
Percent Destroyed of Captured VOC = ~~98.8~~ %			
VOC Destroyed of Captured VOC = (.988)(6.02) =	5.95	#/HR	25.98 TONS/YR
Percent Not Destroyed of Captured VOC = 1.2 %			
VOC Not Destroyed of Captured VOC = (.012)(6.02) =	0.07	#/HR	0.32 TONS/YR
Total VOC Emissions:			
Percent Captured and Destroyed = 75.8 %			
VOC Captured and Destroyed = (.767)(.988)(7.85) =	5.95	#/HR	25.98 TONS/YR
Percent Emitted = 24.2 %			
VOC Emitted = (.767)(.012)(7.85) + 1.83 =	~~1.90~~ 2.31	#/HR	~~8.31~~ 10.1 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(11.55) =	4.50 #/HR	19.68 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(4.50) =	3.45 #/HR	15.08 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(4.50) =	1.05 #/HR	4.58 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(3.45) =	3.41 #/HR	14.89 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(3.45) =	0.04 #/HR	0.18 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(4.50) =	3.41 #/HR	14.89 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(4.50) + 1.05 =	~~1.09~~ 1.32 #/HR	~~4.77~~ 5.79 TONS/YR

PRESS # 11 Pollution Control Device: Blue Haze Control Unit

Process input rate:

Paper:	614.02	#/HR	2,682.04	TONS/YR
Ink :	13.22	#/HR	57.73	TONS/YR
Total	627.24	#/HR	2,739.77	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .		
(0.68)(13.22) =	8.99 #/HR	39.27 TONS/YR
VOC Reduction Rates . . .		
Enclosure Efficiency:		
Percent Capture = 76.7 %		
VOC Captured = (.767)(8.99) =	6.90 #/HR	30.12 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(8.99) =	2.09 #/HR	9.15 TONS/YR
Destruction Efficiency:		
Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(6.90) =	6.82 #/HR	29.78 TONS/YR
Percent Not Destroyed of Captured VOC = 1.2 %		
VOC Not Destroyed of Captured VOC = (.012)(6.90) =	0.08 #/HR	0.36 TONS/YR
Total VOC Emissions:		
Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(8.99) =	6.82 #/HR	29.78 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(8.99) + 2.09 =	~~2.17~~ 2.64 #/HR	~~9.48~~ 11.54 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(13.22) =	5.16 #/HR	22.52 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(5.16) =	3.96 #/HR	17.29 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(5.16) =	1.20 #/HR	5.25 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = ~~98.8~~ 92 %		
VOC Destroyed of Captured VOC = (.988)(3.96) =	3.91 #/HR	17.09 TONS/YR
Percent not destroyed of Captured VOC = 1.2 %		
VOC not Destroyed of Captured VOC = (.012)(3.96) =	0.05 #/HR	0.21 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 75.8 %		
VOC Captured and Destroyed = (.767)(.988)(5.16) =	3.91 #/HR	17.09 TONS/YR
Percent Emitted = 24.2 %		
VOC Emitted = (.767)(.012)(5.16) + 1.20 =	~~1.25~~ 1.52 #/HR	~~5.45~~ 6.64 TONS/YR

PRESS # 14 Removed from Service

Process input rate:

Paper:	47.25 #/HR	206.39 TONS/YR
Ink :	1.02 #/HR	4.44 TONS/YR
Total	48.27 #/HR	210.83 TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(1.02) =	0.69 #/HR	3.03 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7 %		
VOC Captured = (.767)(0.69) =	0.53 #/HR	2.31 TONS/YR
Percent Escape = 23.3 %		
VOC Escaped = (.233)(0.69) =	0.16 #/HR	0.70 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0.53) =	0.0 #/HR	0.0 TONS/YR
Percent Not Destroyed of Captured VOC = 100 %		
VOC Not Destroyed of Captured VOC = (1.00)(0.53) =	0.53 #/HR	2.31 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(0.69) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.767)(1.00)(0.69) + 0.16 =	0.69 #/HR	3.03 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(0) =	0.0 #/HR	0.0 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(0) =	0.0 #/HR	0.0 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent not destroyed of Captured VOC = 100 %		
VOC not Destroyed of Captured VOC = (1.00)(0) =	0.0 #/HR	0.0 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (.767)(0)(0) =	0.0 #/HR	0.0 TONS/YR
Percent Emitted = 100 %		
VOC Emitted = (.233)(1.00)(0) + 0 =	0.0 #/HR	0.0 TONS/YR

PRESS # 15 Pollution Control Device: KATEC Thermal Afterburner

Process input rate:

Paper:	1,100.00	#/HR	4,804.80	TONS/YR
Ink :	24.00	#/HR	104.83	TONS/YR
Total	1,124.00	#/HR	4,909.63	TONS/YR

VOC DATA PRIOR TO PROCESS REVISIONS:

Previous Ink Formulation of 2/3/88 By % wt . . .

Pigment	32.00%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
Total VOC Content	68.0%

VOC Production Rate . . .

(0.68)(0) =	0.00 #/HR	0.00 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 0 %		
VOC Captured = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Escape = 0 %		
VOC Escaped = (0)(0) =	0.00 #/HR	0.00 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 0 %		
VOC Destroyed of Captured VOC = (0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Not Destroyed of Captured VOC = 0 %		
VOC Not Destroyed of Captured VOC = (0)(0) =	0.00 #/HR	0.00 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 0 %		
VOC Captured and Destroyed = (0)(0)(0) =	0.00 #/HR	0.00 TONS/YR
Percent Emitted = 0 %		
VOC Emitted = (0)(0)(0) + 0 =	0.00 #/HR	0.00 TONS/YR

VOC DATA FOLLOWING PROCESS REVISIONS:

VOC Content of 1990 Ink Formulation . . .

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	1.24%
Four Color Average	39.06%

VOC Production Rate . . .

(0.39)(24.00) =	9.36 #/HR	40.88 TONS/YR

VOC Reduction Rates . . .

Enclosure Efficiency:

Percent Capture = 76.7%		
VOC Captured = (0.767)(9.36) =	7.18 #/HR	31.36 TONS/YR
Percent Escape = 23.3%		
VOC Escaped = (.233)(9.36) =	2.18 #/HR	9.53 TONS/YR

Destruction Efficiency:

Percent Destroyed of Captured VOC = 99.8 % 97.5		
VOC Destroyed of Captured VOC = (.998)(7.18) =	7.17 #/HR	31.30 TONS/YR
Percent not destroyed of Captured VOC = 0.2 %		
VOC not Destroyed of Captured VOC = (0.002)(7.18) =	0.01 #/HR	0.06 TONS/YR

Total VOC Emissions:

Percent Captured and Destroyed = 76.5 %		
VOC Captured and Destroyed = (.767)(.998)(9.36) =	7.16 #/HR	31.30 TONS/YR
Percent Emitted = 23.5 %		
VOC Emitted = (.767)(.002)(9.36) + 2.18 =	~~2.19~~ 2.36 #/HR	~~9.53~~ 10.30 TONS/YR

ATTACHMENT #2

BLUE HAZE CONTROL UNIT

2 DESCRIPTION OF THE MMT SYSTEM

The description of the MMT system operating principle and its basic design is presented in this section.

2.1 Principle of Operation

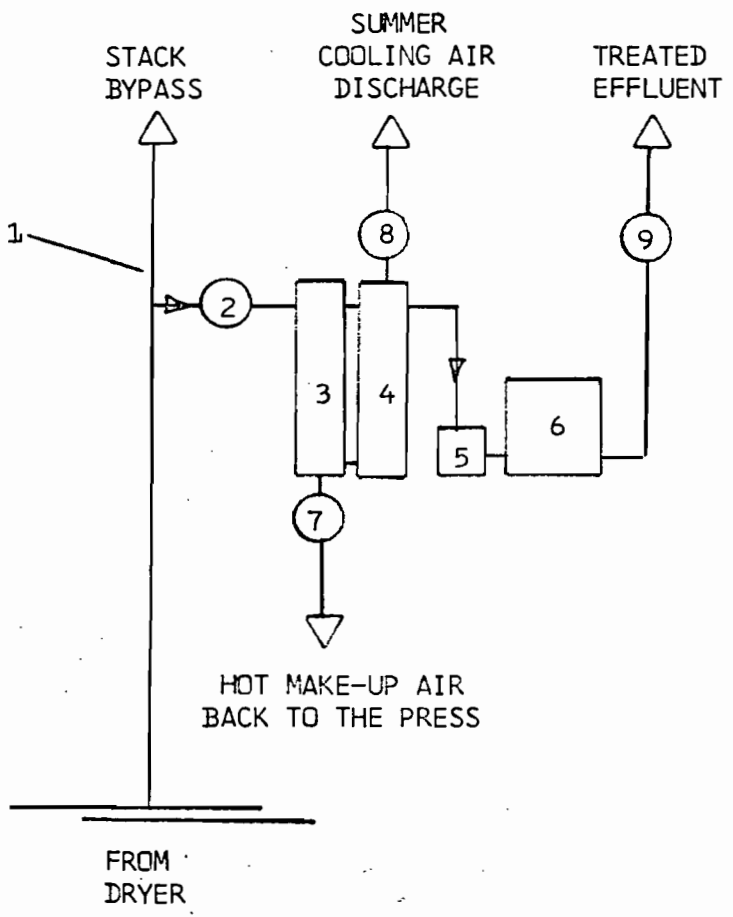
The principle of the MMT system operation is condensing condensible solvents from hot effluent by cooling the effluent to ambient air temperature. The condensed solvents present in the form of microscopic droplets are then collected in a special, self-draining, high-efficiency microfiber air filter.

This principle is very effective primarily because most of the ink solvents are high-boiling point, low vapor pressure of which normally over 95 percent by mass would condense from the web offset dryer effluent at 100° F. However, this percentage depends not only upon the type of solvents, but also upon the ink usage in the press and must be determined individually for each application.

2.2 Flow Diagram

A flow diagram of the system is shown in Figure 1. Raw effluent is removed completely from the dryer stack (1) through an open damper (2) and through a two-stage heat exchanger/condenser (3,4) by a high-pressure centrifugal fan (5). The main portion of condensible solvents condenses in the heat exchanger forming a blue haze. Part of these condensed solvents are collected in and drained from the heat exchanger. The remaining portion of blue haze is almost completely removed from the effluent by a high-efficiency filter (6). Controlled effluent is discharged into the atmosphere through a stack.

The cooling media for the heat exchangers is the ambient air. Warm cooling air from the first stage of the heat exchanger (3) is moved by a fan (7) and can be transported inside the building as make-up air for the press dryer. This results in heat energy savings. The cooling air from the second stage of the heat exchanger is discharged into the atmosphere. This stage operates only in the summer.



LEGEND

1 – STACK (EMERGENCY DISCHARGE)
2 – FIRE DAMPER INLET
3 – #1 CONDENSER
4 – #2 CONDENSER
5 – FAN
6 – PARTICULATE FILTER
7 – MAIN COOLING FAN
8 – SUMMER COOLING FAN
9 – FIRE DAMPER OUTLET

FIGURE 1. FLOW DIAGRAM OF TYPICAL MMT AIR POLLUTION CONTROL SYSTEM

mmt environmental, inc. St. Paul, MN 55112			
DRAWN BY	DATE	REVISIONS	DATE
CHECKED BY			
APPROVED BY			
SCALE			
TITLE		DRAWING NO.	

2.3 System Operation

Solvents and condensed water collected in the condensers and particulate filter are continuously drained. The solvents are separated from the water in a dual-gravity liquid separator. This separation is so good that water is drained directly into a sewer and solvents are collected in barrels for refinery resale, used as solvents by the asphalt industry, or mixed with oil #2 after proper testing.

The system fan (5) is slightly oversized to remove more effluent from the stack than is the actual flow from the dryer. To balance the flow, the difference is made up by a downward flow of ambient air through the dryer stack (1). This design is required by fire safety codes as further explained.

The dampers (2,9) are thermostat operated. When the temperature of the process stack (1) or of the effluent of the MMT system exceeds a preselected level as a result of possible fire in the dryer, the dampers close automatically. The fan (5) and cooling fans (7,8) are turned off, also automatically, at the same time.

Operation of the two heat exchanger/condensers is modulated automatically to maintain effluent temperature at the particulate filter inlet below 110° F at all times. Normally the effluent temperature is maintained at 5° F higher than the ambient air temperature. Effluent temperature is never lower than 40° F. To enhance condensation of solvents, a humidification nozzle is normally installed at the inlet to the first heat exchanger and operated under special press operating conditions (patent pending).

The MMT system is equipped with condenser wash nozzles located in the top of each condenser and also separate nozzles to spray washing solution on the surface of the high-efficiency filter material. The wash system can be activated either manually on an as-needed basis or automatically on a preselected time schedule.

2.4 Design of Critical Elements

The MMT system design and configuration is a result of careful development, both in the laboratory and in the field, and is the subject of several patents pending. From a performance point of view, the most critical elements are the design of heat exchanger/condensers and the type of high-efficiency filter material used to collect condensible aerosols. Attempted copies of the MMT system suffer from inadequate design of the heat exchanger and "low-cost" replacement for special high-efficiency filters.

The heat exchanger must have fins or plates spaced at least 0.25 inch. For smaller spacing, the exchangers will rapidly plug up. For some types of printing inks and web offset dryers, the plates must be surface treated to reduce adhesive forces between the surface of heat exchanging plates and condensed solvents.

The design of filter material must eliminate the danger of material sagging when exposed to liquid droplets and soaked with liquids. In MMT's design the filter material consisting of a mixture of large diameter glass fibers and glass microfibers is exposed to high temperatures to accomplish fusion of fibers where they intersect. The fused fibers give the material strength and stable dimensions even when it is wet. No binding agents can substitute this patented process because they would be slowly dissolved by the ink solvents. The filter material would then develop voids and loose its aerosol collection efficiency.

Large fibers give the material mechanical strength and fine fibers are responsible for high collection efficiency for even submicron aerosol particles. For some ink solvents a special surface treatment of glass fibers improves the self-draining properties of the filter mat. The thermal treatment is a British patent, the surface treatment is an MMT proprietary process.

The filter material design results in a collection efficiency of 99.95 percent for aerosol particles larger than 3 microns and 99.5 percent for particles of 0.3 micron size.

3 FIELD TEST RESULTS

To determine the capabilities of the MMT system, a 500 ACFM pilot system and a 50 ACFM bench model system were constructed several years ago and tested in the field. Long-term testing of the pilot equipment was performed on the effluent from a flame impingement dryer of a web offset press located in the Chicago area. The bench model equipment was tested on the effluent from a hot air dryer of a four-color press located in the St. Paul, Minnesota, area.

The performance parameters of the MMT system were determined for both winter and summer operation during numerous tests performed on four full-size installations; two in the Chicago area, one in the State of Maryland, and one in the State of Minnesota. The results of these tests are summarized in this section.

3.1 Visible and Particulate Emissions

The visible emissions are a result of condensation of condensible solvents in the effluent when it becomes over-saturated with solvent vapor at a given temperature. Visible emissions from the MMT system never exceeded 5 percent for the opacity of untreated effluent of 80 percent. Normally the visible emissions from the MMT system are condensed water vapor which dissipates over a 10 foot distance from the stack.

The particulate emissions from the MMT system determined per EPA Method 5 including back-half catch (condensibles) never exceeded 0.035 gr/dscf. Normally the concentration is 0.01 gr/dscf. It was found that this value is nearly independent of the ink consumption and remains constant for a given type of ink.

3.2 Control of Hydrocarbons

The test results show that the MMT system reduces non-methane hydrocarbons by 85 percent or better. The higher the ink coverage, the better the removal efficiency which may reach a 98 percent level for heavy ink coverage. The emission rate of non-methane hydrocarbons is relatively

independent of the ink coverage. For an average web offset press, the emission rate is typically 1 lb per hour.

It has to be emphasized that because 99 percent of the ink solvents sold on the market are classified as photochemically non-reactive, the emission rate of photochemically reactive solvents from the MMT system is insignificant.

3.3 Control of Odors

The odor concentration of web offset dryer effluent ranges between 400 and 10,000 odor units per cubic foot. The odor concentration depends primarily upon the ink coverage, type of ink and type of dryer.

Odor potential of the dryer effluent was found to be primarily associated with the condensation aerosol. The potential of the solvent vapor, after the aerosol is removed from the test air sample, is much less significant. It was also found during extensive field tests that the proprietary MMT filter material results in reduction of odor potential of non-condensible odorous constituents by absorption in the filter layer. As a result, the odor concentration of the effluent from the MMT system ranges from 25 to 80 odor units per cubic foot. Such a concentration in connection with a properly sized stack (elimination of the plume downwash) does not result in detectable odors on the ground level.

3.4 Overall Performance

The MMT systems which are now in normal use have been in operation for over 33 composite months. No serious operating problems have been experienced during this period.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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Interoffice Memorandum

RECEIVED
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TO: Bruce Mitchell, BAR/DARM

FROM: Tom Tittle, SEFD

DATE: November 19, 1990

SUBJECT: Technical Evaluation and Preliminary Determination for A.D.Weiss Lithograph Co., Inc.

As discussed today we have the following comments on the subject evaluation and determination:

1. Part I.C. of the review does not recognize the existence of the other sources at the facility. A list of the numbers of the other sources was sent to you previously. Since this facility has a long history of renumbering its sources, please have the applicant supply a plot plan of the facility showing the location of each source. The plot plan should also indicate the location of the control devices for each source and the emission stack for each source. The connections between each source, each control device and each stack should be clear enough to determine which sources are controlled by which control devices and allow an observer to determine which stack is connected to which piece of equipment. It would be very useful to the district if the applicant could also supply us with a chronology of the numbering for each unit over the past 10 years. This would provide us with assurance that our records on their renumbering of the units are accurate.

2. The attached construction permit for Press #1 (now #21) (application also attached) was issued by this office when the Magiesol in the ink was not a VOC as formerly defined in FAC Rule 17-2. Now this solvent is considered a VOC. It appears that the increased emissions allowed by the issuance of the permit for Press #1 (now #21) may put the additional emissions over 40 TPY. If so, then it seems LAER would apply to Press #1 (now #21) and the new presses as well.

3. We do not believe that RACT applies to this facility. Web off-set printing is not a process covered by the paper coating RACT. We asked for guidance early on web off-set printing and were instructed that this was not a RACT covered process. Unfortunately, we don't believe the guidance came in written form. I'm sure that at the time,

EPA agreed with (or made) this determination. Our review of the rule and the CTG for paper coating confirms the position that web off-set is not a covered RACT.

4. Permitting of other facilities has made us aware that some web off-set printing operations use a considerable amount of alcohol in one or more ways. We should ask the applicant whether or not alcohol is used by their operation. If used we need to know how it is used and how much is used potentially.

5. Annual testing is required for both capture efficiency and destruction efficiency. I believe that in the past, capture efficiency was only required to be demonstrated initially and at renewal. We were not sure if this was a change in previous practice or an oversight.

6. EPA Method 25 is specified as the required test method. Would the applicant or the Department consider another method equally suitable (eg. Method 25A)? If so, it would be better to establish the most desirable method now in the permit. This way, the time and effort expended by both the applicant and the Department in processing an ASP may be avoided.

7. Specific Condition 1 of the draft permit limits operation to less than 8760 hrs/yr. If the intent of the 24 hr/day, 7 days/wk, 52 wk/yr allowable is to let them operate year-round, then the allowable hours/yr should be at least 8760 hr/yr (24 hours x 365 days). In fact, if hours of operation are not going to be limited, we suggest that no limit on hours be expressed in the permit at all. In such cases, we need to make sure that the review is based on emissions resulting from the operation of the facility 24 hours a day, year-round.

8. It has always been our understanding that the RACT limit was established based on the assumption of a coating containing a solvent with a density of 7.36 lb.VOC/gal.VOC. Furthermore, it has always been our understanding that the RACT standard equivalent (in lb.VOC per gallon of solids) is to be established using 7.36 lb/gal as the solvent density. However, when determining compliance with the equivalent standard, the actual solvent density of the coating in question is used to determine whether or not the coating is in compliance. Using 7.36 (rather than 8.0) for the solvent density, our calculations show that the equivalent RACT standard for 2.9 lb.VOC/gal.coating is 4.79 (not 4.55)lb.VOC/gal.solids.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
1900 SOUTH CONGRESS AVENUE, SUITE A
WEST PALM BEACH, FLORIDA 33406
(305) 964-9668

PERMITTEE:
Mr. Charles Labson, Plant Manager
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, FL 33020

I.D. NUMBER: 50/BRO/06/1014/09 12
PERMIT/CERTIFICATION NUMBER: AC 06-144132
DATE OF ISSUE: MAY 06 1988
EXPIRATION DATE: January 31, 1989
COUNTY: Broward
LATITUDE/LONGITUDE: 26°01'31"N/80°08'51"W
UTM: Zone 17; 585.3 Km. E; 2878.6 Km. N
PROJECT: A. D. Weiss Lithograph Co., Inc.
Printing Press #1 with Blue Haze Unit

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 17-2, and in conformance with all existing regulations of the Florida Department of Environmental Regulation. 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:

CONSTRUCT: An air pollution source consisting of a web offset headset printing press with a single press TEC web press dryer, a Blue Haze control, and a CVM Model 49-CTR S-6 fume eliminator. The dryer burns natural gas and discharges emissions 92 feet above ground level.

IN ACCORDANCE WITH: Application to Construct an Air Pollution Source received January 15, 1988, additional information supplied by letter received February 25, 1988, and Public Notice of Intent issued March 24, 1988 and published April 4, 1988 in the Broward Review (none are attached).

LOCATED AT: 2025 McKinley Street, Hollywood, Broward County, Florida.

TO SERVE: A lithographic commercial printing facility (SIC # 4953)

TO SERVE: SUBJECT TO: General Conditions 1-15 and Specific Conditions 1-9.

PERMITTEE:
Mr. Charles Labson, Plant Manager
A. D. Weiss Lithograph Co., Inc.

I.D. NUMBER: 50/BRO/[illegible]/1014/[illegible]
PERMIT/CERTIFICATION NUMBER: [illegible] 06-144132
DATE OF ISSUE:
EXPIRATION DATE: January 31, 1989

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or 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.

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 the permit, the permittee shall immediately notify and provide the Department with the following information:

   a. a description of and cause of noncompliance; 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.

EE:
arles Labson, Plant Manager
Weiss Lithograph Co., Inc.

I.D. NUMBER: [redacted]BRO/C[redacted]014/09
PERMIT/CERTIFICATION NUMBER: [redacted]AC 06-144132
DATE OF ISSUE: [redacted]
EXPIRATION DATE: January 31, 1989

ENERAL 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 noncompliance 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)
( ) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
( ) 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.

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.

PERMITTEE:
Mr. Charles Labson, Plant Manager
A. D. Weiss Lithograph Co., Inc.

I.D. NUMBER: 50/BRO/06/1014/09
PERMIT/CERTIFICATION NUMBER: AC 06-144
DATE OF ISSUE:
EXPIRATION DATE: January 31, 1989

SPECIFIC CONDITIONS:

1. Application for a permit to operate along with the initial compliance test report shall be submitted to the Department at least sixty (60) days prior to the expiration of this permit, but in no case more than fourteen (14) days after commencement of operation. In no case shall a source be operated without an appropriate operating permit. The Certification of Completion of Construction, DER Form 17-1.202(3) may be submitted in lieu of the application for a permit to operate.

2. Emission limiting standards are as follows:

   a) In accordance with Florida Administrative Code Rule 17-2.610(2) - No person shall cause, let, permit, or allow to be discharged into the atmosphere any pollutants from new, or existing sources, the density of which is equal to or greater than 20 percent opacity, and

   b) In accordance with Florida Administrative Code (F.A.C.) Rule 17-2.610(2), No person shall cause, let, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

3. The compliance test report shall include results of tests by the following method:

Source/Emission Point	Pollutant	Test Method
Blue Haze Unit for Press #1	Visible Emissions	EPA Method 9

The compliance test report shall be submitted to the Department in accordance with Florida Administrative Code (F.A.C.) Rule 17-2.700(7).

4. The compliance test report shall provide the following information on the air pollution control devices and other information as indicated:

   a. General condition of equipment (eg...date of last thorough inspection and results of that inspection. Also note any deficiencies/problems with the equipment which occur during testing).

   b. Normal operating parameters of the equipment and the actual operating parameters for each test run (indicate how each parameter was determined).

5. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and within ten percent (10%) of the rated capacity of the source, otherwise the Department may require the test to be repeated or require modification of the permit to reflect tested rates and/or fuels.

6. The Department shall be notified of expected test dates at least fifteen (15) days prior to compliance testing.

7. On or before March 1 of each calendar year, a completed DER Form 17-1.202(6), Annual Operations Report Form for Air Emissions Sources shall be submitted to the Department. Show formulas with input and output data.

8. Fuel used shall be limited to natural gas.

TEE:
harles Labson, Plant Manager
. Weiss Lithograph Co., Inc.

I.D. NUMBER: 50/BRO/06/1014709
PERMIT/CERTIFICATION NUMBER: AC 06-144132
DATE OF ISSUE: MAY 05 1988
EXPIRATION DATE: January 31, 1989

ECIFIC CONDITIONS:

9. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation, Southeast District Office and Broward County Environmental Quality Control Board.

Issued this 5th day of May, 1988

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

J. Scott Benyon
District Manager

DER Form 17-1.201(5)
Effective November 30, 1982

STATE OF FLOR

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

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

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: AIR POLLUTION [X] New[1] [ ] Existing[1]

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

COMPANY NAME: A. D. WEISS LITHOGRAPH CO., INC. COUNTY: BROWARD

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) BLUE HAZE CONTROL UNIT

SOURCE LOCATION: Street 2025 McKinley Street City Hollywood, Fl.

UTM: East 585.3 North 2878.6

Latitude 26° 01' 31 "N Longitude 80° 08' 51"W

APPLICANT NAME AND TITLE: CHUCK LABSON, PLANT MANAGER

APPLICANT ADDRESS: 2025 McKINLEY STREET, HOLLYWOOD, FLORIDA 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. WEISS LITHO. Co.

I certify that the statements made in this application for a OPERATING 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: Charles M. Labson

Plant Manager

Name and Title (Please Type)

Date: 12/9/87 Telephone No. 920-7300

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_____

_____
Name (Please Type)

_____
Company Name (Please Type)

_____
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.

BLUE HAZE EMISSION CONTROL UNIT

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

Start of Construction 12/1/87 Completion of Construction 3/15/88

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.)

$110,000

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

AO-29075R1-7

AO-27091

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?	NO
	b. If yes, has "Lowest Achievable Emission Rate" been applied?	NO
	c. If yes, list non-attainment pollutants.	
2.	Does best available control technology (BACT) apply to this source? If yes, see Section VI.	N/A
3.	Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII.	N/A
4.	Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	N/A
5.	Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	N/A

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source?

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:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PAPER	NONE		7,000	
INK	ALIPHATIC SOLVENTS	30	104	

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

1. Total Process Input Rate (lbs/hr): 7,104

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	
NONE							

[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)
CVM BLUE HAZE CONTROL	NON VOLATILE ORGANIC SOL.	85-98	.3	TEST

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NATURAL GAS	1.638 MCF/hr.	3.276 MCF/hr.	3.276 MMBTU/hr.

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 1,000 BTU/lb _____ BTU/gal

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

_____

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

Annual Average _____ Maximum _____

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

_____

_____

_____

_____

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:

Hot exhaust gas enters through the heat exchanger and is cooled by ambient air in a plate-type air-to-air heat exchanger. The precooled exhaust passes through fiberglass filters with the final clean air exhausted to the atmosphere.

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

Reclaimed solvent is sold as fuel

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.

```
AIR023 50BR0061014          AIR PROGRAM INFORMATION SYSTEM              11/15/90
                                 FACILITY QUICK LOOK                    16:05:00
FACIL: OWN: A D  WEISS LITHOG   N/L: 2025 MCKINLEY ST  LAST FACIL UPDT:11/15/90
       SRC: 011  MAJOR FAC: N  CITY: HOLLYWOOD          STATUS: A = ACTIVE

SRC #: 01 DESC: WEB OFFSET LITHOGRAPHIC PRESS #2     UNIT SOLD AND GONE    [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (I) = INACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 02 DESC: WEB OFFSET LITHOGRAPHIC PRESS #3     UNIT SOLD AND GONE    [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (I) = INACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 03 DESC: WEB OFFSET LITHOGRAPHIC PRESS #4     UNIT SOLD AND GONE    [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (I) = INACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 04 DESC: WEB OFFSET LITHOGRAPHIC PRESS #5 ✓                         [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...

MORE SOURCES ON FILE ? YES

                                          ACTION TAKEN _   TRANSMIT HERE __

AIR023 50BR0061014          AIR PROGRAM INFORMATION SYSTEM              11/15/90
                                 FACILITY QUICK LOOK                    16:06:00
FACIL: OWN: A D  WEISS LITHOG   N/L: 2025 MCKINLEY ST  LAST FACIL UPDT:11/15/90
       SRC: 011  MAJOR FAC: N  CITY: HOLLYWOOD          STATUS: A = ACTIVE

SRC #: 05 DESC: WEB OFFSET LITHOGRAPHIC PRESS #8 ✓                         [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 06 DESC: WEB OFFSET LITHOGRAPHIC PRESS #10 ✓                        [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 07 DESC: WEB OFFSET LITHOGRAPHIC PRESS #7 ✓ (FORMERLY 12 . . . before that if you're first #10)
 PERMIT/PPS#: .... - ...../A006 - 114613   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 08 DESC: LITOGRAPHIC PRESS #9 W/ MMT BLUE HAZE CONTROL DEVICE (FOR SALE) ]
 PERMIT/PPS#: .... - ...../A006 - 129019   MAJOR SRC: .  STATUS: (I) = INACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...

MORE SOURCES ON FILE ? YES

                                          ACTION TAKEN _   TRANSMIT HERE __

AIR023 50BR0061014          AIR PROGRAM INFORMATION SYSTEM              11/15/90
                                 FACILITY QUICK LOOK                    16:08:25
FACIL: OWN: A D  WEISS LITHOG   N/L: 2025 MCKINLEY ST  LAST FACIL UPDT:11/15/90
       SRC: 011  MAJOR FAC: N  CITY: HOLLYWOOD          STATUS: A = ACTIVE

SRC #: 09 DESC: LITHOGRAPHIC PRESS #11 W/ MMT BLUE HAZE CONTROL SYST       [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 129019   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 10 DESC: WEB OFFSET #14 W/ DIRCT.FLME.IMP. DRYER   GONE ! UNIT SOLD [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 038351   MAJOR SRC: .  STATUS: (I) = INACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: 12 DESC: PRINTING PRESS #21 -SINGLE PRESS TEC WEB PRESS DRYER       [ _ ]
 PERMIT/PPS#: .... - ...../A006 - 164202   MAJOR SRC: .  STATUS: (A) = ACTIVE
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...
SRC #: .. DESC: .....                                                      [ _ ]
 PERMIT/PPS#: .... - ...../.... - .....   MAJOR SRC: .  STATUS: . = .....
   NSPS: ...   NESHAP: ...   111D: ...   PSD: ...   NAA/NSR: ...   RACT: ...

MORE SOURCES ON FILE ? NO

                                          ACTION TAKEN _   TRANSMIT HERE __
```

new #6 is now called #22 ✓

new #15 is now called #23 ✓

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. BRUCE MITCHELL, DARM-Tallahassee
2.
3.
4.

Remarks:

FYI as discussed.

Hope this helps!

Our comments, if any, will follow.

RECEIVED
NOV 19 1990
DER - BAQM

From: Tom Tittle SEED

Date 11-15-90

Phone SC 232-2650

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

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

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

3. Article Addressed to:
Mr. John Markey. V.P.
A.D. Weiss Lithograph Co
2025 McKinley St.
Hollywood, FL 33020

4. Article Number
P 280 742 410

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X

7. Date of Delivery
11/14/90

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

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

P 280 742 410

RECEIPT FOR CERTIFIED MAIL

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

Sent to John Markey	
Street and No. A.D. Weiss Lithograph	
P.O., State and ZIP Code 2025 McKinley St Hollywood, FL	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 11-9-90 AC 06-183175	

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

File Copy

Florida Department of Environmental Regulation

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

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

November 9, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John Markey, V.P. of Manufacturing
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

Dear Mr. Markey:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for A. D. Weiss Lithograph Co., Inc. to construct/install two new presses (Nos. 6 and 15) and dryer enclosures. The new presses will share a KATEC thermal afterburner. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation charge.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

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

CHF/BM/plm

Attachments

c: I. Goldman, SE District
A. Linero, Broward County
H. J. Bauch, P.E., SEEC, Inc.
Reading File
Bruce Mitchell } 11-9-90 BM

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

DER File No. AC 06-183175

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue an air construction 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, A. D. Weiss Lithograph Co., Inc., applied on June 28, 1990, to the Department of Environmental Regulation for a permit to construct/install two new presses (Nos. 6 and 15) and dryer enclosures. The new presses will share a KATEC thermal afterburner. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation charge. The proposed project will occur at the applicant's existing facility located in Hollywood, Broward County, Florida.

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

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

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

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

The Petition shall contain the following information:

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

I. Goldman, SE District
A. Linero, Broward County
H. J. Bauch, P.E., SEEC, Inc.

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 11-9-90.

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.

Kevin Baber
Clerk

11-9-90
Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to A. D. Weiss Lithograph Co., Inc., 2025 McKinley Street, Hollywood, Florida 33020 to construct/install two new presses (Nos. 6 and 15) and dryer enclosures. The new presses will share a KATEC thermal afterburner. Also, the VOC content of the inks will be reduced from an average of 68% to 39.1% by formulation charge. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

Department of Environmental Regulation
Southeast District
1900 S. Congress Ave., Suite A
West Palm Beach, Florida 33406

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

Technical Evaluation
and
Preliminary Determination

A. D. Weiss Lithograph Company, Inc.
Broward County
Hollywood, Florida

Construction Permit No.
AC 06-183175

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

November 9, 1990

I. Application

A. Applicant

A. D. Weiss Lithograph Company, Inc.
2025 McKinley Street
Hollywood, Florida 33020

B. Project

The applicant intends to replace four web offset lithographic presses (Nos. 2, 3, 4 and 14) and associated dual pass Offen dryers with two new presses (Nos. 6 and 15) and dryer enclosures. The new presses will share a KATEC thermal afterburner. Also, the VOC content of the inks will be reduced from an average of 68.0% to 39.1% by formulation change. The project will occur at the applicant's existing facility located in Broward County, Florida.

The UTM coordinates are Zone 17, 585.3 km East and 2878.6 km North.

C. Process and Controls

The existing facility, after the modification, will house five presses (Nos. 5, 6, 8, 10 and 15). The substrate (paper) is fed off of a roll (bound) and through a series of ink roller cylinders. Then, the printed material is fed through a heated dryer enclosure, which cures the paper of the VOCs and sets the ink. The paper is then cooled, cut and folded.

The VOCs released in the heated dryer enclosures have been vented to the atmosphere from the existing presses. The proposed new presses (Nos. 6 and 15) will have an associated and shared KATEC thermal afterburner, which has a maximum projected destruction efficiency of 97.5%. The projected maximum VOC capture efficiency of each dryer enclosure is 76.7%. The incinerator and dryers will be operated on natural gas.

D. The Source Industrial Code is:

o 2752 Lithographic Commercial Printing Facility

The Source Classification Code is:

o 4-05-004-11 Lithographic Tons Solvent in Ink

II. Rule Applicability

The project is subject to preconstruction review pursuant to Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4 and 40 CFR (July, 1988 version).

The application package was deemed complete on July 6, 1990. A waiver of the 90-day clock was received on August 31, 1990, and was extended to, and includes, November 27, 1990.

The existing facility is a major emitting facility for VOCs in accordance with F.A.C. Rule 17-2.100(115). VOCs are defined in accordance with F.A.C. Rule 17-2.100(217).

The existing facility is located in Broward County, an area designated nonattainment for ozone pursuant to F.A.C. Rule 17-2.410(b).

The new ink formulation change from an average VOC content of 68.0% to 39.1% will provide a net decrease in VOC emissions to the existing facility of 328.9 TPY. However, the emissions decrease associated with the formulation change is not considered creditable because the lower VOC content inks are available and competitive with existing inks and it meets the intent of "reasonable further progress" toward attaining the ambient air quality standards from existing and modified facilities located in a nonattainment area.

With the removal of four existing sources (Presses Nos. 2, 3, 4 and 14), contemporaneous creditable VOC emissions for these sources are 36.3 TPY. The projected potential VOC emissions for the new presses, Nos. 6 and 15, are 76.0 TPY. The net VOC change is +39.7 TPY. Therefore, the modification is considered a minor modification to a major facility, and is subject to review in accordance with F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

Since the facility is located in Broward County, which is an area designated nonattainment for ozone, the new presses are subject to the emission limiting standards of F.A.C. Rules 17-2.650(1)(f) and 17-2.650(1)(f)3.b., which requires that no owner or operator cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 4.55 pounds per gallon of solids (2.9 pounds per gallon of coating; 17.4 lbs/hr, 76.0 TPY), excluding water and exempt solvents, delivered to the coating applicator from a paper coating line. Control technology shall be in accordance with F.A.C. Rule 17-2.650(1)(f)3.c., of which the applicant has elected to use the application of incineration. Recordkeeping and reports shall be in accordance with F.A.C. Rules 17-2.650(1)(b)2. and 17-2.650(1)(b)3.

The proposed project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1988 version). Also, the new presses are subject to the provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

The new presses are subject to the provisions of F.A.C. Rule 17-2.610(2), General Visible Emissions Standard.

The new presses are subject to the provisions of 17-2.620(1) and (2), General Pollutant Emissions Limiting Standards.

Initial and annual compliance tests on the KATEC thermal afterburner shall be conducted using EPA Method 9 (visible emissions) and EPA Method 25 (destruction efficiency) in accordance with Table 700-1, F.A.C. Chapter 17-2, and 40 CFR 60, Appendix A (July, 1988 version).

The actual VOC capture efficiency of each dryer enclosure will have to be demonstrated and is to compare the outlet concentration to the inlet concentration. The initial and annual demonstration of the capture efficiency of each press shall be conducted using the permittee's selected protocol from the U.S. EPA's document titled "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency" (see permit Attachments). The permittee will have to notify the Department's Southeast District in writing at least 60 days prior to conducting any compliance test(s) as to which capture efficiency testing protocol will be used.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

The pollutant that is regulated from the new presses is VOC. The sources are also subject to a visible emissions standard. The following table will display the applicable emissions standards and limitations:

Table 1

Source	Pollutant	Emission Standards and Limitations
KATEC Thermal Afterburner	VOC	4.55 lbs/gal of solids, excluding water and exempt solvents, delivered to the coating applicator from a paper coating line (2.9 lbs/gal of coating; 17.4 lbs/hr, 76.0 TPY, total)
	VE	< 20% opacity

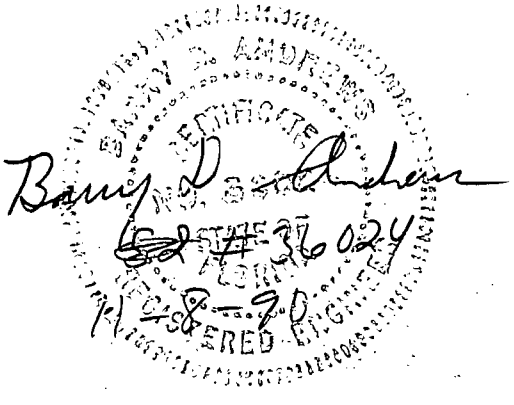
Note: o Operation hours are 24 Hrs/day, 7 days/wk, and 52 wks/yr, for a total of 8736 hrs/yr.
o Emissions are based on F.A.C. Rules 17-2.650(1)(f) and 17-2.650(1)(f)3.b.
o Presses #6 and #15 contribute equally to the total emissions (i.e., 8.7 lbs/hr/press, 38.0/tons/yr/press).

B. Air Quality Analysis

Based on a technical review of the project, an air quality analysis was not required.

IV. Conclusion

Based on the information provided by A. D. Weiss Lithography Company, Inc., the Department has reasonable assurance that the proposed construction of two new presses (Nos. 6 & 15), the removal from service of four existing presses (Nos. 2, 3, 4, & 14), and the ink formulation change at the facility, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.



Florida Department of Environmental Regulation

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

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

PERMITTEE:
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

Permit Number: AC 06-183175
Expiration Date: Dec. 31, 1991
County: Broward
Latitude/Longitude: 26°01'31"N
80°08'51"W
Project: Construction of Presses Nos. 6 and 15

This permit is issued under the provisions of Chapter 403, Florida Statutes, Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4, and 40 CFR (July, 1988 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of two new presses and dryer enclosures (Nos. 6 and 15) with an associated and shared KATEC thermal afterburner; also, the projected maximum efficiencies are 76.7% (capture) for each dryer enclosure and 97.5% (destruction) for the thermal afterburner. The project also includes the removal from service of existing presses Nos. 2, 3, 4 and 14; and, the facility will undergo a formulation change to reduce the VOC content of the inks from an average of 68.0% to 39.1%. The project will occur at the applicant's existing facility. The UTM coordinates are Zone 17, 585.3 km East and 2878.6 km North.

The Source Industrial Code is:
o 2752 Lithographic Commercial Printing Facility
The Source Classification Code is:
o 4-05-004-11 Lithographic Tons Solvent in Ink

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

Attachments are listed below:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1) received June 28, 1990.
2. Mr. H. J. Bauch's letter received August 31, 1990.
3. Mr. Bruce P. Miller's letter with enclosure ("Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency) dated May 15, 1990.
4. Interoffice Memorandum dated November 6, 1990, from Bruce Mitchell.
5. Technical Evaluation and Preliminary Determination dated November 9, 1990.

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: December 31, 1991

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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. Neither 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 is not 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor 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 provide the Department with the following information:

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

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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 for 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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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 17-4.120 and 17-30.300, F.A.C., 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

SPECIFIC CONDITIONS:

1. The sources are allowed to operate 24 hrs/day, 7 days/wk, and 52 wks/yr, for a total of 8736 hrs/yr.

2. Presses Nos. 6 and 15 are each subject to the emission limiting standard pursuant to F.A.C. Rules 17-2.650(1)(f) and 17-2.650(1)(f)3.b., which states that no owner or operator may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds (VOC) in excess of 4.55 pounds per gallon of solids (2.9 lbs/gal of coating; 17.4 lbs/hr, 76.0 TPY, total), excluding water and exempt solvents, delivered to the coating applicator from a papaer coating line.

3. Emissions control technology shall be in accordance with F.A.C. Rule 17-2.650(1)(f)3.c., which requires that the limit in F.A.C. Rule 17-2.650(1)(f)3.b. be achieved by:

a. the application of low solvent content coating technology; or,

SPECIFIC CONDITIONS:

b. incineration, provided that 90 percent of the VOC (measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

4. The dryer enclosure for each press will be required to achieve a minimum capture efficiency of 70%. The initial and annual demonstration of the capture efficiency of each dryer enclosure shall be conducted using the U.S. EPA's "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency" (attached). The permittee shall notify the Department's Southeast District in writing of the protocol that will be used for the capture efficiency demonstration purpose at least 60 days prior to compliance testing.

5. Pursuant to Table 700-1, F.A.C. Rule 17-2.700, initial and annual compliance tests for the actual destruction efficiency (comparison of the inlet and outlet concentrations) of the KATEC thermal afterburner shall be conducted using EPA Method 25, 40 CFR 60, Appendix A (July, 1988 version).

6. Recordkeeping shall be in accordance with F.A.C. Rule 17-2.650(1)(b)2.

7. Reporting shall be in accordance with F.A.C. Rule 17-2.650(1)(b)3.

8. The Department's Southeast District shall be notified in writing at least 15 days prior to conducting compliance tests pursuant to F.A.C. Rule 17-2.700(2).

9. Test reports shall be submitted to the Department's Southeast District no later than 45 days after the last sampling run of each test is completed pursuant to F.A.C. Rule 17-2.700(7).

10. This project is subject to all applicable provisions of F.A.C. Chapters 17-2 and 17-4 and 40 CFR (July, 1988 version).

11. The sources are subject to the provisions of F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.

12. The sources are subject to the provisions of F.A.C. Rule 17-2.620 (1)(a), General Pollutant Emission Limiting Standards for VOC or Organic Solvents.

PERMITTEE:
A. D. Weiss Lithograph Company, Inc.

Permit Number: AC 06-183175
Expiration Date: December 31, 1991

SPECIFIC CONDITIONS:

13. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

14. The KATEC thermal afterburner is subject to the visible emissions standard of "less than 20% opacity" pursuant to F.A.C. Rule 17-2.610(2). Initial and annual compliance tests shall be conducted using EPA Method 9 pursuant to Table 700-1, F.A.C. Rule 17-2.700, and 40 CFR 60, Appendix A (July, 1988 version).

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

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

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: File: A. D. Weiss Lithograph Co., Inc.
AC 06-183175

FROM: Bruce Mitchell BM

DATE: November 6, 1990

SUBJ: Calculations

1. Creditable VOC Emissions

   a. Presses #4 and #14

      5.6 #/hr x 39.1% = 2.2 lbs/hr, 9.6 TPY

   b. Presses #2 and #3

      15.6 #/hr x 39.1% = 6.1 lbs/hr, 26.7 TPY

      Total: 36.3 TPY

2. Emissions standard to "lbs VOC/gal of solids" (std. @ 2.9 lbs VOC/gal of coating, less water and exempt solvents; density @ 8.0 lbs/gal)

   a. 2.9 lbs/gal x 1 gal/8.0 lbs = 0.3625 gal VOC/gal coating

   b. 1 - 0.3625 = 0.6375 gal. solids

   c. 1 gal coating/0.6375 gal solids = 1.569 gal coating/gal solids

   d. 2.9 lbs/gal coating x 1.569 = 4.55 lbs VOC/gal solids

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Bruce Mitchell, BAR, Tallahassee
2.
3.
4.

Remarks:

A. D. Weiss latest permits
+ other pertinent data

RECEIVED

OCT 15 1990

DER - BAQM

From: S. Brooks

Date 10-11-90

Phone 232-2650

FILE

Florida Department of Environmental Regulation

Southeast District • 1900 S. Congress Ave., Suite A • West Palm Beach, Florida 33406 • 407-964-9668

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Scott Benyon, Deputy Assistant Secretary

PERMITTEE:
Mr. Norm Lincoln
Plant Manager
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, Florida 33020

I.D. NUMBER: 50/BRO/061014
PERMIT/CERTIFICATION NUMBER: AO 06-164202 *
DATE OF ISSUE: JUN. 15 1989
EXPIRATION DATE: May 1, 1994
COUNTY: Broward
LATITUDE/LONGITUDE: 26°00'31"N/80°08'51"W
UTM: Zone 17; 585.3 Km. E; 2878.6 Km. N
PROJECT: A. D. Weiss Lithograph Co., Inc.
Printing Presses 1, 2, 3, 4, 5, 8, 10, & 14

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 17-2, and in conformance with all existing regulations of the Florida Department of Environmental Regulation. 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:

OPERATE: An air pollution source consisting of a web offset printing facility. The following web offset lithographic presses are covered by this permit:

a. Nos. 2, 3, 4, 5, and 14 which have dual-pass Offen dryers with control airfoils on stacks.

b. Nos. 1, 8, and 10, each of which has a single dual-pass T & C dryer with its own MMT Blue Haze condensation system to control VOC, particulate and odors. The dryers burn natural gas and discharge emissions 92 feet above ground level.

IN ACCORDANCE WITH: Application for Renewal of Permit to Operate Air Pollution Sources received May 1, 1989, (Presses 2, 3, 4, 5, 8, 10, & 14), Certificate of Completion of Construction dated December 12, 1980, Application to Construct Air Pollution Sources dated September 5, 1979 (Press #14), Application to Operate dated February 27, 1984 as amended by Application dated July 20, 1984 (Presses 2, 3, 4, 5, 8, and 10) and Certificate of Completion of Construction received December 12, 1988, Application to Construct an Air Pollution Source received January 15, 1988 and additional information supplied by letter received February 25, 1988, (none are attached).

LOCATED AT: 2025 McKinley Street, Hollywood, Broward County, Florida.

TO SERVE: A lithographic commercial printing facility (SIC # 2752).

SUBJECT TO: General Conditions 1-17(d). and Specific Conditions 1-9.

* This permit is a renewal of AO 06.144132 issued May 6, 1988, and AO 06-114613 issued June 22, 1986.

DER Form 17-1.201 (k27)
Effective November 30, 1982

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither 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 is not 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 this 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are 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 and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor 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 provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including 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 for 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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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 Rule 17-4.120 and 17-30.300, F.A.C., 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

( ) Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)

( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. 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 the 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 corrected promptly.

16. In the case of an underground injection control permit, the following permit conditions also shall apply:

(a) All reports or information required by the Department shall be certified as being true, accurate and complete.

(b) Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(c) Notification of any noncompliance which may endanger health or the environment shall be reported verbally to the Department within 24 hours and again within 72 hours, and a final written report provided within two weeks.

1. The verbal reports shall contain any monitoring or other information which indicate that any contaminant may endanger an underground source of drinking water and any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

GENERAL CONDITIONS:

2. The written submission shall contain a description of and a discussion of the cause of the noncompliance and, if it has not been corrected, the anticipated time the noncompliance is expected to continue, the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance and all information required by Rule 17-28.230(4)(b), F.A.C.

(d) The Department shall be notified at least 180 days before conversion or abandonment of an injection well, unless abandonment within a lesser period of time is necessary to protect waters of the state.

17. The following conditions also shall apply to a hazardous waste facility permit.

(a) The following reports shall be submitted to the Department:

1. Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the permittee shall attempt to rectify the discrepancy. If not resolved within 15 days after the waste is received, the permittee shall immediately submit a letter report, including a copy of the manifest, to the Department.

2. Unmanifested waste report. The permittee shall submit an unmanifested waste report to the Department within 15 days of receipt of unmanifested waste.

3. Annual report. An annual report covering facility activities during the previous calendar year shall be submitted pursuant to Chapter 17-30, F.A.C.

(b) Notification of any noncompliance which may endanger health or the environment, including the release of any hazardous waste that may endanger public drinking water supplies or the occurrence of a fire or explosion from the facility which could threaten the environment or human health outside the facility, shall be reported verbally to the Department within 24 hours, and a written report shall be provided within 5 days. The verbal report shall include the name, address, I.D. number, and telephone number of the facility, its owner or operator, the name and quantity of materials involved, the extent of any injuries, an assessment of actual or potential hazards, and the estimated quantity and disposition of recovered material. The written submission shall contain:

1. A description and cause of the noncompliance.

2. If not corrected, the expected time of correction, and the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

(c) Reports of compliance or noncompliance with, or any progress reports on, requirements in any compliance schedule shall be submitted no later than 14 days after each schedule date.

(d) All reports or information required by the Department by a hazardous waste permittee shall be signed by a person authorized to sign a permit application.

PERMITTEE:
Mr. Norm Lincoln, Plant Manager
A. D. Weiss Lithograph Co., Inc.
Hollywood, Florida 33020

I.D. NUMBER: BC/BR 60104
PERMIT/CERTIFICATION NUMBER: AO 06-164202
DATE OF ISSUE: JUN 15 1989
EXPIRATION DATE: May 1, 1994

SPECIFIC CONDITIONS:

1. Compliance testing shall be conducted for the sources covered by this permit by December 1989 and annually thereafter in accordance with the methods specified below.

2. Emission limiting standards are as follows:

   a. In accordance with Florida Administrative Code Rule 17-2.610(2)(b) - No person shall cause, let, permit, or allow to be discharged into the atmosphere any pollutants from new or existing sources, the density of which is equal to or greater than 20 percent opacity, and
   b. In accordance with Florida Administrative Code Rule 17-2.620(2)) - No person shall cause, let, permit, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

3. The compliance test report shall include results of tests by the following methods:

Source/Emission Point	Pollutant	Test Method
Blue Haze Units & dual-pass Offen dryers	Visible Emissions	EPA Method 9

The compliance test report shall be submitted to the Department in accordance with Florida Administrative Code (F.A.C.) Rule 17-2.700(7).

4. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and within ten percent (10%) of the rated capacity of the source. Otherwise the Department may require the test to be repeated or modify the permit to reflect tested rates and/or fuels.

5. The Department shall be notified of expected test dates at least fifteen (15) days prior to compliance testing.

6. On or before March 1 of each calendar year, a completed DER Form 17-1.202(6), Annual Operations Report Form for Air Emissions Sources shall be submitted to the Department.

7. Fuel used shall be limited to natural gas.

8. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation, Southeast District Office and Broward County Environmental Quality Control Board.

9 The permittee shall be aware of and operate under the attached "General Permit Conditions #1 through #17(d).". General Permit Conditions are binding upon the permittee and enforceable pursuant to chapter 403 of the Florida Statutes.

Issued this 15th day of June, 1989

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

J. Scott Benyon
Deputy Assistant Secretary
1900 South Congress Ave., Suite A
West Palm Beach, FL 33406
407/964-9668

JSB:SB/k40

cc: Broward County Environmental Quality Control Board

DER Form 17-1.201(37)
Effective November 30, 1982

Florida Department of Environmental Regulation

Southeast District ● 1900 S. Congress Ave., Suite A ● West Palm Beach, Florida 33406 ● 407-964-9668

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary | Scott Benyon, Deputy Assistant Secretary

JUN. 1 6 1989

FILE

NOTICE OF PERMIT

Broward County
AP - A. D. Weiss Lithograph Co. Inc.
Printing Presses 1, 2, 3, 4, 5, 8, 10, & 14

Mr. Norm Lincoln, Plant Manager
A. D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, FL 33020

Dear Mr. Lincoln:

Enclosed is Permit Number AO 06-164202 to operate an air pollution source issued pursuant to Section 403.087, Florida Statutes.

Persons whose substantial interests are affected by this permit have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, FAC, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, FAC. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, FL 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 Final Order is filed with the Clerk of the Department.

Executed in West Palm Beach, Florida

STATE OF FLORIDA
DEPARTMENT OF REGULATION

J. Scott Benyon
Deputy Assistant Secretary
1900 South Congress Ave., Suite A
West Palm Beach, FL 33406
407/964-9668

JSB:SB/k37

cc: Broward County Environmental Quality Control Board

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on JUN. 16 1989 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to §120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Sybil L. Kern
Clerk

JUN. 16 1989
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR POLLUTION SOURCES
CERTIFICATE OF COMPLETION OF CONSTRUCTION*

PERMIT NO. _____ DATE: 11/21/88

Company Name: A. D. WEISS LITHOGRAPH CO., INC. County: BROWARD COUNTY

Source Identification(s): Printing Press #1 -Blue Haze Control Unit

Actual costs of serving pollution control purpose: $ 110,000.00

Operating Rates: 5500ACFM Design Capacity: 5434 SCFM

Expected Normal _____ During Compliance Test _____

Date of Compliance Test: 6/6/88 (Attach detailed test report)

Test Results:	Pollutant	Actual Discharge	Allowed Discharge

Date plant placed in operation: Late 60's

This is to certify that, with the exception of deviations noted**, the construction of the project has been completed in accordance with the application to construct and Construction Permit No. AC 06-144132 dated May 6, 1988.

A. Applicant:

Norm Lincoln
Name of Person Signing (Type)

Signature of Owner or Authorized Representative and Title

Date: 11/21/88 Telephone: 305/920-7300

B. Professional Engineer:

Gordon Myers
Name of Person Signing (Type)

Gordon Myers
Signature of Professional Engineer

AAG Consulting, Inc.
Company Name

Florida Registration No. 36852

Date: 12-6-88

(Seal)

109 NW 80th Avenue, Margate, Florida 33063
Mailing Address

305/971-5504
Telephone Number

*This form, satisfactorily completed, submitted in conjunction with an existing application to construct permit and payment of application processing fee will be accepted in lieu of an application to operate.

**As built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.

MATERIAL SAFETY DATA SHEET

SHAMROCK CHEMICALS CORPORATION

Date of Issue: 1/15/86
Prepared by: J. Choo
Supersedes: All previous

HAZARD RATINGS

Minimal	0
Slight	1
Moderate	2
Serious	3
Severe	4

HEALTH
FLAMMABILITY
REACTIVITY

Section I

MANUFACTURER'S NAME: SHAMROCK CHEMICALS CORPORATION
STREET ADDRESS: FOOT OF PACIFIC ST.
CITY, STATE, ZIP: NEWARK, NJ 07114
TELEPHONE NUMBER: 201/242-2999

TRADE NAME: S-437, S-438, X-5325, X-5290
PRODUCT CLASS: Polyethylene dispersion
CHEMICAL NAME: Trade secret
SYNONYM(S): Polyethylene wax dispersion

Section II - HAZARDOUS INGREDIENTS

Ingredient:		HAZARD DATA:	ACGIH TLV	OSHA PEL
Treated middle distillate	33%	General oil mist	5 mg/m^3	5 mg/m^3

Section III - PHYSICAL DATA

BOILING RANGE °F >464°F >240°C	VAPOR DENSITY: HEAVIER ☒ vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ vs. water LIGHTER ☒	TYPE OF ODOR Resinous
APPEARANCE Amber paste Soluble in: Petroleum solvents	EVAPORATION RATE FASTER ☐ vs. Butyl Acetate SLOWER ☒	PERCENT VOLATILE WT. <1%	

Section IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION	OSHA Not regulated DOT Not regulated	FLASH POINT °F >300°F >149°C (open cup)	LEL 1.1% UEL N/I

EXTINGUISHING MEDIA:

☒FOAM ☐"ALCOHOL" FOAM ☒CO2 ☒DRY CHEMICAL ☒WATER FOG ☐OTH

UNUSUAL FIRE AND EXPLOSION HAZARDS :
Combustion may liberate hazardous fumes.
Closed drum may rupture in presence of excessive heat.

AVOID THE FOLLOWING:
Protect drum from excessive heat.

SPECIAL FIREFIGHTING PROCEDURES Use self-contained breathing apparatus. Use water only to cool adjacent containers.

Section V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

ACTUE EFFECTS: EYE: Irritating on contact.
SKIN: Prolonged or repeated exposure may cause irritation.

CHRONIC EFFECTS: N/I

MEDICAL CONDITIONS POTENTIALLY AGRAVATED BY EXPOSURE: N/I

LISTED BY: __NTP __IARC __OSHA

PRIMARY ROUTE(S) OF ENTRY: _X_ EYE _x_ DERMAL ___INHALATION ___INGEST

EMERGENCY AND FIRST AID PROCEDURES

EYE: Immediately flush with plenty of water for at least 15 minutes.
SKIN: Was thoroughly with soap and water.

If irritation persists, CALL A PHYSICIAN.

Section VI - REACTIVITY DATA

PRODUCT STABILITY: _X_ STABLE ___UNSTABLE HAZARDOUS DECOMPOSITION: N/I

CONDITIONS TO AVOID Strong oxidizing agents

Section VII - SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED Stop spill at source if possible.
Wipe or sweep, or first absorb with sand, earth or similar material and then sweep up solid waste.

WASTE DISPOSAL METHOD (S) Incineration, chemical landfill

Section VIII - SPECIAL PROTECTION INFORMATION

VENTILATION Mechanical is sufficient **GROUNDING** None required

PROTECTIVE GLOVES Recommended **WASH FACILITIES** Eye and hand wash

RESPIRATORY PROTECTION None required **EYE PROTECTION** Safety goggles

OTHER PROTECTIVE EQUIPMENT N/I

Section IX - SPECIAL PRECAUTIONS

HANDLING AND STORING

Avoid skin and eye contact.
Keep closed drums from excessive heat.

OTHER PRECAUTIONS:

N/I

The information and recommendations contained in this Data Sheet are belie to be accurate & represent the best information currently available to us, no warranty, guarantee or representation is made by Shamrock as to the abs correctness or sufficiency of the information & recommendations in this Da ... be assumed that all possible safety measures are contai

Product Health & Safety Data Sheet

MAGIE BROS.

A PENNZOIL DIVISION

1-H
1-F
0-R

2170

I Product Identification

Manufacturer's Name	MAGIE BROS. OIL CO.		
Address	9101 Fullerton Ave., Franklin Park, IL 60131		
Regular Telephone No.	312/455-4500	Emergency Telephone No.	713/236-6070
Trade Name	MAGIESOL 47		
Synonyms	Petroleum Hydrocarbon (Hydrotreated)		(CAS #64742-46-7)

II Hazardous Ingredients

Material or Component in Hazardous Concentrations	%	Hazard Data
None		

III Health Effect Information

Eye Contact	Eye contact may cause burning and irritation.
Skin Contact	Irritation or dermatitis may develop on prolonged or repeated exposure.
Inhalation	Excessive inhalation in a mist form may cause local irritation, dizziness, drowsiness, pneumonia, or coma.
Ingestion	Ingestion may cause local irritation of the mucous membranes of the mouth, esophagus, and stomach. May act as a laxative.
Health Data	OSHA permissible exposure limit (PEL) for oil mist is 5 mg/M³.
Systemic Effects	No laboratory data is available on this material

See Disclaimer of Warranty on Page 4.

(Approved by U.S. Department of Labor, "Essentially similar to Form OSHA 20, Material Safety Data Sheet")

Art September, 1983

REVISED January, 1985

IV Emergency & First Aid Procedures

Eye Contact	Flush eyes with large amounts of water. Continue at least for 15 minutes. SEEK MEDICAL ATTENTION.
Skin Contact	Remove all contaminated clothing. Wash exposed portions of the skin with soap and water. Contaminated clothing must be washed before being reworn.
Inhalation	Remove exposed person to fresh air immediately. If breathing has stopped, apply artificial respiration and administer oxygen if necessary. SEEK MEDICAL ATTENTION.
Ingestion	If material has been swallowed, DO NOT induce vomiting. SEEK MEDICAL ATTENTION.

V Personal Health Protection Information

Eye Protection	Plastic face shield or splash proof safety goggles should be worn if material is handled in such a way that it could be splashed into eyes.
Skin Protection	Synthetic rubber protective clothing; boots, gloves, aprons, etc. may be worn over parts of body subject to exposure.
Respiratory Protection	Not required under normal usage. If product is handled in such a way as to create a vapor or mist, the following protection should be taken: Low concentration mist - Use half-mask or full face piece respirator with replaceable cartridge filter. High concentration mist - Use full face supplied air respirator in positive pressure mode or full face self-contained breathing apparatus with positive pressure. NOTE: All respirators must be of the NIOSH approved type. DO NOT use compressed oxygen in hydrocarbon atmospheres.
Ventilation	Adequate ventilation in accordance with good engineering practice must be provided to keep any oil mist concentration below the PEL.
Other	Wash hands and face with soap and water before smoking or eating.

VI Fire Protection Information

Flash Point (Test Method)	215°F	(ASTM D-93)	Autoignition Temperature (°F)	530°F (ASTM D-2155)
Flammable Limits In Air % By Vol.	Lower	1.1	Upper	6.0
Extinguishing Media	Carbon Dioxide, Dry Chemical, or Foam.			
Special Fire Fighting Procedures	Water may be ineffective but can be used to cool containers exposed to heat or flame.			
Unusual Fire and Explosive Conditions	Dense smoke may be generated when burning.			
Hazardous Combustion Products	Products of combustion — smoke, CO, CO_2.			

VII Reactivity Data

Stability (thermal, light, etc.)	Stable	X	Conditions to Avoid	None
	Unstable			
Incompatibility (materials to avoid)	May react with strong oxidizing agents.			
Hazardous Decomposition Products	None			
Hazardous Polymerization	Stable	X	Conditions to Avoid	None
	Unstable			

VIII Environmental Precautions

Steps To Be Taken if Material is Released or Spilled	Collect large spills with shovel, dry sand or absorbant materials. Clean spill area with detergent solutions. Provide adequate ventilation during clean-up.
Waste Disposal Method	Waste materials should be dumped or buried in an approved industrial waste land fill. Large quantities may be disposed of by incineration in a suitable combustion chamber. Disposal must comply with all federal, state, and local regulations.

Special Precautions

Handling and Storage Requirements	Store in sealed containers away from heat, open flame, and oxidizing materials. Fire extinguishers must be kept readily available and personnel trained in proper use. See NFPA 30 and OSHA 1910.106 — FLAMMABLE AND COMBUSTIBLE LIQUIDS.
Precautionary Statements	Do not transfer to unmarked containers. Follow DOT regulations during transport

X Physical Properties

Boiling Point (°F)	464°-525°F	**Melting Point (°F)**	No Data	**Solubility** Insoluble in water. *Soluble in hydrocarbons.*
Vapor Pressure (mm Hg & temp.)	0 05 @ 68°F	**Specific Gravity (H_2O = 1)** @ 60°F/60°F	0.8003	**Appearance, Color, Odor, etc.** Clear, odorless liquid
Molecular Weight	195	**Percent Volatile by Volume (%)**	See vapor pressure	**Other**
Vapor Density (air = 1)	6.72	**Evaporation Rate (EE = 1)**	No Data	

Approved By: P. E. Brutto

Date September, 1977
Revised September, 1983

REVISED: January, 1985

nquired under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917).

All inks, but black, are mixed at the facility
Average ink formulation:

32% Color Paste
5% Polyethylene Compound
52% Varnish
11% Magiesol 47

BEST AVAILABLE COPY

A. D. WEISS
LITHOGRAPH COMPANY, INC.

2025 McKINLEY STREET
HOLLYWOOD, FLORIDA 33020

RECEIVED
APR 12 1984
Dept. of Environmental Reg.
West Palm Beach

April 10, 1984

Mr. I. Goldman
Florida Department
of Environmental Regulation
Post Office Box 3858
West Palm Beach, Florida 33402

Dear Mr. Goldman:

Enclosed is a copy of the roof drawing of our plant with press stacks shown and numbered by the numbers we referred to and discussed during your visit.

If you like, we could further identify these units as Offen and TEC (the types of dryers using manufacturers' names).

Presses 8, 9, 10, 11 have TEC Dryers. All remaining presses are Offen.

If I can be of further assistance, please do not hesitate to call.

4/13/84 Phone call to Mr Parker, 10:15 AM
a) Presses Nos 2, 3, 4, 5, 12, 14 have Offen dual pass dryers
b) Presses 8 & 10 have single dual pass TEC dryers
c) Presses 9 & 11 have 2 single pass TEC dryers
d) [illegible]
[illegible]
e) Mr Parker will [illegible] confirming [illegible]

Sincerely,

WAYNE PARKER,
PLANT MANAGER

A. D. WEISS LITHOGRAPH CO., INC.

WP:ik

encl.

PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	SMOG HOG
10	OPERATIONAL	STACK
11	OPERATIONAL	SMOG HOG
12	OPERATIONAL	STACK
TOTAL WEBB PRESSES WITH STACKS		8
TOTAL WEBB PRESSES ON SMOG HOG		2
TOTAL OPERATIONAL		10

blue haze units for each
8, 10,

9, 11 share a blue haze unit

not in operation for last year

ROOF ELEV. 24'

ROOF ELEV. 15'-10"

ROOF ELEV. 18'-0"

STACK NOT IN USE

WEB PRESS #10

WEB PRESS #9 DRYER

AIR DILUTION BLOWER

WEB PRESS #8

WEB PRESS #12

WEB PRESS #14

WEB PRESS #9

WEB PRESS #11

TRIPLE PASS NS 4-1 SMOG HOG TEMP'X. COILS & FAN BY UNITED AIR SPECIALISTS

WEB PRESS #2 DRYER

WEB PRESS #3 DRYER

WEB PRESS #4 DRYER

WEB PRESS #5 DRYER

PWR TRAN

BOILER AIR

AC

SERVICE ALLEY

DRAIN PIT

LAUNDRY

ROOF ELEV.

15'-11"

16'-6"

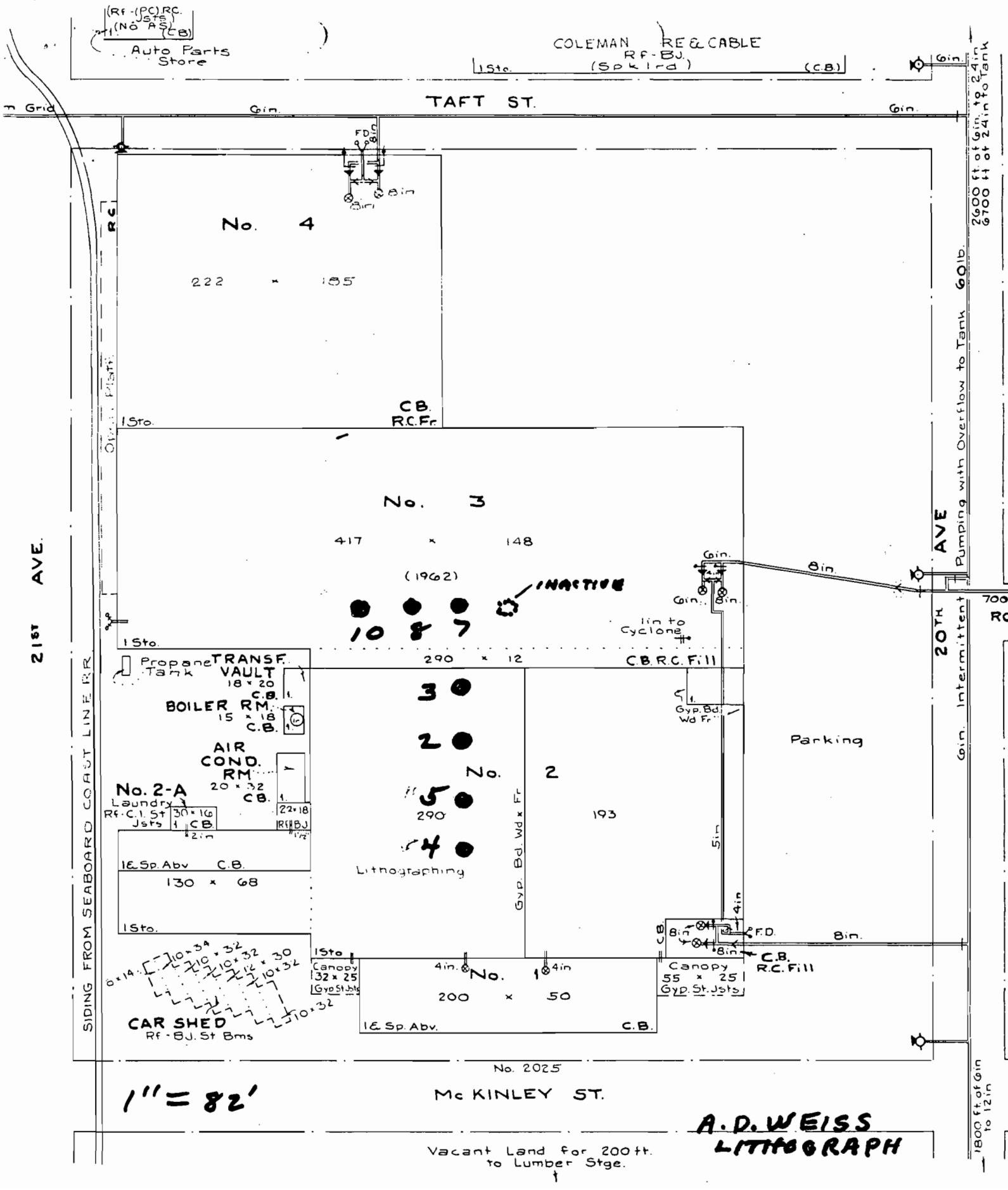
McKINLEY STREET

DIXIE HGWY.

issued 5/16/77
modified 4/5/84 DG

ACME INDUSTRIAL SHEET METAL
555 W 21 ST, HIALEAH, FLORIDA

ROOF PLAN
A.D. WEISS LITHOGRAPHY, INC
2025 McKINLEY ST.
HOLLYWOOD, FLORIDA



BEST AVAILABLE COPY

AP

DER-WPB	Copy ✓ Action A	Route # D
REMARKS:		

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-7 DATE January 31, 1977

PERMIT ISSUED TO: NAME A.D. Weiss Lithograph Co.

ADDRESS 2025 McKinley Co.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

1. Rotation ability according to wind direction
2.
3.
4.

TO BE KNOW AS (same as above)

AND TO BE LOCATED AT (same as above)

IN ACCORDANCE WITH THE Constructional APPLICATION WHICH IS CONSIDERED PART OF THIS PERMIT.

THIS PERMIT EXPIRES January 31, 1982

THIS PERMIT IS SUBJECT TO ALL FLORIDA STATE, BROWARD COUNTY, AND LOCAL LAWS, REGULATIONS, RULES, AND THE CONDITIONS ATTACHED HERETO.

RECEIVED

FEB 15 1979

Dept. of Environmental Reg.
West Palm Beach

POST THIS PERMIT IN A PROMINENT PLACE ON THE PLANT PREMISES.

(signature)	POLLUTION CONTROL OFFICER	2/3/77
NAME	TITLE	DATE

VICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-6 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

	POLLUTION CONTROL OFFICER	2/3/77
NAME	TITLE	DATE

ICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-5 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

Victor N. Howard POLLUTION CONTROL OFFICER 2/3/77

NAME TITLE DATE

VICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-4 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

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2.
3.
4.

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AND TO BE LOCATED AT (same as above)

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

Victor N. Howard POLLUTION CONTROL OFFICER 2/3/77

NAME TITLE DATE

VICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

dc 104

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-3 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

1. Rotation ability according to wind direction
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4.

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AND TO BE LOCATED AT (same as above)

IN ACCORDANCE WITH THE Constructional APPLICATION WHICH IS CONSIDERED PART OF THIS PERMIT.

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

	POLLUTION CONTROL OFFICER	2/3/77
NAME	TITLE	DATE

VICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-2 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

1. Rotation ability according to wind direction
2.
3.
4.

TO BE KNOW AS (same as above)

AND TO BE LOCATED AT (same as above)

IN ACCORDANCE WITH THE Constructional APPLICATION WHICH IS CONSIDERED PART OF THIS PERMIT.

THIS PERMIT EXPIRES January 31, 1982

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

[signature] POLLUTION CONTROL OFFICER 2/3/77

NAME TITLE DATE

ICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

AC 104

BROWARD COUNTY

ENVIRONMENTAL QUALITY CONTROL BOARD

PERMIT TO Operate Air POLLUTION SOURCE

PERMIT NO. AO-3751-1 DATE January 31, 1977

PERMIT ISSUED TO: NAME A. D. Weiss Lithograph Co.

ADDRESS 2025 McKinley St.

Hollywood, FL 33020

TELEPHONE NO. 920-7300

FOR THE Operation OF Airfoil with negative angle of incidence

WITH THE FOLLOWING AIR POLLUTION CONTROL EQUIPMENT

1. Rotation ability according to wind direction
2.
3.
4.

TO BE KNOW AS (same as above)

AND TO BE LOCATED AT (same as above)

IN ACCORDANCE WITH THE Constructional APPLICATION WHICH IS CONSIDER PART OF THIS PERMIT.

THIS PERMIT EXPIRES January 31, 1982

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POST THIS PERMIT IN PROMINENT PLACE ON THE PLANT PREMISES

Victor N. Howard POLLUTION CONTROL OFFICER 2/3/77

NAME TITLE DATE

VICTOR N. HOWARD, PE

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOA

AC 10/1

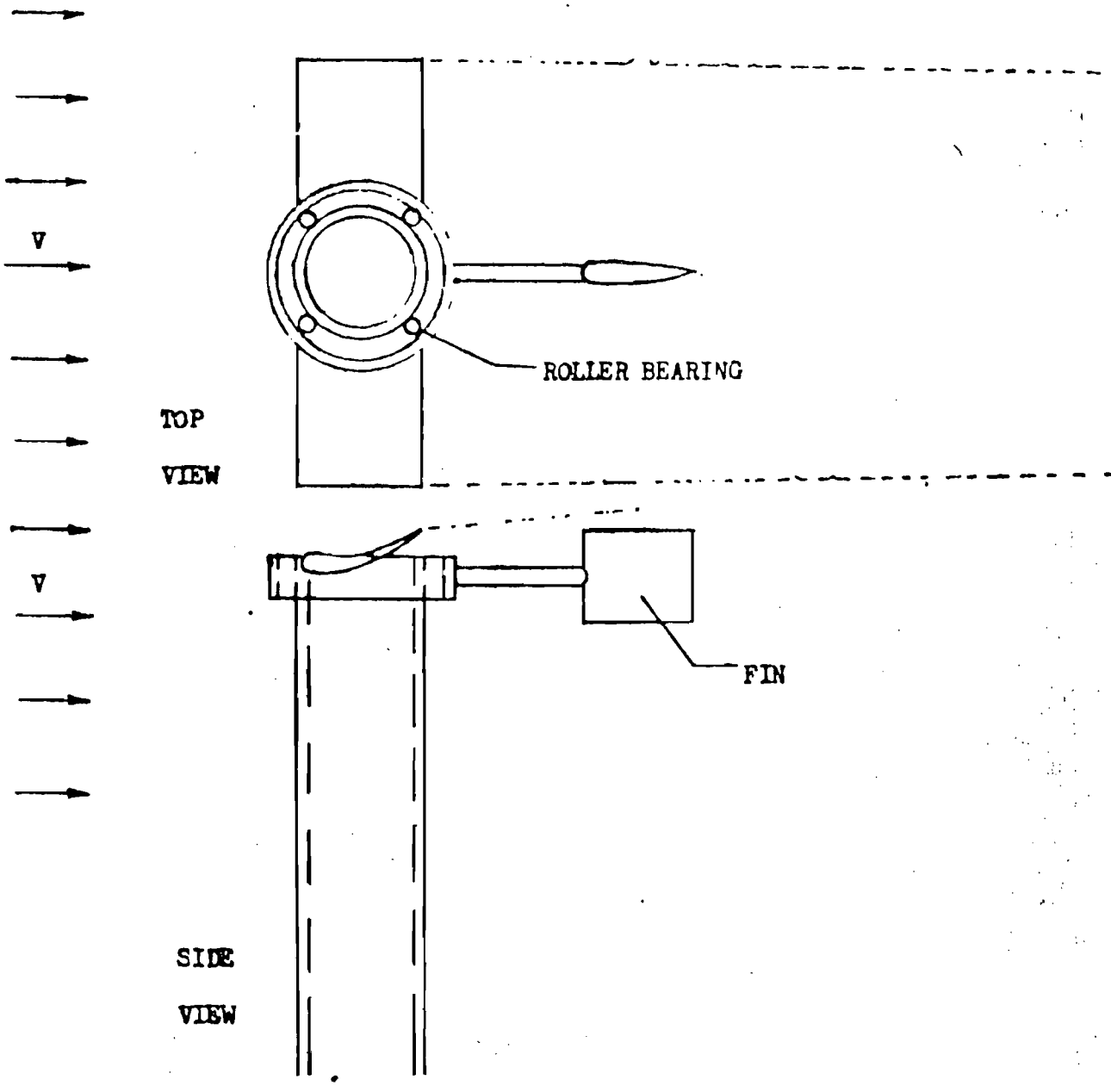


Figure 5. Airfoil mounted on a revolvable carriage and oriented by a vertical tail fin. The airfoil is shown with dihedral angle $\Gamma = 0$. Airfoil controls other than for orientation perpendicular to the relative wind are not shown.

A.D. WEISS
LITHOGRAPH COMPANY, INC.

2025 McKINLEY STREET
HOLLYWOOD, FLORIDA 33020

January 10, 1986

Mr. John A. Guidry,
Supervisor
Air Pollution Permitting
State of Florida
Department of Environmental Regulation
Southeast Florida District
P.O. Box 3858
3301 Gun Club Road
West Palm Beach, Florida 33402-3858

Dear Mr. Guidry:

Enclosed are applications for renewal of permit to operate air pollution source for permit A0-06-38351 along with appropriate fees.

Compliance report tests are being forwarded directly to you from South Florida Environmental Service, 822 Bama Lane, West Palm Beach, Florida.

If you have any questions please call.

Sincerely,

WAYNE PARKER
PLANT MANAGER

Enclosure

WP/mmj

TELEPHONES: HOLLYWOOD (305) 920-7300 - MIAMI (305) 949-5231

STATE OF FLORIDA

DEPARTME. OF ENVIRONMENTAL REGULATION

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

RECEIVED
JAN 13 1986
Dept. of Environmental Reg.
West Palm Beach

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

RECEIVED
$100.00
JAN 13, 1986
Ck 78309
Dept. of Environmental Reg.
West Palm Beach

APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S)

If major alterations have occurred, the applicant should complete the Standard Air Permit Application Form.

Source Type: Offset Lithograph Printing Presses Renewal of DER Permit No. AO-06-38351

Company Name: A. D. Weiss Lithograph Co., Inc. County: Broward

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: 2025 McKinley Street City: Hollywood

UTM: East 7585300 North 2878600

Latitude: __ __° __ __' __ __"N. Longitude: __ __° __ __' __ __"W.

1. Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05.

2. Have there been any alterations to the plant since last permitted? [ ] Yes [X] No If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously.

4. Have previous permit conditions been adhered to? [X] Yes [ ] No If no, explain on a separate sheet and attach.

5. Has there been any malfunction of the pollution control equipment during tenure of current permit? [ ] Yes [X] No If yes, and not previously reported, give brief details and what action was taken on a separate sheet and attach.

6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach.

8. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type	%Wt	Utilization Rate	lbs/hr
PAPER			3,800	Tons/yr.
INK			70	Tons/yr.

B. Product Weight (lbs/hr): _____

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Max/hr**	Maximum Heat Input (MMBTU/hr)
NATURAL GAS	.5 10^6 Cubic Ft.		

D. Normal Equipment Operating Time: hrs/day 24 ; days/wk 5 ; wks/yr 48 ;

hrs/yr (power plants only) _____; if seasonal, describe _____

_____

_____

The undersigned owner or authorized representative*** of A. D. WEISS LITHOGRAPH CO., INC. is fully aware that the statements made in this application for a renewal of a permit to operate an air pollution source are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403, Florida Statutes, and all the rules and regulations of the Department. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted facility.

*During actual time of operation.

**Units: Natural Gas-MMCF/hr; Fuel Oils-barrels/hr; Coal-lbs/hr.

***Attach letter of authorization if not previously submitted

Wayne Parker
Signature, Owner or Authorized Representative
(Notarization is mandatory)

X Wayne Parker, Vice-President Manufacturing
Typed Name and Title

2025 McKinley Street
Address

Hollywood, Florida, 33020
City State Zip

1/6/86
Date

(305) 920-7300
Telephone No.

AO 06-144132

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

JAN 15 1988

Dept. of Environmental Reg.
West Palm Beach

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: PRINTING PRESS #1 (NEW) [X] New[1] [ ] Existing[1]

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

COMPANY NAME: A. D. WEISS LITHOGRAPH CO., INC. COUNTY: BROWARD

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) PRESS #1 BLUE HAZE CONTROL UNIT

SOURCE LOCATION: Street 2025 McKinley Street City Hollywood, Fl.

UTM: East 585.3 North 2878.6

Latitude 26° 01' 31 "N Longitude 80° 08' 51"W

APPLICANT NAME AND TITLE: CHUCK LABSON, PLANT MANAGER

APPLICANT ADDRESS: 2025 McKINLEY STREET, HOLLYWOOD, FLORIDA 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. WEISS LITHO. Co.

I certify that the statements made in this application for a OPERATING 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: Charles M. Labson

Plant Manager
Name and Title (Please Type)

Date: 12/9/87 Telephone No. 920-7300

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 Gordon Myers

GORDON MYERS
Name (Please Type)

AAG CONSULTING INC.
Company Name (Please Type)

109 N. W. 80th Avenue, Margate, Fl. 33063
Mailing Address (Please Type)

Florida Registration No. 36852 Date: 1-8-88 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.

BLUE HAZE EMISSION CONTROL UNIT FOR PRESS #1

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

Start of Construction 12/1/87 Completion of Construction 3/15/88

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.)

$110,000

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

AO-29075R1-7

AO-27091

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?	NO
b. If yes, has "Lowest Achievable Emission Rate" been applied?	NO
c. If yes, list non-attainment pollutants.	N/A
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	N/A
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII.	N/A
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	N/A
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	N/A
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:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PAPER	NONE		7,000	
INK	ALIPHATIC SOLVENTS	30	104	

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

1. Total Process Input Rate (lbs/hr): 7,104

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	
NONE							

[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)
CVM BLUE HAZE CONTROL	NON VOLATILE ORGANIC SOL.	85-98	3	TEST

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NATURAL GAS	1.638 MCF/hr.	3.276 MCF/hr.	3.276 MMBTU/hr.

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

Fuel Analysis:

Percent Sulfur:_____ Percent Ash:_____

Density: _____ lbs/gal Typical Percent Nitrogen:_____

Heat Capacity: 1,000 BTU/lb _____ BTU/gal

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

_____

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

Annual Average _____ Maximum _____

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

_____

_____

_____

_____

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:

Hot exhaust gas enters through the heat exchanger and is cooled by ambient air in a plate-type air-to-air heat exchanger. The precooled exhaust passes through fiberglass filters with the final clean air exhausted to the atmosphere.

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

Reclaimed solvent is sold as fuel

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 [X] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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: 30' ft. b. Diameter: 2.5 ft.

c. Flow Rate: 5017 ACFM d. Temperature: 110 °F.

e. Velocity: 40 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:

Explain method of determining efficiency.
Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[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

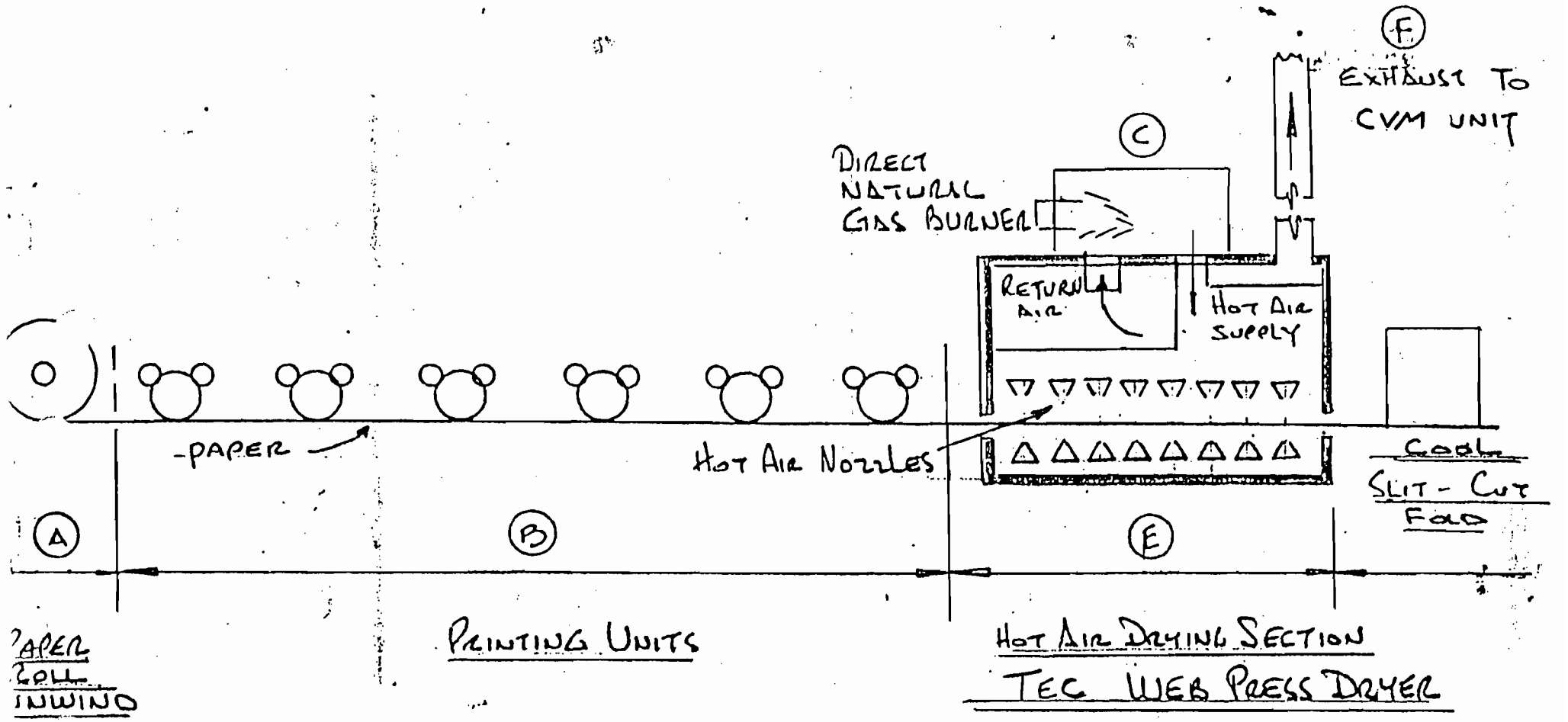
E. Emission Data Used in Modeling

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.

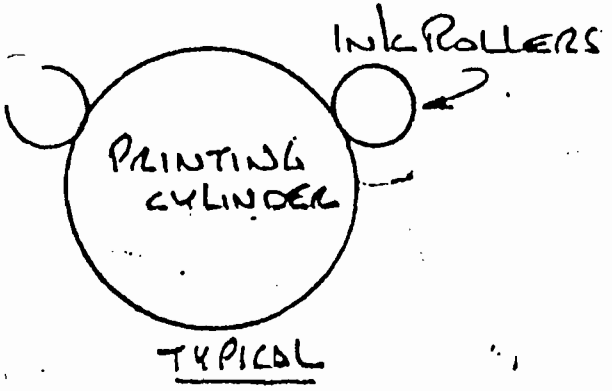
F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologiea (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.



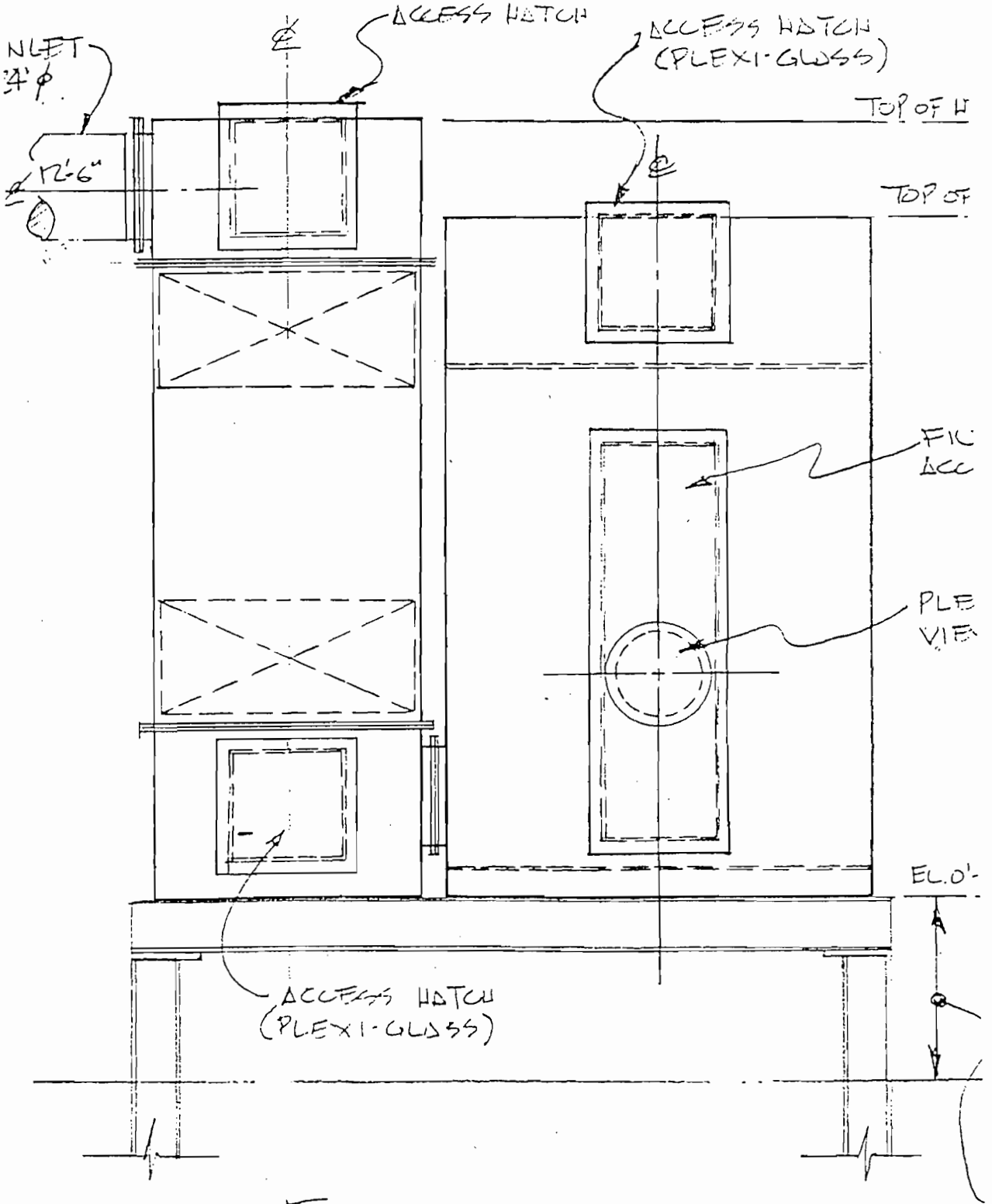
TEC WEB PRESS DRYER



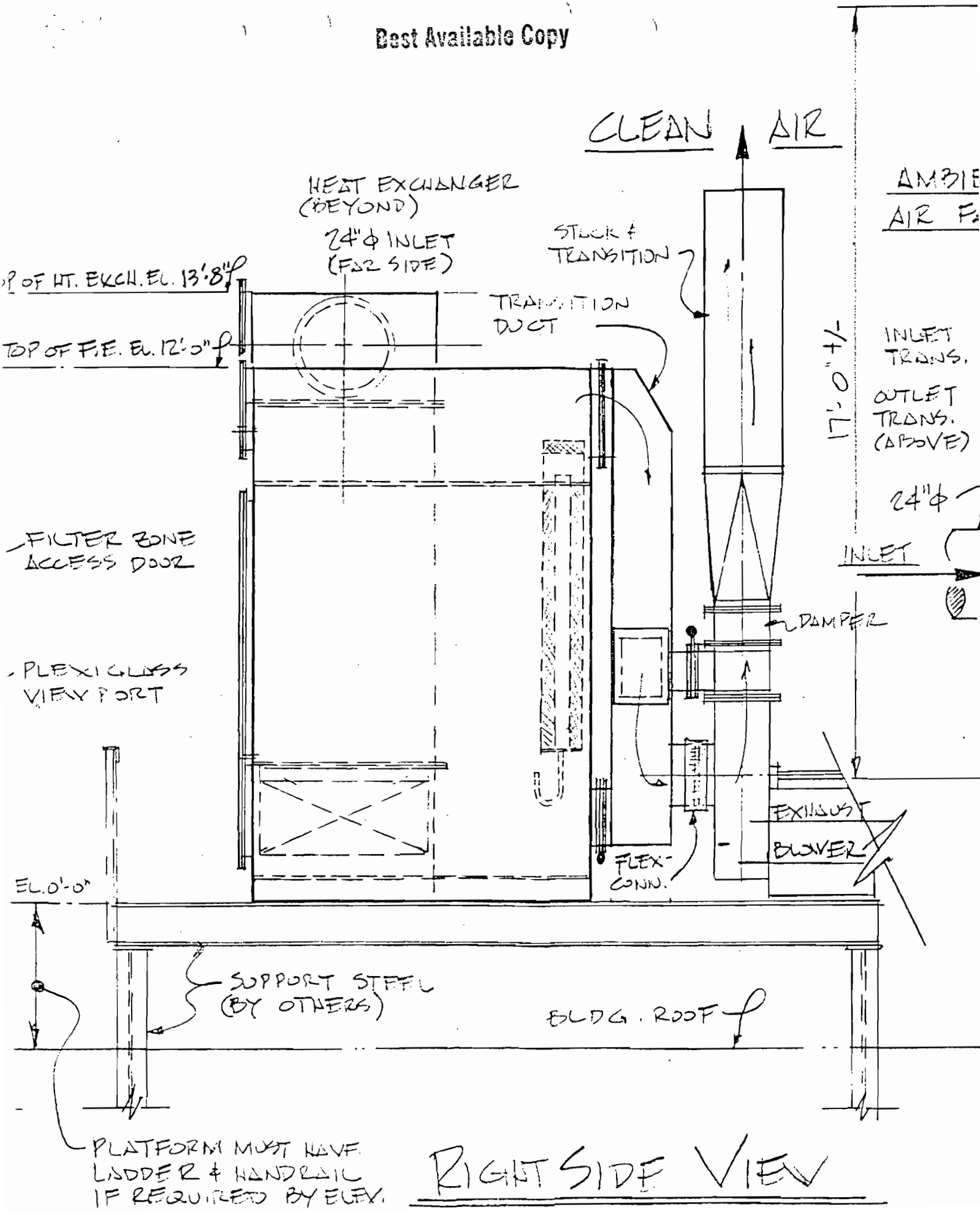
TYPICAL

SCHEMATIC FLOW DIAGRAM
WEB OFFSET - HEATSET PRINTING PROCESS

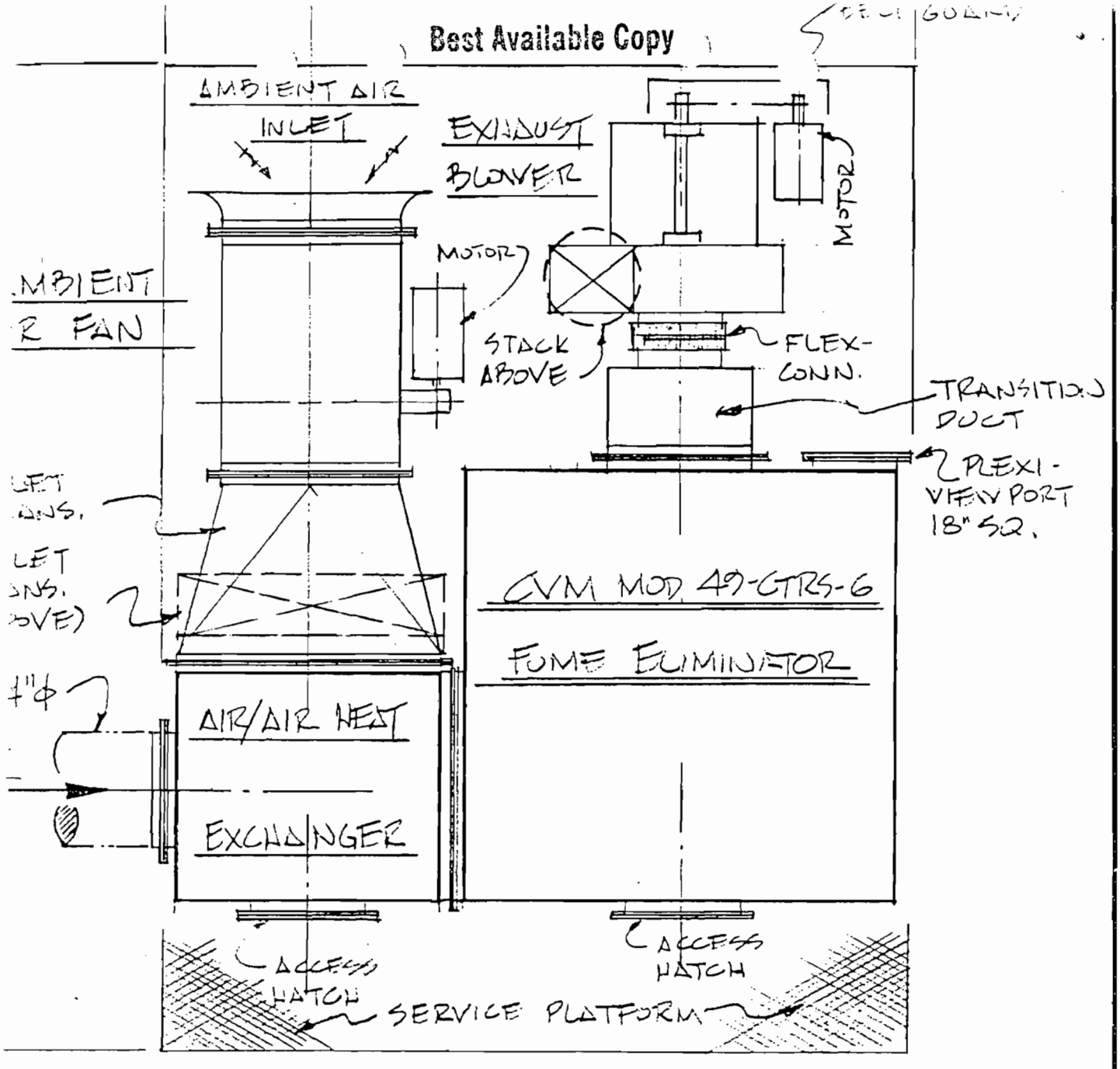
A.D. WEISS LITHOGRAPH CO.
2025 McKinley St
HOLLYWOOD FLA.



ELEVATION



RIGHT SIDE VIEW



PLAN VIEW

CVM CORPORATION		
402 VANDEVER AVENUE		WILMINGTON, DELAWARE 19802
SCALE: NONE	APPROVED BY:	DRAWN BY C.E.T.
DATE: 11-16-87		REVISED

CVM FUME ELIMINATOR SYSTEM

D. E. BRITT ASSOCIATES INC. FT. LAUDERDALE, FLA.

BY J.C. DATE

CHKD. BY G.B. DATE

SUBJECT PLOT PLAN

FOR A.D. WEISS

SHEET NO. 1 OF 2

JOB NO. 1115

20TH AVE. (RES. & COMM.)

TAFT STREET (INDUSTRIAL)

MCKINLEY STREET (INDUSTRIAL)

285'4"

220

185'

185'

147.4'

150'

179'

40

100'

30'

120'

68'

#1 New CVM Model

2 80' Existing MMT MODEL PPFS 3500 BLUE HAZE CONTROL SYSTEM FOR PRESS No. 1 BELOW

#10

Existing MMT Model #8

ROOF ELEV. 15'-10"

ROOF ELEV. 18'-0"

ROOF ELEV. 24'

EXISTING MMT MODEL PPFS-6000 BLUE HAZE CONTROL SYSTEM

#9

SERVICE ALLEY

EXISTING CVM Model #7

NORTH

DIXIE HIGHWAY (RAILROAD)

MATERIAL SAFETY DATA SHEET

FLUSH

DATE OF PREP. : 12-20-85

MAGRUDER COLOR COMPANY, INC.
1029 NEWARK AVENUE
ELIZABETH, NEW JERSEY 07201
(201) 242-1300

SECTION I

PRODUCT CODE: RC-6169-HD

TRADE NAME: CLAR-ALL RED HEATSET FLUSH

CLASSIFICATION: HEATSET DISPERSION OF PIGMENT ORANGE 46:1 C.I.NO.15602:1

SECTION II-HAZARDOUS INGREDIENTS

INGREDIENT:	HAZARD DATA:
TREATED MIDDLE DISTILLATE	OSHA PEL: 5 mg/m^3 (OIL MISTS)

SECTION III - PHYSICAL DATA

BOILING RANGE °F NOT APPLICABLE	VAPOR DENSITY: HEAVIER VS. AIR	LIQUID DENSITY: HEAVIER VS. WATER	TYPE OF ODOR: RESINOUS
APPEARANCE: YELLOWISH-RED PASTE	EVAPORATION RATE: SLOWER VS. BUTYL ACETATE	SOLUBILITY IN WATER: INSOLUBLE PERCENT VOLATILE WT. : 18 % SPECIFIC GRAVITY (H2O=1): 1.12	

SECTION IV-FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION: NOT REGULATED (DOT)	FLASH POINT °F > 400 (METHOD USED) ASTM D-92	LEL: 1.1 %

EXTINGUISHING MEDIA: FOAM CO2 DRY CHEMICAL WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS:
PROTECT CLOSED DRUMS FROM PRESSURE BUILD-UP AND POSSIBLE RUPTURE IF EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES:
USE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POTENTIAL HARMFUL AND/OR IRRITATING FUMES.

LUSH CODE: RC-6169-HD DATE: 12-20-85

SECTION V -- HEALTH HAZARD DATA

FECTS OF OVEREXPOSURE ORAL LD50(RAT): NOT ESTABLISHED
OSHA PEL: 5 mg/m^3 (OIL MISTS)

YE CONTACT MAY CAUSE IRRITATION.
ROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION.
XCESSIVE INHALATION OF VAPORS OR MISTS MAY CAUSE LOCAL IRRITATION,
NEUMONIA, CENTRAL NERVOUS SYSTEM DEPRESSION.

IDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN

IMARY ROUTE(S) OF ENTRY: DERMAL

IERGENCY AND FIRST AID PROCEDURES:
YES: FLUSH WITH WATER FOR 15MINUTES; IF IRRITATION DEVELOPS, GET MEDICAL ATTENTION
KIN: WASH WITH SOAP AND WATER; IF IRRITATION DEVELOPS, GET MEDICAL ATTENTION.
NHALATION: REMOVE TO FRESH AIR; IF BREATHING IS DIFFICULT, GET MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

ODUCT STABILITY: STABLE; HAZARDOUS POLYMERIZATION NOT EXPECTED. THERMAL DECOMPOSITION MAY PRODUCE TOXIC OXIDES OF CARBON AND/OR NITROGEN.

NDITIONS TO AVOID: NO SPECIFIC INCOMPATIBILITY, BUT, AS WITH ALL ORGANIC MATERIALS, AVOID CONTACT WITH STRONG CHEMICAL OXIDIZING AGENTS.

SECTION VII -- SPILL OR LEAK

OCEDURE WHEN MATERIAL SPILLED OR RELEASED: COLLECT INTO SUITABLE CONTAINER FOR APPROPRIATE DISPOSAL; USE RESPIRATOR AS NECESSARY.

STE DISPOSAL METHOD: LANDFILL OR OTHERWISE DISPOSE OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL CONTROL REGULATIONS

SECTION VIII-SPECIAL PROTECTION INFORMATION

NTILATION: LOCAL EXHAUST

OTECTIVE GLOVES: SYNTHETIC GLOVES IF NECESSARY TO PREVENT EXCESSIVE SKIN CONTACT.

SPIRATORY PROTECTION: HIGH APPROVED ORGANIC VAPOR RESPIRATOR IF EXCESSIVE MISTING OCCURS.

EYE PROTECTION: SAFETY GOGGLES IF NECESSARY TO PREVENT PRODUCT CONTACT.

HER PROTECTIVE EQUIPMENT: EYE WASH STATIONS AND EMERGENCY SHOWERS SHOULD BE AVAILABLE.

SECTION IX -- SPECIAL PRECAUTIONS

NDLING AND STORING:
E IN ACCORDANCE WITH GOOD INDUSTRIAL WORKPLACE PRACTICES; AVOID UNNECESSARY CONTACT; WASH OROUGHLY AFTER HANDLING; STORE IN A DRY AREA AWAY FROM EXCESSIVE HEAT.

HER PRECAUTIONS: FOR INDUSTRIAL USE ONLY.

Form Approved
Budget Bureau No. 44-R1307
Approval Expires April 30, 1977

U.S. DEPARTMENT OF LABOR
WORKPLACE STANDARDS ADMINISTRATION
Bureau of Labor Standards

HMIS RATING

FLUSHED COLOR	
HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: APOLLO COLORS INC.	EMERGENCY TELEPHONE NO.: 1-815/744-5650
ADDRESS (Number, Street, City, State, and ZIP Code): 1550 MOUND ROAD, ROCKDALE IL 60436	
CHEMICAL NAME AND SYNONYMS: COPPER PHTHALOCYANINE BLUE GS	TRADE NAME AND SYNONYMS: APOLLO Blue BH-1757
CHEMICAL FAMILY: Phthalonitrile + Cuprous Chloride	FORMULA: Blue 15:3, Color Index 74160, CAS 147-14-8

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS NONE KNOWN			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
NONE		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	500-600°F	SPECIFIC GRAVITY (H_2O=1)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	22.0%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (=1)	N/A
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR	BLUE VISCOUS PASTE - RESINOUS ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used): Above 200°F	FLAMMABLE LIMITS: N/A	LEL	UEL
EXTINGUISHING MEDIA: Carbon Dioxide, Foam or Dry Chemical			
SPECIAL FIRE FIGHTING PROCEDURES: Water Spray System may be used			
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: NOT ESTABLISHED

EFFECTS OF OVEREXPOSURE: Contact with eyes may result in strong irritation. Contact with skin may result in irritation. Ingestion may result in gastric disturbance. Prolonged or repeated inhalation of vapors may cause headache, dizziness or nausea.

EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Wash affected skin areas thoroughly with soap and water. If irritation develops, consult a physician.

INTERNAL: If swallowed, DO NOT induce vomiting. Dilute with water or milk. Get immediate medical attention. If inhaled, move to fresh air. Aid in breathing, if necessary, and get medical attention.

CLOTHING: Remove and launder contaminated clothing before reuse.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Direct heat, strong
	STABLE	X	oxidizing agents, high temperatures.

INCOMPATARILITY (Materials to avoid): Glycols, Alcohols, etc.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and oxides of nitrogen.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: Not Applicable
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: This is not a regulated product. Spills should be contained, absorbed and placed in suitable containers for disposal in a licenses facility and in accordance with Local, State and Federal Laws.

WASTE DISPOSAL METHOD: Incinerate or bury at a licensed facility. Do not discharge into waterways or sewer systems

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Approved organic solvent vapor respirator as necessary.

VENTILATION	LOCAL EXHAUST: Recommended		SPECIAL
	MECHANICAL (General): None		OTHER
PROTECTIVE GLOVES: Recommended		EYE PROTECTION: Safety Goggles	

OTHER PROTECTIVE EQUIPMENT: Coveralls, apron, boots as necessary to prevent skin contact.

Date Prepared: November 1, 1985

Prepared By: 

Form Approved
Budget Bureau No. 44-R1327
Approval Expires April 30

U.S. DEPARTMENT OF LABOR
WORKPLACE STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

Form No. LSB-MDS-1
Rev. 1-86

FLUSHED COLOR
HEALTH
FLAMMABILITY
REACTIVITY

SECTION I

MANUFACTURER'S NAME: APOLLO COLORS INC.	EMERGENCY TELEPHONE NO.: 1-815/744-5650
ADDRESS (Number, Street, City, State, and ZIP Code): 1550 MOUND ROAD, ROCKDALE IL 60436	
CHEMICAL NAME AND SYNONYMS: LITHOL RUBINE BS	TRADE NAME AND SYNONYMS: APOLLO Red RUH-1758
CHEMICAL FAMILY: Para Toluene Meta Sulfonic Acid + Beta Oxy Napthoic Acid	FORMULA: Red 57:1 C.I. 15850:1. CAS 5281-04-9

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	NONE KNOWN		BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
NONE		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	500-600°F	SPECIFIC GRAVITY (H_2O=1)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	26.0%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (=1)	N/A
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR	Red Viscous Paste - Resinous Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used): Above 200°F	FLAMMABLE LIMITS: N/A	LEL	UEL
EXTINGUISHING MEDIA: Carbon Dioxide, Foam or Dry Chemical			
SPECIAL FIRE FIGHTING PROCEDURES: Water Spray System may be used			
UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: NOT ESTABLISHED

EFFECTS OF OVEREXPOSURE: Contact with eyes may result in strong irritation. Contact with skin may result in irritation. Ingestion may result in gastric disturbance. Prolonged or repeated inhalation of vapors may cause headache, dizziness or nausea.

EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Wash affected skin areas thoroughly with soap and water. If irritation develops, consult a physician.

INTERNAL: If swallowed, DO NOT induce vomiting. Dilute with water or milk. Get immediate medical attention. If inhaled, move to fresh air. Aid in breathing, if necessary, and get medical attention.

CLOTHING: Remove and launder contaminated clothing before reuse.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Direct heat, strong oxidizing agents, high temperatures.
	STABLE	X	

INCOMPATABILITY (Materials to avoid): Glycols, Alcohols, etc.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and oxides of nitrogen.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: Not Applicable
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: This is not a regulated product. Spills should be contained, absorbed and placed in suitable containers for disposal in a licenses facility and in accordance with Local, State and Federal Laws.

WASTE DISPOSAL METHOD: Incinerate or bury at a licensed facility. Do not discharge into waterways or sewer systems

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Approved organic solvent vapor respirator as necessary.

VENTILATION	LOCAL EXHAUST: Recommended		SPECIAL
	MECHANICAL (General): None		OTHER
PROTECTIVE GLOVES: Recommended		EYE PROTECTION: Safety Goggles	

OTHER PROTECTIVE EQUIPMENT: Coveralls, apron, boots as necessary to prevent skin contact.

Date Prepared: November 1, 1985

Prepared By: W. D. Bykerk

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
MAGRUDER COLOR CO. INC.	201-242-1300
ADDRESS (Number, Street, City, State, and ZIP Code) 1029 NEWARK AVE. ELIZABETH N.J. 07201	
CHEMICAL NAME AND SYNONYMS DIARYLIDE YELLOW AAA ATLAS SET	TRADE NAME AND SYNONYMS YA-8597 AS
CHEMICAL FAMILY DIAZO YELLOW HEATSET FLUSH	FORMULA PIGMENT YELLOW 12 C.I. 21090

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS NOT APPLICABLE			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
AVOID CONTACT WITH CHEMICAL OXIDIZING		
AGENTS AS WITH ANY ORGANIC MATERIAL		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	1.04
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	25%
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR	YELLOW PASTE, RESINOUS ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) 220° F CC.	FLAMMABLE LIMITS	Lel 1.1	Uel 1.1

EXTINGUISHING MEDIA
USE NFPA CLASS B EXTINGUISHER (CARBON DIOXIDE, DRY CHEMICAL OR FOAM

SPECIAL FIRE FIGHTING PROCEDURES
WATER SPRAY MAY COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE AUTO-IGNITION ON EXPOSURE TO EXTREME HEAT.

UNUSUAL FIRE AND EXPLOSION HAZARDS
KEEP CONTAINERS TIGHTLY CLOSED.
ISOLATE FROM HEAT, SPARKS AND FLAME.

(Continued on reverse side)

THRESHOLD LIMIT VALUE: NOT ESTABLISHED. GENERALLY CONSIDERED AS NON TOXIC.

EFFECTS OF OVEREXPOSURE: EXCESSIVE INHALATION MAY CAUSE HEADACHE, DIZZINESS AND NAUSEA. PROLONGED SKIN CONTACT MAY CAUSE IRRITATION. EYE IRRITATION IS ALSO POSSIBLE

EMERGENCY AND FIRST AID PROCEDURES: INHALATION: REMOVE FROM EXPOSURE, RESTORE BREATHING, CALL PHYSICI

EYES: FLUSH WITH WATER FOR 15 MIN. CALL PHYSICIAN

SKIN: WASH WITH SOAP AND WATER, REMOVE CONTAMINATED CLOTHING

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. AVOID BREATHING CONCENTRATED VAPORS. VENTILATE AREA. ADD ABSORBENT, AND SCOOP INTO WASTE CONTAINER. WASH OR STEAM CLEAN AREA.

WASTE DISPOSAL METHOD: IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL LAW

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: USE BUR MINES APPROVED RESPIRATORS.

VENTILATION	LOCAL EXHAUST: GOOD		SPECIAL
	MECHANICAL *(General)*: BEST		OTHER

PROTECTIVE GLOVES: COTTON	EYE PROTECTION: GOGGLES IF NEEDED

OTHER PROTECTIVE EQUIPMENT: AVOID PROLONGED SKIN CONTACT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP AWAY FROM HEAT SPARKS AND OPEN FLAMES

OTHER PRECAUTIONS: STORE IN COOL DRY AREA

GPO 934-110

MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

H	1
F	1
R	0
PP	B

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
PMC SPECIALTIES GROUP, INC.	(312) 660-4016
ADDRESS (Number, Street, City, State, and ZIP Code)	
735 E. 115th Street, Chicago, IL 60628	
CHEMICAL NAME AND SYNONYMS	**TRADE NAME AND SYNONYMS**
Organic Color Pigments	Flushed Alkali Blue R (FL-16-518)
CHEMICAL FAMILY	**FORMULA**
Flushed Color Pigments	Not Applicable

SECTION II HAZARDOUS INGREDIENTS

MATERIAL	%	TLV (Units)
Not Applicable		

SECTION III PHYSICAL DATA

BOILING POINT, 760 mm. Hg	> 460°F (238°C) 700°F (371°C)	FREEZING POINT	Not Applicable
SPECIFIC GRAVITY (H_2O = 1)	1.01	VAPOR PRESSURE at 20° C.	1 mm. Hg
VAPOR DENSITY (air = 1)	Not Applicable	SOLUBILITY IN WATER, % by wt. at 20° C.	Unknown
PER CENT VOLATILES BY VOLUME (at 100°C and 760 mm. Hg)	0	EVAPORATION RATE (Butyl Acetate = 1)	Not Applicable
APPEARANCE AND ODOR	Heavy blue paste, mild aliphatic hydrocarbon solvent odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	> 200°F (93.3°C) COC	AUTOIGNITION TEMPERATURE			
FLAMMABLE LIMITS IN AIR, % by volume	LOWER		UPPER		

EXTINGUISHING MEDIA	Foam, CO_2, water (may cause frothing), dry chemicals
SPECIAL FIRE FIGHTING PROCEDURES	Not Applicable
UNUSUAL FIRE AND EXPLOSION HAZARDS	Not Applicable

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
None Established

EFFECTS OF OVEREXPOSURE
Dermal LD_{50} (rabbit) >2gm/kg, 16 CFR (rev. 1-1-75) 1500.3 (C) (2)

EMERGENCY AND FIRST AID PROCEDURES

Wash affected area well with mild soap and water.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove with inert absorbent materials

WASTE DISPOSAL METHOD

Sanitary landfill in accordance with local, state, and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST X	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Rubber Gloves	EYE PROTECTION Safety Glasses

OTHER PROTECTIVE EQUIPMENT

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid high temperatures, sparks, flames and freezing

OTHER PRECAUTIONS

DATE PREPARED 11-1-85

Best Available Copy

MATERIAL SAFETY DATA SHEET

FOR PRINTING INK AND RELATED MATERIALS

INFORMATION ON THIS FORM IS PROPRIETARY INFORMATION AND FURNISHED SOLELY FOR THE USE OF OUR CUSTOMERS

DATE OF PREP 10/10/85 PREPARED BY W.R. Martens

HAZARD RATINGS

Minimal 0
Slight 1
Moderate 2
Serious 3
Severe 4

HEALTH
FLAMMABILITY
REACTIVITY

Section I

MANUFACTURER'S NAME: Superior Varnish & Drier Company

STREET ADDRESS: Rte. 130 & Clements Ave. CITY, STATE AND ZIP CODE: Pennsauken, NJ 08110

EMERGENCY TELEPHONE NUMBER: (609) 662-0118

PRODUCT CLASS: Litho Ink Vehicle

TRADE NAME: Heatset Gel MANUFACTURER'S CODE IDENTIFICATION: #6621

Section II - HAZARDOUS INGREDIENTS

Ingredient:	Hazard Data:
35% Aliphatic hydrocarbon solvent - hydrotreated	OSHA PEL for oil mist 5 mg per cubic meter. Avoid breathing vapor. Vapor pressure 0.05 mm Hg @ 68°F.
7% Tridecanol	Slight inhalation hazard. May produce choking response when present as warm vapor No TLV established. Vapor pressure 5 mm Hg @ 68°F.
Varnish	May produce mild eye irritation on contact with liquid or vapor.

Section III - PHYSICAL DATA

BOILING RANGE °F	VAPOR DENSITY: HEAVIER ☒ vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ vs. water LIGHTER ☒	TYPE OF ODOR
464-525			Oleoresin
APPEARANCE	EVAPORATION RATE FASTER ☐ vs. Butyl Acetate SLOWER ☒	PERCENT VOLATILE WT. 42%	
Amber viscous liquid			

Section IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION		FLASH POINT °F 215 (Method Used) SETA	LEL 1.1% by vol. in a for solver
OSHA	Combustible Liquid		
DOT	Class IIIB		

EXTINGUISHING MEDIA:

X- FOAM ☐ "ALCOHOL" FOAM ☒ CO2 ☒ DRY CHEMICAL ☒ WATER FOG ☐ OTHE

UNUSUAL FIRE AND EXPLOSION HAZARDS May produce CO, CO2, dense smoke on burning. No unusual explosion hazards.

SPECIAL FIREFIGHTING PROCEDURES Self-contained breathing apparatus.

Section V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE Liquid contact with eyes may cause burning and irritation. Excessive skin contact may cause dermatitis and local irritation in sensitive individuals. Excessive inhalation of solvent vapor may cause dizziness, nausea, pneumonia, or coma.

PRIMARY ROUTE(S) OF ENTRY: X DERMAL X INHALATION

EMERGENCY AND FIRST AID PROCEDURES For eye contact, wash with copious amounts of water for 15 minutes. Call a physician. For skin contact, wash with soap and water. Maintain good hygiene. For inhalation, remove to fresh air.

Section VI - REACTIVITY DATA

PRODUCT STABILITY X STABLE ☐ UNSTABLE

CONDITIONS TO AVOID Excessive heat, sources of ignition, and strong oxidizing agents.

Section VII - SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED Dam with sand or approved booms for large spills. Clean up all spills at once. Ink solvent or mineral spirits will aid cleanup.

WASTE DISPOSAL METHOD In accord with local, state, and federal regulations.

Section VIII - SPECIAL PROTECTION INFORMATION

VENTILATION Normal fresh air usually sufficient. In confined areas, provide 1 cu. ft. per min. per sq. ft. of floor area.

PROTECTIVE GLOVES Not normally required. For sensitive or allergic persons, synthetic plastic or neoprene.

RESPIRATORY PROTECTION Not normally required.

EYE PROTECTION Safety glasses should be worn in industrial applications.

OTHER PROTECTIVE EQUIPMENT None.

Section IX - SPECIAL PRECAUTIONS

HANDLING AND STORING Store in closed containers in a cool, well-ventilated area. Control sources of ignition.

OTHER PRECAUTIONS Do not reuse drums for other materials. Do not flame cut or weld drums.

MATERIAL SAFETY DATA SHEET

FOR PRINTING INK AND RELATED MATERIALS

DATE OF PREP 11/11/86 PREPARED BY W.R. Martens

HAZARD RATINGS

Minimal 0
Slight 1
Moderate 2
Serious 3
Severe 4

HEALTH	0
FLAMMABILITY	1
REACTIVITY	0

Section I

MANUFACTURER'S NAME: Superior Varnish & Drier Company

STREET ADDRESS: Rte. 130 & Clements Ave. CITY, STATE AND ZIP CODE: Pennsauken, NJ 08110

EMERGENCY TELEPHONE NUMBER: (609) 662-0118

PRODUCT CLASS: Litho Ink Vehicle

TRADE NAME: Heatset Gel Varnish MANUFACTURER'S CODE IDENTIFICATION: #6345

Section II - HAZARDOUS INGREDIENTS

Ingredient:	Hazard Data:
98% Aliphatic hydrocarbon solvent	OSHA PEL for oil mist 5 mg per cubic meter. Avoid breathing vapor. Vapor pressure 0.04 mm Hg @ 68°F.
1% Tridecanol	Slight inhalation hazard. May produce choking response when present as warm vapor. No TLV established. Vapor pressure 5 mm Hg @ 68°F. May produce mild eye irritation on contact with liquid or vapor.

Section III - PHYSICAL DATA

BOILING RANGE °F	VAPOR DENSITY: HEAVIER ☒X vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ vs. water LIGHTER ☒X	TYPE OF ODOR
464-516			Oleoresinous
APPEARANCE Amber viscous gel	EVAPORATION RATE FASTER ☐ vs. Butyl Acetate SLOWER ☒X	PERCENT VOLATILE WT. 39%	

Section IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION		FLASH POINT °F 210 (Method Used) SETA	LEL 1.1% by vol. in air for solvent
	OSHA Combustible Liquid DOT Class IIIB		

EXTINGUISHING MEDIA:

FOAM ☐"ALCOHOL" FOAM ☒CO2 ☒DRY CHEMICAL ☒WATER FOG ☐OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS May produce CO, CO2, dense smoke on burning. No unusual explosion hazards.

SPECIAL FIREFIGHTING PROCEDURES Self-contained breathing apparatus.

Section V - HEALTH HAZARD DATA

ECTS OF OVEREXPOSURE: Liquid contact with eyes may cause burning and itation. Excessive skin contact may cause dermatitis and local itation in sensitive individuals. Excessive inhalation of solvent or may cause dizziness, nausea, pneumonia, or coma.

MARY ROUTE(S) OF ENTRY: X DERMAL X INHALATION

RGENCY AND FIRST AID PROCEDURES: For eye contact, wash with copious amounts of ter for 15 minutes. Call a physician. For skin contact, wash with ap and water. Maintain good hygiene. For inhalation, remove to esh air.

Section VI - REACTIVITY DATA

DUCT STABILITY: XSTABLE ☐UNSTABLE

NDITIONS TO AVOID: Excessive heat, sources of ignition, and strong oxidizing agents.

Section VII - SPILL OR LEAK PROCEDURES

OCEDURE WHEN MATERIAL SPILLED OR RELEASED: Dam with sand or approved booms for rge spills. Clean up all spills at once. Ink solvent or mineral irits will aid cleanup.

STE DISPOSAL METHOD: In accord with local, state, and federal regulations.

Section VIII - SPECIAL PROTECTION INFORMATION

NTILATION: Normal fresh air usually sufficient. In confined areas, provide 1 cu. ft. per min. per sq. ft. of floor area.

OTECTIVE GLOVES: Not normally required. For sensitive or allergic persons, synthetic plastic or neoprene.

SPIRATORY PROTECTION: Not normally required.

EYE PROTECTION: Safety glasses should be worn in industrial applications.

HER PROTECTIVE EQUIPMENT: None.

Section IX - SPECIAL PRECAUTIONS

NDLING AND STORING: Store in closed containers in a cool, well-ventilated ea. Control sources of ignition.

HER PRECAUTIONS: Do not reuse drums for other materials. Do not ame cut or weld drums.

NAPIM 11-71

MATERIAL SAFTY DATA SHEET
(For Printing Ink and Related Materials)

HEALTH-------- 1
FLAMMABILITY-- 1
REACITVITY---- 0

Section I

Manufacturer's Name			Emergency Phone No.
ALVAR Inc.			(309) 248-7523
Address	**City**	**State**	**Zip Code**
Box 7A RR 1	Washburn	IL	61570
Product Class	**Trade Name**		**Manufacturers Code**
Oleoresinous vehicle	Heatset Varnish		9226

Section II -- HAZARDOUS INGREDIENTS

none

Section III -- PHYSICAL DATA

Boiling Range: 464-525 F Type of Odor: very slight linseed odor
Vapor Density vs AIR Heavier: Y Lighter:
Liquid Density vs WATER Heavier: Y Lighter:
Evaporation Rate vs ETHER Faster: Slower: Y
Color and Appearance: amber slightly gelled liquid
Percent of Volatile Weight: 38.70 %

Section IV -- FIRE & EXPLOSION DATA

Flash Point: 215 degrees F Test Method Pensky Martin Open Cup
Extinguishing Media: dry chemicals, CO2, water
Special Fire Fighting Procedures: treat as an oil fire
Unusual Fire & Explosion Hazards: none

Section V -- HEALTH HAZARD DATA

Threshold Limit: not determined
Effects of Over Exposure: may cause contact dermatitis
Emergency First Aid: flush and wash with soap and water

Section VI -- REACTIVITY DATA

Product Stability Stable: Y Unstable:
Conditions to Avoid: contact with open flames

Section VII -- SPILL OR LEAK PROCEDURES

Spilled Material: scoop up large spills, treat residue as an oil
Waste Disposal: incinerate, dispose solids in a sanitary land fill

Section VIII -- SPECIAL PROTECTION INFORMATION

Ventilation: local exaust
Eye Protection: none in normal use of product
Skin Protection: rubber gloves for prolonged contact
Respitory Protection: none in normal use of product

Section IX -- SPECIAL PRECAUTIONS

Storage: keep sealed and at normal room temperature
Handling: keep container sealed when not in use

ATERIAL SAFETY DATA SHEET

R PRINTING INK AND RELATED MATERIALS

HMIS RATINGS

Minimal 0
Slight 1
Moderate 2
Serious 3
Severe 4

HEALTH	0*
FLAMMABILITY	1
REACTIVITY	0

OF PREP. 10/8/85 PREPARED BY W.R. Martens
sed 12/30/85

Section I

UFACTURER'S NAME: Superior Varnish & Drier Co.
ET ADDRESS: Rte. 130 & Clements Ave. CITY, STATE AND ZIP CODE: Pennsauken, NJ 08110
GENCY TELEPHONE NUMBER: (609) 662-0118
UCT CLASS: Litho Ink Vehicle
E NAME: Heatset Gel Varnish MANUFACTURER'S CODE IDENTIFICATION: #4710

Section II - HAZARDOUS INGREDIENTS

Ingredient:	Hazard Data:
% Aliphatic hydrocarbon lvent	OSHA PEL for oil mist 5 mg per cubic meter. Avoid breathing vapor. Vapor pressure 0.04 mm Hg @ 68°F.
% Tridecanol	Slight inhalation hazard - may produce choking response when present as warm vapor. No TLV established. Vapor pressure 5 mm Hg @ 68°F. May produce mild eye irritation on contact with liquid or vapor.

CONTAINS MATERIAL WHICH SIMILAR PRODUCTS HAVE SHOWN CAUSE SKIN TUMORS IN LABORATORY RATS.

Section III - PHYSICAL DATA

ING RANGE °F	VAPOR DENSITY: HEAVIER X vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ WPG 7.7 vs. water LIGHTER X	TYPE OF ODOR
164-578			Oleoresinous
EARANCE Amber t viscous gel	EVAPORATION RATE FASTER ☐ vs. Butyl Acetate SLOWER X	PERCENT VOLATILE WT. 43%	

Section IV - FIRE & EXPLOSION DATA

MMABILITY CLASSIFICATION		FLASH POINT °F	LEL
	OSHA Combustible Liquid DOT Class IIIB	210 (Method Used) SETA	1.1% by vol. in air for solvent

NGUISHING MEDIA:

AM ☐"ALCOHOL" FOAM X CO2 X DRY CHEMICAL X WATER FOG ☐OTHER

SUAL FIRE AND EXPLOSION HAZARDS May produce CO, CO2, dense smoke on burning. nusual explosion hazards.

IAL FIREFIGHTING PROCEDURES Self-contained breathing apparatus.

Section V - HEALTH HAZARD DATA

TS OF OVEREXPOSURE Liquid contact with eyes may cause burning and ritation. Excessive skin contact may cause dermatitis and local rritation in sensitive individuals. Excessive inhalation of solvent apor may cause dizziness, nausea, pneumonia, or coma.

PRIMARY ROUTE(S) OF ENTRY: X DERMAL X INHALATION

MERGENCY AND FIRST AID PROCEDURES For eye contact, wash with copious amounts of water for 15 minutes. Call a physician. For skin contact, wash with soap and water. Maintain good hygiene. For inhalation, remove to fresh air.

Section VI - REACTIVITY DATA

RODUCT STABILITY X STABLE UNSTABLE

ONDITIONS TO AVOID Excessive heat, sources of ignition, and strong oxidizing agents.

Section VII - SPILL OR LEAK PROCEDURES

ROCEDURE WHEN MATERIAL SPILLED OR RELEASED Dam with sand or approved booms for arge spills. Clean up all spills at once. Ink solvent or mineral pirits will aid cleanup.

ASTE DISPOSAL METHOD In accord with local, state, and federal regulations.

Section VIII - SPECIAL PROTECTION INFORMATION

ENTILATION Normal fresh air usually sufficient. In confined areas, provide 1 cu. ft. per min. per sq. ft. of floor area.

ROTECTIVE GLOVES Not normally required. For sensitive or allergic persons, synthetic plastic or neoprene.

ESPIRATORY PROTECTION Not normally required.

EYE PROTECTION Safety glasses should be worn in industrial applications.

THER PROTECTIVE EQUIPMENT None.

Section IX - SPECIAL PRECAUTIONS

ANDLING AND STORING Store in closed containers in a cool, well-ventilated rea. Control sources of ignition.

THER PRECAUTIONS Do not reuse drums for other materials. Do not lame cut or weld drums.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 6 ; 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? 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. N/A

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. N/A

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A

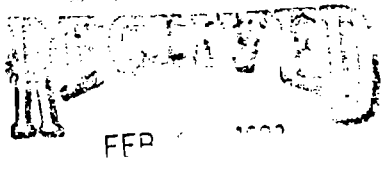
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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.



MATERIAL SAFETY DATA SHEET

DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219, COLUMBUS, OHIO 43216 - (614) 889-3333

Ashland

3 A

ACCEPTED BY O.S.H.A. AS ESSENTIALLY IDENTICAL TO O.S.H.A. FORM 20

24-HOUR EMERGENCY TELEPHONE: 606-329-3333 (LOCATED AT ASHLAND, KENTUCKY)

ASHLAND PRODUCT NAME: WEISS BLANKET WASH

DATA SHEET NO. 0100327-000
LATEST REVISION DATE 12/01-01357

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: SOLVENT BLEND

HAZARD CLASSIFICATION (10) COMBUSTIBLE (123.115)

SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL	
ALIPHATIC HYDROCARBONS	30-60 %	500 PPM	(1)
AROMATIC HYDROCARBONS	>60 %	100 PPM	

(1): NIOSH RECOMMENDS A TLV OF 350 MG/CUM.

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR COMPONENT(>60 %)	315.00 DEG F (157.22 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR COMPONENT(30-60 %)	2.00 MMHG @ 68.00 DEG F (20.00 DEG C)
VAPOR DENSITY		HEAVIER THAN AIR
SPECIFIC GRAVITY		LESS THAN WATER
PERCENT VOLATILES		100.00 %
EVAPORATION RATE		SLOWER THAN ETHER

SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT(CLOSED CUP) 100-200 DEG F
(38-94 DEG C)

LOWER EXPLOSIVE LIMIT (LOWEST VALUE OF COMPONENT) 1.0 %

EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE., VARIOUS HYDROCARBONS, ETC.

SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

To release the plates

BEST AVAILABLE COPY

PAID

JAN - 7 1981

Dept. of Environmental Reg.
West Palm Beach

DER-WPB	Copy ✓ Route # Action A		
DM		PER.	✓ DADE
SDM		ENF.	BROW.
FT.F.		T/A	P.BCH.
AA		BAG	E. PD.

REMARKS:

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR POLLUTION SOURCES
CERTIFICATE OF COMPLETION OF CONSTRUCTION*

PERMIT NO. AC063599A DATE: 12-10-80

Company Name: A.D. Weiss Lithograph Inc. County: Broward

Source Identification(s): Web Press # 15

Actual costs of serving pollution control purpose: $ 0 (Reuse of existing equipment)

Operating Rates: N/A Design Capacity: Same as before

Expected Normal N/A During Compliance Test N/A

Date of Compliance Test: N/A (Attach detailed test report)

Test Results:	Pollutant	Actual Discharge	Allowed Discharge
	N/A		

Date plant placed in operation: Not operating - awaiting your permit to operate

This is to certify that, with the exception of deviations noted**, the construction of the project has been completed in accordance with the application to construct and Construction Permit No. AC063599A dated .

A. Applicant:

Name of Person Signing (Type)

J. W. Wilson V.P. Mfg.
Signature of Owner or Authorized Representative and Title

Date: 12/24/80 Telephone: 920-7306

B. Professional Engineer:

Ben Karp P.E.
Name of Person Signing (Type)

Ben Karp P.E
Signature of Professional Engineer

Company Name

Florida Registration No. 11558

Date: Dec 12, 1980

(Seal)

555 West 18 Street, Hialeah Fla. 33010
Mailing Address

885-4943
Telephone Number

*This form, satisfactorily completed, submitted in conjunction with an [illegible] application to construct permit and payment of application processing fee will be accepted in lieu of an application to operate.

**As built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.

RECEIVED
DEC 31 1980
Dept. of Environmental Reg.
West Palm Beach

RECEIVED
JAN 7 1981
Dept. of Environmental Reg.
West Palm Beach

DER FORM 17-1.122(20) Page 1 of 1

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

Source Type: [X] **Air Pollution** [ ] **Incinerator**

Application Type: [X] Construction [ ] Operation [ ] Modification [ ] Renewal of DER Permit No. _____

Company Name: A.D. Weiss Lithograph Co. County: Broward

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: 2025 McKinley Street City: Hollywood, Florida

UTM: East 7585300 North 2878600

Latitude: ___ ___ ° ___ ___ ' ___ ___ "N. Longitude: ___ ___ ° ___ ___ ' ___ ___ "W.

Appl. Name and Title: J.W. Wilson, Vice President, Manufacturing

Appl. Address: 2025 McKinley Street, Hollywood, Fla 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative of* A.D.Weiss Lithograph Co.

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provisions 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 nontransferable and I will promptly notify the Department upon sale or legal transfer of the permitted establishment.

J.W. Wilson
Name of Person Signing (please Type or Print)

J W Wilson
Signature of the Owner or Authorized Representative and Title

Date: 5/16/79 Telephone No.: 920-7300

*Attach a letter of authorization.

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA

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 judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the Department. It is also agreed that the undersigned will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signature: Ben Karp

Name: Ben Karp
(Please Type)

Company Name: _____

Florida Registration Number: 11558

(Affix Seal)

Mailing Address: 555 West 18 Street
Hialeah, Florida 33010

Telephone No.: 885-4943

Date: _____

MAY 22 1979

Dept. of Environmental Reg.
West Palm Beach

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.

1- Lithograph Printing Press with recirculation of drying air thru combustion Chamber and exhausting thru stack 90' above ground level.

B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Start of Construction: 6/1/79 Completion of Construction: 10/1/79

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

N/A

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

Operation permit A 06 - 2261 A06 - 2693 A06 - 17584
A06 - 17486 A06 -17585
A06 - 17582 A06- 17586
A06 - 17583 A06 -17587

E. Is the emission point considered to be a New* or Existing* source, as defined in Chapter 17-2.02(5) & (6), Florida Administrative Code?
_____ New _____ Existing

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

G. Normal Equipment Operating Time: hrs/day: 24 ; days/wk: 6 ; wks/yr: 52 ; if seasonal, describe: _____

*Note

New Source: any source which came into existence, began operation or construction, or received a permit for the latter on or after January 18, 1972.

Existing Source: any source in existence, operating or under construction (or with a permit to construct) prior to January 18, 1972.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES

(other than incinerators)

A. Raw Materials and Chemicals Used in Your Process:

Description	Utilization Rate lbs./hr.	Relate to Flow Diagram
Paper		
Ink	87 tons day	A
	2500 lbs/day	B

B. Process Rate:

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

2) Product Weight (lbs/hr): 616 #/Hr Magazines

C. Airborne Contaminants Discharged:

Name of Contaminant	Actual Discharge*		Allowed Discharge Rate Per Ch. 17-2, F.A.C.**	Allowable Discharge*** (lbs./hr.)	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulates	.010 lbs	day	n/a	n/a	F
Odor	Minimal (not measurable)		n/a	n/a	F

D. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency†	Range of Particles Size Collected (in microns)	Basis for Efficiency††
After Burner section		n/a	339° F	D
92' stacks		n/a	339° F	F

*Estimate only if this is an application to construct.

**Specify units in accordance with emission standards prescribed within Section 17-2.04, F.A.C. (e.g. Section 17-2.04(6)(e)1.a. specifies that new fossil fuel steam generators are allowed to emit particulate matter at a rate of 0.1 lbs. per million BTU heat input computed as a maximum 2-hour average.)

***Using above example for a source with 260 million BTU per hour heat input: $\frac{0.1 \text{ lbs}}{\text{MMBTU}} \times \frac{260 \text{ MMBTU}}{\text{hr.}} = 26$ lbs./hr.

†See Supplemental Requirements, page 5, number 2.

††Indicate whether the efficiency value is based upon performance testing of the device or design data.

E. Fuels:

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg./hr.	Max./hr.	1,750
Natural Gas	10,000 CF	1750	

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

Fuel Analysis:

Percent Sulfur: 0 Percent Ash: _____

Density: _____ lb./gal.

Heat Capacity: 1000 BTU/lb. _____ BTU/gal.

Other Fuel Contaminants: _____

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

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

None

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

Stack Height: 92 ft. Stack Diameter: 1.58 ft.

Gas Flow Rate: 4000 ACFM Gas Exit Temperature: _____ °F

Water Vapor Content: _____ %

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste: _____

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

Approximate Number of Hours of Operation per Day: _____ , days/week: _____

Manufacturer: _____

Date Constructed: _____ Model No.: _____

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

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

Gas Flow Rate: _____ ACFM _____ DSCFM*

*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 Device: _____

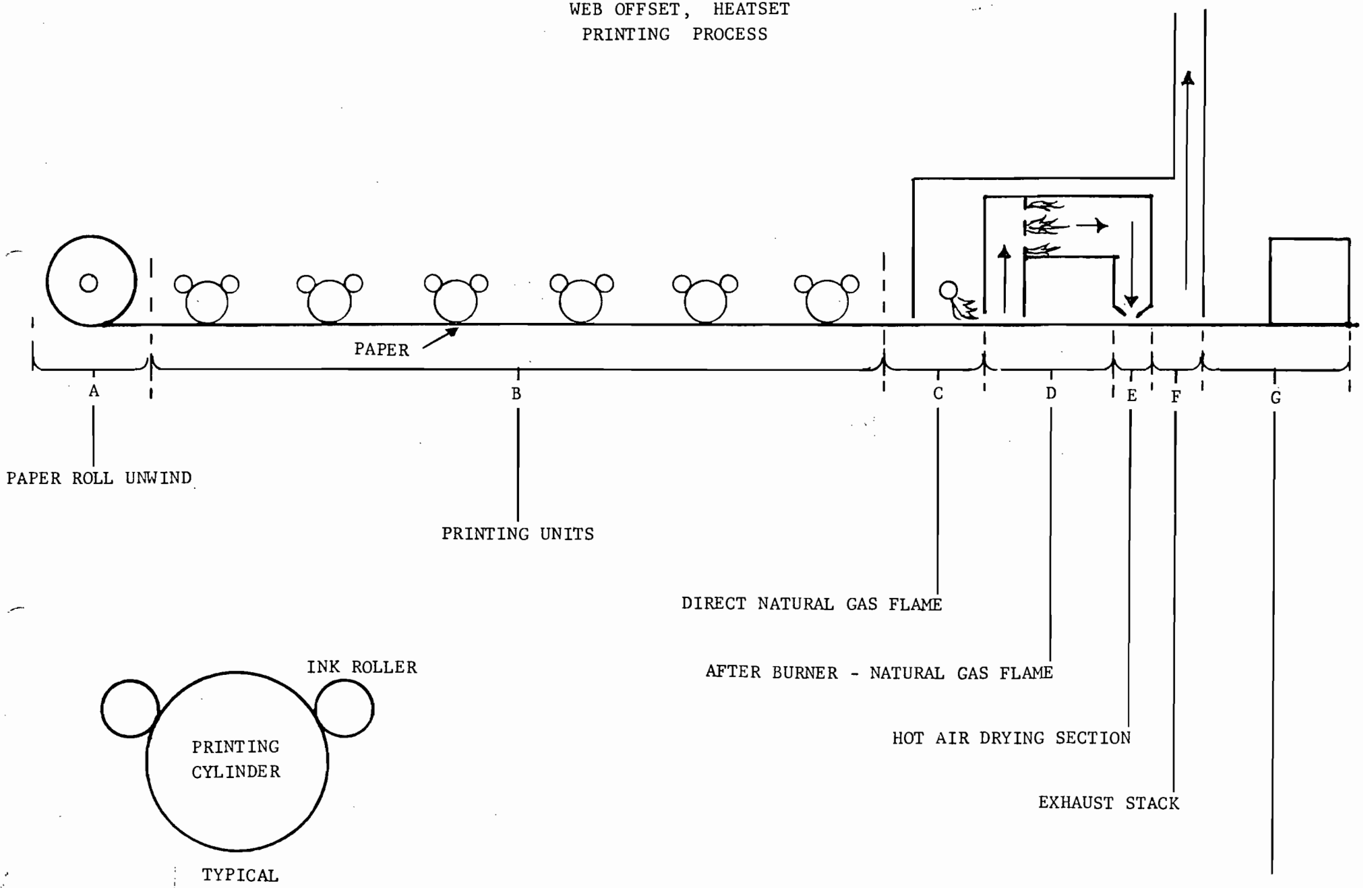
Ultimate Disposal of Any Effluent Other Than That Emitted From the Stack (scrubber water, ash, etc.): _____

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please Provide the Following Supplements Required For All Pollution Sources:

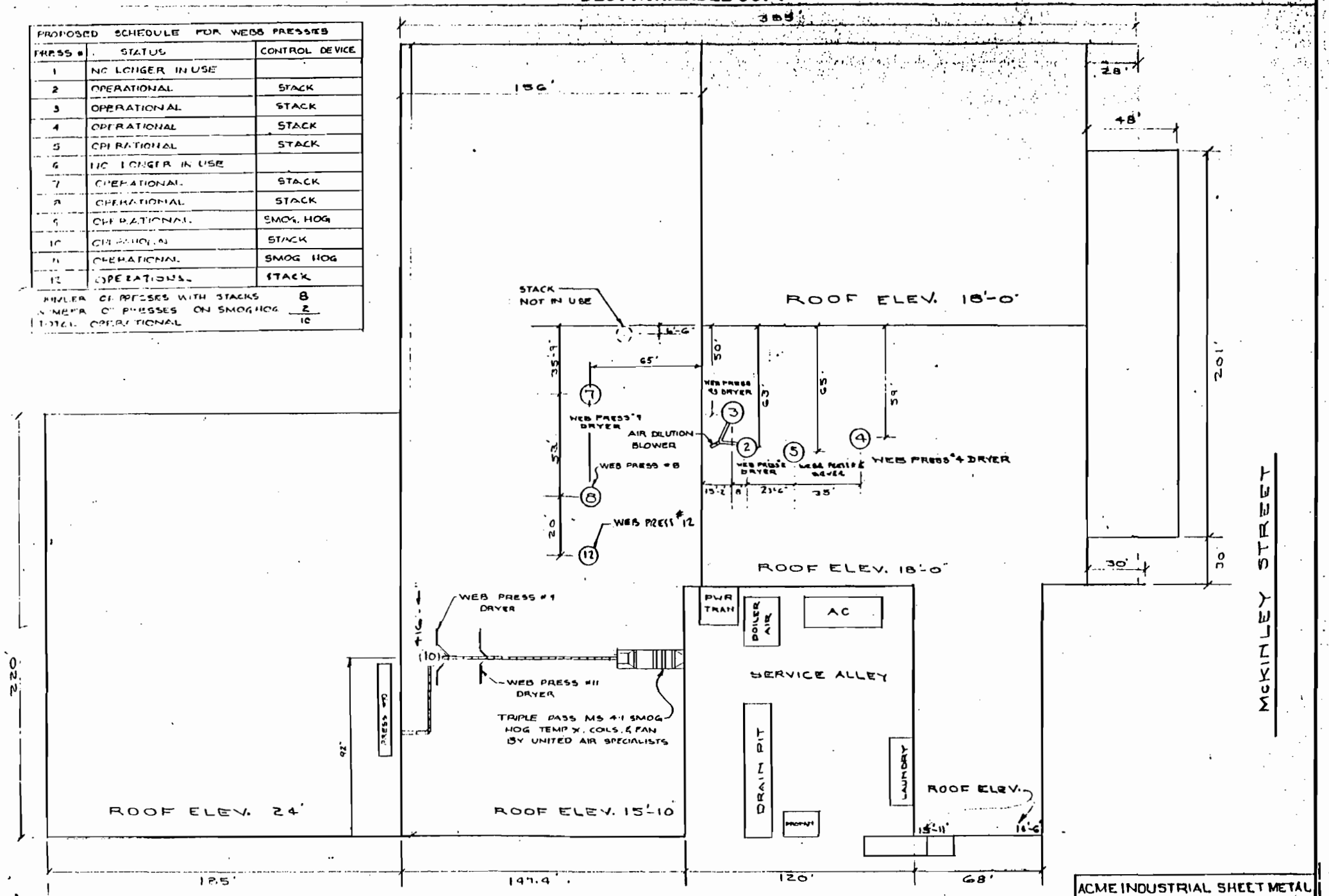
1. Total process input rate and product weight - show derivation.
2. Efficiency estimation of control device(s) - show derivation. Include pertinent test and/or design data.
3. An 8½" x 11" flow diagram, which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
4. An 8½" x 11" plot plan of facility showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
5. An 8½" x 11" plot plan showing the exact 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 USGS topographic map.)
6. Description and sketch of storm water control measures taken both during and after construction.
7. An application fee of $20.00, unless exempted by Chapter 17-4.05(3), FAC, made payable to the Department of Environmental Regulation.
8. With construction permit application, include design details for control device(s). Example: for baghouse, include cloth to air ratio; for scrubber, include cross-sectional sketch; etc.
9. Certification by the P.E. with the operation permit application that the source was constructed as shown in the construction permit application.

SCHEMATIC FLOW DIAGRAM
WEB OFFSET, HEATSET
PRINTING PROCESS



TYPICAL

PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	SMOG HOG
10	OPERATIONAL	STACK
11	OPERATIONAL	SMOG HOG
12	OPERATIONAL	STACK
NUMBER OF PRESSES WITH STACKS		8
NUMBER OF PRESSES ON SMOG HOG		2
TOTAL OPERATIONAL		10



ACME INDUSTRIAL SHEET METAL
333 W. 8 ST., HIALEAH, FLORIDA

ROOF PLAN
A.D. WEISS LITHOGRAPHY, INC.
2025 MCKINLEY ST.
HOLLYWOOD, FLORIDA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

Source Type: Air Pollution [ ]X Incinerator [ ]

Type application: [ ] Operation [ ]X Construction

Source Status: [ ]X New [ ] Existing [ ] Modification

Company Name: _____ County: Broward

Source Identification: A. D. Weiss Lithograph Co., Inc.

Source Location: Street: 2025 McKinley Street City: Hollywood, FL

UTM: East 7585300 North 2878600

Appl. Name and Title: J. W. Wilson, Vice President, Manufacturing

Appl. Address: 2025 McKinley Street, Hollywood, FL 33020

STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative of* A.D. Weiss Lithograph Co.

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provisions 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 nontransferable and I will promptly notify the Department upon sale or legal transfer of the permitted establishment.

J. W. Wilson

Signature of the Owner or Authorized Representative and Title

Date: 2/27/78 Telephone No.: 920-7300

*Attach a letter of authorization. If applicant is a corporation, a Certificate of Good Standing must be submitted with application. This may be obtained for a $5.00 charge from the Secretary of State, Bureau of Corporate Records, Tallahassee, Florida 32304.

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA

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

Signature: _____

Name: James G. North, P.E.
(Please Type)

Company Name: Applied Research Labs

Florida Registration Number: 14500

(Affix Seal)

Mailing Address: P. O. Box 489
Hialeah
Florida 33011

Telephone No.: 885-4515

Date: February 24, 1978

RECEIVED

MAR 23 1978

Dept. of Environmental Reg.
West Palm Beach

DETAILED DESCRIPTION OF SOURCE

A. Describe the nature and extent of the project. Refer to existing pollution control facilities, expected improvement in performance of the facilities and state whether the project will result in full compliance. Attach additional sheet if necessary.

1 8 unit Web Offset Lithographic Press with 92' high stack and effluent control airfoil described in NASA Technical Brief 75-10074 operating in full compliance with all Air Quality Standards

B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Start of Construction: 1 April 1978

Completion of Construction: 1 June 1978

C. Costs of Construction (Show a breakdown of estimated costs for individual components/units of the project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit.

Stack and Airfoil $10,465

D. For this source indicate any previous DER permits, orders, and notices; including issuance dates and expiration dates.

A06-2261 issued 3/8/74 Expires 3/8/79

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

AIR POLLUTION SOURCES & CONTROL DEVICES

(other than incinerators)

A. Identification of Air Contaminants:

1) [ ] Particulates

a) [ ] Dust b) [ ] Fly Ash c) [ ] Smoke d) [ ] Other (Identify)

2) [ ] Sulfur Compounds

a) [ ] SO_x as SO_2 b) [ ] Reduced Sulfur as H_2S c) [ ] Other (Identify)

3) [ ] Nitrogen Compounds

a) [ ] NO_x as NO_2 b) [ ] NH_3 c) [ ] Other (Identify)

4) [ ] Fluorides 5) [ ] Acid Mist 6) [X] Odor

7) [X] Hydrocarbons 8) [ ] Volatile Organic Compounds

9) [ ] Other (Specify): _____

B. Raw Materials and Chemicals Used (Be Specific):

Description	Utilization Rate lbs./hr.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
Paper	11 Tons Day			A
Ink	300 lbs.	Alaphatic Solvents	34%	B

C. Process Rate:

1) Total Process Input Rate (Units*): _____

2) Product Weight (Units*): 829

3) Normal Operating Time: 24 hrs/6 day week, if seasonal describe: _____

hrs./day: _____ days/wk.: _____ wks/yr.: _____

D. Airborne Contaminants Discharged:

Name of Contaminant	Actual** Discharge		Discharge Criteria Rate*	Allowable Discharge lbs./hr.	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulates	Not measurable		N/A	N/A	
Odor	Minimal		N/A	N/A	

*Refer to Chapter 17-2.04(2), Florida Administrative Code.

(Discharge Criteria: Rate = lbs./ton P_2O_5, lbs./M BTU/hr., etc.)

**Estimate only if this is an application to construct.

E. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency*	Conditions of Operations	Basis for Efficiency Operational Data, Test, Design, Data
92' Stack			450°	F
With Airfoil				

*See required supplement.
(Include any test data and/or design data for efficiency substantiation)

F. Fuels:

Type (Be Specific)	Consumption*		Maximum Heat Input MMBTU/hr.
	Avg./hr.	Max./hr.	
Natural Gas	1000CF	1,750,000	C & D

*Units: Natural Gas – MCG/hr.; Fuel Oils, Coal – lbs./hr.

Fuel Analysis:

Percent Surfur: _____ Percent Ash: _____

Density: _____ lb./gal.

Heat Capacity: _____ BTU/lb. _____ BTU/gal.

Other Fuel Contaminants: _____

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

Web Offset Lithography, Heatset - None

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

Stack Height: 92' ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM Gas Exit Temperature: _____ °F

Water Vapor Content: _____ %

INCINERATOR INFORMATION

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

Description of Waste: _____

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

Approximate Number of Hours of Operation per Day: _____, days/week: _____

Manufacturer: _____

Date Constructed: _____ Model No.: _____

	Volume $(ft.)^3$	Heat Release (BTU/hr.)	Fuel		Temp. (^oF)
			Type	BTU/hr.	
Primary Chamber					
Secondary Chamber					

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

Water Vapor Content: _____ %

Type of Pollution Control Device: [ ] Cyclone [ ] Wet scrubber [ ] Afterburner
[ ] Other (Specify): _____

Brief Description of Operating Characteristics of Control Device: _____

Ultimate Disposal of Any Effluent Other Than That Emitted From the Stack (scrubber water, ash, etc.): _____

Please Provide the Following Required Supplements For All Pollution Sources:

1. Total process input rate and product weight — show derivation.

2. Efficiency estimation — show derivation.

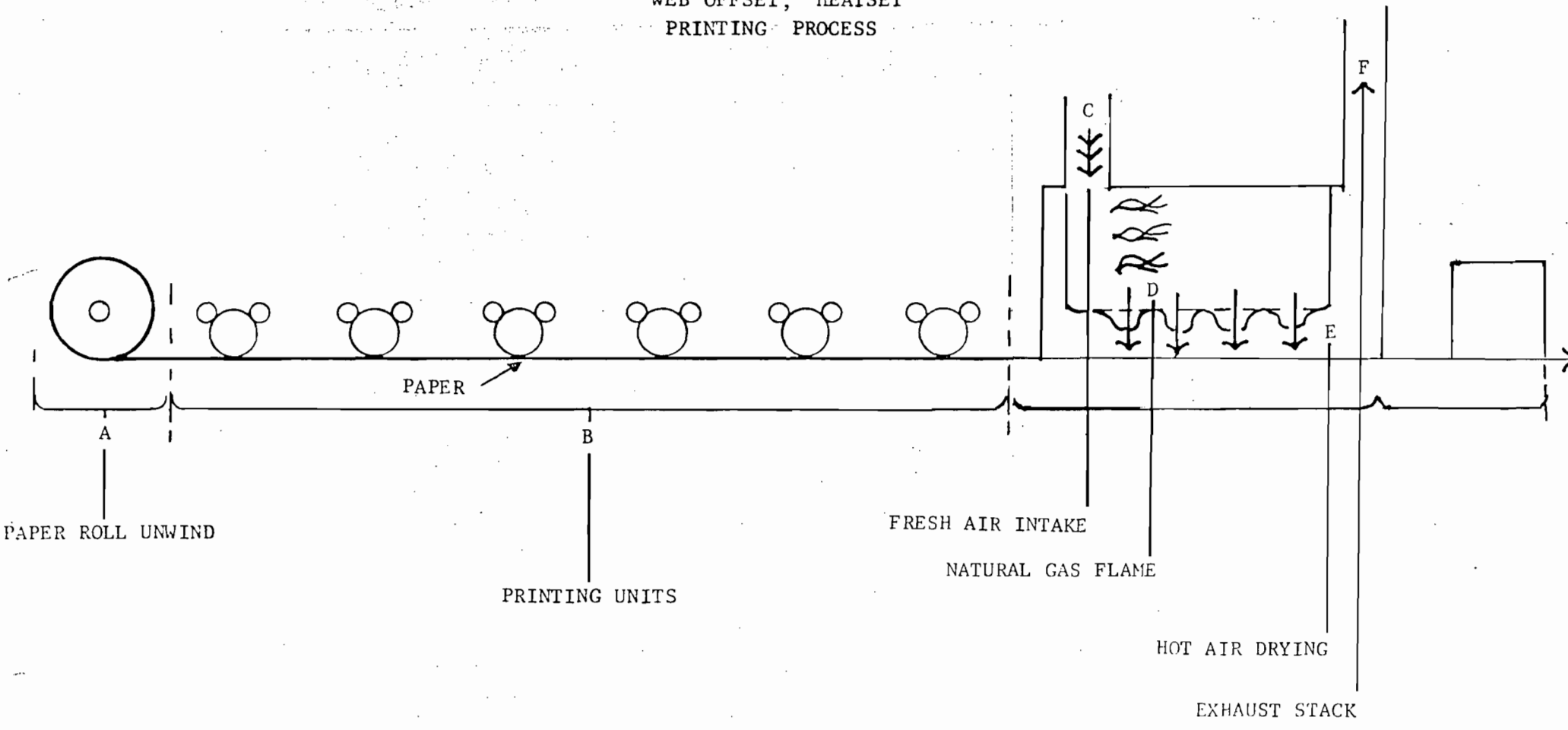
3. An 8½" x 11" flow diagram, which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

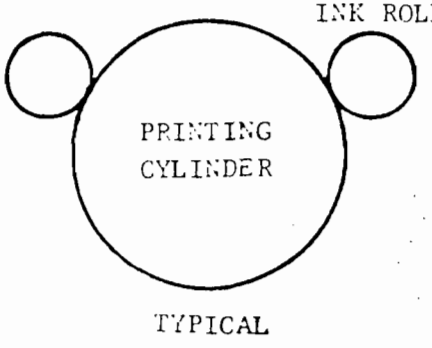
4. An 8½" x 11" plot plan showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

5. An 8½" x 11" plot plan showing the exact location of the establishment, and points of airborne emissions in relation to the surrounding area, residences and other permanent structures and roadways.

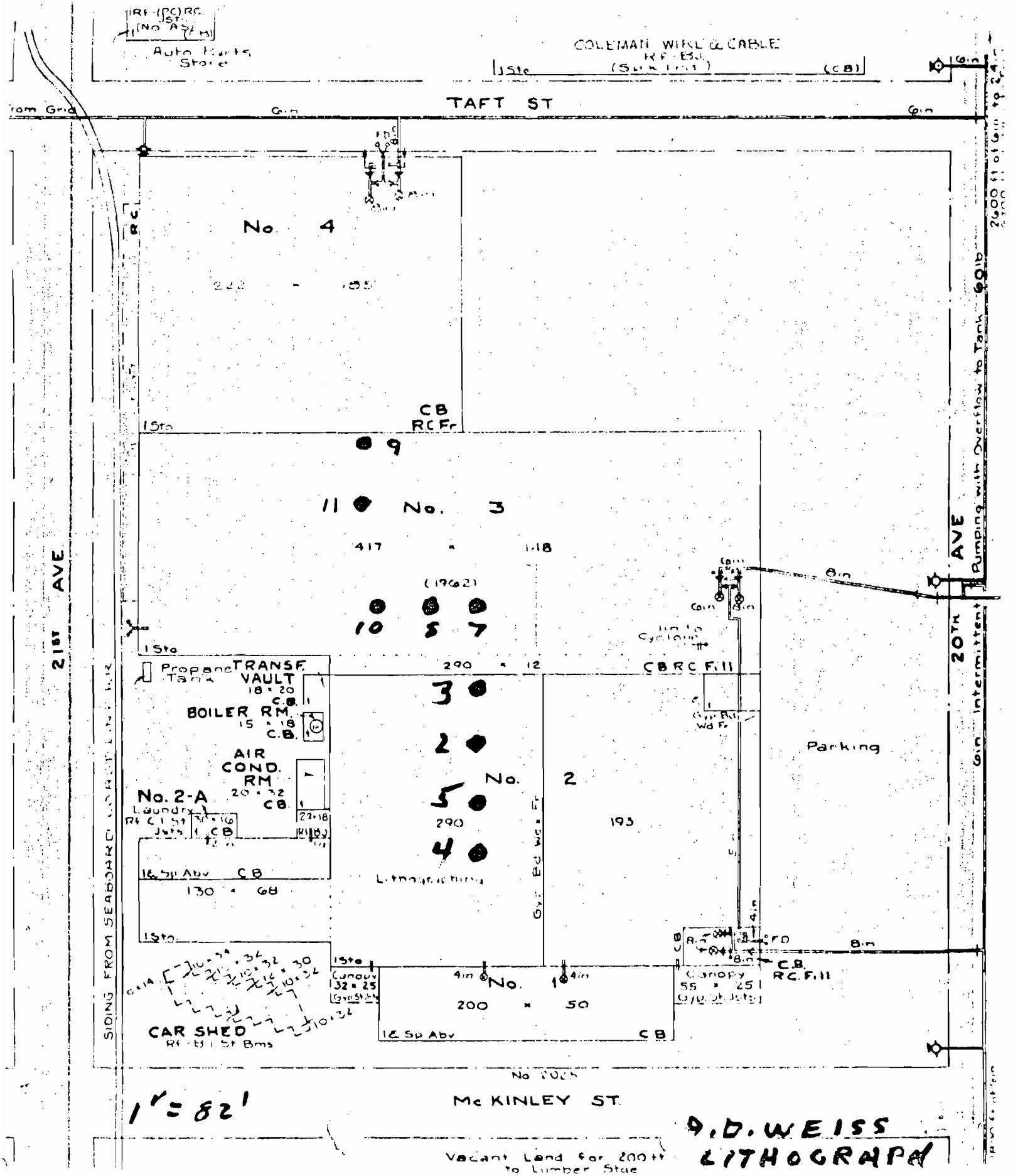
6. Description and sketch of storm water control measures taken both during and after construction.

SCHEMATIC FLOW DIAGRAM
WEB OFFSET, HEATSET
PRINTING PROCESS





TYPICAL



STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

APPLICATION TO OPERATE/CONSTRUCT POLLUTION SOURCES

SECTION I – GENERAL INFORMATION FOR ALL POLLUTION SOURCES

I TO BE FILLED IN BY APPLICANT

Source Type: Air Pollution
Type application: [ ] Operation [ ] Temporary Operation [ ] Construction
Status Source: [ ] New [X] Existing [X] Modification

Source Name: A. D. Weiss Lithograph Co. County: Broward

Source Location: Street: 2025 McKinley Street City: Hollywood
(Water Source Only) Lat: ____° ____' ____" Long: ____° ____' ____"
(Air Source Only) UTM: East 7585300 North 2878600N

Appl. Name and Title: J. W. Wilson, Vice President, Manufacturing
Appl. Address: 2025 McKinley Street, Hollywood, FL 33020

II TO BE FILLED IN BY REGION (*BY BUREAU OF PERMITTING)

Control No: Region ____ County ____ Type ____ *Project ____

Type Permit	Date Rec'd	*Permit No.	*Issue Date	*Compl. Date	*Exp. Date

Source Description: ____
Control Equipment: ____

Water Permits

Receiving Body Code: ____ Surface Water Code: ____
Station No.: Influent: ____ Effluent: ____

Effluent:	Average	Design	% Reduction
Flow rate, MGD			
BOD, lbs/day			
Susp. Sol., lbs/day			
Other:			

Air Permits

Operating Time: [ ] Continuous [X] Intermittent 1.75 Max
Fuel: Type Natural Gas M-BTU/hr. In Put 17.500 00
Incinerator: Capacity, tons/day ____ Type Waste ____
Mfg. & Model ____

Pollutant Emissions, lbs/day	Actual	Design	Allowable
Particulate	.010		
Sulfur Oxides	None		
Other:			

Implementation: Estimated Appl. Filing Date ____
Estimated Start of Const. ____ Estimated Compliance Date ____

DESCRIPTION OF PROPOSED PROJECT

A. Describe the nature and extent of the proposed project. Refer to existing pollution control facilities, DPC permits, conditions, orders and notices, expected improvement in performance of the facilities and state whether the proposed project will result in full compliance of the source. Attach additional sheet if necessary.

1 8 unit Web Offset Lithographic Press with 92' high stack and effluent control airfoil described in NASA Technical Brief 75-10074 operating in full compliance with all Air Quality Standards

B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Federally or State Financed Projects only:

Planning Complete _____

Financing Program Complete _____

Indicate other local, state and/or federal agency approvals and dates _____

All projects:

Start of Construction _____

Completion of Construction _____

C. Costs of Construction (Show a breakdown of costs for individual components/units of the proposed project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit.

Stack and Airfoil $10,465

D. Indicate any previous DPC permits, issuance dates, and expiration dates.

A06-2261 issued 3/8/74 Expires 3/8/79

AIR POLLUTION SOURCES & CONTROL DEVICES

A. Identification of Air Contaminants

1) [ ] Particulates
   a) [ ] Dust b) [ ] Fly Ash c) [ ] Smoke d) [ ] Other (Identify)

2) [ ] Sulfur Compounds
   a) [ ] SO_x as SO_2 b) [ ] Reduced Sulfur as H_2S c) [ ] Other (Identify)

3) [ ] Nitrogen Compounds
   a) [ ] NO_x as NO_2 b) [ ] NH_3 c) [ ] Other (Identify)

4) [ ] Flourides 5) [ ] Acid Mist 6) [X] Odor

7) [X] Hydrocarbons 8) [ ] Volatile Organic Compounds

9) [ ] Other (Specify): _____

B. Raw Materials and Chemicals Used (Be Specific)

Description	Utilization Tons/day, lbs./day, etc.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
Paper	11 Tons Day			A
Ink	300 lbs.	Alaphatic	34%	B
		Solvents		

C. Process Weight:

1) Total Process Weight Rate _____ lbs./hr. [See Sec. 17-2.04(2)]
2) Product Weight 829 lb./hr. expressed as Magazines
3) Normal Operating Time 24 hrs/6 day week, if seasonal describe: _____

D. Airborne Contaminants Discharged:

Name of Contaminant	Actual Discharge	Discharge Criteria*	Allowable Discharge*	Relate Location to Flow Diagram
Particulates	Not measurable	N/A	N/A	
Odor	Minimal	N/A	N/A	

* Refer to Chapter 17-2 Florida Administrative Code
(Discharge Criteria: Process Weight Rate, #/tonP_2O_5, #/M BTU/hr etc.)

E. Control Devices:

Name	Eff.	Conditions of Operation, Particle Size Range, etc.	Relate to Flow Diagram
92' Stack		450°F	F
With Airfoil			

F. Fuels:

Type (Be specific)	Daily Consumption	Heat Input BTU/hr.	Relate to Flow Diagram
Natural Gas	1000CF	17,500,00	C & D

G. Describe briefly, without revealing trade secrets, the unit processes/operations generating the airborne emissions identified in this application:

Web Offset Lithography, Heatset

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

None

STATEMENTS BY APPLICANT AND ENGINEER

A. **Applicant**

The undersigned owner or authorized representative of * A. D. Weiss Lithograph Co. is fully aware that the statements made in this application for a modification permit are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403 Florida Statutes and all the rules and regulations of the Department or revisions thereof. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted establishment.

J. W. Wilson

Signature of the Owner or Authorized Representative

J.W. Wilson, Vice President, Manufacturing

Name and Title (Please Type)

Date: June 14, 77 Telephone No.: 920-7300

* Attach a letter of authorization

B. **Professional Engineer Registered in Florida:**

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 control and discharge of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution source(s) with appropriate control facilities, when properly maintained and operated, will comply 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 the applicant a set of instructions for the proper maintenance and operation of the installation covered in this application.

Signature: James G. Worth

Mailing Address: P. O. Box 489
Hialeah, FL 33010

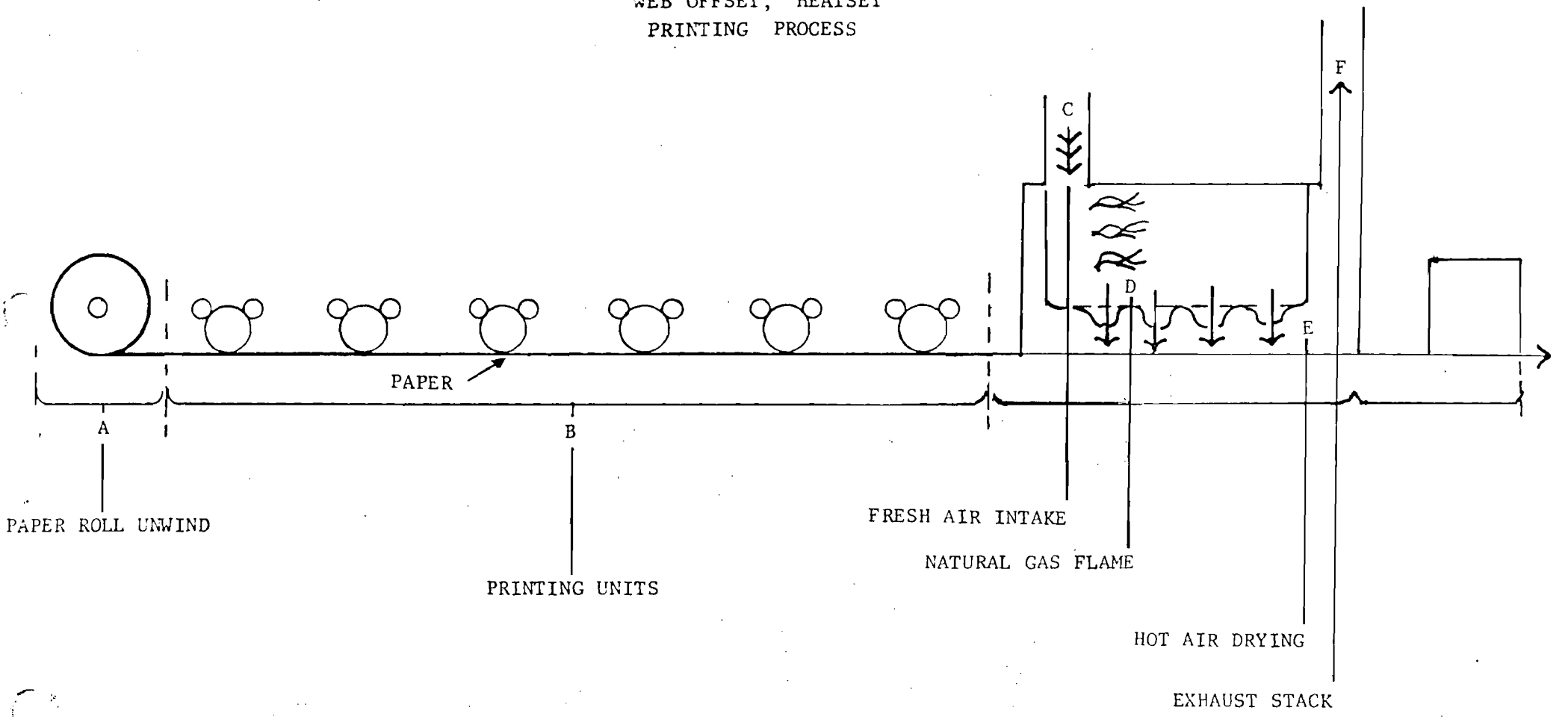
Name: James G. Worth, P.E., FAIC
(please type)

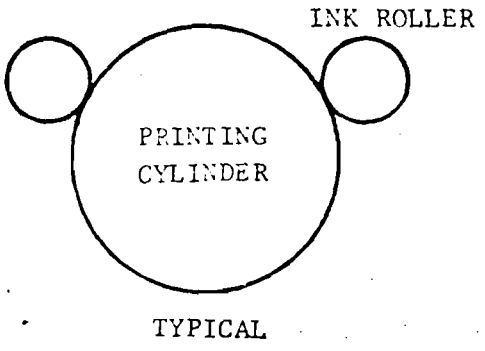
Telephone No.: 885-4515

Florida Registration Number 14500
(Please affix seal)

Date: 5/31/77

SCHEMATIC FLOW DIAGRAM
WEB OFFSET, HEATSET
PRINTING PROCESS





TYPICAL

PERMITTED
BY
SOUTHEAST REGION
DEPT. OF POLLUTION CONTROL

PERMIT NO. A006-2261

DATE 3-8-74

State of Florida
Department of Air and Water Pollution Control

PAID
Plan Ck #17489
FEB 27 1974
V17/74 RS
Southeast Regional Office
DPC

60th DAY
3-18-74

Application for Permit to Operate Air Pollution Sources

Applicant
(Owner or authorized agent) — J. W. Wilson, Vice President
(Name and Title)

Name of Establishment — A. D. WEISS LITHOGRAPH CO., INC.
(Corporation, Company, Political SD, Firm, etc.)

Mailing Address — 2025 McKinley Street

Location of Pollution Source — 2025 McKinley Street, Hollywood
(Number and Street) (City)

SIC-2721
UTM 2878600N
585300E

Broward
(County)

Nature of Industrial Operation — Publication Printing and Binding

---

Permit Applied For Operating:

- New Source ☐
- Existing Source ☒
- Existing Source after modification ☐
- Existing Source after Expansion ☐
- Existing Source After relocation, expansion or reconstruction ☐

Project Engineer:

James G. Worth
Name

Applied Research Laboratories
of Florida, Inc.
Firm

P. O. Box 489, Hialeah, Florida 33011
Mailing Address

James G. Worth
Signature

14500
Florida Registration Number

For Department's Use Only Permit No. Date: JAN

1-D

The undersigned owner or authorized representative* of A. D. WEISS LITHOGRAPH CO., INC. is fully aware that the statements made in this form and the attached exhibits and statements constitute the application for an Operation Permit from the Florida Department of Air and Water Pollution Control and certifies that the information in this application is true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes and all the rules and regulations of the Department or revisions thereof. He also understands that the Permit is non transferable and, if granted a permit, will promptly notify the Department upon sale or legal transfer of the permitted establishment.

J. W. Wilson

Signature of owner or agent.

J. W. Wilson, Vice President

Name and Title

Date: Jan 16, 1974

*Attach letter of authorization.

Project History

DAWPC CONSTRUCTION PERMIT NO. & DATE _____

DIVISION OF HEALTH SERIAL NO. & DATE _____

Information Regarding Pollution Sources and Proposed Control Facilities

1. Actual cost of control facilities $ 55,000 - HIGH STACKS

2. Prepare and attach an 8½" x 11" flow diagram, without revealing trade secrets, identifying the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.

3. Include an 8½" x 11" plot plan showing location of manufacturing processes and location of outlets for airborne emissions. Relate all flows to the flow diagram.

4. Submit an 8½" x 11' plot plan showing the exact location of the establishment and points of discharge in relation to the surrounding area, residences and other permanent structures and roadways.

I General

A. Raw Materials and Chemicals Used.

Description	Utilization Tons/day, Lbs./day, etc.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	Percent Dry Weight	
PAPER	87 TONS DAY	0		A
INK	2500 LBS/DAY	ALIPHATIC SOLVENTS	34%	B

B. Fuels

Type (Be Specific)	Daily Consumption	Gross Maximum Heat Output	Relate to Flow Diagram
NATURAL GAS	10,000 CF	17,500,000 BTU	C & D
NATURAL GAS	1,000 CF	4,190,000 BTU	STEAM BOILER

C. Products

Description	Average Daily Production (Tons/Day. Lbs/Hr. etc.)
MAGAZINES	148,000 LBS DAY

D. Normal operation: Hours/Day 24 Day and Week 120 to 144

If operation or process is seasonal, describe: _____

II Identification of Air Contaminants

Compounds of:		Also —			
Chlorine	☐	Hydrocarbons	☒	Acid Mists	☐
Fluorine	☐	Smoke	☐	Odors	☐
Nitrogen	☐	Fly Ash	☐	Radioisotopes	☐
Sulfur	☐	Dusts	☐	Other _____	☐

Specific Compounds _____

III Air Pollution Control Devices

Contaminant	Control Device	Relate to Flow Diagram	Operating Efficiency	Conditions (Particle Size Range, Temp. etc.)
HYDROCARBONS	AFTER BURNER SECTION	D	N/A	339° F
	92' STACKS	F	N/A	339° F

Provide a brief description of the control device or treatment system. Attach separate sheets giving details regarding principle of operation, manufacturer, model, size, type and capacity of control/treatment device and the basis for calculating its efficiency. Show any bypasses of the control device and specify when such bypasses are to be used and under what conditions.

The control devices consist of a natural gas fired afterburner section, which is an integral part of each oven, operating at 600° F through which pass the evaporated solvents from the ink drying process. In addition the exhaust from this process is released to atmosphere through stacks 92' above ground level.

IV. Contaminant Balance

From contaminant content in raw materials, waste products, and manufactured products, summarize daily contaminant flow:

	Pounds Contaminant per Day	
	Input	Output
List Raw Materials:		
PAPER		
INK - ALIPHATIC SOLVENTS	925	
List Manufactured Products:		
MAGAZINES		
List Solid Wastes:		
NONE		
List Liquid Wastes:		
NONE		
Totals		
Airborne Wastes (Total input minus total output)		

Note: If more than one contaminant, specify each
Contaminants recovered in control devices should be shown as either a liquid or a solid waste.

V. Discharged Emissions to Atmosphere

A. Discharge Points and Design Conditions

Discharge Point Description	Relate to Flow Diagram	Height above Ground (ft.)	Cross Sect. Area (sq. ft.)	Periods of Flow Hrs./ Day	Hrs./ Wk.	Temp. of Discharge (°F)
				INTERMITTENT		
PRESS 4	F	92	3	24	144	339
PRESS 5	F	92	3	24	144	339
PRESS 2	F	92	3	24	144	339
PRESS 3	F	92	3	24	144	339
PRESS 7	F	92	3	24	144	339
PRESS 8	F	92	3	24	144	339
PRESS 10	F	92	3	24	144	339

B. Tabulation of Discharged Contaminants

		Total Contaminants Discharged					
Discharge Point — Relate to Flow Diagram	Flow Rate at Std. Cond. (cfm)	Particulates		Other Contaminants (F^-, SO_X, NO_X etc.)			
		Gr/ft3 (Std.Cond.)	lbs./ Day	Gr/ft3 (Std. Cond.)	lbs/ Day	Gr/ft3 (Std.Cond)	lbs/ Day
F	5,000		.0013	NONE	NONE	NONE	NONE
TYPICAL OF	#2, 3, 4,	5, 7, 8, 10					
Totals							

VI. Treatment and Disposal of Liquid and Solid Waste

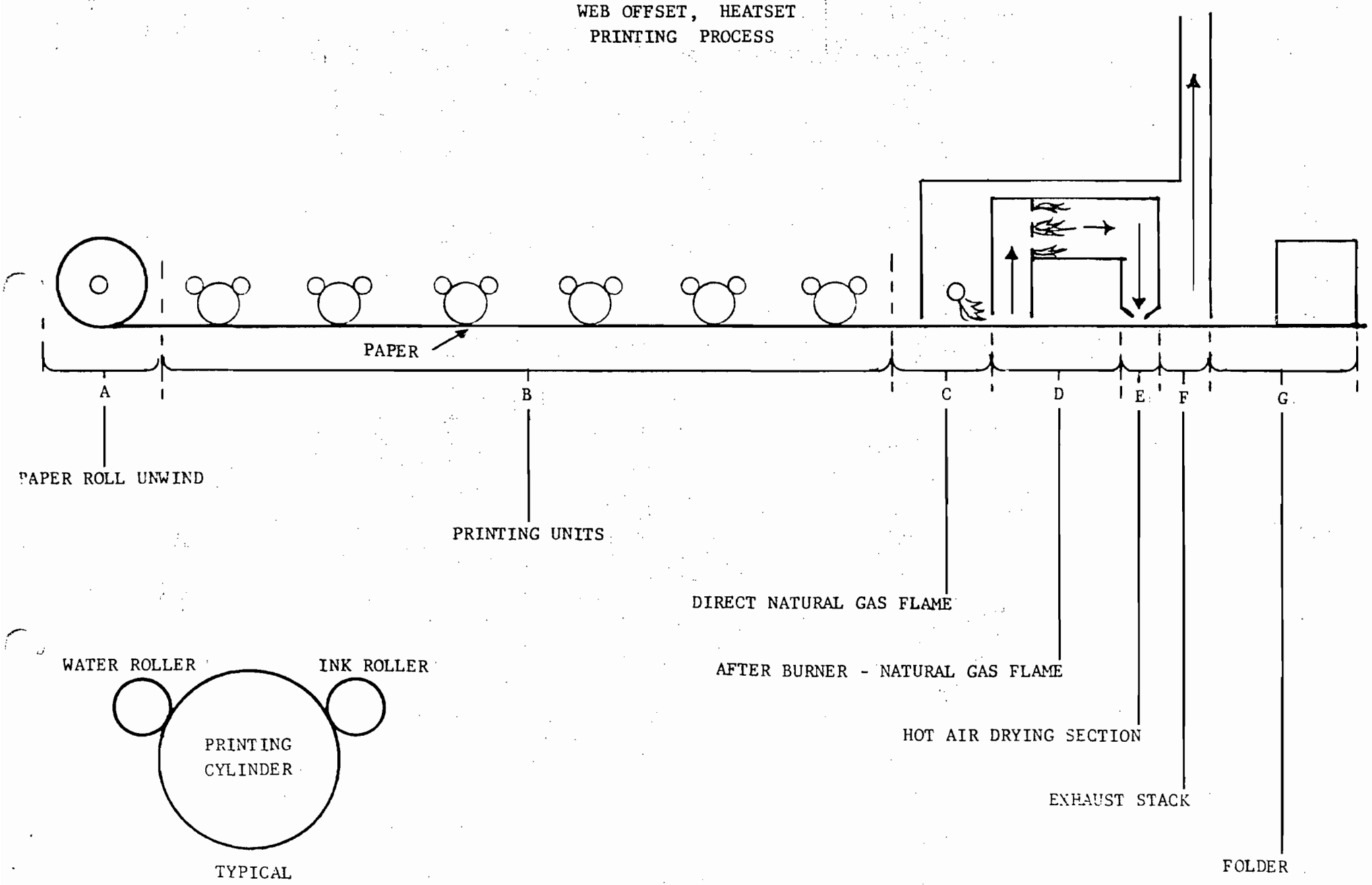
1. Identify the contaminants which will be discharged as liquid or solid wastes.

   NONE

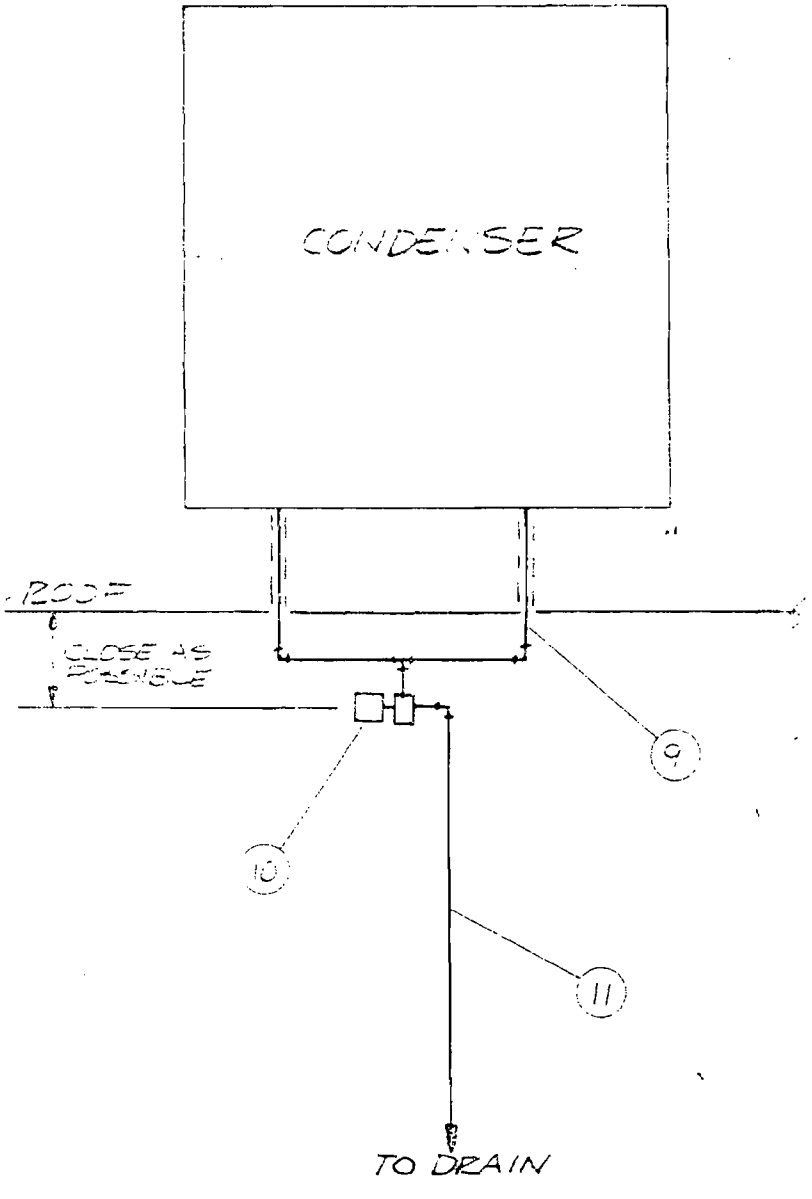
2. Describe the treatment and disposal of liquid and solid wastes. Indicate the concentrations and volume of individual contaminants in treated wastes before disposal.

   NONE

SCHEMATIC FLOW DIAGRAM
WEB OFFSET, HEATSET
PRINTING PROCESS



TYPICAL



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

Source Type: [X] Air Pollution [ ] Incinerator

Application Type: [X] Construction [ ] Operation [ ] Modification [ ] Renewal of DER Permit No. _____

Company Name: A.D. Weiss Lithograph Co. County: Broward

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: 2025 McKinley Street City: Hollywood, Florida

UTM: East 7585300 North 2878600

Latitude: ___ ___ ° ___ ___ ' ___ ___ "N. Longitude: ___ ___ ° ___ ___ ' ___ ___ "W.

Appl. Name and Title: J.W. Wilson, Vice President, Manufacturing

Appl. Address: 2025 McKinley Street, Hollywood, Fla. 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative of* A. D. Weiss Lithograph Co.

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provisions 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 nontransferable and I will promptly notify the Department upon sale or legal transfer of the permitted establishment.

J.W. Wilson
Name of Person Signing (please Type or Print)

J.W. Wilson V.P. Mfg.
Signature of the Owner or Authorized Representative and Title

Date: 9/5/79 Telephone No.: 920-7300

*Attach a letter of authorization.

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA

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 judgement, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the Department. It is also agreed that the undersigned will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signature: Ben Karp P.E

Name: Ben Karp P.E
(Please Type)

Company Name: _____

Florida Registration Number: 11558

(Affix Seal)

Mailing Address: 555 West 18 Street
Hialeah, Florida 33010

Telephone No.: 885-4943

Date: _____

RECEIVED
SEP 7 1979
Dept. of Environmental Reg.
West Palm Beach

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.

1- Lithograph Printing Press # 15 with recirculation of drying air thru combustion chamber and exhausting thru stack 90' above ground level.

B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Start of Construction: ~~10/1/79~~ 10/1/79 Completion of Construction: 10/1/~~81~~ 80

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

N/A

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

Operation permit A 06 -2261 A06 -2693 A06-17584
A06 -17486 A06-17585
A06 -17582 A06-17586
A06 -17583 A06-17587

E. Is the emission point considered to be a New* or Existing* source, as defined in Chapter 17-2.02(5) & (6), Florida Administrative Code?
X New ____ Existing

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

G. Normal Equipment Operating Time: hrs/day: 24 ; days/wk: 6 ; wks/yr: 52 ; if seasonal, describe: ____

*Note

New Source: any source which came into existence, began operation or construction, or received a permit for the latter on or after January 18, 1972.

Existing Source: any source in existence, operating or under construction (or with a permit to construct) prior to January 18, 1972.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES

(other than incinerators)

A. Raw Materials and Chemicals Used in Your Process:

Description	Utilization Rate lbs./hr.	Relate to Flow Diagram
Paper	1417	
Ink	21	

B. Process Rate:

1) Total Process Input Rate (lbs./hr.): 1438

2) Product Weight (lbs/hr): 1434

C. Airborne Contaminants Discharged:

INK ANALYSIS

Name of Contaminant	Actual Discharge* lbs./hr.	Actual Discharge* T/yr.	Allowed Discharge Rate Per Ch. 17-2, F.A.C.**	Allowable Discharge*** (lbs./hr.)	Relate to Flow Diagram
Aliphatic Solvent			N/A	N/A	F
Magiesol # 470	Deorodorized		30%	By weight	
Vapor Pressure = .04 MM hg under standard conditions					
Pigments and Varnish			70%	By weight	

D. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency†	Range of Particles Size Collected (in microns)	Basis for Efficiency††
Stacks		N/A		
92' High				

*Estimate only if this is an application to construct.

**Specify units in accordance with emission standards prescribed within Section 17-2.04, F.A.C. (e.g. Section 17-2.04(6)(e)1.a. specifies that new fossil fuel steam generators are allowed to emit particulate matter at a rate of 0.1 lbs. per million BTU heat input computed as a maximum 2-hour average.)

***Using above example for a source with 260 million BTU per hour heat input: $\frac{0.1 \text{ lbs}}{\text{MMBTU}} \times \frac{260 \text{ MMBTU}}{\text{hr.}} = 26 \text{ lbs./hr.}$

†See Supplemental Requirements, page 5, number 2.

††Indicate whether the efficiency value is based upon performance testing of the device or design data.

E. Fuels:

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg./hr.	Max./hr.	
Natural Gas	1.5 MMCF/HR	3.MMCF/HR	3 MMCF/HR

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

Fuel Analysis: Natural Gas

Percent Sulfur: 0 Percent Ash: _____

Density: _____ lb./gal.

Heat Capacity: 1000 BTU/lb. _____ BTU/gal.

Other Fuel Contaminants: _____

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

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

None

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

Stack Height: 92 ft. Stack Diameter: 1.58 ft.

Gas Flow Rate: 4000 ACFM Gas Exit Temperature: 339°F °F

Water Vapor Content: _____ %

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste: _____

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

Approximate Number of Hours of Operation per Day: _____ , days/week: _____

Manufacturer: _____

Date Constructed: _____ Model No.: _____

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

Stack Height: 92 ft. Stack Diameter: 19" Ø Stack Temp.: 339 °F

Gas Flow Rate: 4000 ACFM _____ DSCFM*

*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): _____

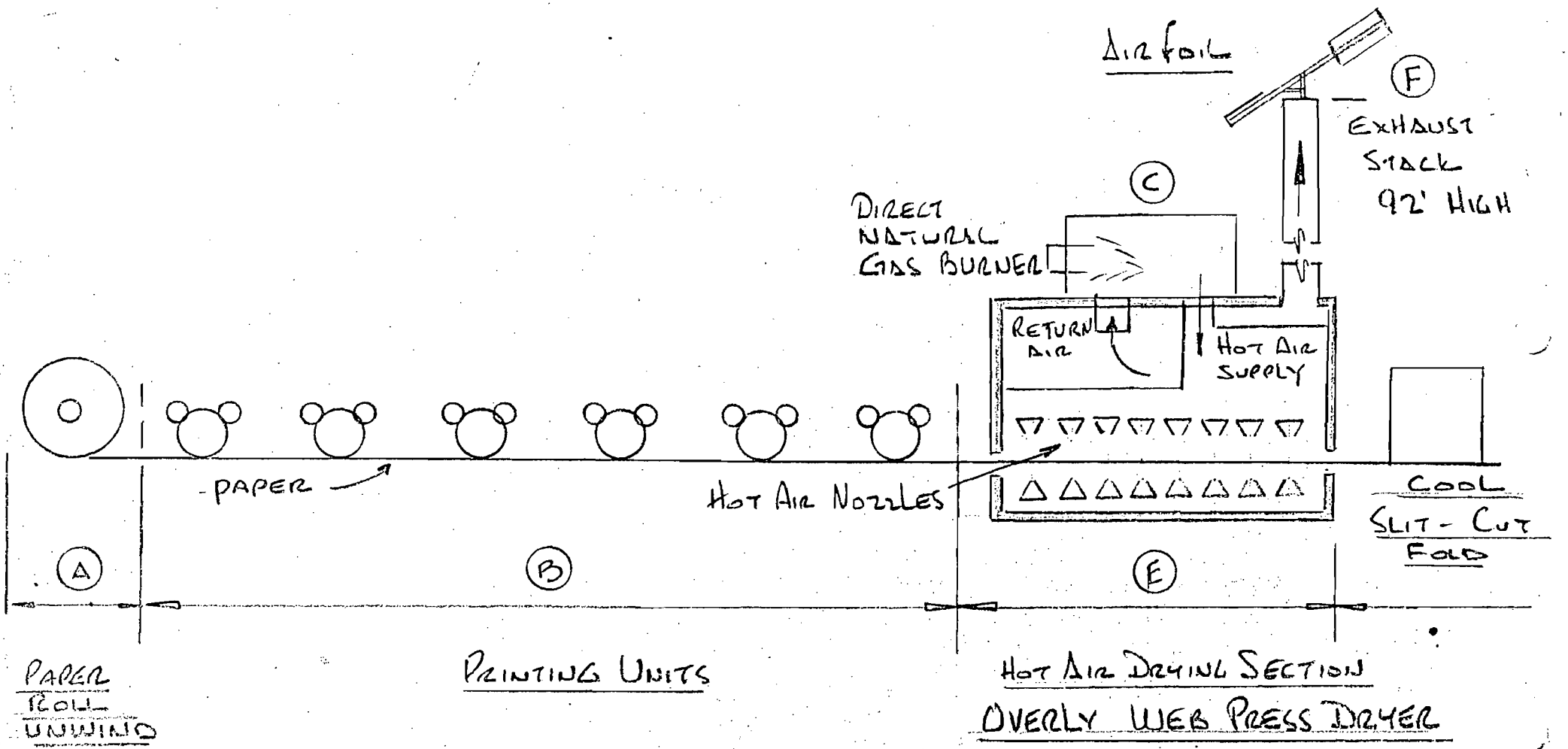
Brief Description of Operating Characteristics of Control Device: A 92' Stainless steel stack equipped with an upward effluent dispersal air foil as described in Nasa Tech Brief 75-10074

Ultimate Disposal of Any Effluent Other Than That Emitted From the Stack (scrubber water, ash, etc.): _____

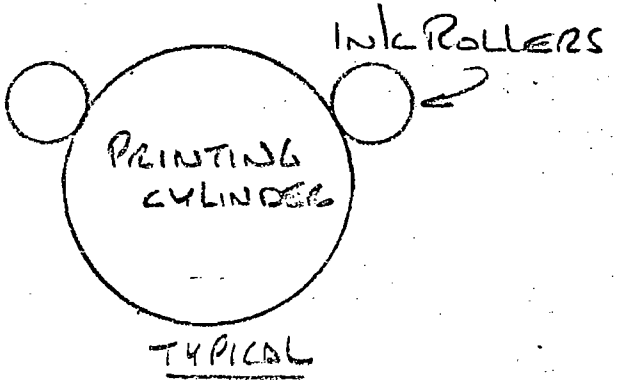
SECTION V: SUPPLEMENTAL REQUIREMENTS

Please Provide the Following Supplements Required For All Pollution Sources:

1. Total process input rate and product weight - show derivation.
2. Efficiency estimation of control device(s) - show derivation. Include pertinent test and/or design data.
3. An 8½" x 11" flow diagram, which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
4. An 8½" x 11" plot plan of facility showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
5. An 8½" x 11" plot plan showing the exact 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 USGS topographic map.)
6. Description and sketch of storm water control measures taken both during and after construction.
7. An application fee of $20.00, unless exempted by Chapter 17-4.05(3), FAC, made payable to the Department of Environmental Regulation.
8. With construction permit application, include design details for control device(s). Example: for baghouse, include cloth to air ratio; for scrubber, include cross-sectional sketch; etc.
9. Certification by the P.E. with the operation permit application that the source was constructed as shown in the construction permit application.



Overly Web Press Dryer



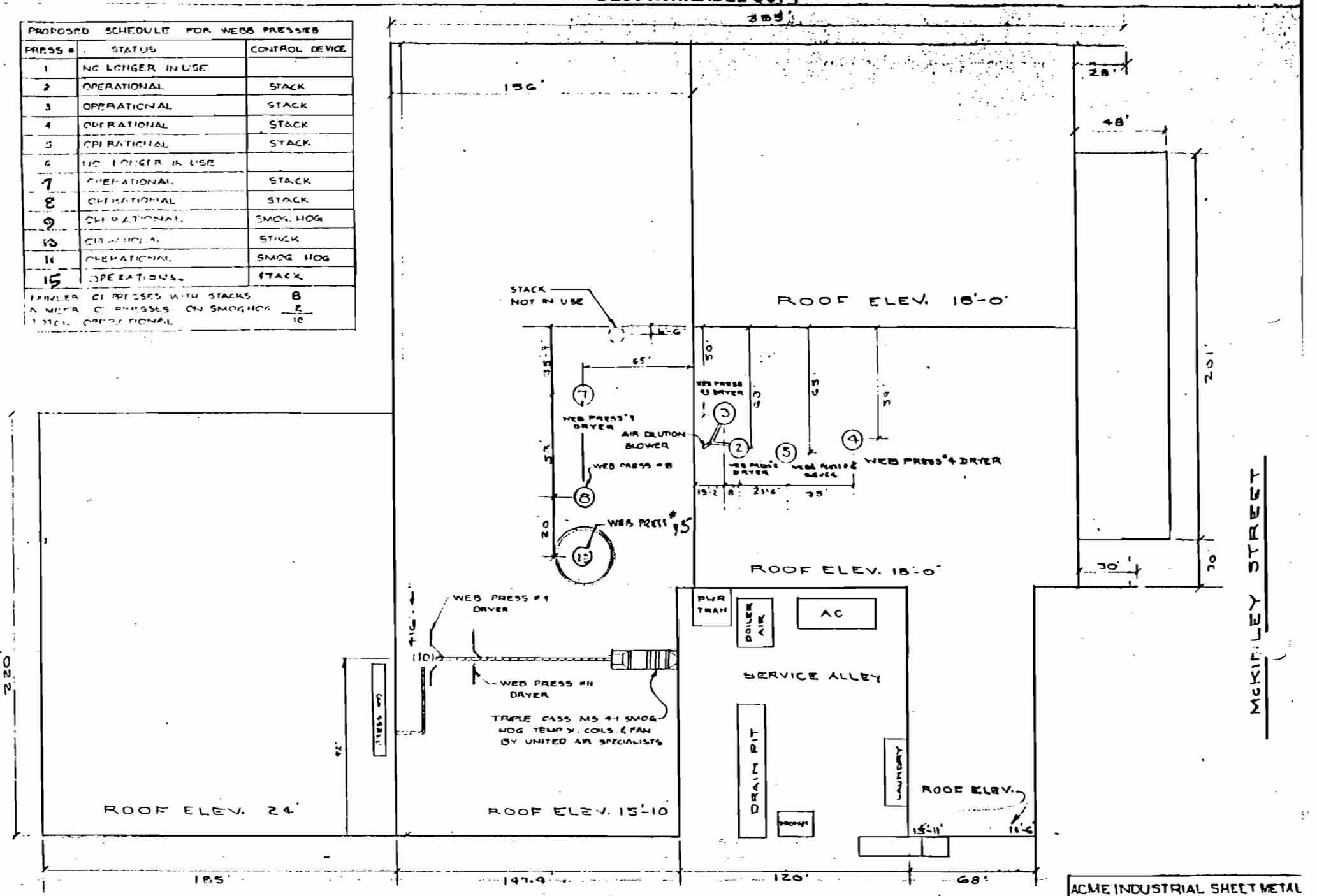
Typical

Schematic Flow Diagram
Web Offset Heatset Printing Process

A.D. Weiss Lithograph Co
2025 McKinley St
Hollywood Fla.

PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	SMOG HOG
10	OPERATIONAL	STACK
11	OPERATIONAL	SMOG HOG
15	OPERATIONAL	STACK

NUMBER OF PRESSES WITH STACKS 8
NUMBER OF PRESSES ON SMOG HOG 2
TOTAL OPERATIONAL 10



ACME INDUSTRIAL SHEET METAL
[illegible] W. 83 ST., HIALEAH, FLORIDA

ROOF PLAN
A.D. WEISS LITHOGRAPHY, INC.
2025 MC KINLEY ST.
HOLLYWOOD, FLORIDA

BEST AVAILABLE COPY

PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	—
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	—
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	SMOG HOG
10	OPERATIONAL	STACK
11	OPERATIONAL	SMOG HOG
12	OPERATIONAL	STACK
NUMBER OF PRESSES WITH STACKS		8
NUMBER OF PRESSES ON SMOG HOG		3
TOTAL OPERATIONAL		11

blue haze units for each 8, 10,

9, 11 share a blue haze unit

not in operation for last year

STACK NOT IN USE

ROOF ELEV. 18'-0"

WEB PRESS #10

WEB PRESS #7 DRYER

AIR DILUTION BLOWER

WEB PRESS #8

WEB PRESS #12

WEB PRESS #14

WEB PRESS #2 DRYER

WEB PRESS #3 DRYER

WEB PRESS #5 DRYER

WEB PRESS #4 DRYER

ROOF ELEV. 15'-0"

WEB PRESS #9

WEB PRESS #11

WEB PRESS #12

PRESS #1

TRIPLE PASS MS 4:1 SMOG HOG TEMP'X, COILS, & FAN BY UNITED AIR SPECIALISTS

PUR TRAIN

BOILER AIR

AC

SERVICE ALLEY

DRAIN PIT

LAUNDRY

ROOF ELEV.

ROOF ELEV. 24'

ROOF ELEV. 15'-10"

McKINLEY STREET

DIXIE HGWY.

issued 5/16/77

mod/back 4/5/84 DR

ACME INDUSTRIAL SHEET METAL
555 WEST ST, HILLSMN, FLORIDA

ROOF PLAN
A.D. WEISS LITHOGRAPHY, INC
2025 McKINLEY ST.
HOLLYWOOD, FLORIDA

REVIEW COPY.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

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

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

COMPANY NAME: A. D. Weiss Lithograph Company COUNTY: Broward

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

SOURCE LOCATION: Street 2025 McKinley Street City Hollywood, Florida

UTM: East 7585300 North 2878600

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

APPLICANT NAME AND TITLE: J. W. Wilson, Vice President of Manufacturing

APPLICANT ADDRESS: 2025 McKinley Street, Hollywood, Florida 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. Weiss Lithograph Company

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

*Attach letter of authorization

Signed: J. W. Wilson

J. W. Wilson, Vice President of Manufacturing
Name and Title (Please Type)

Date: 5/22/81 Telephone No. 920-7300

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

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

Signed: Ben Karp

BEN KARP
Name (Please Type)

(Affix Seal)

Company Name (Please Type)

Mailing Address (Please Type)

Florida Registration No. 11558 Date: 5-26-81 Telephone No. 885-4943

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

SECTION II: GENERAL PROJECT INFORMATION

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

Replacement of electrostatic precipitator with installation of a cooling, condensing and filtering device for the removal of emissions.

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

Start of Construction 6/12/81 Estimated Completion of Construction 6/26/81

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.)

N/A

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

Operation permit A-06-2261, A06-2693, A06-17584, A06-17486, A06-17585, A06-17582, A06-17586, A06-17583, A06-17587

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

F. Normal equipment operating time: hrs/day 24 ; days/wk 6 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

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

1. Is this source in a non-attainment area for a particular pollutant? 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.
      None - No volatile organic solvents. alsp Latic III c
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioration" (PSD) requirements 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

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

Send Copy

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		
Paper	None		2837	
Ink	None		42	

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

1. Total Process Input Rate (lbs/hr): 1438 / 1434 — 4 #/bk D wt.

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: reclaimed solvent ?

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Aliphatic Solvent			N/A	N/A			
Magiesal #470 - Deodorized			30%	By Weight	MSDS ?		
Vapor Pressure = .04MM hg. under std. conditions							
Pigments and Varnish			70%	By Weight			

Sic Solvent

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
MMT Blue Haze Control System				
Model #PPFS 6000		? c	? c	? b

[1] See Section V, Item 2.

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

[3] Calculated from operating rate and applicable standard

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

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption* avg/hr	Consumption* max./hr	Maximum Heat Input (MMBTU/hr)
Natural Gas	3.0 MCF/HR	6. MCF/HR	6MM BTU/HR. ?
			? 6000 X1000

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

Fuel Analysis: Natural Gas

Percent Sulfur: 0 Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 1,000 BTU/lb _____ BTU/gal

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

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

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

None

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

Stack Height: 10' ? ft. Stack Diameter: 1.5' 56 FPS ft.

Gas Flow Rate: 6,000 ? combustion air ACFM Gas Exit Temperature: 110 °F.

Water Vapor Content: _____ % Velocity: 33 (~~32.95~~) FPS determines

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste _____

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

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

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

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

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

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

Brief description of operating characteristics of control devices: Exhaust is cooled by means of two (2) air to air heat exchangers and then filtered through specially designed fiberglass filter elements.

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

Reclaimed solvent is sold as fuel.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

Contaminant	Rate or Concentration
N/A	

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

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

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height:	10'	ft.	b. Diameter:	1.5	ft.
c. Flow Rate:	6,000	ACFM	d. Temperature:	110	°F
e. Velocity:	33	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: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy*:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy**:

h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

*Explain method of determining efficiency.

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

3.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*: See letter of March 15, 1979, from Gary D. Carlson, Broward County, Environmental Quality Control Board.

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*Explain method of determining efficiency above.

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device

b. Operating Principles: N/A

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*:

3. Capital Cost:

N/A

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager: N/A

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b. N/A

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

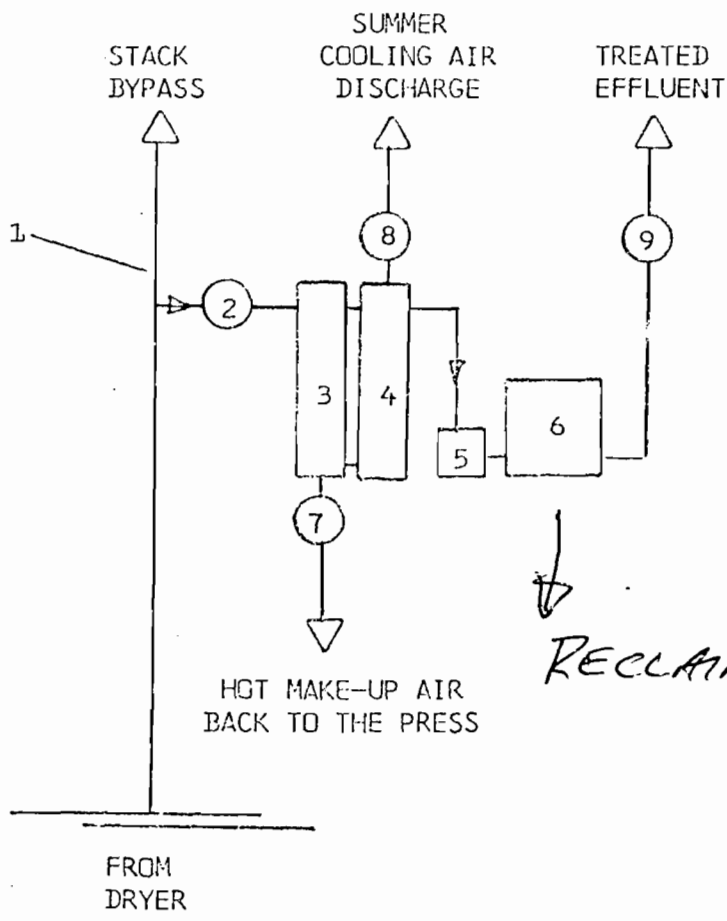
(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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



LEGEND

1 – STACK (EMERGENCY DISCHARGE)
2 – FIRE DAMPER INLET
3 – #1 CONDENSER
4 – #2 CONDENSER
5 – FAN
6 – PARTICULATE FILTER
7 – MAIN COOLING FAN
8 – SUMMER COOLING FAN
9 – FIRE DAMPER OUTLET

RATES

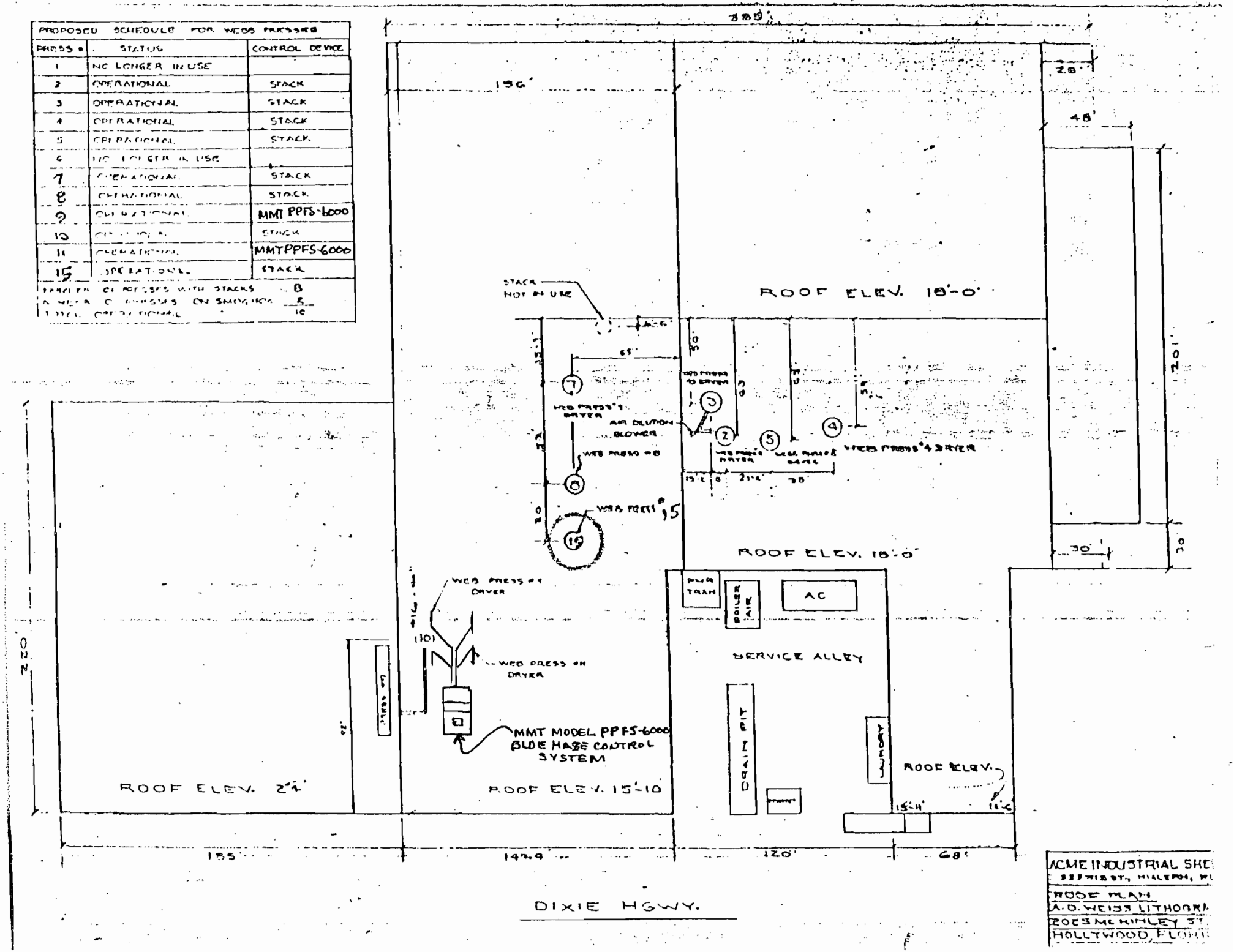
FIGURE 1. FLOW DIAGRAM OF TYPICAL MMT AIR POLLUTION CONTROL SYSTEM

mmt environmental, inc. St. Paul, MN 55112

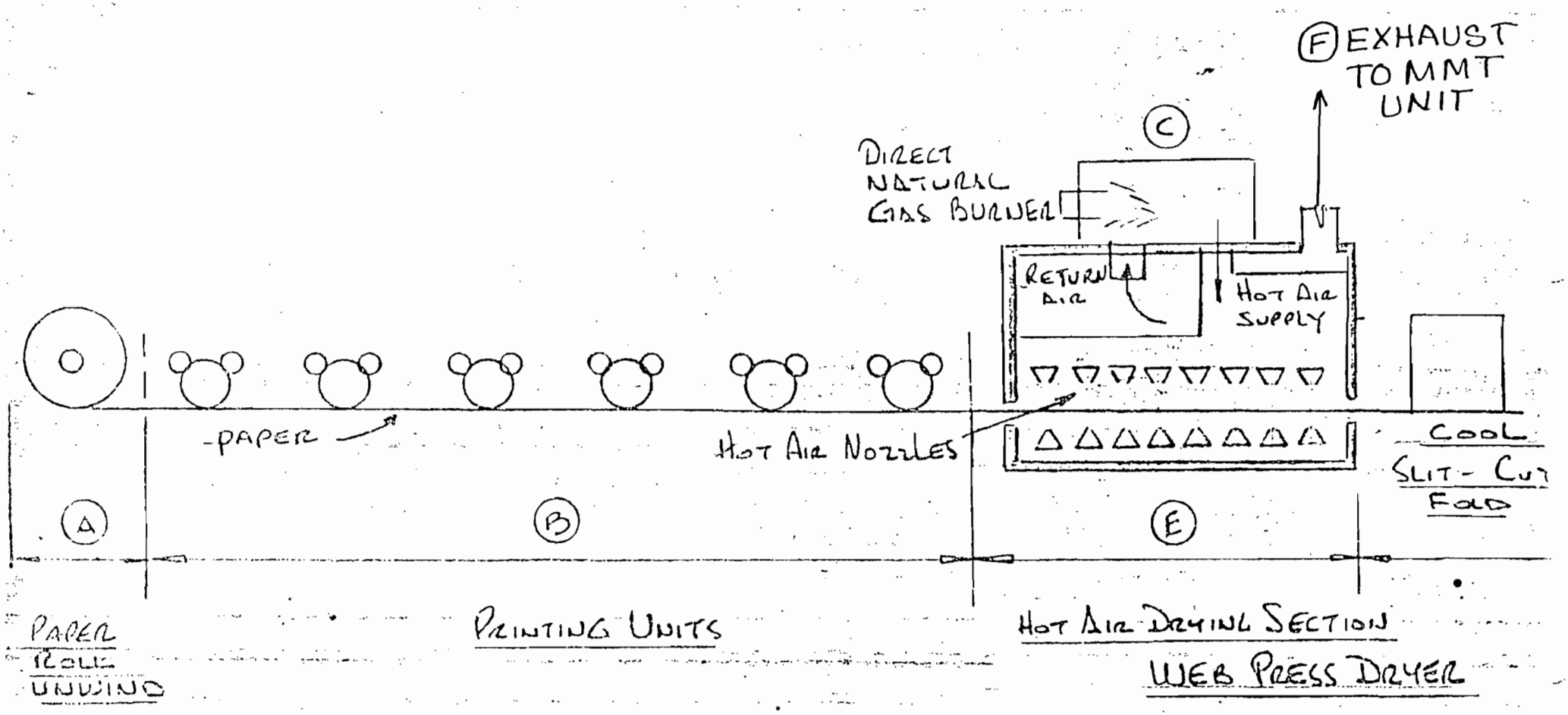
DRAWN BY	DATE	REVISIONS	DATE
CHECKED BY			
APPROVED BY			
SCALE			
TITLE		DRAWING NO.	

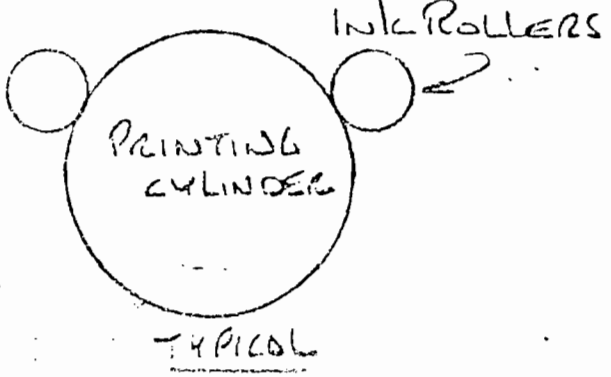
PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	MMT PPFS-6000
10	OPERATIONAL	STACK
11	OPERATIONAL	MMTPPFS-6000
15	OPERATIONAL	STACK

NUMBER OF PRESSES WITH STACKS ... 8
A NEW & PREVIOUS ON SMOKING ... 5
TOTAL OPERATIONAL ... 10



ACME INDUSTRIAL SHE
ROOF PLAN
A.D. WEISS LITHOGRA
2065 MCKINLEY ST
HOLLYWOOD, FLORI





SCHEMATIC FLOW DIAGRAM
WEB OFFSET HEATSET PRINTING PROCESS

A D. WEISS LITHOGRAPH CO
2025 McKinley ST

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data Not Applicable

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

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

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

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location) _____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

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

Submittal #2

REVISIONS -

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED
JUL 20 1981
Dept. of Environmental Reg.
West Palm Beach

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

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

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

COMPANY NAME: A. D. WEISS LITHOGRAPH COMPANY COUNTY: BROWARD

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) BLUE HAZE CONTROL UNIT FOR PRESSES 9 AND 11.

SOURCE LOCATION: Street 2025 McKinley Street City Hollywood, Florida

UTM: East 585.3 North 2878.6

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

APPLICANT NAME AND TITLE: J. W. WILSON, VICE PRESIDENT OF MANUFACTURING

APPLICANT ADDRESS: 2025 McKinley Street, Hollywood, Florida 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. WEISS LITHOGRAPH COMPANY

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

*Attach letter of authorization

Signed: _____

J. W. WILSON, VICE PRESIDENT OF MANUFACTURING

Name and Title (Please Type)

Date: 5/22/81 Telephone No. 920-7300

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

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

Signed: _____

BEN KARP

Name (Please Type)

(Affix Seal)

ACME INDUSTRIAL SHEET METAL

Company Name (Please Type)

555 W. 18TH STREET, HIALEAH, FLORIDA 33010

Mailing Address (Please Type)

Florida Registration No. 11558 Date: _____ Telephone No. 885-4943

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

SECTION II: GENERAL PROJECT INFORMATION

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

Replacement of electrostatic precipitator with installation of a cooling, condensing and filtering device for the removal of emissions.

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

Start of Construction 6/3/81 Estimated Completion of Construction 8/2/81

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.)

Show price estimate.

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

AO 10839
Issued: 12/2/1980
Expires: 12/6/1983

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

F. Normal equipment operating time: hrs/day 24 ; days/wk 6 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

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

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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Paper	None		2837	
Ink	Aliphatic solvent	30	42	

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

1. Total Process Input Rate (lbs/hr): 2879

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: Magiesal #470 - Vapor Pressure .04MM hg. under standard conditions

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
No volatile organic solvents			N/A	N/A	N/A	N/A	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5])
MMT BLUE HAZE CONTROL SYSTEM, MODEL #PPFS 6000	Non volatile organic solvent	85-98	.3	Tests

[1]See Section V, Item 2.

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

[3]Calculated from operating rate and applicable standard

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

[5]If Applicable

E. Fuels

Type (Be Specific)	Consumption* avg/hr	Consumption* max./hr	Maximum Heat Input (MMBTU/hr)
Natural Gas	3.0 MCF/HR.	6.0 MCF/HR.	6MM BTU/HR.

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

Fuel Analysis: Natural Gas

Percent Sulfur: 0 Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 1,000 BTU/cf _____ BTU/gal

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

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

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

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

Stack Height: 34 ft. Stack Diameter: 1.5 ft.

Gas Flow Rate: 6,000 ACFM Gas Exit Temperature: 110 °F.

Water Vapor Content: _____ % Velocity: 56 FPS

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste _____

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

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

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

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

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

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

Brief description of operating characteristics of control devices: Exhaust is cooled by means of two (2) air to air heat exchangers and then filtered through specially designed fiberglass filter elements.

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

Reclaimed solvent is sold as fuel.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42,test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

Contaminant	Rate or Concentration
N/A	

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

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

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height:	34'	ft.	b. Diameter:	1.5	ft.
c. Flow Rate:	6,000	ACFM	d. Temperature:	110	°F
e. Velocity:	54	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: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy*:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy**:

h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

*Explain method of determining efficiency.

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

3.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*: See letter of March 15, 1979, from Gary D. Carlson, Broward County, Environmental Quality Control Board.

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*Explain method of determining efficiency above.

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device

b. Operating Principles: N/A

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*: N/A

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager: N/A

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b. N/A

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

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

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

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location) _____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

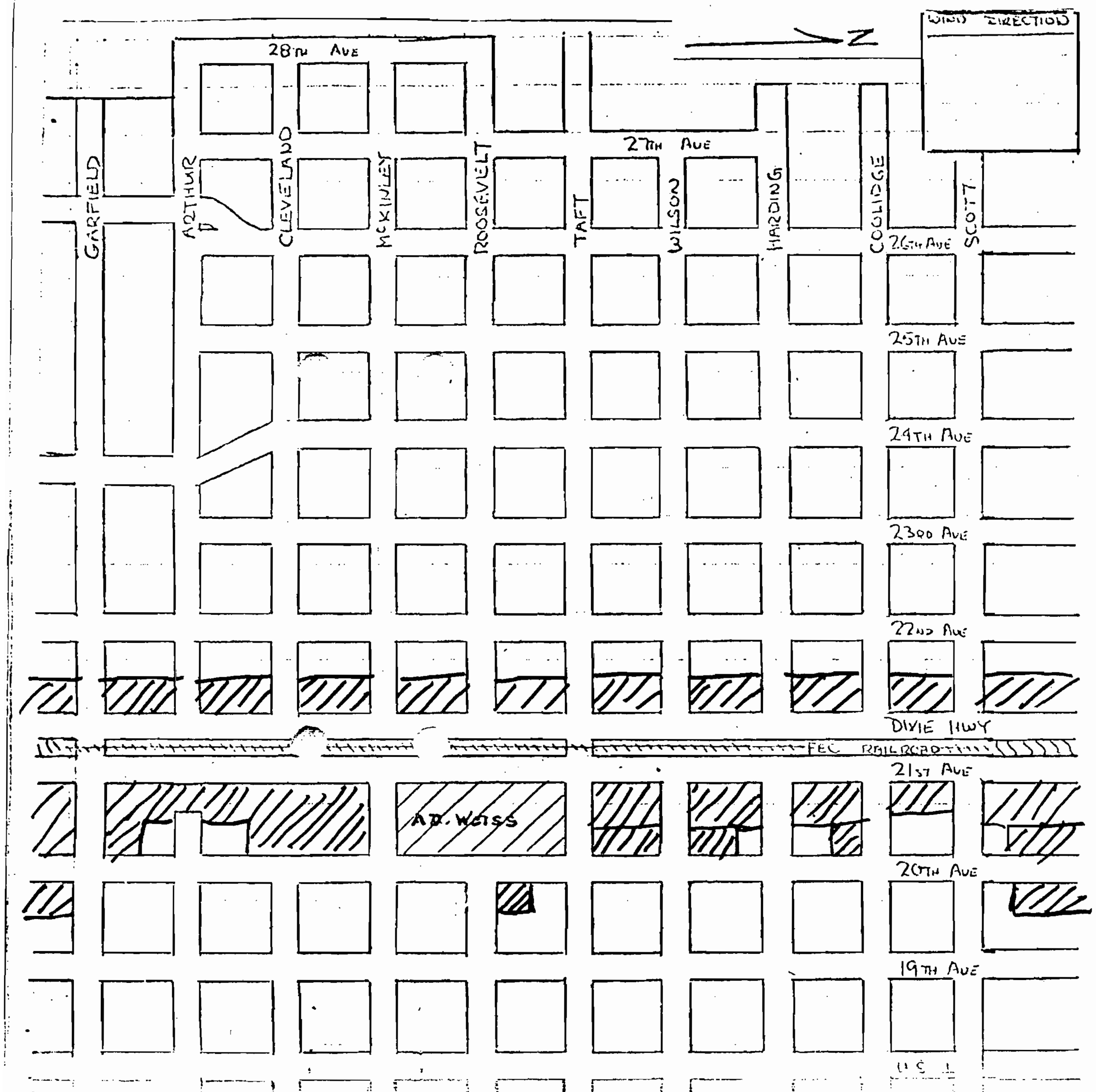
Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

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

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

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



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DATE ____________

TIME IN ______ TIME OUT ______

INSPECTOR ____________

COMPLAINANT ____________

ADDRESS ____________

COMPLAINT NO ____________

COMPLAINT DATE ____________

COMPLAINT TIME ____________

WEATHER CONDITIONS

SKY ____________

VISIBILITY ____________

WIND DIRECTION ____________

VELOCITY ____________

VERIFIED BY: ____________

No.	LOCATION	TIME AT LOCATION	ODOR INTENSIT

A.D. WEISS
LITHOGRAPH COMPANY, INC.

2025 McKINLEY STREET
HOLLYWOOD, FLORIDA 33020

March 2, 1982

Mr. I. Goldman
State of Florida
Dept. of Environmental Reg.,
South Florida Subdistrict
3301 Gun Club Road
P. O. Box 3858
West Palm Beach, Fla. 33402

Dear Mr. Goldman:

Enclosed are the items required to complete our application to operate the Blue Haze Control System, Model PPFS 6000 as requested. That is, an application fee of $20.00, test results showing compliance with emission limitations of the department and manufacturer's descriptive literature.

We would also like to correct Section III, Item E, page 4 of 10 to show a consumption rate of 3000 CF/HR. average and 6000 CF/HR. maximum. As was originally typed, we intended the M to reflect 1000.

If I can be of further assistance, please do not hesitate to contact me at 920-7300, Ext. 217.

Very truly yours,

WAYNE PARKER

WP:ID
ENCLS.

PAID
MAR 3 1982
Dept. of Environmental Reg.
West Palm Beach

RECEIVED
MAR 3 1982
Dept. of Environmental Reg.
West Palm Beach

TELEPHONES: HOLLYWOOD (305) 920-7300 - MIAMI (305) 949-5231

BEST AVAILABLE COPY

PROPOSED SCHEDULE FOR WEBB PRESSES		
PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	-
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	STACK, HOG
10	OPERATIONAL	STACK
11	OPERATIONAL	STACK, HOG
12	OPERATIONAL	STACK
NUMBER OF PRESSES WITH STACKS		8
NUMBER OF PRESSES ON SMOGHOG		5
TOTAL OPERATIONAL		10

blue haze units for each 8, 10,

9, 11 share a blue haze unit

not in operation for last year

STACK NOT IN USE

ROOF ELEV. 16'-0"

WEB PRESS 10

WEB PRESS 9 DRYER

AIR DILUTION BLOWER

WEB PRESS 8

WEB PRESS 12

WEB PRESS 14

WEB PRESS 3 DRYER

WEB PRESS 4 DRYER

WEB PRESS 5 DRYER

WEB PRESS 2 DRYER

ROOF ELEV. 15'-0"

WEB PRESS 9 DRYER

WEB PRESS 11 DRYER

TRIPLE PASS NS 41 SMOG HOG TEMP'X, COILS, & FAN BY UNITED AIR SPECIALISTS

PUR TRAN

BOILER AIR

AC

SERVICE ALLEY

DRAIN PIT

LAUNDRY

ROOF ELEV. 15'-11"

ROOF ELEV. 24'

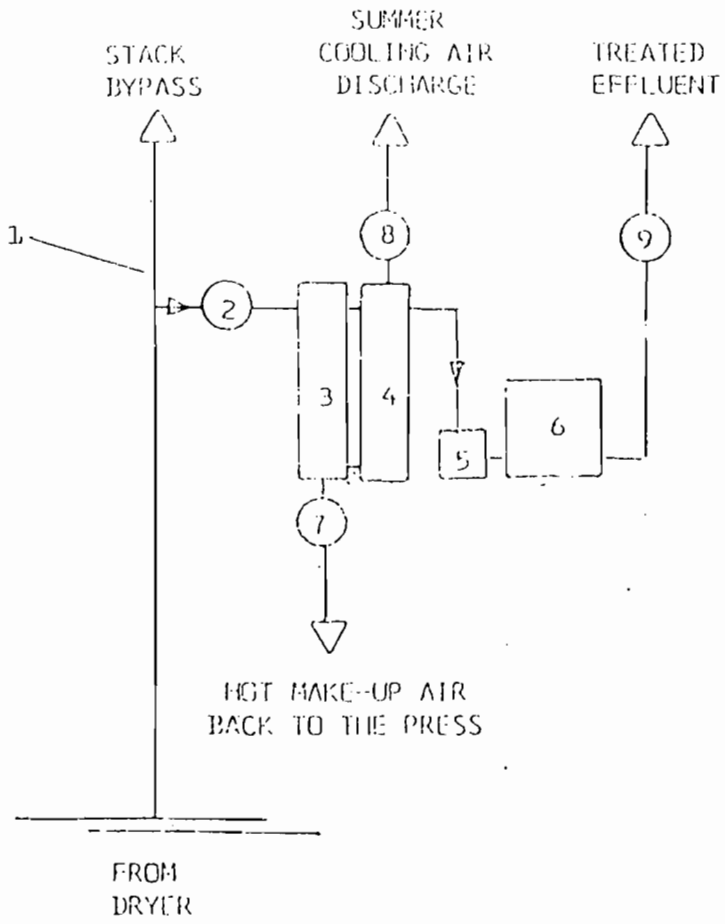
ROOF ELEV. 15'-10"

McKINLEY STREET

DIXIE HGWY.

issued 5/16/77

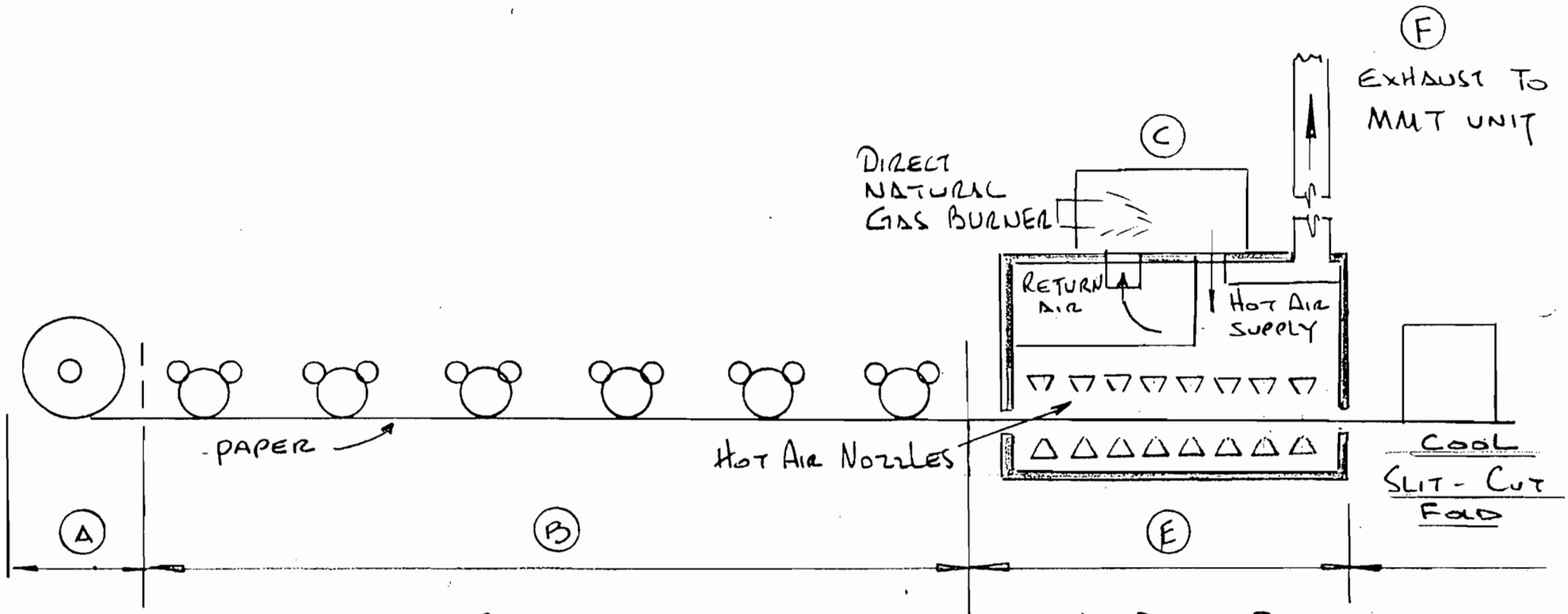
ACME INDUSTRIAL SHEET METAL
ROOF PLAN
A.D. WEISS LITHOGRAPHY, INC
2025 McKINLEY ST.
HOLLYWOOD, FLORIDA



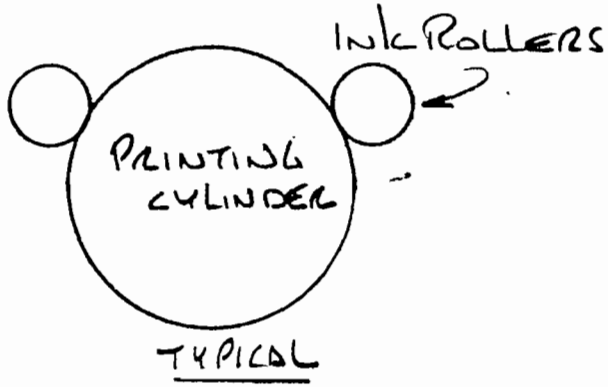
LEGEND

1 - STACK (EMERGENCY DISCHARGE)
2 - FIRE DAMPER INLET
3 - #1 CONDENSER
4 - #2 CONDENSER
5 - PAN
6 - PARTICULATE FILTER
7 - MAIN COOLING FAN
8 - SUMMER COOLING FAN
9 - FIRE DAMPER OUTLET

FIGURE 1. FLOW DIAGRAM OF TYPICAL HMT AIR POLLUTION CONTROL SYSTEM



OVERLY WEB PRESS DRYER



TYPICAL

SCHEMATIC FLOW DIAGRAM
WEB OFFSET . HEATSET PRINTING PROCESS

A. D. WEISS LITHOGRAPH CO
2025 McKINLEY ST
HOLLYWOOD FLA.

PROPOSED SCHEDULE FOR VICOR PRESSES

PRESS #	STATUS	CONTROL DEVICE
1	NO LONGER IN USE	
2	OPERATIONAL	STACK
3	OPERATIONAL	STACK
4	OPERATIONAL	STACK
5	OPERATIONAL	STACK
6	NO LONGER IN USE	
7	OPERATIONAL	STACK
8	OPERATIONAL	STACK
9	OPERATIONAL	MMT PPES-6000
10	OPERATIONAL	STACK
11	OPERATIONAL	MMT PPES-6000
12	OPERATIONAL	STACK

TOTAL # OF PRESSES WITH STACKS 8
TOTAL # OF PRESSES CONTROLLED BY MMT PPES-6000 3
TOTAL # OF PRESSES 10

ROOF ELEV. 10'-0"

ROOF ELEV. 10'-0"

AC

SERVICE ALLEY

MMT MODEL PPES-6000 DUST HAZE CONTROL SYSTEM

ROOF ELEV. 24'

ROOF ELEV. 15'-10"

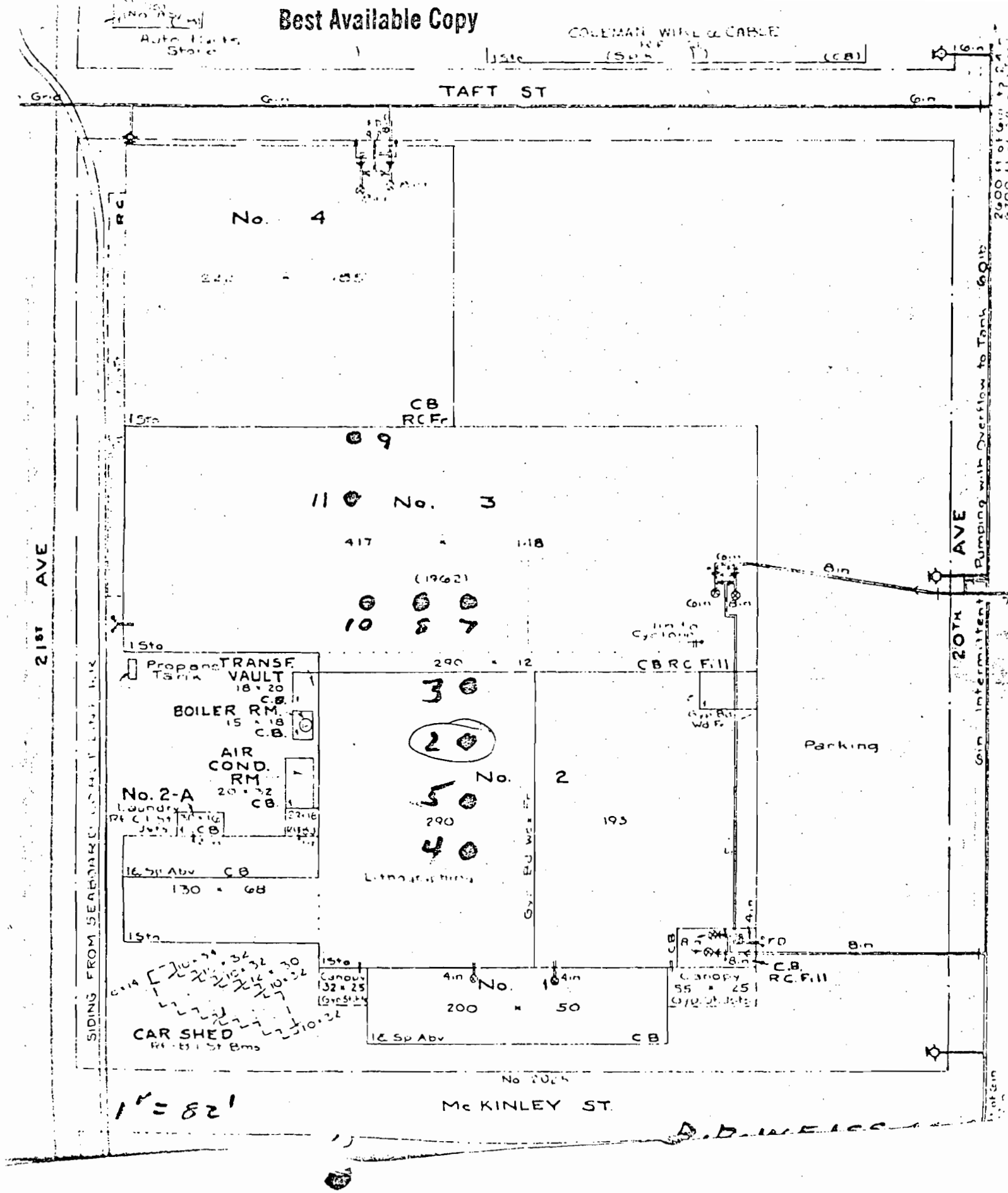
ROOF ELEV.

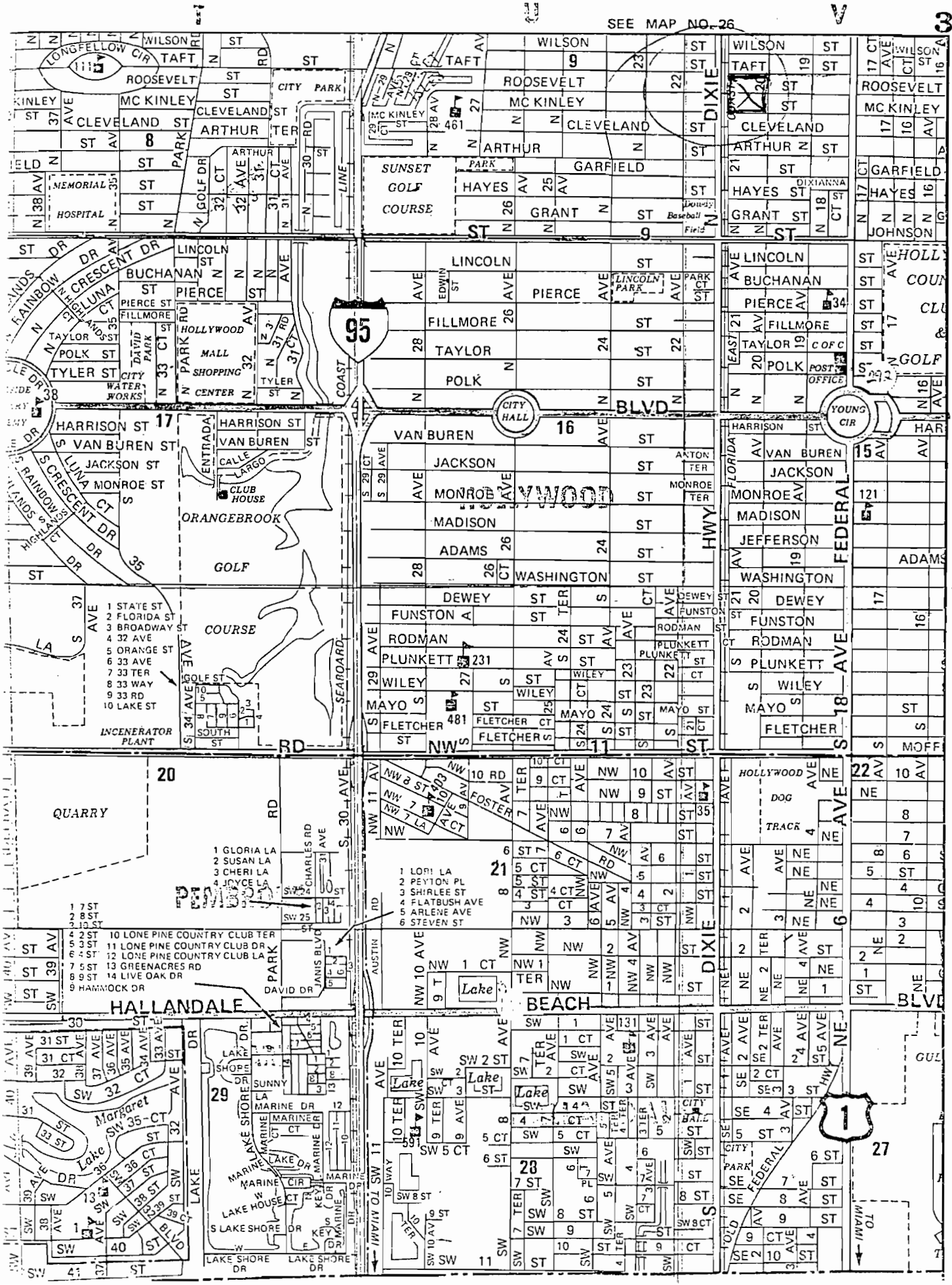
DIXIE HIGHWAY

ACME INDUSTRIAL SITE

ROOF PLAN

A.B. VICOR LITHOGRAPH





STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

File Copy

SOURCE TYPE: AIR POLLUTION [*] New[1] [ ] Existing[1]

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

COMPANY NAME: A. D. WEISS LITHOGRAPH COMPANY COUNTY: BROWARD

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) BLUE HAZE CONTROL UNIT FOR PRESSES 9 AND 11.

SOURCE LOCATION: Street 2025 MCKINLEY STREET City HOLLYWOOD, FLORIDA

UTM: East 585.3 North 2878.6

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

APPLICANT NAME AND TITLE: J. W. WILSON, VICE PRESIDENT OF MANUFACTURING

APPLICANT ADDRESS: 2025 MCKINLEY STREET, HOLLYWOOD, FLORIDA 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. WEISS LITHOGRAPH COMPANY

I certify that the statements made in this application for a OPERATING 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. W. Wilson

J. W. WILSON, VICE PRESIDENT OF MANUFACTURING
Name and Title (Please Type)

Date: 2/2/82 Telephone No. 920-7300

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

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

Signed: Ben Karp P.E.

BEN KARP P.E.
Name (Please Type)

(Affix Seal)

CONSULTING ENGINEERS
Company Name (Please Type)

555 W. 18 STREET, HIALEAH, FLORIDA 33010
Mailing Address (Please Type)

Florida Registration No. 11558 Date: 2/10/82 Telephone No. 885-4943

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

SECTION II: GENERAL PROJECT INFORMATION

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

REPLACEMENT OF ELECTROSTATIC PRECIPITATOR WITH INSTALLATION OF A COOLING, CONDENSING AND FILTERING DEVICE FOR THE REMOVAL OF EMISSIONS.

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

Start of Construction _____ Completion of Construction _____

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

$121,916.99

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

AO 10839 AC 06-440237

ISSUED: 12/2/1980

EXPIRES: 12/6/1983

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

F. Normal equipment operating time: hrs/day 24 ; days/wk 6 ; wks/yr 52 ; if power plant, hrs/yr _____ ;

if seasonal, describe: _____

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

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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PAPER	NONE		2837	
INK	Aliphatic solvent	30	42	

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

1. Total Process Input Rate (lbs/hr): 2879

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: MAGIESAL #470 - VAPOR PRESSURE .04MM GH. UNDER STANDARD CONDITIONS

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
NO VOLATILE ORGANIC SOLVENTS			N/A	N/A	N/A	N/A	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5])
MMT BLUE HAZE CONTROL	Non volatile organic solvent	85-98	.3	TESTS
SYSTEM, MODEL #PPFS 6000				

[1] See Section V, Item 2.

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

[3] Calculated from operating rate and applicable standard

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

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NATURAL GAS	~~3,500~~ ~~3.0~~ MCF/HR.	~~6,000~~ ~~6.0~~ MCF/HR.	6MM BTU/HR.

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

Fuel Analysis: Natural Gas

Percent Sulfur: 0 Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 1,000 BTU/lb _____ BTU/gal

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

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

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

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

Stack Height: 34 ft. Stack Diameter: 1.5 ft.

Gas Flow Rate: 6,000 ACFM Gas Exit Temperature: 110 °F.

Water Vapor Content: _____ % Velocity: 56 FPS

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste _____

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

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

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

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

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

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

Brief description of operating characteristics of control devices: EXHAUST IS COOLED BY MEANS OF TWO (2) AIR TO AIR HEAT EXCHANGERS AND THEN FILTERED THROUGH SPECIALLY DESIGNED FIBERGLASS FILTER ELEMENTS.

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

RECLAIMED SOLVENT IS SOLD AS FUEL.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

Contaminant	Rate or Concentration
N/A	

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

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

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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: N/A

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:
2. Efficiency*:
3. Capital Cost:
4. Life:
5. Operating Cost:
6. Energy:
7. Maintenance Cost:
8. Manufacturer:
9. Other locations where employed on similar processes:

N/A

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

N/A

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

N/A

(2) Mailing Address:

(3) City:

(4) State:

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

10. Stack Parameters

a.	Height:	34'	ft.	b.	Diameter:	1.5	ft.
c.	Flow Rate:	6,000	ACFM	d.	Temperature:	110	°F
e.	Velocity:	54	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: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy*:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy**:

h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

*Explain method of determining efficiency.

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

3.

a. Control Device:

b. Operating Principles: N/A

c. Efficiency*: See letter of March 15, 1979, from Gary D. Carlson, Broward County, Environmental Quality Control Board.

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*Explain method of determining efficiency above.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

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

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

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location) _____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

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

FILE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
1900 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406

MAY 2 0 1987

NOTICE OF PERMIT

Broward County
AP - A.D. Weiss Lithograph Co., Inc.

Mr. Charles M. Labson
Plant Manager
A.D. Weiss Lithograph Co., Inc.
2025 McKinley Street
Hollywood, FL 33020

Dear Mr. Labson:

Enclosed is Permit Number AO 06-129019, to operate an air pollution source, issued pursuant to Section 403.087, Florida Statutes.

Persons whose substantial interests are affected by this permit have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, FAC, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee 32301, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, FAC. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.168, 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 32301; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 Days from the date the Final Order is filed with the Clerk of the Department.

Executed in West Palm Beach, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Stephanie S. Brooks

Stephanie S. Brooks
Engineer III
Air Permitting
1900 S. Congress Ave., Ste. A
West Palm Beach, FL 33406
305/964-9668

SSB:dd:15

Copies furnished to:

cc: Broward County Environmental Quality Control Board
Kaye Arlington

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on MAY 20 1987 to the listed persons.

Clerk Stamp
FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to the §120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Carmella B. Bee — MAY 20 1987

Clerk — Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
1900 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406

PERMITTEE:

Mr. Charles M. Labson
Plant Manager
A.D. Weiss Lithograph
Company, Inc.
2025 McKinley Street
Hollywood, FL 33020

I.D. NUMBER: 50/BRO/06/1014
PERMIT/CERTIFICATION NUMBER: AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992
COUNTY: Broward County
LATITUDE/LONGITUDE: 26°01'31"N/80°08'51"W
UTM Zone 17; 585.3 KmE; 2878.6 KmN
PROJECT: A.D. Weiss Lithograph, Co., Inc. Presses #9 & #11

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 17-2. 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:

OPERATE: An air pollution source consisting of lithographic presses #9 and #11 using Mageisol non-VOC solvents. Particulate and odor emissions are controlled by an MMT Blue Haze Control Unit, Model PDFS6000; which discharges to the atmosphere 34 feet above ground level.

IN ACCORDANCE WITH: Application for Renewal dated December 29, 1986, and Application to Operate Air Pollution Sources dated February 2, 1982 and information supplied by letter dated March 2, 1982 (none are attached).

LOCATED AT: 2025 McKinley Street, Hollywood, Broward County, Florida.

TO SERVE: A lithographic commercial printing facility (SIC#2752)

SUBJECT TO: General Conditions 1-15 and Specific Conditions 1-7.

DER Form 17-1.201(5)
Effective November 30, 1982

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

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, 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), 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 therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules.

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

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 the permit, the permittee shall immediately notify and provide the Department with the following information:

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

   b. the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

      The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other 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 in proscribed by Sections 403.73 and 403.111, Florida Statutes.

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

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)
    (x) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
    ( ) 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.

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

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

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;
- analytical techniques or methods used; and
- 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.

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

SPECIFIC CONDITIONS:

1. Compliance testing shall be conducted for the sources covered by this permit in the year prior to permit renewal in accordance with the methods specified below.

2. Emission limiting standards are as follows:

   a) In accordance with Florida Administrative Code Rule 17-2.610(2)(a) no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere any air pollutants with an opacity greater than or equal to 20 percent.

   b) In accordance with Florida Administrative Code Rule 17-2.620(2) no person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectable odor.

3. The compliance test report shall include results of tests by the following methods:

Source/Emission Point	Pollutant	Test Method
Blue Haze Unit for Presses #9 & #11	Visible Emission	E8A Method 9

4. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and within ten percent (10%) of the rated capacity of the source, otherwise the Department may require the test to be repeated or require modification of the permit to reflect tested rates and/or fuels.

PERMITTEE:
Mr. Charles M. Labson
A.D. Weiss Lithograph
Company, Inc.

I.D. NUMBER: 50/BRO/61014
PERMIT/CERTIFICATION NUMBER:AO 06-129019
DATE OF ISSUE: MAY 20 1987
EXPIRATION DATE: June 1, 1992

SPECIFIC CONDITIONS:

5. The Department shall be notified of expected test dates at least fifteen (15) days prior to compliance testing.

6. On or before March 1 of each calendar year, a completed DER Form 17-1.122(44), Annual Operations Report Form for Air Emissions Sources shall be submitted to the Department.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation, Southeast District Office and Broward County Environmental Quality Control Board.

Issued this 20th day of May, 1987

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

J. Scott Benyon
District Manager

STATE OF FLOR

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

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

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: AIR POLLUTION [X] New[1] [ ] Existing[1]

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

COMPANY NAME: A. D. WEISS LITHOGRAPH CO., INC. COUNTY: BROWARD

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) BLUE HAZE CONTROL UNIT

SOURCE LOCATION: Street 2025 McKinley Street City Hollywood, Fl.

UTM: East 585.3 North 2878.6

Latitude 26° 01' 31 "N Longitude 80° 08' 51"W

APPLICANT NAME AND TITLE: CHUCK LABSON, PLANT MANAGER

APPLICANT ADDRESS: 2025 McKINLEY STREET, HOLLYWOOD, FLORIDA 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. WEISS LITHO. Co.

I certify that the statements made in this application for a OPERATING 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: Charles M. Labson

Plant Manager
Name and Title (Please Type)

Date: 12/9/87 Telephone No. 920-7300

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_____

_____
Name (Please Type)

_____
Company Name (Please Type)

_____
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.

BLUE HAZE EMISSION CONTROL UNIT

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

Start of Construction 12/1/87 Completion of Construction 3/15/88

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.)

$110,000

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

AO-29075R1-7

AO-27091

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? NO

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

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

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

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. N/A

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source?

   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:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PAPER	NONE		7,000	
INK	ALIPHATIC SOLVENTS	30	104	

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

1. Total Process Input Rate (lbs/hr): 7,104

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	
NONE							

[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)
CVM BLUE HAZE CONTROL	NON VOLATILE ORGANIC SOL.	85-98	.3	TEST

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NATURAL GAS	1.638 MCF/hr.	3.276 MCF/hr.	3.276 MMBTU/hr.

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 1,000 BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

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:

Hot exhaust gas enters through the heat exchanger and is cooled by ambient air in a plate-type air-to-air heat exchanger. The precooled exhaust passes through fiberglass filters with the final clean air exhausted to the atmosphere.

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

Reclaimed solvent is sold as fuel

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 [X] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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: 30' ft. b. Diameter: 2.5 ft.

c. Flow Rate: 5017 ACFM d. Temperature: 110 °F.

e. Velocity: 40 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

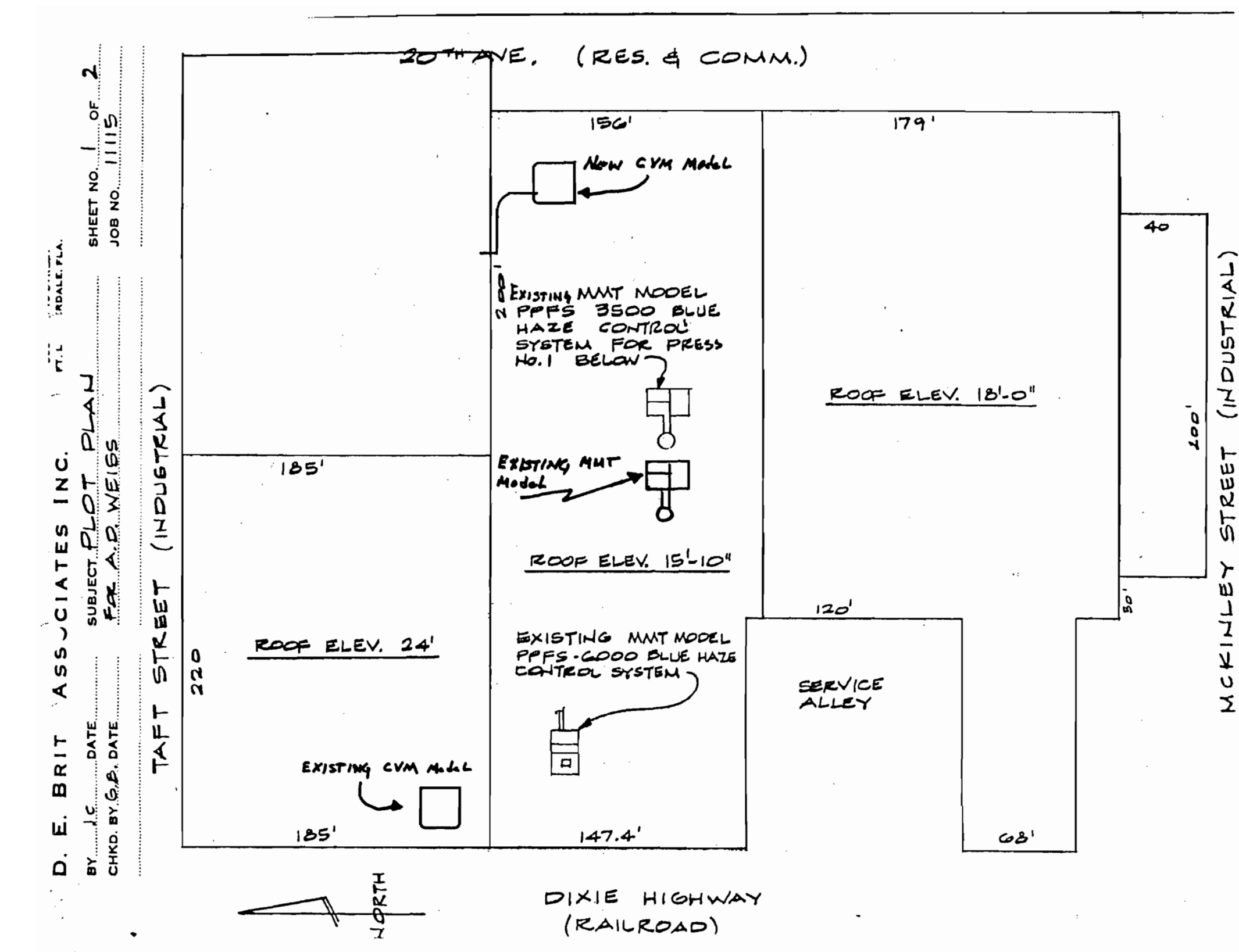
E. Emission Data Used in Modeling

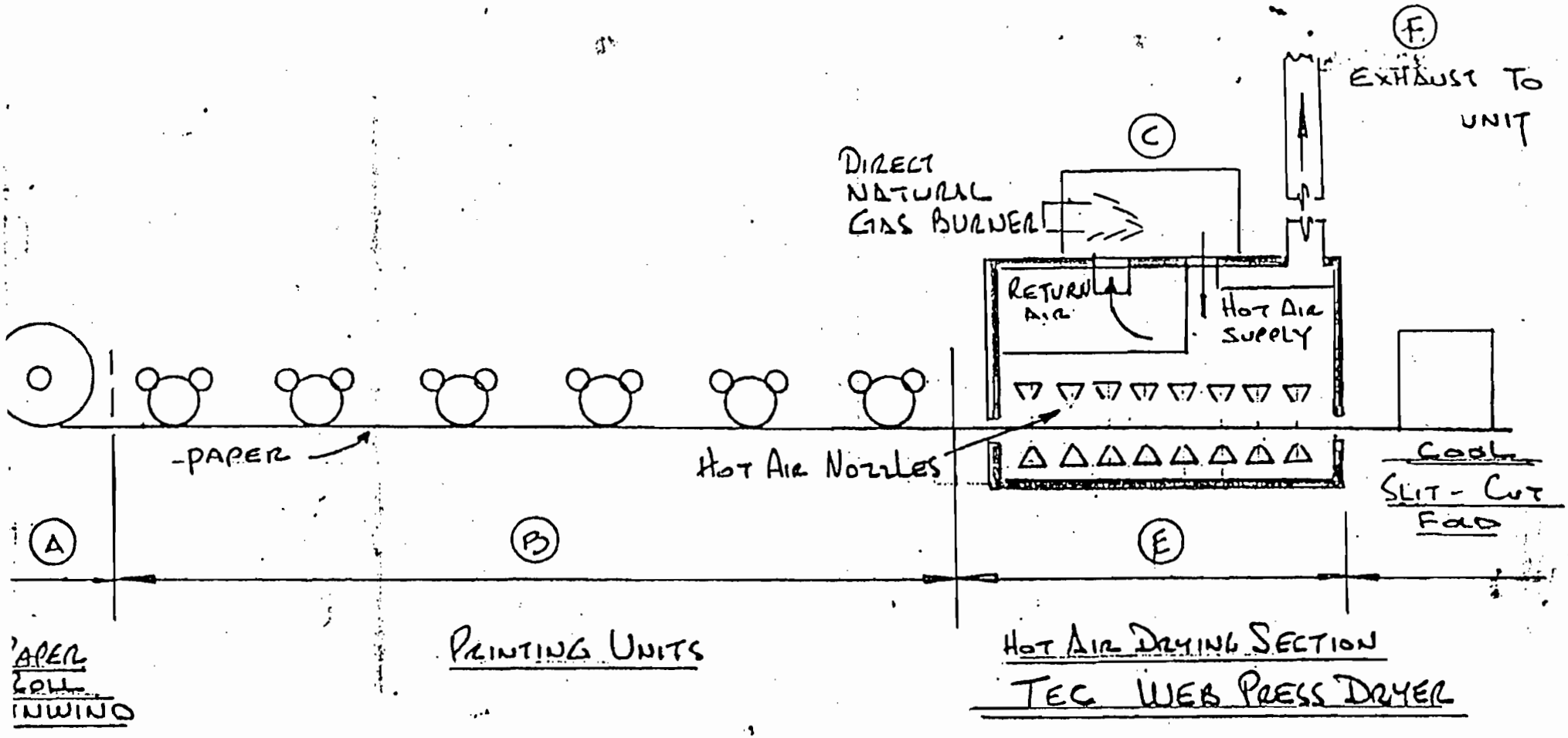
Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

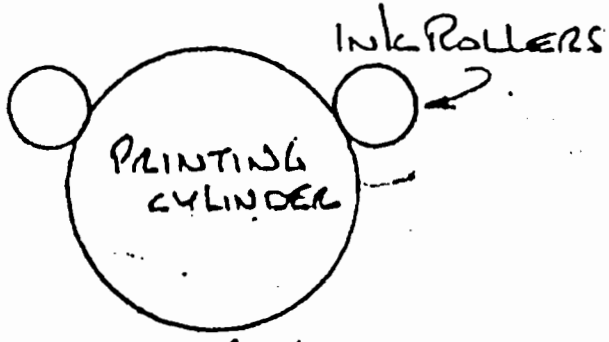
G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

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.


D. E. BRIT ASSOCIATES INC.
FT. L RDALE, FLA.
BY J.C. DATE
CHKD. BY G.B. DATE
SUBJECT PLOT PLAN
FOR A.D. WEIGS
SHEET NO. 1 OF 2
JOB NO. 1115
20TH AVE. (RES. & COMM.)
TAFT STREET (INDUSTRIAL)
MCKINLEY STREET (INDUSTRIAL)
DIXIE HIGHWAY (RAILROAD)
NORTH
156'
179'
185'
220
185'
147.4'
68'
120'
40
100'
50'
NEW CVM Model
EXISTING MMT MODEL PPFS 3500 BLUE HAZE CONTROL SYSTEM FOR PRESS NO. 1 BELOW
EXISTING MMT Model
EXISTING CVM Model
EXISTING MMT MODEL PPFS-6000 BLUE HAZE CONTROL SYSTEM
ROOF ELEV. 18'-0"
ROOF ELEV. 15'-10"
ROOF ELEV. 24'
SERVICE ALLEY



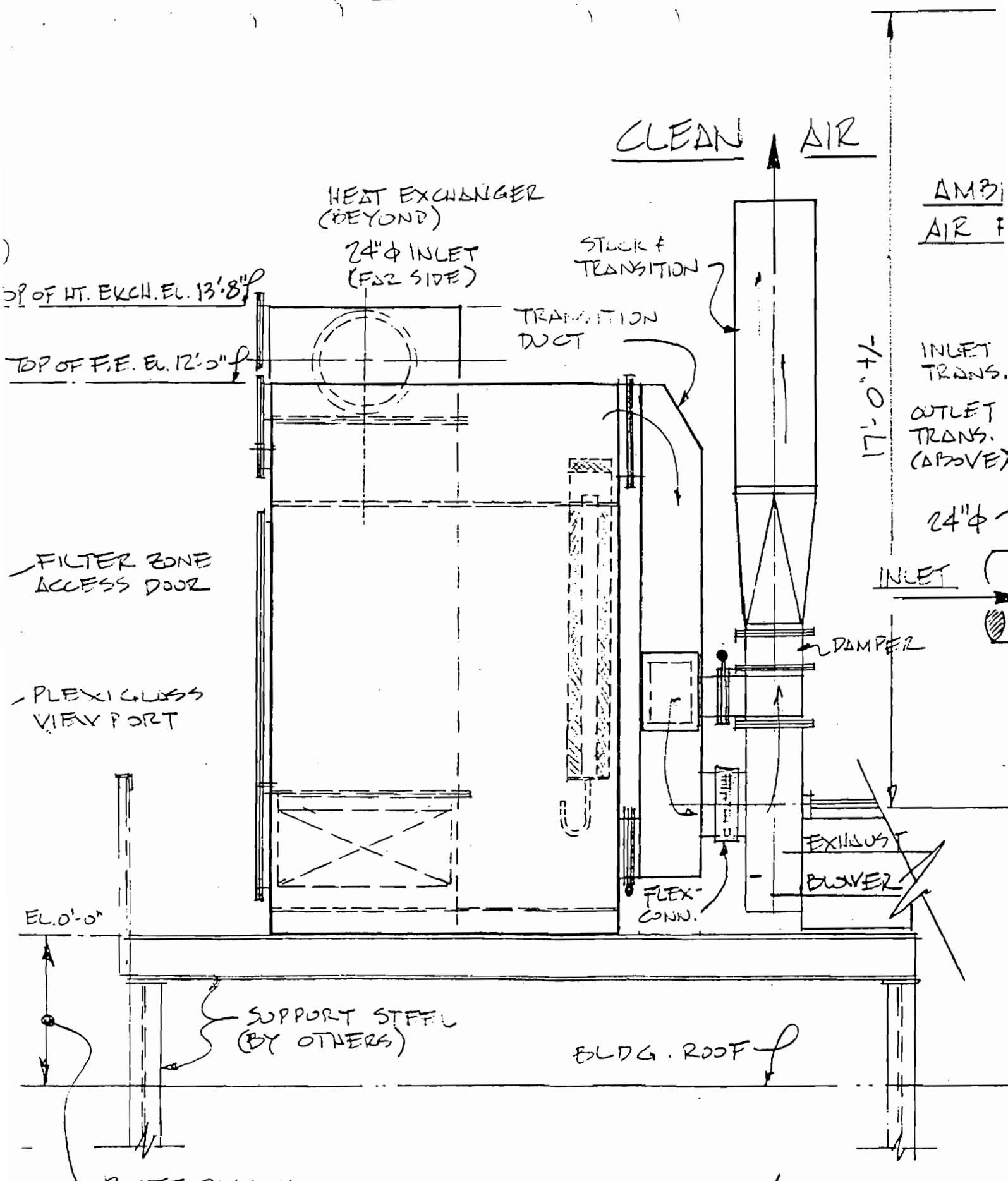
TEC WEB PRESS DRYER



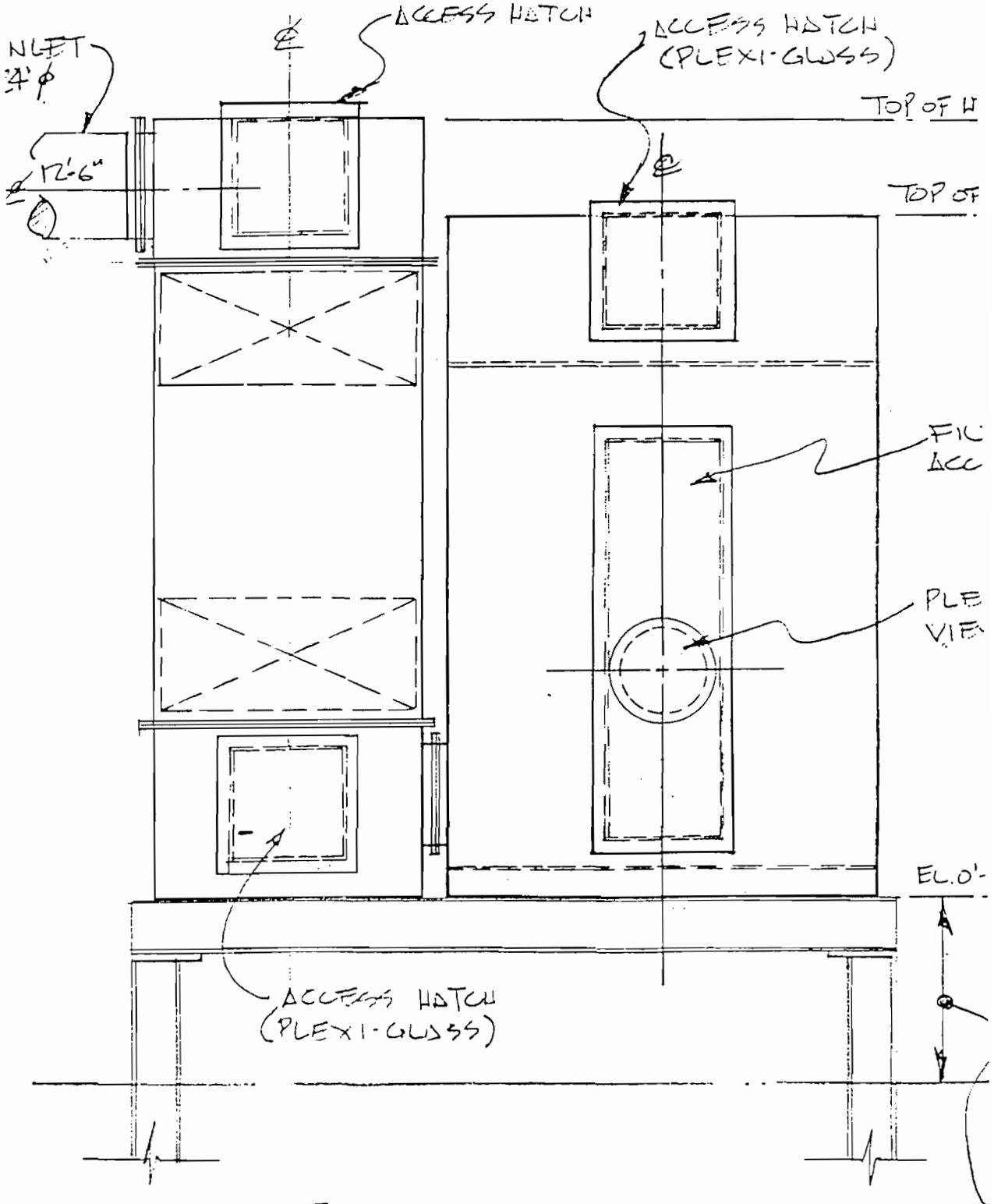
TYPICAL

SCHEMATIC FLOW DIAGRAM
WEB OFFSET - HEATSET PRINTING PROCESS

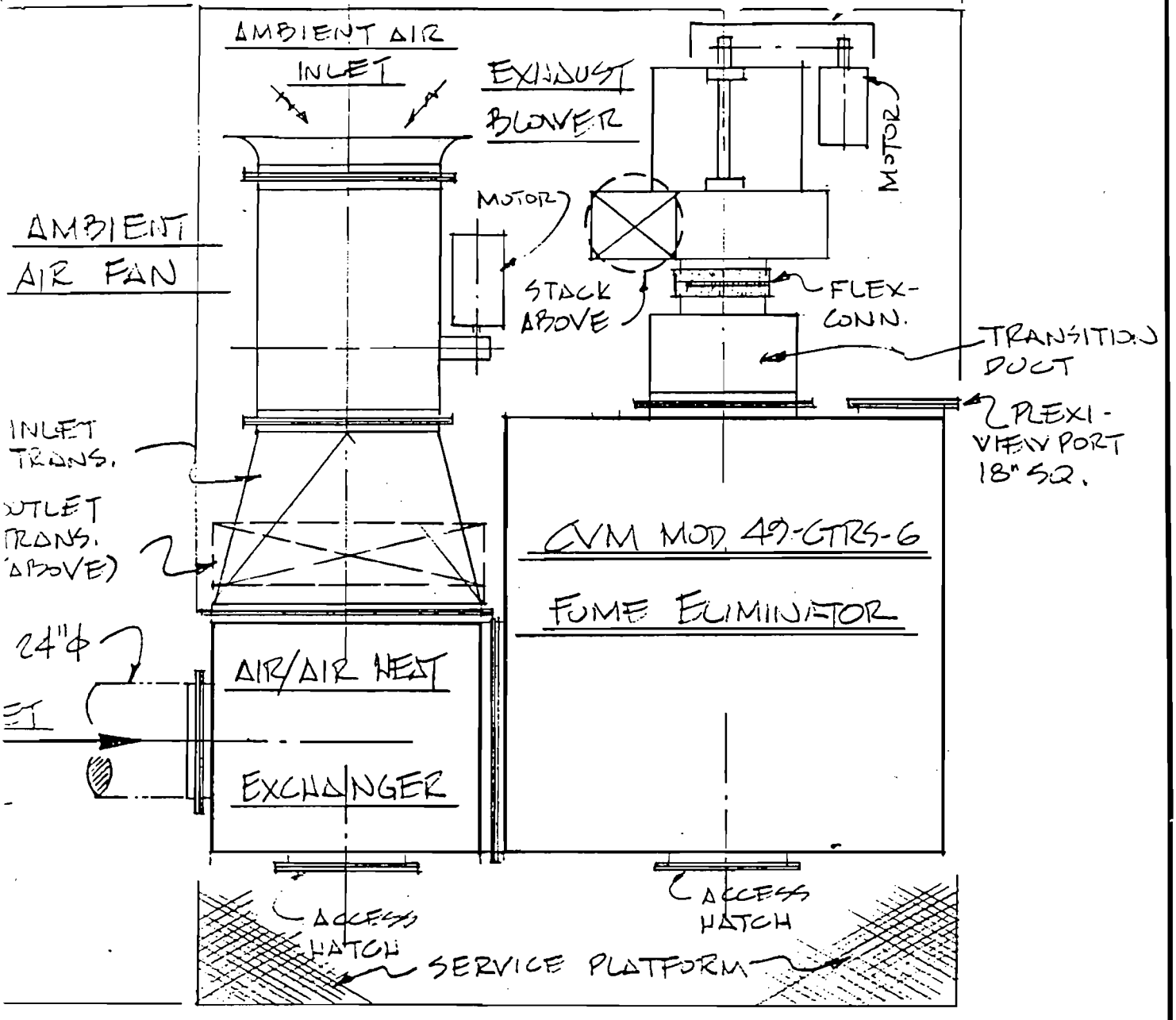
A.D. WEISS LITHOGRAPH CO.
2025 McKinley St
HOLLYWOOD FLA.



RIGHT SIDE VIEW



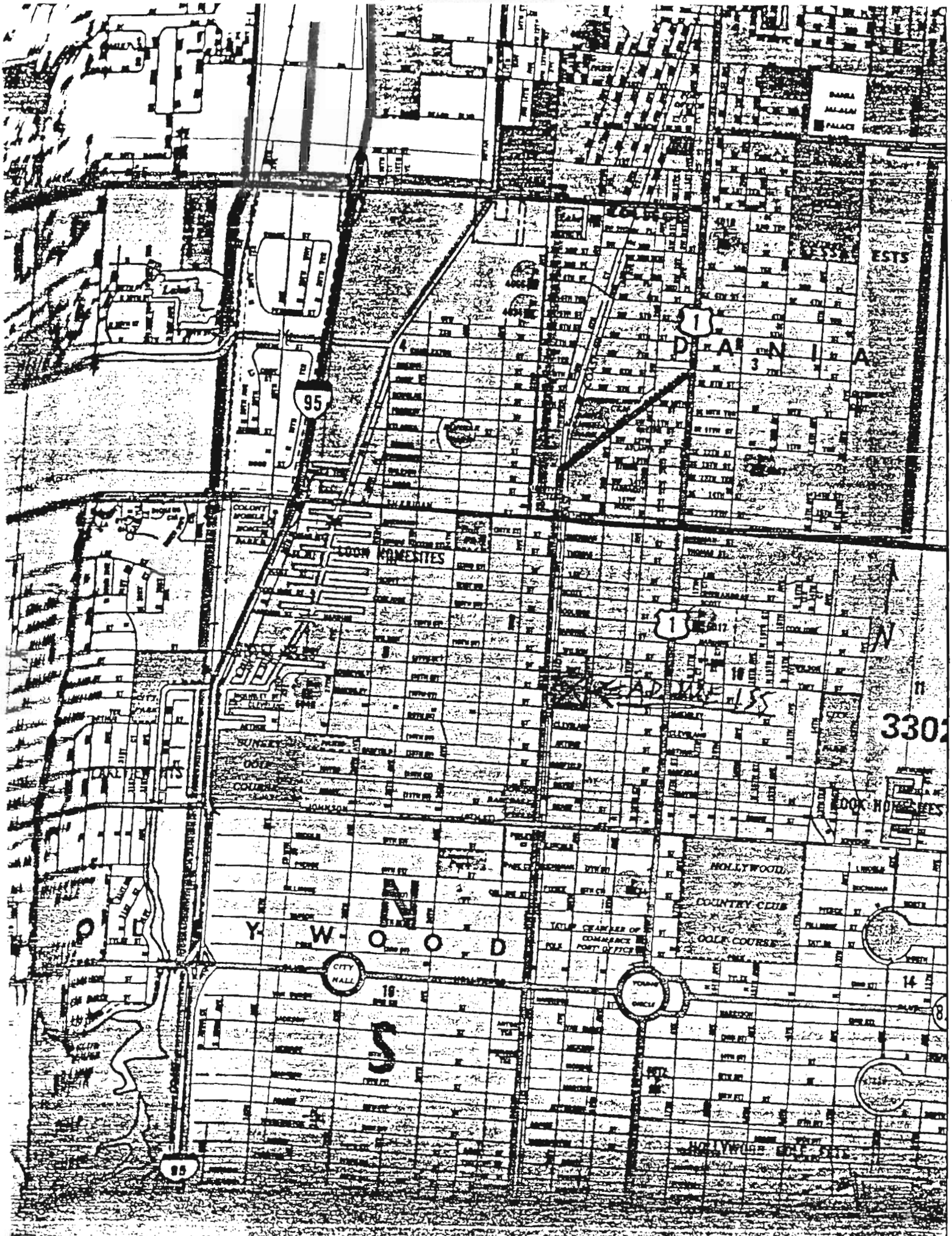
ELEVATION



PLAN VIEW

CVM CORPORATION		
402 VANDEVER AVENUE		WILMINGTON, DELAWARE 19802
SCALE: NONE	APPROVED BY:	DRAWN BY C.E.T.
DATE: 11-16-87		REVISED
CVM FUME ELIMINATOR SYSTEM		

BEST AVAILABLE COPY



S.E.
ENVIRONMENTAL CONSULTANTS, INC.
MANAGEMENT · ENGINEERING · TESTING
7060 TAFT STREET • HOLLYWOOD, FLORIDA 33024 • PHONE (305) 962-0176

August 30, 1990

Ms. Stephanie Brooks
Department of Environmental Regulation
1900 S. Congress Avenue, Suite A
West Palm Beach, FL 33406

Re: A.D. Weiss Lithograph Company, Inc.
2025 McKinley Street
Hollywood, FL 33020

Dear Ms. Brooks:

Please accept this letter as our motification of a waiver of the 90 day time clock for permit processing of the "Modification to Improve" application dated 6/27/90 for the subject facility so as to permit you to transmit this application to D.E.R.-Tallahassee for processing.

Should you have any questions on the above, please contact me at (305) 962-0176.

Sincerely,

A.D. Bauch P.E.

A.D. Bauch, P.E.
Executive Director

cc: Mr. John Neubauer
A.D. Weiss

Best Available Copy

Permit Data Form

Private Source Name: A. D Weiss

Rule Code: AC Subcode: 1D Check #: ☐ GP ☐ Exempt Correct Fee: 500

Amount Received: 500.00

Permit Processor's Initial: DB Data Entry Operator's Initial: DD Amount Returned: 0

Comments:

AC 06-183175

Rec # 156007

A. D. WEISS
LITHOGRAPH COMPANY, INC.
2025 McKINLEY STREET
HOLLYWOOD, FLORIDA 33020-3199

005313 63-574/632

SOUTHEAST BANK OF WEST FLORIDA
PENSACOLA, FLORIDA

FIVE HUNDRED DOLLARS AND 00 CENTS

DATE	CHECK NO.	AMOUNT
6/26/90	5313	**500.00

PAY TO THE ORDER OF FLORIDA DEPT. OF ENVIRONMENTAL REGULATION

A. D. WEISS LITHOGRAPH COMPANY, INC.

Michael D. Weiss

[redacted]

SOUTHEAST DISTRICT PERMIT PROCESSING WORKSHEET

LOGGING

NAME OF PROJECT A. D. Weis

PROJECT LOG NO. AC06-183175 COUNTY Broward

DATE APPLICATION RECEIVED 7-6-90 30-DAY (HW 60-DAY) DATE 8-4-90

AMOUNT OF FEE PAID 500.00 Rec # 15007 COPIES OF PLANS 1

COPIES OF APPLICATION 1 COPIES OF SPECIFICATIONS ____

COPIES TO: CORPS__; LOCAL PROGRAM 1; TALLAHASSEE__;DNR__;OTHER__
7/9/90

PERMIT REVIEW

PERMIT ASSIGNED TO Brooks, Stephanie AMOUNT OF FEE REQ'D $____

DISCHARGE TO OR LOCATED IN AQUATIC PRESERVE: Yes__ No __ N/A ___

PERMIT STATUS AND CHRONOLOGY

DATE	REVIEWER'S INITIALS	COMMENTS

(continue on reverse side)

FIELD INSPECTION BY:_____DATE_____; N/A _____

WATER MANAGEMENT COMMENTS (DATE)_____; N/A _____

LOCAL PROGRAM APPROVAL (DATE)_____; N/A _____

GPSI, APIS, OR PWS UPDATE DRAFTED: Yes _____ ; N/A _____

PUBLIC NOTICE LETTER ISSUED/PUBLISHED (DATES)_____ ; N/A _____

APPLICATION COMPLETION DATE_____ > DEFAULT DATE_____

>> D.A.S. 90+ DAYS INACTIVITY AUTHORIZATION:_____OK ____DENY <<

COMMENTS: _____

~~PERMIT, EXEMPTION, DENIAL~~ DRAFTED BY: S Brooks DATE:_____

INTENT: PROGRAM HEAD_____PROGRAM ADM._____

FINAL DRAFT REVIEWED BY:_____DATE:_____

FINAL DRAFT APPROVED BY:_____DATE:_____

****

FINAL PROCESSING

DISTRIBUTION BY:_____DATE:_____

PATS UPDATED BY:_____DATE:_____

GPSI, APIS OR PWS UPDATED BY: _____DATE:_____

WORD PROCESSOR: _____

Best Available Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 156

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from A. D. Weiss Date July 6, 1

Address 2025 McKinley Street Hollywood FL 33020-3199 Dollars $ 500.00

Applicant Name & Address John Markey, V.P. & Manager. Same

Source of Revenue A. D. Weiss

Revenue Code 001031 (00513) Application Number AC 06-18317

By B. J. Jones

PPL NO
APPL #
DER OF
DER P
APPL

(Y/N)
(Y/N)
(Y/N)
(Y/N)
(Y/N)

PROJECT SOURCE

STREET:2025 ZIP:33020
STATE:FL
APPLICATION NAME:JOHN MARKEY, V.P. OF MANUFACTURING CITY:HOLLYWOOD
STREET:2025 MCKINLEY STREET PHONE:305-920-7300
STATE:FL ZIP:33020
AGENT NAME:H.J. BAUCH/S.E.ENVIRONMENTAL CONS. CITY:HOLLYWOOD
STREET:730 TAFT STREET PHONE:305-962-0175
STATE:FL ZIP:33021
FEE #1 DATE PAID:07/06/90 AMOUNT PAID:00500 RECEIPT NUMBER:00156007

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - - - __/__/__
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - __/__/__ __/__/__
D DATE DER REC. COMMENTS FROM GOV. BODY FOR LOCAL APP. - - - __/__/__
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__ __/__/__
F DATE LAST 45 DAY LETTER WAS SENT - - - - - - - - - - - __/__/__
G DATE FIELD REPORT WAS REQ--REC - - - - - - - - - - - - __/__/__
H DATE DNR REVIEW WAS COMPLETED - - - - - - - - - - - - __/__/__

I DATE APPLICATION WAS COMPLETE - - - - - - - - - - - - __/__/__
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - - __/__/__
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - __/__/__ __/__/__
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - - - __/__/__
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - - __/__/__
N WAIVER DATE BEGIN--END (DAY 90) - - - - - - - - - - - 09/31/90--11/27

COMMENTS:

S.E.

ENVIRONMENTAL CONSULTANTS, INC.

MANAGEMENT · ENGINEERING · TESTING
7060 TAFT STREET • HOLLYWOOD, FLORIDA 33024 • PHONE (305) 962-0176

August 30, 1990

Ms. Stephanie Brooks
Department of Environmental Regulation
1900 S. Congress Avenue, Suite A
West Palm Beach, FL 33406

Re: A.D. Weiss Lithograph Company, Inc.
2025 McKinley Street
Hollywood, FL 33020

Dear Ms. Brooks:

Please accept this letter as our motification of a waiver of the 90 day time clock for permit processing of the "Modification to Improve" application dated 6/27/90 for the subject facility so as to permit you to transmit this application to D.E.R.-Tallahassee for processing.

Should you have any questions on the above, please contact me at (305) 962-0176.

Sincerely,

A.J. Bauch P.E.

A.J. Bauch, P.E.
Executive Director

cc: Mr. John Neubauer
A.D. Weiss

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Patty Adams, BAQM, TT, Tally		Initial / Date
2.		Initial / Date
3. RECEIVED		Initial / Date
4. SEP 07 1990 DER - BAQM		Initial / Date

REMARKS:

Patty,

When I glanced at this I didn't realize they were changing all inks to the new kind. This is a ~~major~~ minor mod at a major source. A. D Weiss has waived the clock.

INFORMATION	
	Review & Return
	Review & File
	Initial & Forward

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

FROM:

T. Brooks

DATE
9-4-90

PHONE
232-2010

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

AC 06-183175

SOUTHEAST FLORIDA DISTRICT
1900 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
J. SCOTT BENYON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: two lithographic printing presses [X] New[1] [X] Existing[1]

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

COMPANY NAME: A. D. Weiss Lithograph Company, Inc. COUNTY: Broward

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 2025 McKinley Street City Hollywood, FL

UTM: East 585.3 North 2878.6

Latitude 26 ° 01 ' 31 "N Longitude 80 ° 08 ' 51 "W

APPLICANT NAME AND TITLE: John Markey, Vice President of Manufacturing

APPLICANT ADDRESS: 2025 McKinley Street, Hollywood, Florida 33020

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of A. D. Weiss Lithograph Co., Inc.

I certify that the statements made in this application for a construction modification 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 Markey

V.P. Manufacturing

Name and Title (Please Type)
John Markey, Vice President of Manufacturing
Date: 6-27-90 Telephone No. (305)920-7300

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 H. J. Bauch P.E.

H. J. Bauch, P. E.
Name (Please Type)

S.E. Environmental Consultants, Inc.
Company Name (Please Type)

7060 Taft Street
Hollywood, Florida 33024
Mailing Address (Please Type)

Florida Registration No. #22011 Date: 6-27-90 Telephone No. (305) 962-0176

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 for the purpose of constructing a modification to improve by replacing four dual pass Offen dryers (presses #2,3,4 and #14) with control airfoils on stacks with a new KATEC Thermal Afterburner with two new presses and dryer enclosures and reducing the ink VOC content from 68% to 39.1% by formulation change. The upgraded facility press numbers shall be #6 and #15.

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

Start of Construction upon receipt of permit Completion of Construction 90 days

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.)

$200,000.

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

A006-164202 (5/1/94)

A006-129019 (6/1/92)

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

if power plant, hrs/yr _____; if seasonal, describe: N.A.

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

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

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

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

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

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

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. N.A.

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N.A.

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N.A.

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:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Paper	None	-	1100 Per Press 2200 Total	See Attachment #6
Heatset Ink	VOC	39.1	24 per press 48 Total	See Attachment #6

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

1. Total Process Input Rate (lbs/hr): 2248 lbs/hr.

2. Product Weight (lbs/hr): 2292.2 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~~ hr.	T/yr	
Add presses #6 & 15 VOC's	4.8	21.0	17-2.650(1)(f)3	17.4	18.8	82.2	See Attachment #6
Delete presses 2,3,4,&14 VOC's	(14.4)	(29.7)	"		14.4	62.9	
Ink change VOC's	(69.2)	(302.3)	"		93.6	408.8	"
Decrease Total VOC's	(78.8)	(344.2)	"	--			"

[1] See Section V, Item 2. See Attachment #1

[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.

2.9 #V.O.C./gallon Ink x 48 #ink/hr÷8.0#/gallon = 17.4 #/hr.

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

See Attachment #1

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)
Dryer Enclosure	VOC Capture	76.7%	3	Test*
KATEC Afterburner	VOC Destruction	97.5%	3	Test*

*See Attachment #3

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	7.5 MMCF/Hr.	15.0 MMCF/Hr.	15.0 MMBTU/Hr.

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

Fuel Analysis:

Percent Sulfur: 0 Percent Ash: —

Density: — lbs/gal Typical Percent Nitrogen: —

Heat Capacity: 1,000. BTU/lb — BTU/gal

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

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

Annual Average _____ Maximum _____

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

Scrap paper sold to recycler.

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

Stack Height: 40 ft. Stack Diameter: 39.31" x 44.38" rectangular ft.

Gas Flow Rate: 31100 ACFM 17,400 DSCFM Gas Exit Temperature: 475 °F.

Water Vapor Content: — % Velocity: 42.8 FPS

SECTION IV: INCINERATOR INFORMATION = N.A.

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

Description of Waste _____

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

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack 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)]

   See Attachment #1

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.

   See Attachment #1, #2, and #3

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

   See Attachment #1, #2, and #3

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.)

   See Attachment #4 and #5

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).

   See Attachment #1, #2, and #3

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.

   See Attachment #6

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).

   See Attachment #7

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.

   See Attachment #8

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation. $500. check enclosed.

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. N.A.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY - N.A.

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

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.

Attachment #1

Section 111 B.

For two (2) new presses #6 & #15

Total Process Input Rate = lbs/hr Paper + lbs/hr Ink.
= 1100 + 1100 + 24 + 24
= 2248 lbs/hr

Product Weight = Process Input Rate less VOC loss
= 2248 - 18.8 = 2292.2 lbs/hr.

Section 111 C.

The following data has been derived from the Ink and Production data found in Attachment #2.

Previous Ink Formulation of 2/3/88 by wt.%

Pigment	32.0%
Polyethylene Compound	5.0%
Varnish	52.0%
Magiesol 47	11.0%
	100.0%

VOC content per 4/90 definition.....68.0%

New Ink Formulation for 1990 by wt.%

Black	35.67%
Blue	39.00%
Red	40.33%
Yellow	41.24%

Four Color Average VOC content= 156.24 ÷ 4 = 39.06%

From production rates for 1989 in Attachment #2 using 8736 hours/year:

	Paper	Ink
Presses #4 & #14	260.6 #/hr.	5.6 #/hr.
Presses #2 & #3	725.3 #/hr.	15.6 #/hr.
Total	985.9 #/hr.	21.2 #/hr.

These presses are to be phased out as new presses #6 and #15 are started up.

	Paper	Ink
Presses #6 & #15	2200 #/hr.	48 #.hr.

New VOC % = 39.1%
VOC rate = 18.8 #/hr.

From Attachment #3

Dryer Enclosure Capture Rate	= 76.7%	23.3% loss
KATEC Afterburners destruction efficiency	= 97.5%	2.5% loss

Based on above:

VOC loss	23.3% x 18.8 = 4.4#/hr.
VOC Capture	76.7% x 18.8 = 14.4#/hr.

but captured VOC are fed thru Afterburner

VOC Escape	2.5% x 14.4 = 0.4#/hr
VOC Destruction	97.55 x 14.4 = 14.0#/hr

VOC in = 48#/hr x .391% = 18.8#/hr.
Total VOC loss = 4.4#/hr + 0.4#/hr = 4.8#/hr.
= 21.0 Tons/year

Total VOC Destruction = 14.0#/hr
= 61.2 Tons/year

Summary

	#/hr.	Tons/year
New Presses #6 & #15 loss.....	4.8	21.0
Less Presses #4 & #14 loss offset.. (3.8) 5.6#/hr x 68.0% = 3.8	(3.8)	(16.6)
Less Presses #2 & #13 loss offset..(10.6) 15.6#/hr x 68.0% = 10.6	(10.6)	(46.3)
Net Change (decrease)	(9.6)	(41.9)

Less Ink Formulation change
(all Presses other than #2,#3,#4, and #14)

Total Ink = 260.6#/hr - 21.2#/hr = 239.4#/hr

Was 239.4#/hr x 68.0% = 162.8

Is 239.4#/hr x 39.1% = 93.6
Net change (decrease) (69.2)#/hr. (302.3)T/yr

Attachment #2

Sun Chemical

General Printing Ink Division
Sun Chemical Corporation
631 Central Avenue
Carlstadt NJ 07072
201 933 4500
201 933 5658 Fax
6711405 Telex

March 12, 1990

Mr. John Neubauer
A.D. Weiss
2025 McKinley Street
Hollywood, Florida 33020

Dear Mr. Neubauer:

Your request for information concerning the solvent systems used in the web offset heatset series of inks supplied to your firm by our General Printing Ink Division in Miami, has been forwarded to this office for reply.

All of the web offset heatset inks reported in this disclosure were especially designed with selected solvents that will reduce visible emissions and dry at low web temperatures.

The attached photocopies of the computer print-out identifies the individual proprietary hydrocarbon solvents (i.e., oils) contained in each ink with a General Printing Ink designated solvent code. The relative weight and volume percents in the total organic solvent system are given, along with a volume percent distribution by hydrocarbon type for each ink solvent component. All of these web offset heatset inks have densities that are nearly equal to eight pounds per gallon. In addition, the calculated distribution of hydrocarbon types contained in the ink solvent system is also reported as well as the total solvent content of each ink system. Physical properties of the various solvents are included in a separate table. All of these ink solvent components are proprietary hydrocarbon mixtures and have vapor pressures less than 0.1mm Hg. @ 20 degrees C., and as such are not defined as "volatile organic compounds (VOC's)" by most state regulatory agencies.

The data concerning the quantities of hydrocarbon types, aromatics, olefins, and saturates, was obtained from the standard ASTM/FIA procedure (ASTM D-1319-70/IP 156: "Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Absorption"). Additionally, the data obtained from the ASTM D-1019-68/IP 145-69 ("Olefins Plus Aromatic Hydrocarbons in Petroleum Distillates") test method gives similar results.

With regard to the identification of the various organic solvents, it is against Sun Chemical's policy to divulge the actual chemical composition of these constituents. We will, if necessary, provide this information on a confidential basis to the Florida Department of Environmental Regulation.

If any additional information is desired or questions arise please feel free to call or write.

Respectfully yours,

Joseph L. Zborovsky
Environmental Engineer
Environmental Sciences

JLZ:kg

Encl.

A.D.WEISS/HOLLYWOOD,FLORIDA

ORGANIC INK OILS USED IN W/O HEATSET INKS

SOLVENT ID#	DISCRIPTION	BOILING RANGE,deg.F	VAPOR PRESSURE mmHg @ 20 deg.C
A2	SATURATED HYDROCARBON MIXTURE	468-532	0.016
A3	HYDROCARBON MIXTURE	492-613	0.003
A6	HYDROCARBON MIXTURE	462-516	0.016
A8	HYDROCARBON MIXTURE	510-575	0.006
B0	SATURATED LINEAR ALCOHOL	482-640	<0.01
B7	SATURATED GLYCOL	464-473	<0.01
C0	HYDROCARBON MIXTURE	482-640	<0.01
C2	DIBASIC ESTER	450-460	<0.1
D4	HYDROCARBON MIXTURE	464-518	0.016
F0	SATURATED GLYCOL ESTER	534-538	<0.01

INK OILS CONTAINED IN W/O HEATSET INKS
CURRENTLY SUPPLIED TO A.D.WEISS/FLA.

F88-2788 W/O HEATSET SunTEC PROCESS BLACK

Solv ID	Organic Solvent System Weight %	Volume %	Hydrocarbon Type (vol %) Saturates	Olefins	Aromatics
C0	29.52%	29.21%	97.80%	0.30%	1.90%
A2	26.62%	26.95%	100.00%	0.00%	0.00%
A6	28.72%	28.93%	84.00%	4.30%	11.70%
B0	2.80%	2.69%	100.00%	0.00%	0.00%
A8	12.34%	12.22%	84.60%	3.00%	12.40%
Overall Breakdown of Hydrocarbon Type (vol%) in Total Organic Solvent System			92.85%	1.70%	5.45%

Total Organic Solvent Content in Ink (wt %) = 35.67%

21775 W/O HEATSET HIGHPERFORMANCE 1120 BLUE

Solv ID	Organic Solvent System Weight %	Volume %	Hydrocarbon Type (vol %) Saturates	Olefins	Aromatics
A6	62.10%	62.18%	84.00%	4.30%	11.70%
A8	13.49%	13.28%	84.60%	3.00%	12.40%
C2	0.10%	0.08%	0.00%	0.00%	100.00%
A2	24.31%	24.46%	100.00%	0.00%	0.00%
Overall Breakdown of Hydrocarbon Type (vol%) in Total Organic Solvent System			87.92%	3.07%	9.00%

Total Organic Solvent Content in Ink (wt %) = 39.00%

21774 W/O HEATSET HIGHPERFORMANCE 1120 RED

Solv ID	Organic Solvent System Weight %	Volume %	Hydrocarbon Type (vol %) Saturates	Olefins	Aromatics
A6	67.74%	68.25%	84.00%	4.30%	11.70%
A8	10.84%	10.74%	84.60%	3.00%	12.40%
C2	0.11%	0.09%	0.00%	0.00%	100.00%
A2	14.82%	15.01%	100.00%	0.00%	0.00%
B0	3.33%	3.19%	100.00%	0.00%	0.00%
F0	3.17%	2.72%	100.00%	0.00%	0.00%
Overall Breakdown of Hydrocarbon Type (vol%) in Total Organic Solvent System			87.34%	3.26%	9.40%

Total Organic Solvent Content in Ink (wt %) = 40.33%

INK OILS CONTAINED IN W/O HEATSET INKS

21772 W/O HEATSET HIGHPERFORMANCE 1120 YELLOW

	Organic Solvent System		Hydrocarbon Type (vol %)		
Solv ID	Weight %	Volume %	Saturates	Olefins	Aromatics
A6	59.33%	59.37%	84.00%	4.30%	11.70%
A8	11.89%	11.70%	84.60%	3.00%	12.40%
C2	0.11%	0.09%	0.00%	0.00%	100.00%
A2	17.41%	17.51%	100.00%	0.00%	0.00%
B7	0.91%	0.78%	100.00%	0.00%	0.00%
D4	7.69%	8.04%	100.00%	0.00%	0.00%
A3	1.92%	1.87%	83.00%	0.00%	17.00%
B0	0.25%	0.24%	100.00%	0.00%	0.00%
F0	0.48%	0.41%	100.00%	0.00%	0.00%
Overall Breakdown of Hydrocarbon Type (vol%) in Total Organic Solvent System			88.29%	2.90%	8.80%

Total Organic Solvent Content in Ink (wt %) = 41.24%

Allocation of Paper & Ink by Press 1989

Press	Paper #'s	Ink #'s
1	9,511,979	204,729
2	2,757699	59,355
3	3,578,565	77,023
4	1,863,643	40,112
5	1,797,297	38,684
7	4,520,170	97,289
8	3,101,866	66,762
9	3,631,229	78,156
10	4,686,041	100,859
11	5,364,072	115,453
14	412,773	8,884

To: JOHN NEUBAUER

2/3/88

AVERAGE INK FORMULA - COMPONENT PERCENTAGES

%	
32.0	PASTE COLOR
5.0	POLYETHYLENE COMPOUND
52.0	VARNISH
18.0	MAGIESOL 47
100.0	

WRK

Attachment #3

#2624

BEST AVAILABLE COPY

TEC SYSTEMS
W. R. Grace & Co.
830 Prosper Road, P.O. Box 30
De Pere, Wisconsin 54115-0030

(414) 336-5715 TELEX 26-3471
TELEFAX (414) 336-3404

TEC SYSTEMS
Quality Products Today...
With Tomorrow's Technologies

March 3, 1989

Mr. Ed Jeanin
Avanti Press
13225 NW 42nd Avenue
Opa-Locka, FL 33054

Dear Ed:

As per your conversation with George Newkirk, I am sending you a copy of an EPA Method 25 Hydrocarbon Conversion Stack Test done on a TEC Systems catalytic incinerator. The unit in question is of the same vintage as Avanti's and we assume would test out accordingly. As you will see from the test, the Hydrocarbon Removal Efficiency of this unit was 97.5% We feel these results are typical of a TEC Systems catalytic incinerator of that vintage.

Ed, if you have any other questions regarding this issue, please feel free to call George or me at your convenience.

Sincerely,

TEC SYSTEMS
W. R. Grace & Co.-Conn.

Mark D. Roepke/mlv

Mark D. Roepke
Sales Engineer
Graphic Arts Industry

MDR:mlv

encl.

cc: G. R. Newkirk
P. J. Peeters

sa.mlv
H4.116

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1864
CABLE: TRUELABS

CLIENT

DATE December 28, 1987

RECEIVED November 18, 1987

SAMPLE

LABORATORY NO.

Inlet and Outlet of Catalytic incinerator

INVESTIGATION

Total Hydrocarbon removal efficiency

RESULTS

On November 18, 1987 representatives of Truesdail Laboratories, Inc., conducted tests to determine the total hydrocarbon removal efficiency of the catalytic incinerator serving printing presses 1 and 2 at Printing in the City of

For each press, concurrent duplicate samples of the flue gas were collected for 30 minutes by the SCAQMD Total Carbon Analysis (TCA) method at the inlet and the outlet of the incinerator simultaneously. Each sampling train consisted of a stainless steel condensate traps packed in dry ice and connected to an evacuated 7-liter aluminum cylinder.

The flue gas flow rate of the incinerator was determined at each sampling location by measuring the average velocity head with a Standard Pitot tube and a Magnehelic differential pressure gage, and by measuring the average temperature with a Chromel-Alumel thermocouple and a Micromite potentiometer.

The sample cylinders were analyzed for volatile hydrocarbons (as C_1) by gas chromatography utilizing Tenax adsorption at 0°C to isolate the nonmethane hydrocarbons, followed by desorption at 100°C, combustion-oxidation of the desorbed hydrocarbons to CO_2 and detection of the CO_2 by-nondispersive infrared spectrophotometry.

The condensate traps were analyzed for condensable hydrocarbons (as C_1) by volatilization and combustion-oxidation of the trap contents to CO_2 which was collected in an evacuated vessel. Each vessel and sample cylinder was analyzed for carbon monoxide (CO), methane (CH_4), and carbon dioxide (CO_2) by gas chromatography followed by methanization of the separated components and flame ionization detection of the methane.

The results were as follows:

TRUESDAIL LABORATORIES, INC.

PRINTING
Laboratory Number

INLET OF CATALYTIC INCINERATOR

Gas Volume: CFM 9,812*
SCFM 6,785*

* See Inlet Composite

Hydrocarbon Samples: (13:05-14:05)	Concentration, ppm (as C_1)			Emission Rate (Organic Carbon)
	A	B	Avg	lbs/hr
Carbon Dioxide (CO_2)	6,473	6,394	6,434	
Carbon Monoxide (CO)	244	241	243	
Methane (CH_4)	115	115	115	
Hydrocarbons (as C_1)				
Gaseous	54	21		
Condensable	2,036	2,492		
Total (w/o CH_4)	2,090	2,513	2,302	29.67

OUTLET OF CATALYTIC INCINERATOR

Flue Gas: Temperature, °F	475	
Velocity, ft/sec	41.3	
Static Pressure, in. H_2O	+0.01	
Duct Diameter, inches	29.5 X 29.5	
Duct Area, sq. ft.	6.04	
Gas Volume: CFM	14,990	
SCFM	8,379	

Hydrocarbon Samples: (13:05-13:35)	Concentration, ppm (as C_1)			Emission Rate (Organic Carbon)
	A	B	Avg	lbs/hr
Carbon Dioxide (CO_2)	11,856	7,697	9,777	
Carbon Monoxide (CO)	1	1	1	
Methane (CH_4)	116	74	95	
Hydrocarbons (as C_1)				
Gaseous	3	12		
Condensable	58	21		
Total (w/o CH_4)	61	33	47	0.75

HYDROCARBON REMOVAL EFFICIENCY, % $\frac{29.67-.75}{92.67} \times 100 = 97.5\%$

TRUESDAIL LABORATORIES, INC.

PRINTING

INLET COMPOSITE		Press #1	Press #2
Flue Gas:	Temperature, °F	286	301
	Velocity, ft/sec	54.9	47.3
	Static Pressure, in. H_2O	-3.6	+0.82
	Duct Dimensions, in.	16.5 X 14	16.5 X 14
	Duct Area, sq. ft.	1.60	1.60
Gas Volume:	ACFM	5,274	4,538
	SCFM	3,662	3,123

Production Data

Webs	1	2
Line Speed, ft/min	1,309	1,000
Coverage, % 4-Color	20	25
Web Width, in.	34 3/8	34 3/8
Temperatures, °F		
Web	265	248, 225
Catalyst inlet	646	
Catalyst outlet	715	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

S. Hugh Brown

S. Hugh Brown, Supervisor
Air Pollution Testing

AVANTI

13225 N.W. 42 Avenue
Miami, Florida 33054
(305) 685-7381 • (800) 327-7486

April 30, 1985

Mr. Tom Tittle
Department of Environmental Regulation
Air Compliance Engineer
State of Florida
P. O. Box 3858
3301 Gun Club Road
West Palm Beach, Florida 33420-3858

Re: Avanti Facility Inspection, April 2, 1985

Dear Mr. Tittle:

As requested in your letter of April 9, 1985, we are furnishing the following information.

A. SOLVENT CONTENT
Actual Solvent Content of ink is 60% max., trade name being Mageisal 47.

B. CAPTURE EFFICIENCY
Ink 76.7% - Alcohol - 0%

C. DATA (SEE CHART)

D. ESTIMATED ANNUAL EMISSIONS (UNCONTROLLED) PERIOD 79-80

INK
(30 Lb. Ink/hr.) (0.14 Lb. Solvent/Lb. Ink) = 4.2 Lb. Voc./hr.)
(4,2 Lb. Voc./hr.) (15 hr/day) (5 day/wk.) (17 wk.) 1/200 = 2.68 TPY

ALCOHOL
(131 gal/wk.) (6.563 Lb./gal. (17 wk.) 1/2000= 7.31 TPY

TOTAL INK & ALCOHOL = 9.98 TPY - PERIOD 80-81

INK
(55 Lb. Ink/hr.) (0.14 Lb. Solvent/Lb. Ink) = 7.7 Lb. Voc/hr. (7.7 Lb. Voc/hr) (15 hr./day) (5 day/wk.) (52 wk.) 1/2000 = 15.02 TPY

ALCOHOL
(240 gal/wk.) (6.563 Lb./gal.) (52 wk.) 1/2000 = 41.0 TPY

TOTAL INK & ALCOHOL = 56.02 TPY - PERIOD 81-82

Attachment #4

Section II - General Information

P00107
20 Mar 89

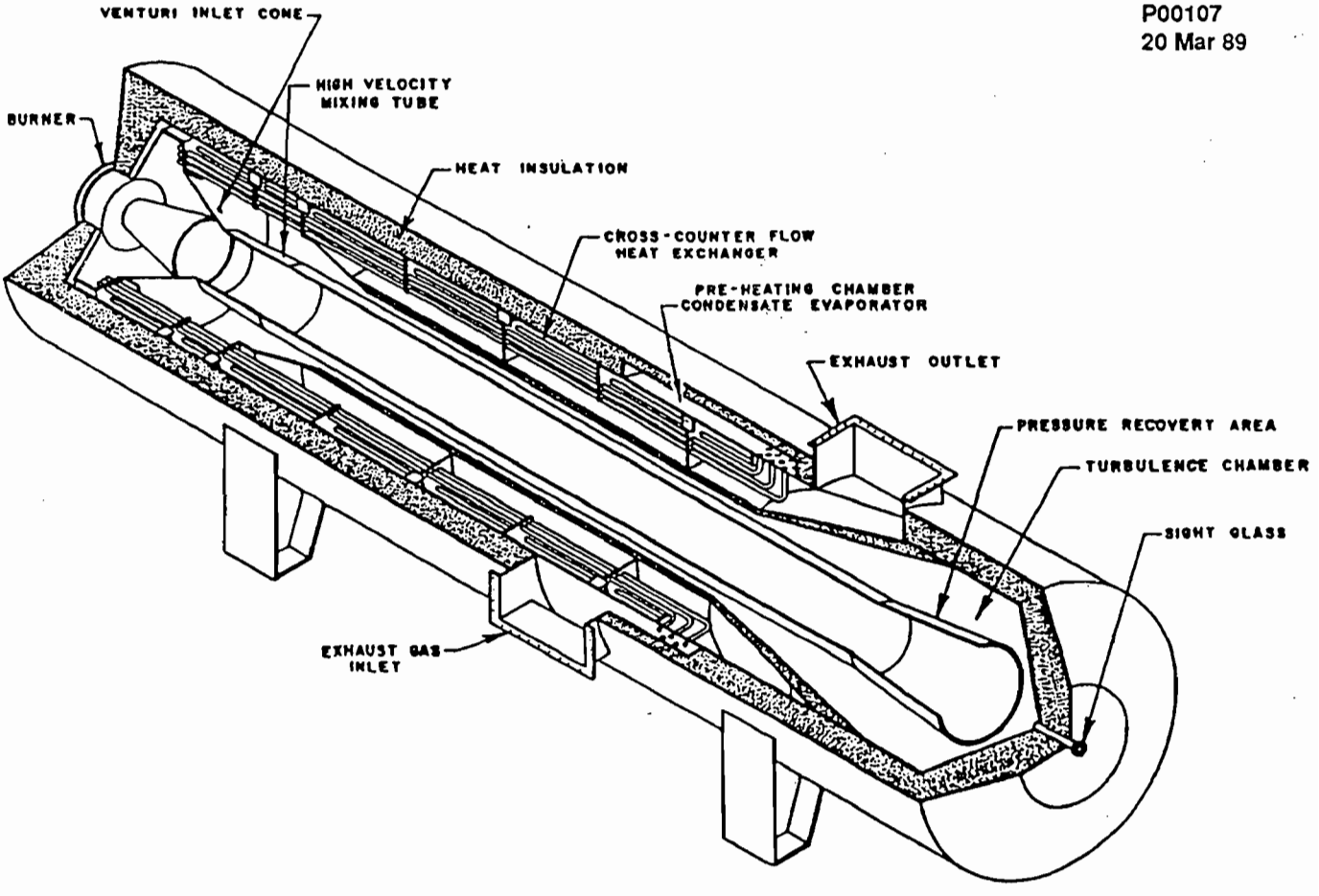


Figure 2-1. KATEC® Thermal Afterburner

2.1 Introduction

The KATEC® Thermal Afterburner System is a gas-fired pollution control device. The afterburner is designed to treat industrial exhaust gases by controlled thermal oxidation. The afterburner processing rate is adjusted automatically for changes in exhaust volume and solvent concentrations. The thermal afterburner may be mounted inside or outside of the building. The control unit for the KATEC is usually placed as close as possible to the unit. Generally the afterburner will be in continuous operation after startup, regardless of process activity. Refer to Figure 2-1.

2.2 Equipment Description

The thermal afterburner consists of a combustion chamber, cross-counter flow heat exchanger, gas-fired burner, exhaust fan with a variable speed A.C. drive, electrical controls and monitoring instruments. The thermal afterburner is connected to the process equipment (dryer) by ducting supplied either as part of the TEC System's unit or by the Customer. The thermal afterburner is sized based on the composition and volume of process exhaust requiring thermal incineration. Refer to Figure 2-2.

Recirculation Temperature Tee-Damper

The recirculation temperature tee-damper is located in the recirculation duct loop between the afterburner exhaust and the recirculation volume damper. One blade controls fresh air intake and one controls treated hot air from the afterburner exhaust. The dampers

P00108
20 Mar 89

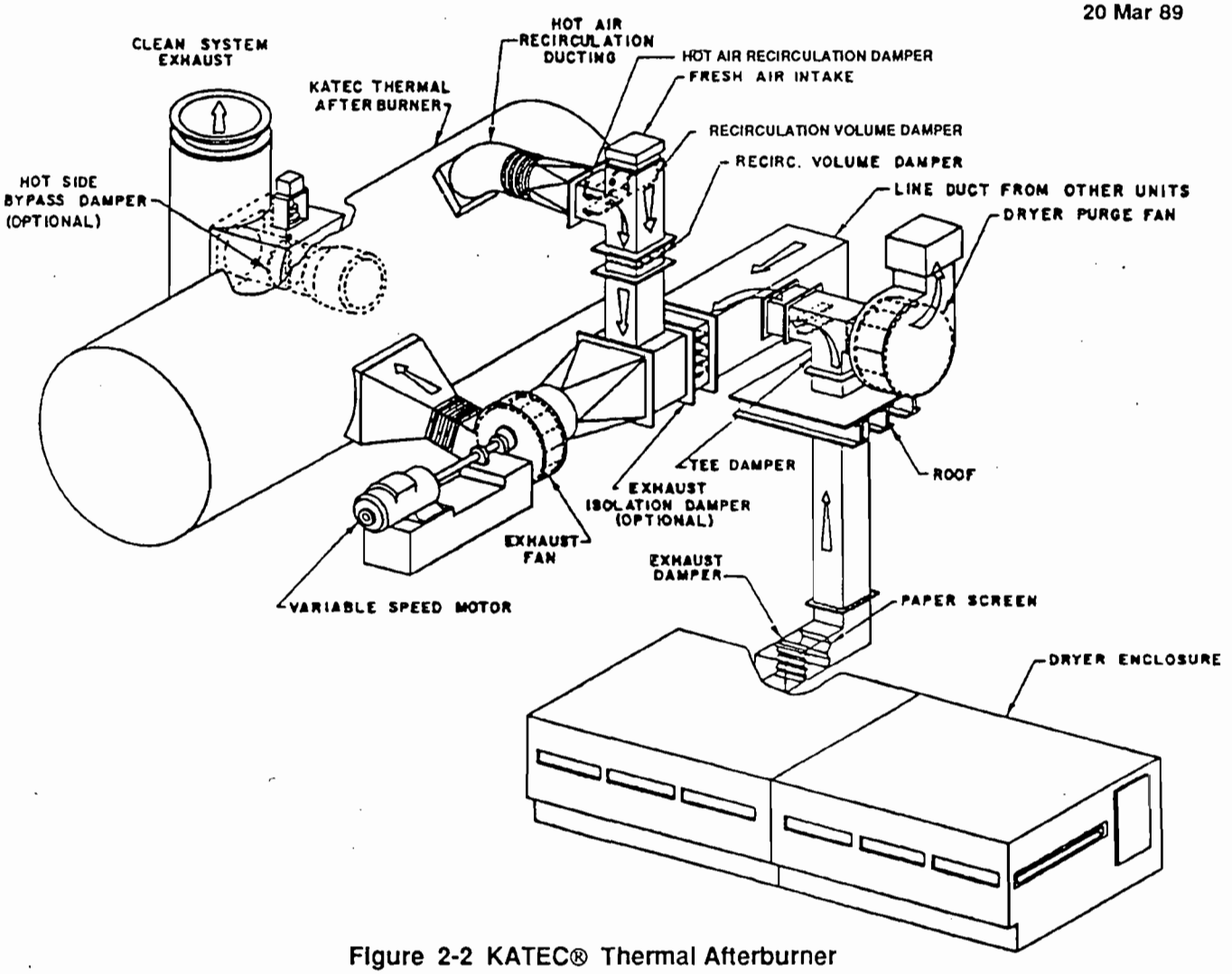


Figure 2-2 KATEC® Thermal Afterburner

are actuated simultaneously by a single actuator. The actuator is controlled by an output from the recirculation air temperature controller (set at 350° F.). The thermocouple is located in the exhaust fan outlet duct (A/B inlet).

During heat-up and shutdown, the hot air recirculation damper is driven 100% closed and the fresh air intake damper is 100% open. During fresh air intake mode, idle mode or normal running operation the dampers modulate (mix hot treated exhaust and fresh air) to supply 350° F. recirculation air.

Recirculation Volume Damper

The recirculation volume damper is located between the recirculation temperature tee-damper and the process exhaust ducting. During heat-up and shutdown the the damper is 100% open. During idle mode and fresh air intake the damper position modulates based on signals from the burner chamber temperature controller or the minimum flow pressure sensor. During automatic blanket wash it is driven open for a predetermined time period and then closed.

Minimum Air Flow Meter

The minimum air flow meter monitors the air velocity with a probe mounted in the exhaust fan discharge duct (A/B inlet). The flow meter shuts down the afterburner if the air flow drops below the minimum setpoint. The probe sends a signal to the logic board which in turn emits a signal to a low voltage relay (set at startup).

Transducer / Variable Speed A.C. Drive

The thermal afterburner uses a variable speed A.C. drive to control the exhaust fan speed. The variable speed drive maintains the proper volume of exhaust gas flow to the afterburner. The variable speed drive controls are located in a stand alone cabinet near the main electrical enclosure. For more informatiion about the variable speed drive consult the vendor supplied information for your specific equipment.

A pressure transducer tapped into the exhaust header duct monitors duct negative pressure and signals the drive controls. The fan speed is increased or decreased based on changes in the negative duct pressure. The negative pressure setpoint is set at startup to ensure proper flow rates under all running conditions.

Two separate setpoints control variable speed drive activity:

1. 70% flow; used during heat-up and cool-down.

2. Idle/Run; used during process on-line mode and Idle/Run mode (A/B running with no process equipment on line).

Minimum Flow Pressure Sensor

A 0-15" W.C. pressure sensor (Photohelic®) is located in the exhaust fan outlet duct (A/B inlet). During the idle mode the pressure sensor controls the recirculation volume damper to maintain a 20% flow rate. During periods of reduced flow (single press/coater on-line by itself) when the exhaust is less than the minimum system setpoint, the pressure sensor will open the recirculation volume damper to maintain minimum air flow through the afterburner.

Ramp Board Temperature Controller

The ramp board temperature controller electronically controls variations in the rate of temperature change within the afterburner to protect the internal components from rapid thermal expansion. The ramp board also provides the following:

1. The ramp *start* signal (run request) to the Programable Logic Controller (PLC).

2. The ramp *differential* signal that tells the PLC unit that the actual temperature is different from the set temperature. The burner chamber temperature controller then adjusts the burner throttle to match the set temperature.

3. The ramp *ready* signal tells the PLC unit that the afterburner unit is ready to accept process exhaust.

4. The ramp *shutdown request* signal tells the PLC that a shutdown request has been entered and that the equipment should proceed with a controlled shutdown.

5. The ramp *shutdown* signal tells the PLC unit to shut down the afterburner when the internal temperature drops below 750° F.

Raw Gas Burner

The raw gas burner system is constructed by TEC Systems. The burner unit consists of the main gas lance, the pilot lance and the U-V scanner assembly. The pilot lance mixes air from the pilot air combustion blower and gas from the pilot line. The pilot gas/air mixture is ignited by a 15 second intermittent electric spark. When the pilot flame has been detected by the U-V scanner the main gas line blocking valves open to provide gas to the main flame gas lance.

The burner assembly is positioned at startup to provide optimum efficiency and cleanup. The depth of the burner pilot lance and the main burner lance are adjusted at startup. The placement of the burner assembly is critical to proper operation.

NOTE: *Certain components of the burner assembly require periodic replacement. Contact TEC Systems service department as required.*

2.3 Equipment Operation

Starting Sequence

The control mode for the thermal afterburner is determined by a keyswitch generally located on the electrical enclosure control panel. By selecting the A/B mode, the process exhaust is directed to the afterburner any time that the afterburner is in the "READY" condition. The ATMOSPHERE keyswitch position allows the A/B to operate independent of the process equipment while diverting the process exhaust directly to the atmosphere.

The thermal afterburner is activated by turning ON all electrical disconnects and pressing the AFTERBURNER ON push button. Once started the thermal afterburner is designed to maintain automatic operation, regardless of process activity. The process tee damper isolates the thermal afterburner from the process equipment by diverting process exhaust flow to the atmosphere.

The thermal afterburner recirculation volume damper is a multi-bladed damper located in the recirculation ductwork downstream from the recirculation temperature tee-damper. A signal from the burner chamber temperature controller or the minimum flow pressure sensor controls the function of the damper. During periods of heatup and shutdown the recirculation volume damper is 100% open. The recirculation temperature tee-damper switches to provide 100% fresh air for the "PURGE" cycle. At the same time, all fans and blowers are started to direct fresh air through the afterburner. The purge timer allows for at least four internal air changes within the afterburner and ducting. This removes any concentrations of volatile solvents or gas that may have accumulated in the afterburner before burner ignition.

After the purge cycle has timed out, the burner pilot flame ignites and the main gas blocking valve opens to supply gas to the burner. The main flame ignites and the pilot flame terminates (after a 15 second time delay). The afterburner heatup rate is controlled electronically by a ramp board which increases the unit temperature by 40° F./minute. At 1200° F. the "READY" light illuminates. The ramp board changes to heatup rate #2. The afterburner will accept the process exhaust whenever the "READY" status is achieved .

On-line Dryer Operation

After the dryer purge cycle, the process equipment tee damper switches from the process purge fan to the on-line afterburner position. The process purge fan is shut down. The afterburner exhaust fan directs the process exhaust to the afterburner exhaust inlet.

Exhaust gases enter the pre-heating chamber / condensate evaporator. The exhaust then enters the inlet tubes of the cross-counterflow heat exchanger and are heated to near reaction temperature. The heated gases pass out of the heat exchanger tubes, around and through the burner cone and into the high velocity mixing tube. The burner flame ignites the exhaust gases and directs them down the length of the main combustion chamber. This provides added retention time for more thorough oxidation. The gases pass through the turbulence chamber and down the outside of the combustion chamber. The hot exhaust preheats the incoming exhaust by circulating around the heat exchanger tubes.

Electrical signals from thermocouples and safety switches inside the afterburner monitor the combustion chamber activity. Electrical controllers adjust the fan speed, burner throttle rate and recirculation temperature tee-damper positions relative to solvent concentration and air volume changes from the process equipment. Increases in solvent loading will cause the afterburner to decrease the throttle rate to Lo-fire. The recirculation volume damper will open. The recirculation temperature tee-damper modulates to provide 350° F. recirculation air.

The exhaust fan speed varies to maintain duct pressure. As solvent loading decreases, the burner rate increases. The recirculation volume damper closes, the recirculation temperature tee-damper switches to 100% fresh air intake and the exhaust fan speed decreases. The afterburner will assume the idle mode during any periods of total process shutdown.

Afterburner Shutdown

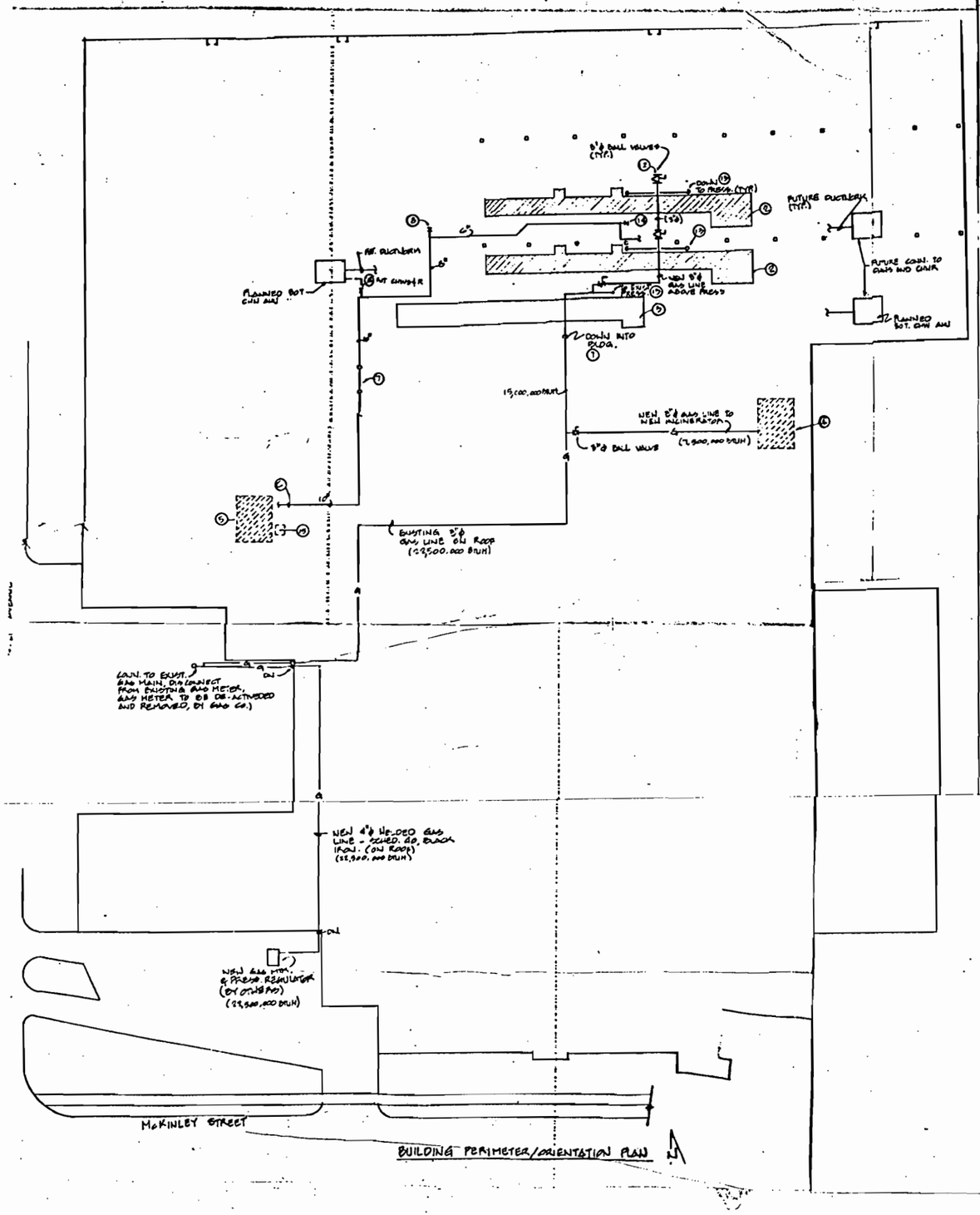
The afterburner can be shut down at anytime by using the AFTERBURNER OFF push button. Unless the afterburner keyswitch is in the ATMOSPHERE mode, any on-line dryers will also be shut down. The recirculation volume damper opens 100%, the recirculation temperature damper closes 100% and the variable speed drive resets the main exhaust fan speed to the 70% flow rate. The transducer verifies 70% flow rate while the afterburner begins a controlled cool-down. At 1200° F. the afterburner loses "READY" status. The afterburner completely shuts down at 750° F.

Emergency Stop

The afterburner **"OUTPUT DISABLE"** (emergency stop) button is located on the electrical control cabinet below the Operator's control panel. The output disable push button shuts down the afterburner by terminating power to the programmable logic control (PLC) unit. The afterburner may also be shut down in an emergency by closing the main gas shutoff valve located on the gas train.

NOTE: *To avoid damage to the equipment, use the controlled shutdown sequence for normal operation.*

Attachment #5



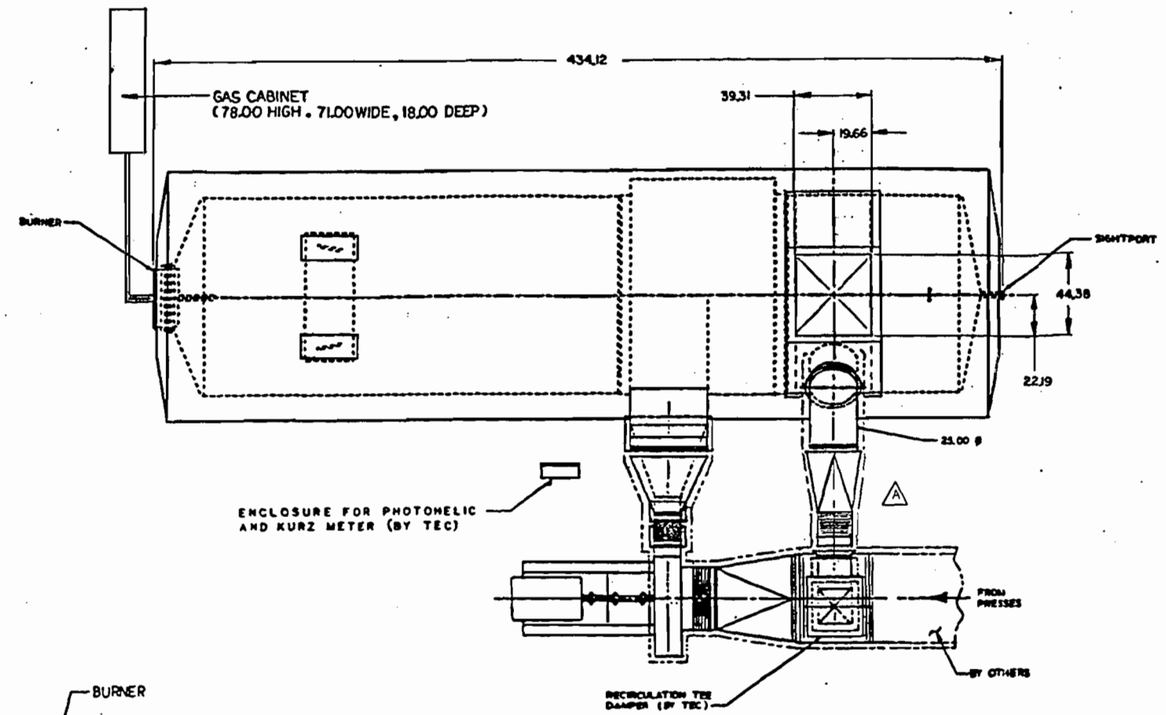
DRAWING NOTES

1. ALL INTERIOR PARTITIONING HAS NOT BEEN SHOWN FOR PURPOSES OF CLARITY.
2. NEW PRESS. (9,750,000 BTUH INPUT)
3. EXISTING PRESS. (9,750,000 BTUH INPUT)
4. NEW INCINERATOR ON ROOF ABOVE (REFER TO DRAWING M-3).
5. NEW COOLING TOWER (CT-1) OF ROOF ABOVE (REFER TO DRAWING M-2).
6. 14" CHWS,R (SEE DRAWING M-2).
7. OFFSET AS REQUIRED.
8. PROVIDE BYPASS WITH BALANCING VALVE BETWEEN SUPPLY AND RETURN.
9. PROVIDE VALVED AND CAPPED CONNECTION FOR FUTURE CONNECTION SIZE AND LOCATION AS DIRECTED.
10. PROVIDE VALVED TEES AND CONNECTION TO EQUIPMENT AS DIRECTED. VERIFY EXACT LOCATION IN FIELD.
11. PROVIDE "AS-BUILT" DRAWINGS.
12. VALVE & CAP FOR EXTENSION TO FUTURE PRESS. (ALLOCATION 9,750,000 BTUH INPUT)
13. CONN. TO EQUIP. W/ SHUT-OFF VALVES AS REQ'D. VERIFY SIZE, LOCATION IN FIELD.
14. SIZE AND EXTEND CHW PIPING AS REQ'D FOR PUT. EQUIPMENT
15. EXISTING 8"ø OLD CHW AREA TO BE CHILLED WATER SYSTEM MAKE-UP SOURCE W/ BACKFLOW PREVENTER AND EYEWASH STATION.
16. CONDENSER WATER MAKEUP TAKEN FROM EXISTING 6" MAKEUP FOR EXIST. COOLING TOWER.

J. E. MITCHELL & ASSOCIATES, INC.
PROFESSIONAL ASSOCIATES CONSULTING ENGINEERS
111 S.W. 1ST STREET MIAMI, FLORIDA 33130-20

PROJECT
A.D. WEISS LITHOGRAPH
8015 McKINLEY STREET
HOLLYWOOD, FLA. 33020
EQUIPMENT ADDITIONS & UPGRADES

SHEET



NOTES

1) ALL INTERCONNECTING DUCTWORK BY OTHERS
2) GAS PIPING, FROM GAS CABINET TO BURNER INLET, MUST NOT EXCEED 6 FEET

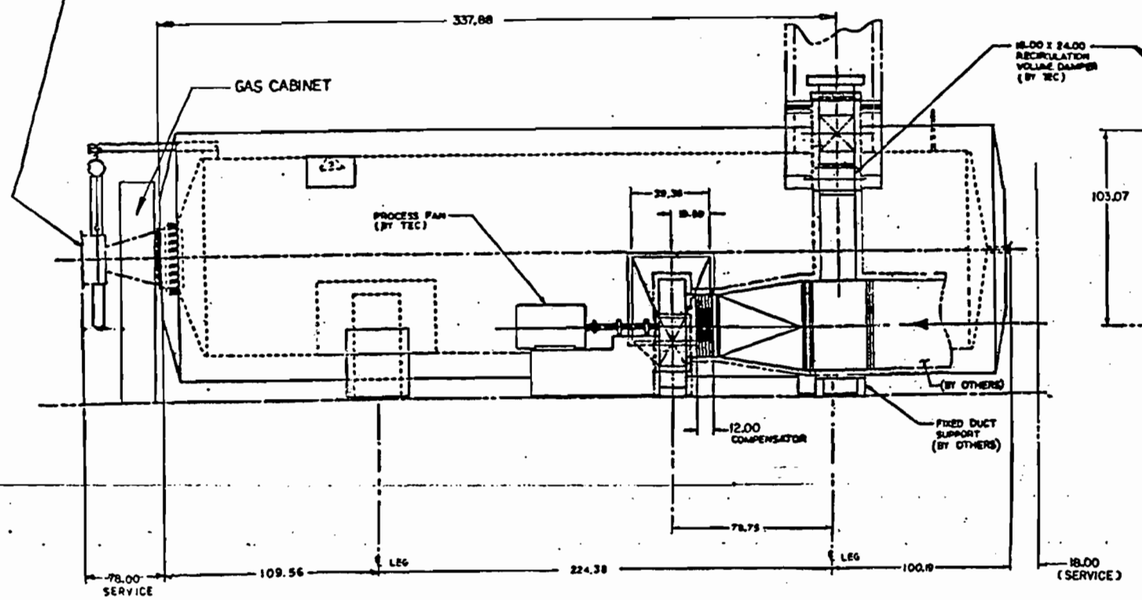
PARTS LIST

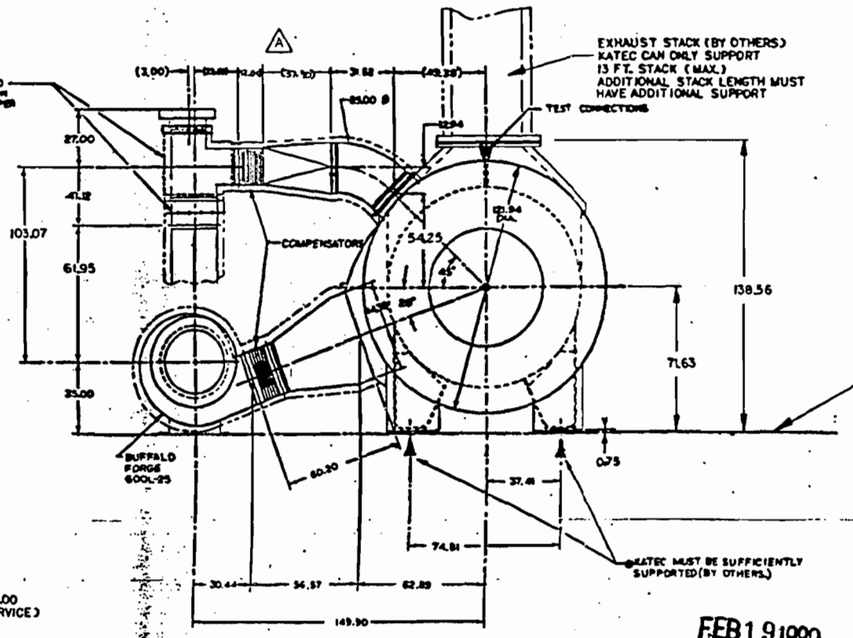
PART	QTY	S/N	DWG NO	SIZE	DESCRIPTION

1. FUEL TYPE NATURAL GAS BTU/FT³ 1000 .
2. MIN. NATURAL GAS PRESS. REQUIRED TO THE AFTERBURNER IS 2.0 PSI.
3. NATURAL GAS REQUIRED FOR START-UP 7170 CFH.
4. NATURAL GAS REQUIRED FOR NORMAL OPERATION ※ CFH. THIS IS BASED ON ※ DEGREE OPERATING TEMP. AND ※ DEGREE DRYER EXHAUST WITHOUT SOLVENTS.
5. CONTROL FACEPLATE TO BE MOUNTED IN PRESS CONSOLE OR TEC WILL PROVIDE ENCLOSURE FOR REMOTE MOUNTING.
6. APPROXIMATE UNIT WEIGHT 56,000# .
   AUXILIARY EQUIPMENT; GAS CABINET= 1,500#
   EXHAUST FAN= 4,500
   TOTAL WEIGHT= 62,000
7. EXHAUST VOLUME 17,405 SCFM.
8. DUCTWORK; MINIMUM CROSS SECTION OF EXHAUST DUCT TO AFTERBURNER IS 11.30 FT². ALL DUCT RUNS BETWEEN SYSTEM COMPONENTS NOT TO EXCEED 2" W.C. STATIC PRESSURE LOSS. ALL DUCTS MUST BE WELDED AIR TIGHT AND BE INSULATED FOR 450 DEGREE AIR.
9. THE EXHAUST FAN HAS A 200 HP MOTOR.
10. PLANT VOLTAGE IS 460 / 60 / 3 / .
11. TEC CONTROL VOLTAGE IS 110 / 60 / 1 .
13 KVA REQUIREMENTS ARE 191 TOTAL.

REQUIRED FROM CUSTOMER
1. MINIMUM OPENING THROUGH WHICH EQUIPMENT MUST BE TRANSPORTED _____ WIDTH X _____ HEIGHT.
2. INSURANCE COVERAGE BY _____
3. VOLTAGE VARIATION LIMITS +5% TO -10%

※ SEE FLOW DIAGRAM 502-4.





REVISED

FEB 19 1990

ZONE	REV	DESCRIPTION	APVD	DATE
	A	MOVED RICIRC. EXP. JT.	PMM	2-5-90

TOLERANCES DECIMAL X.X ±.1, X.XX ±.05, X.XXX ±.025, ∠ ±1° UNLESS SPECIFIED

THIRD ANGLE PROJECTION

	BY	DATE
DWN	MSG	12/18/89
APVD	RWM	12/18/89

TEC SYSTEMS W. R. GRACE & CO. DE PERE, WI

TITLE A.D. WEISS, HOLLYWOOD FL. TVA 2013 (2-174)

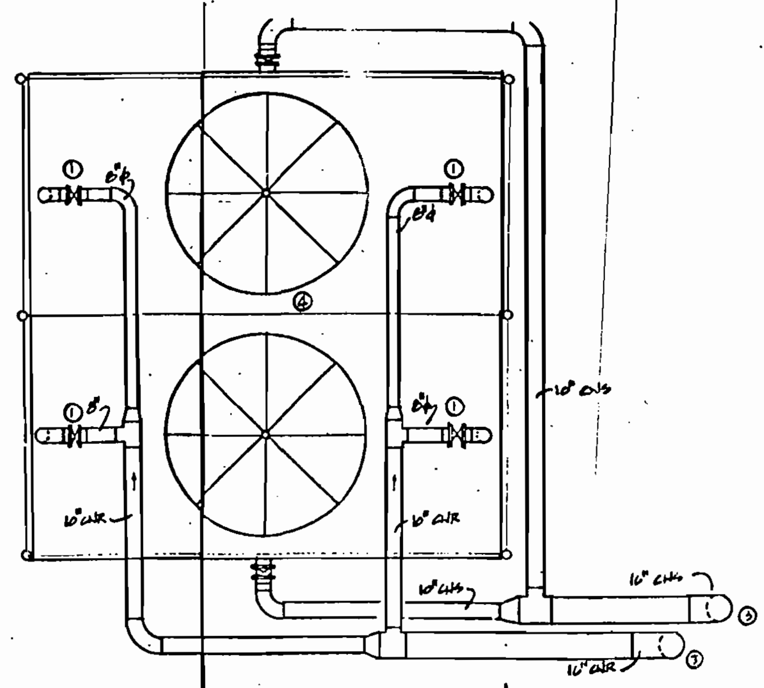
DRAWING NUMBER — ITEM 501 — REV —

JOB — SCALE — FULL SCALE DRAWING SHEET OF SIZE D

BEST AVAILABLE COPY

DRAWING NOTES

1. FLOW CONTROL VALVE ASSEMBLY (TYP. - CT-1)
2. REFER TO DWG. M-1 FOR LOCATION
3. COUNTERFLASHED, WEATHERTIGHT ROOF PENETRATION
4. PROVIDE OVERFLOW AND QUICKFILL, AND MAKE-UP AS REQUIRED THRU DIRECT INTERFACE W/ EXISTING SERVICES
5. 10" VALVE & CAP FOR FUTURE
6. FOR CONTINUATION REFER TO DWG M-1
7. FOR VALVES AND FITTINGS @ PUMP/CHILLER CONN. REFER TO DWG. M-3
8. PROVIDE WATER TREATMENT
9. INTERFACE W/ MIN. 88 GAL. BLADDER TYPE EXPAN. TANK & MAKE-UP THRU BACKFLOW PREVENTER
10. 10" VALVE & CAP FOR FUT. EQUIPMENT CONN.
11. BLIND FLANGE MANIFOLD CAP.
12. CW MAKE UP FROM EXISTING SINK AREA R14 CHEM. TREATMENT AND EYEWASH AREA, BLEED-OFF DRAIN TO EXISTING CONDENSATE DRAINAGE SYSTEM, VERIFY EXACT LOCATION IN FIELD.



PARTIAL ROOF PLAN - COOLING TOWER
1/4" = 1'-0"

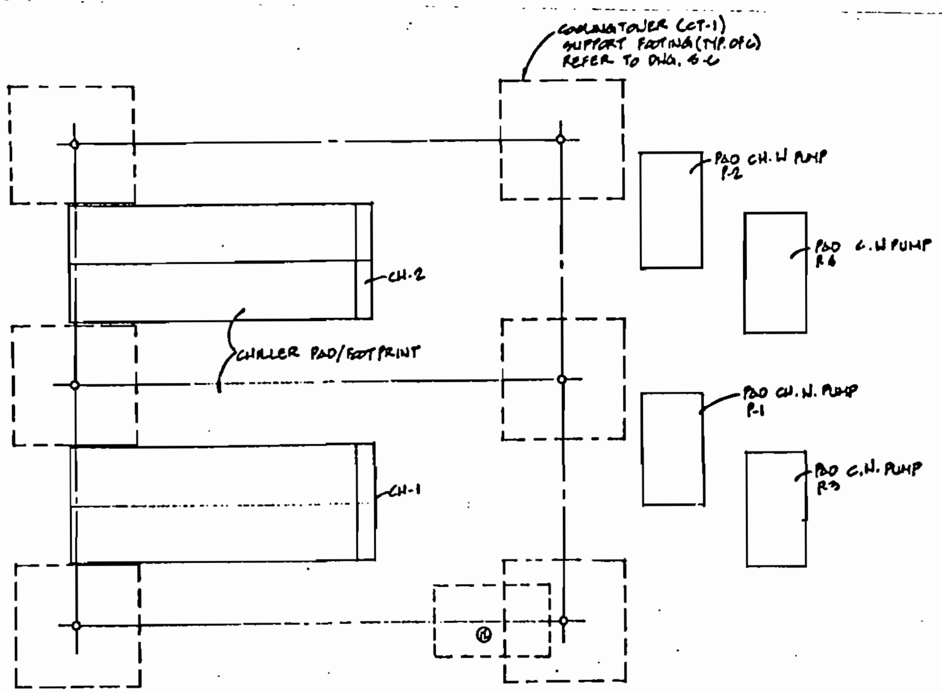
UNIT NUMBER		CT-1		
LOCATION		ROOF		
WATER QUANTITY	GPM	3360		
WATER TEMP ENT/LVG	°F	95/85		
DESIGN TEMP.	°FWB	80		
FAN MOTOR	HP	(2) 40		
ELEC. CHAR.	V/ϕ/~	460/3/60		
MANUFACTURER		MARLEY		
MODEL NUMBER		NC 732		
WEIGHT	LBS.	36,400		
REMARKS		(1)		

NOTES:
(1) - TWO SPEED MOTORS, OSHA APP'D LADDER & HAND... FLOW CONTROL VALVES

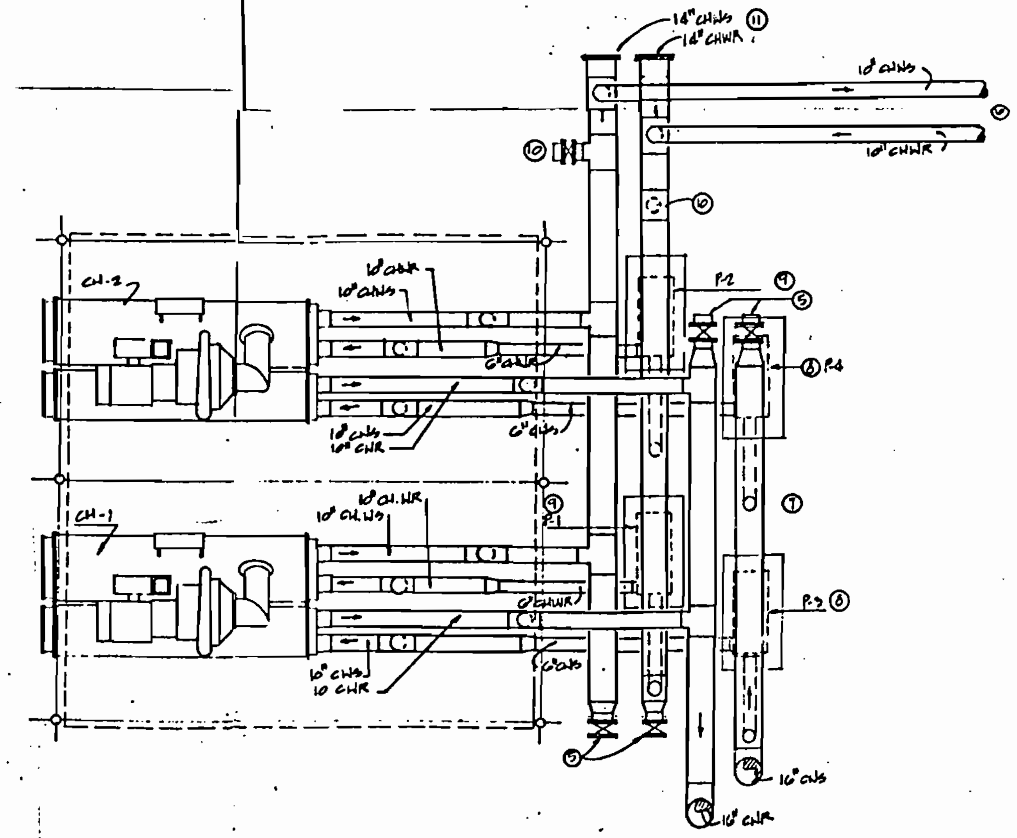
CHILLER SCHEDULE

	UNIT NUMBER		CH-1,2
	LOCATION		SEE PLAN
	RATED CAPACITY	TONS	500
CHILLER	WATER FLOW	GPM	1944
CHILLER	WATER TEMP ENT/LVG.	°F	45/55
CHILLER	WATER PRESS. DROP	"H_2O	14.7
CHILLER	FOULING FACTOR		.00025
CHILLER	NUMBER OF PASSES		2
CONDENSER	WATER QUAN.	GPM	1680
CONDENSER	WATER TEMP ENT/LVG	°F	85/94.5
CONDENSER	WATER PRESS. DROP	"H_2O	21.0
CONDENSER	FOULING FACTOR		.00025
CONDENSER	NUMBER OF PASSES		2
	ELEC. CHARACT	V/ϕ/~	460/3/60
	MOTOR MAX.	KW/FLA	321/459
	WEIGHT	LBS	19400
	DESIGN MANUFACTURER		YORK
	MODEL NUMBER		YTUSE...
	REMARKS		(1)

NOTES:
(1) - SOLID STATE STARTING, CERTIFI... ACCORDANCE W/ ARI STD 550-...



PARTIAL FLOOR PLAN - EQUIPMENT FOUNDATIONS/PADS



PARTIAL FLOOR PLAN - CHILLERS/PUMPS
1/4" = 1'-0"

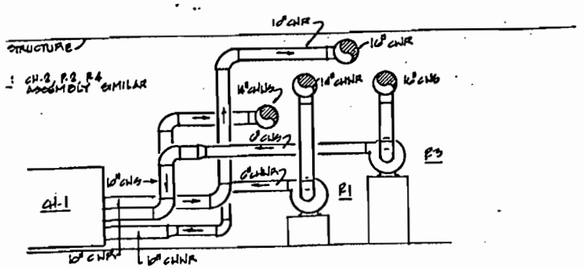
PUMP SCHEDULE

PUMP NUMBER	P1,2	P3,...
SERVICE	CHILLED WATER	CON...
LOCATION	SEE PLAN	SEE PLAN
PUMP TYPE	CENT	CEN...
MAXIMUM WATER FLOW GPM	1944	16...
TOTAL DYNAMIC HEAD FT H_2O	130	7...
DESIGN EFFICIENCY %	84	7...
MOTOR HORSEPOWER HP	50	5...
RPM	1750	175...
ELECTRICAL CHAR. V/ϕ/~	460/3/60	460/...
DESIGN MANUFACTURER	[illegible]	[illegible]
MODEL NUMBER	[illegible]	[illegible]
REMARKS	(1)(2)(3)	(1)(2)...

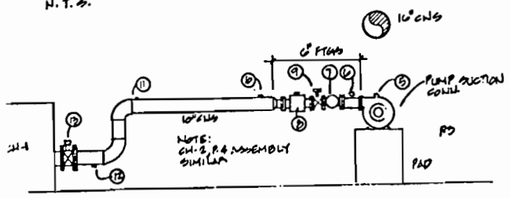
NOTES:
(1) FURNISH PUMPS WITH SUITABLE CHARACTERISTICS TO DELIVER S... GPM AGAINST TOTAL DYNAMIC HE... PIPING SYSTEMS AS ACTUALLY I...
(2) IMPELLER SHALL NOT EXCEED 9... MAXIMUM ALLOWABLE SIZE FOR ... CASING.
(3) ALL PUMPS SHALL HAVE NON OV... CHARACTERISTICS.

J. E. MITCHELL & ASSOCIA...

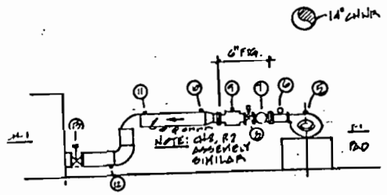
PROJECT
A.D. WEISS LITHOGRAPH
2025 McKINLEY STREET
HOLLYWOOD, FLA. 33020
EQUIPMENT ADDITIONS & UPGRADES



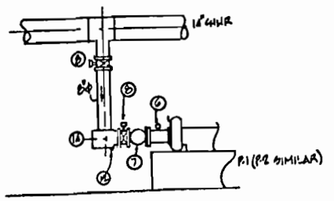
PARTIAL SECTION - LOOKING NORTH
N.T.S.



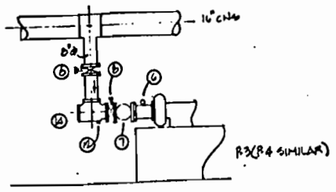
CHILLER (CH-1) CONDENSER INLET PIPING SECTION
1/4" = 1'-0"



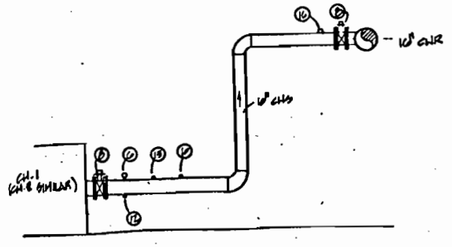
CHILLER (CH-1) COOLER INLET PIPING SECTION
1/4" = 1'-0"



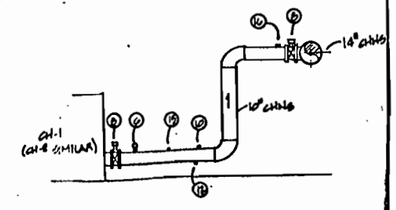
CHILLED WATER PUMP INLET PIPING
1/8" = 1'-0"



CONDENSATE WATER PUMP INLET PIPING
1/8" = 1'-0"



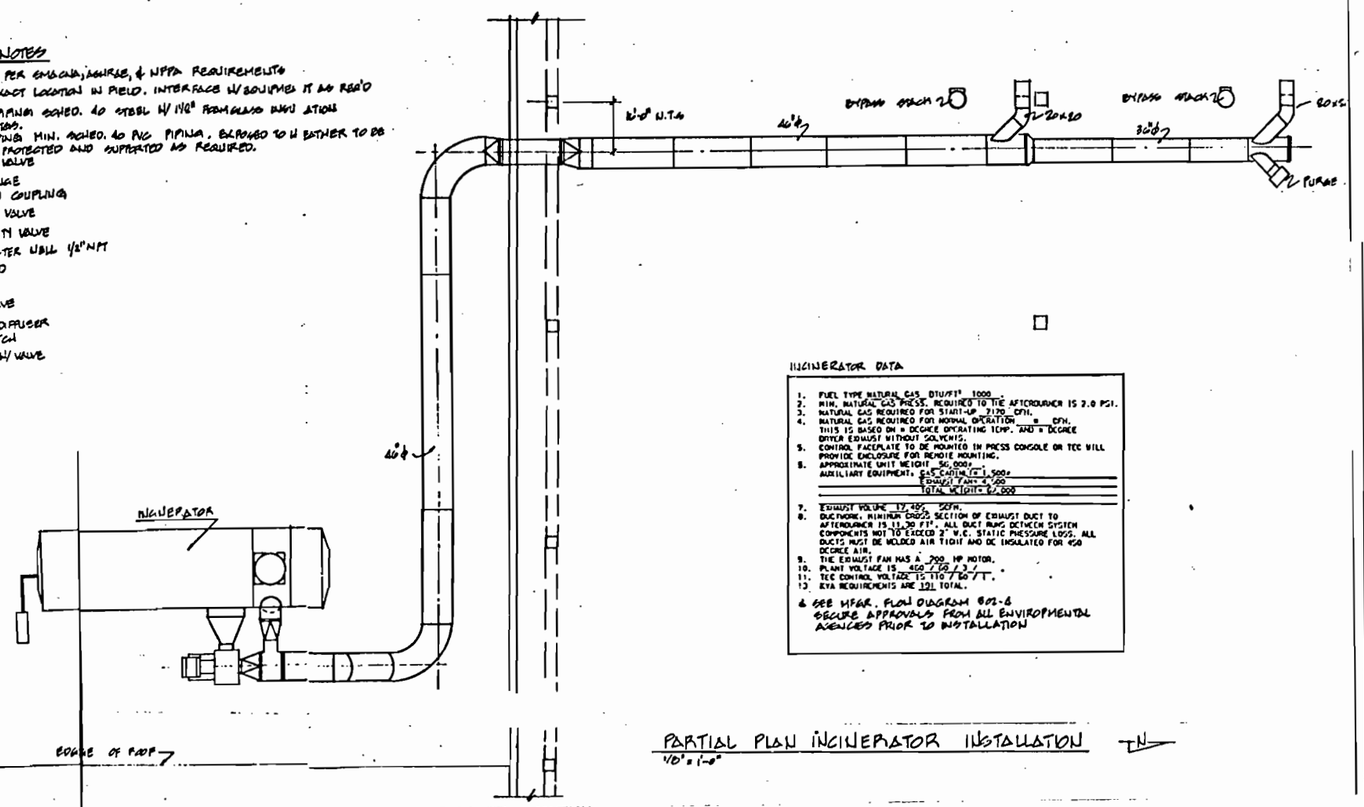
CHILLER (CH-1) CONDENSER OUTLET PIPING SECTION



CHILLER (CH-1) COOLER OUTLET PIPING SECTION
1/4" = 1'-0"

DRAWING NOTES

1. DUCTWORK PER SMACNA, AGHRAE, & NFPA REQUIREMENTS
2. VERIFY EXACT LOCATION IN FIELD. INTERFACE W/ EQUIPMENT IF AS REQ'D
3. CHWS & PIPING SCHED. 40 STEEL W/ 1½" FOAMGLASS INSULATION ON PIPE RUNS.
4. CWS & PIPING MIN. SCHED. 40 PVC PIPING. EXPOSED TO U/V EITHER TO BE STEEL OR PROTECTED AND SUPPORTED AS REQUIRED.
5. AIR INLET VALVE
6. PRESS GAUGE
7. VIBRATION COUPLING
8. SHUT-OFF VALVE
9. TRIPLE DUTY VALVE
10. THERMOMETER WELL ½" NPT
11. AIR BLEED
12. DRAIN
13. GEAR VALVE
14. SUCTION DIFFUSER
15. FLO SWITCH
16. ¼" NPT W/ VALVE

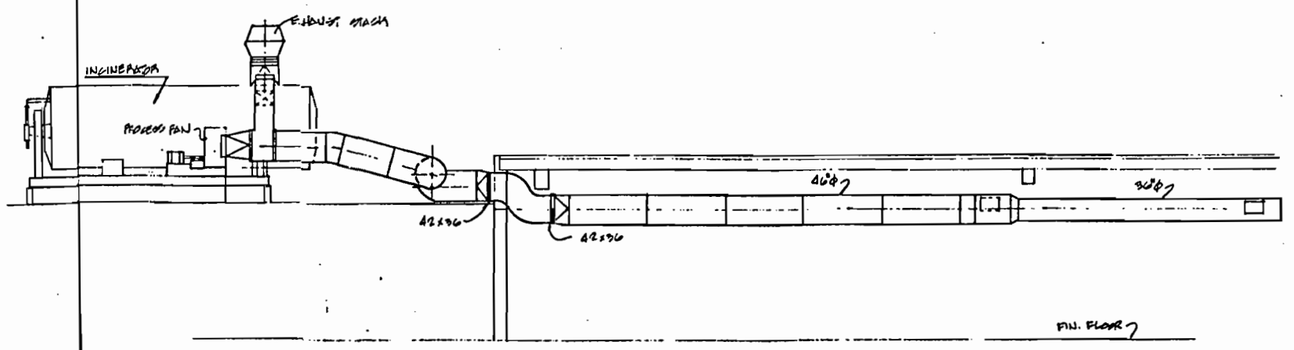


PARTIAL PLAN INCINERATOR INSTALLATION
1/8" = 1'-0"

INCINERATOR DATA

1. FUEL TYPE NATURAL GAS BTU/FT³ 1000 +-
2. MIN. NATURAL GAS PRESS. REQUIRED TO THE AFTERBURNER IS 2.0 PSI.
3. NATURAL GAS REQUIRED FOR START-UP 2170 CFH.
4. NATURAL GAS REQUIRED FOR NORMAL OPERATION = CFH. THIS IS BASED ON = DEGREE OPERATING TEMP. AND = DEGREE DRYER EXHAUST WITHOUT SOLVENTS.
5. CONTROL FACEPLATE TO BE MOUNTED IN PRESS CONSOLE OR TEC WILL PROVIDE ENCLOSURE FOR REMOTE MOUNTING.
6. APPROXIMATE UNIT WEIGHT 56,000+
   AUXILIARY EQUIPMENT: GAS TRAIN (+-) 1,500+
   EXHAUST FAN + MOTOR 4,500
   TOTAL WEIGHT= 62,000
7. EXHAUST VOLUME 12,485 SCFM.
8. DUCTWORK, MINIMUM CROSS SECTION OF EXHAUST DUCT TO AFTERBURNER IS 13.39 FT². ALL DUCT RUNS BETWEEN SYSTEM COMPONENTS NOT TO EXCEED 3" W.C. STATIC PRESSURE LOSS. ALL DUCTS MUST BE WELDED AIR TIGHT AND BE INSULATED FOR 450 DEGREE AIR.
9. THE EXHAUST FAN HAS A 200 HP MOTOR.
10. PLANT VOLTAGE IS 460 / 60 / 3 /
11. TEC CONTROL VOLTAGE IS 110 / 60 / 1.
12. KVA REQUIREMENTS ARE 121 TOTAL.

& SEE MFGR. FLOW DIAGRAM 602-6
SECURE APPROVALS FROM ALL ENVIROMENTAL AGENCIES PRIOR TO INSTALLATION



PARTIAL SECTION INCINERATOR — LOOKING WEST
1/8" = 1'-0"

J. E. MITCHELL & ASSOCIATES, INC.
PROFESSIONAL ENGINEERING CONSULTANTS
111 S.E. 1st STREET, MIAMI, FLORIDA 33131

PROJECT	SHEET
A.D. NELSON LITHOGRAPH 6026 HOLLYWOOD STREET HOLLYWOOD, FLA 33020 EQUIPMENT ADDITIONS & UPGRADES	M
SCALE: AS SHOWN	DATE: 6/19/90

OF 2

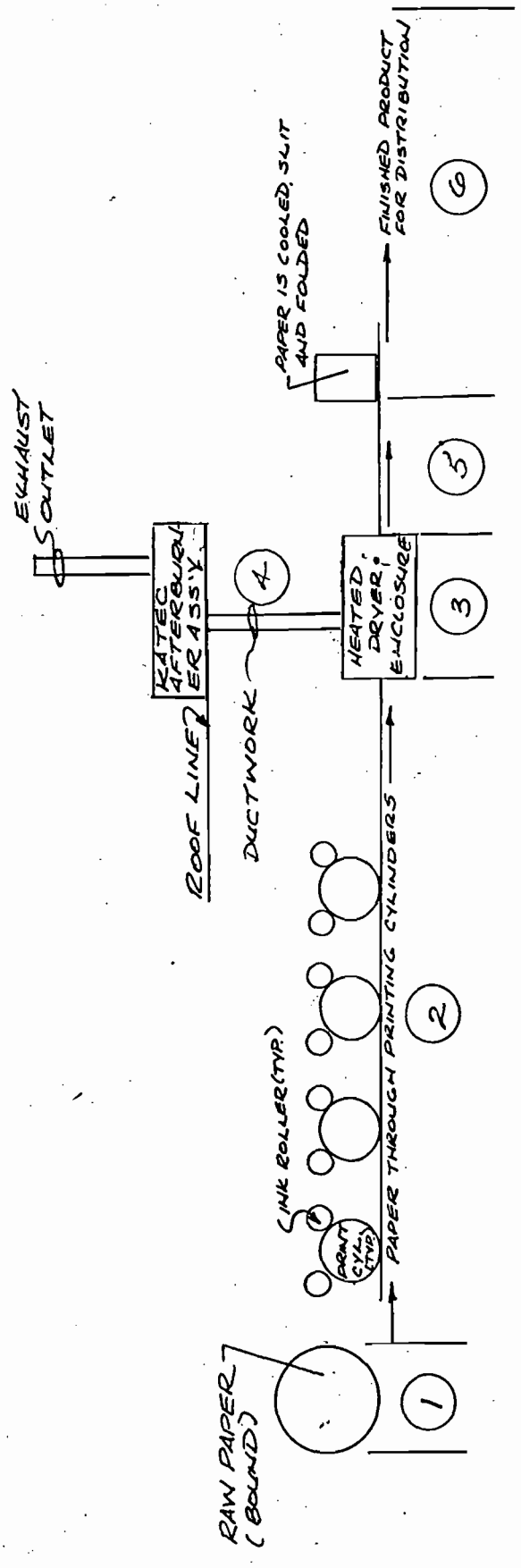
S.E.
ENVIRONMENTAL CONSULTANTS, INC.
MANAGEMENT • ENGINEERING • TESTING
7060 TAFT STREET • HOLLYWOOD, FLORIDA 33024 • PHONE (305) 962-0176

FLOW PROCESS DIAGRAM

ATTACHMENT #6

Date: 6/26/90

By: C.M.



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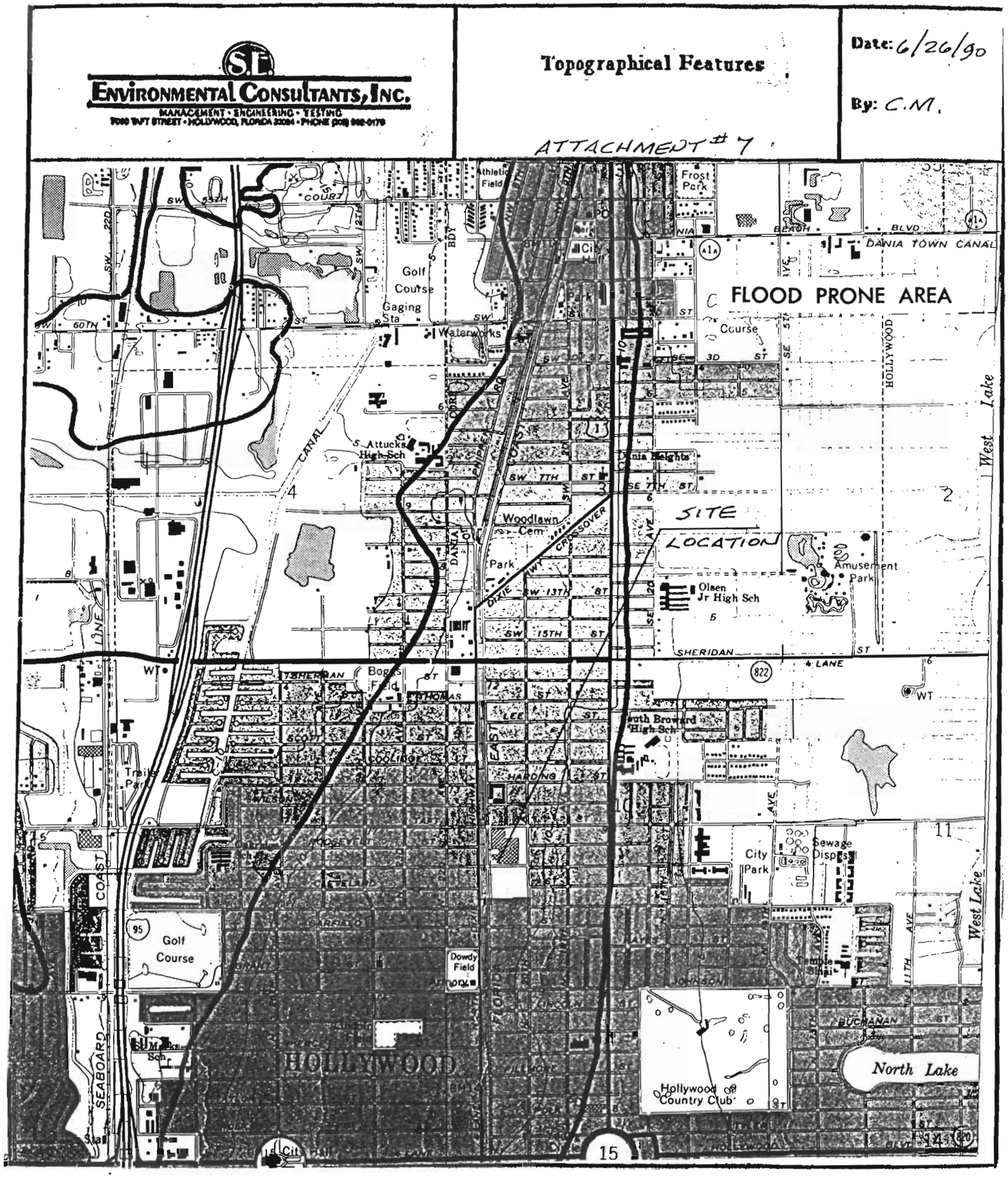

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ENVIRONMENTAL CONSULTANTS, INC.
MANAGEMENT • ENGINEERING • TESTING
7060 TAFT STREET • HOLLYWOOD, FLORIDA 33024 • PHONE (305) 962-0176

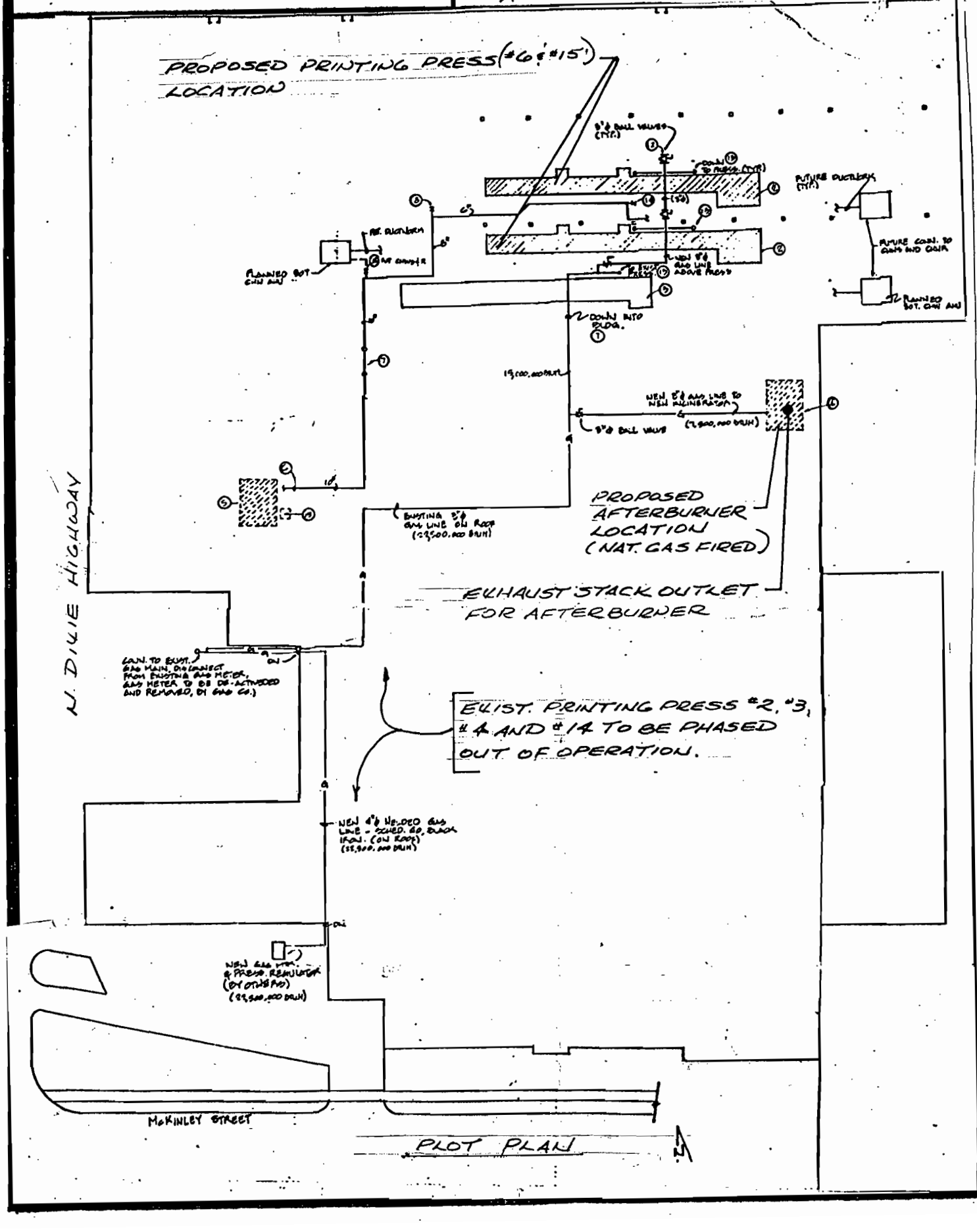
SITE PLAN AND DETAILS

ATTACHMENT # 8

Date: 6/26/90

By: C. M.

SCALE: NTS



SYED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED
MAY 18 1990
DER - BAQM

MAY 15 1990

4APT/APB

Mr. Steve Smallwood, P.E., Director
Air Resources Management Division
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Smallwood:

Enclosed please find a copy of an April 16, 1990, memo from John Seitz entitled "Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency (CE)." This memo provides guidance on the determination of capture efficiency and contains protocols developed by EPA for use by both the states and EPA. These protocols will serve as the basis for capture efficiency determinations and should be used in the interim prior to adoption into the SIP. The model language for adoption of the capture efficiency protocols as SIP regulations will be sent to you as soon as it is received from EPA Headquarters.

If you have any questions, please do not hesitate to call Kay Prince of my staff at (404) 347-2864.

Sincerely,

Bruce P. Miller

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides & Toxics
Management Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AIR PROGRAMS BRANCH
RECEIVED
APR 27 1990
EPA-REGION IV
ATLANTA, GA.

APR 16 1990

MEMORANDUM

SUBJECT: Guidelines for Developing a State Protocol for the Measurement of Capture Efficiency (CE)

FROM: John S. Seitz, Director
Stationary Source Compliance Division

TO: Air Management Division Directors
Regions III and IX

Air and Waste Management Division Director
Region II

Air, Pesticides and Toxics Management Division Directors
Region I, IV, and VI

Air and Radiation Division Director
Region V

Air and Toxics Division Directors
Regions VII, VIII, and X

This memorandum provides guidance on capture efficiency (CE) measurement procedures for determining compliance with the applicable regulations for volatile organic compounds (VOC). The guidance represents the combined input of several offices within the Office of Air Quality Planning and Standards (OAQPS). This guidance has been reviewed by the Office of Enforcement and Compliance Monitoring (OECM).

The purpose of this guidance is to provide sufficient information to States for adopting CE measurement protocols into State implementation plans (SIPs). Included in this guidance are: 1) Conditions for exempting CE determinations; 2) Recommended CE protocols; 3) Requirements for adopting the recommended protocols into SIPs; 4) Requirements if a State decides to adopt non-recommended protocols; and 5) As attachments, a guideline document for developing CE protocols and recommended measurement procedures.

The following terminology and abbreviations are used throughout the memorandum:

CE	Capture efficiency
VOC	Volatile organic compounds
F	Gas phase fugitive VOC
G	Gas phase VOC captured and delivered to the control device
L	VOC in liquid input
BE	Building or room enclosure
PTE	Permanent total enclosure
TTE	Temporary total enclosure

CONDITIONS FOR EXEMPTION FROM CE DETERMINATION

VOC regulations normally require the assessment of overall reduction efficiency of a control system. Generally, this assessment is done in two parts: 1) determination of CE and 2) determination of control device efficiency. However, if a source is equipped with a permanent total enclosure, the requirement to measure CE can be waived provided that the source owner or operator demonstrates that the enclosure meets the specifications given in attached Procedure T for permanent total enclosure (PTE). A PTE is an enclosure that captures and delivers 100 percent of the VOC emitted by the process to the control device. In such a case, the CE will be considered to be 100 percent and only the control device efficiency, which would be equal to the overall reduction efficiency, needs to be determined.

RECOMMENDED CE PROTOCOLS

Typically, in a VOC emitting process, an input VOC stream (L), most likely a liquid, enters the process and two gas phase VOC streams leave the process: the gas phase VOC (G) captured and delivered to the control device, and the gas phase fugitive VOC (F), i.e., the VOC that is not captured. CE is essentially the ratio of the amount of VOC captured (G) to the amount of VOC introduced to the process (L). CE cannot be measured directly, but must be calculated based on a material balance from the measurement of two of the three VOC streams to the process.

When the material balance involves measuring only the gas phase VOC streams, i.e., the captured VOC (G) and fugitive VOC (F), it is referred to as the gas/gas method. When the material balance involves measuring the liquid VOC input (L) and the fugitive VOC (F) or the captured VOC (G), it is referred to as the liquid/gas method.

Several different protocols for determining CE are described in detail in the attachment, "Guidelines for Developing Capture Efficiency Protocols." Specific procedures for measuring VOC in input L and output streams G and F of a process, and verifying that an enclosure meets the specifications for a permanent or temporary total enclosure are also included in the attachments. They are:

Procedure F.1	Fugitive VOC Emissions from Temporary Enclosures
Procedure F.2	Fugitive VOC Emissions from Building Enclosures
Procedure G.1	Capture VOC Emissions
Procedure G.2	Capture VOC Emissions (Dilution Technique)
Procedure L	VOC in Liquid Input Stream
Procedure T	Criteria for and Verification of a Permanent or Temporary Total Enclosure

Some of the protocols are likely to produce much more reliable CE determinations than others. One major objective of this guidance is to encourage the use of those techniques most likely to produce the most accurate CE determinations.

Based on theoretical error analyses of several CE protocols, the protocols that measure the fugitive VOC (F) directly were found to have lowest potential variability. These procedures involve measuring F from a temporary total enclosure (TTE) or from the existing building or room enclosure (BE). Thus the following protocols, identified by the same number as they are listed in the attachment, "Guidelines for Developing Capture Efficiency Protocols," are recommended:

Protocol 1a -

Gas/gas method using a TTE and Procedures G.2 and F.1.

Protocol 2a -

Liquid/gas method using a TTE and Procedures L and F.1.

Protocol 1 c. Option A -

Gas/gas method using as the enclosure the building or room (BE) in which only the affected source is located and operated and Procedures G.2 and F.2.

Protocol 2c, Option A -

Liquid/gas method using as the enclosure the building or room (BE) in which only the affected source is located and operated and Procedures L and F.2.

The installation of a PTE, or the use of an existing enclosure (building or room) that can serve as one, is clearly a highly desirable means for complying with the CE requirements. Not only does it achieve total capture, reducing VOC emissions to the air, but it saves the cost of all future requirements to measure CE.

For sources using a control device, e.g., carbon adsorber, to collect and recover VOC, an explicit measurement of CE may not be necessary; the overall reduction efficiency of the control system can be determined by directly comparing the input VOC to the recovered VOC. The procedure for use in such situations is described in 40 CFR 60.433.

Other protocols evaluated but not recommended for use

Other protocols that have been evaluated are identified as Protocols 1b; 2b; 1c, Option B; and 2c, Option B in the attachment, "Guidelines for Developing Capture Efficiency Protocols." They show significantly higher potential imprecisions, and therefore, are not recommended for use.

REQUIREMENTS FOR SPECIFYING CE IN SIP'S

For EPA approval, SIPs concerning CE measurements must incorporate the above recommended protocols, i.e., Protocols 1a; 2a; 1c, Option A; and 2c, Option A. Model regulatory language for incorporating CE protocol specifications into the SIP revisions is currently being prepared and is expected to be distributed soon.

REQUIREMENTS FOR SPECIFYING NON-RECOMMENDED PROTOCOLS

The recommended CE protocols will accommodate the majority of the VOC sources. However, there may be cases where the recommended protocols will not be suitable. If, for a given source or source category the State feels it necessary to consider other CE protocols, it must present in the SIP for EPA's approval on a case by case basis: a) these new protocols; b) the reasons why the EPA recommended protocols are unsuitable; and c) the rationale and validity for the new protocols.

Once a protocol is approved it must be used, and the source must accept the results of the testing, irrespective of the potential error margin associated with the measured CE values.

Attachments

cc: Jack Farmer, Director
Emission Standards Division

John Calcagni, Director
Air Quality Management Division

William Laxton, Director
Technical Support Division

Air Compliance Branch Chiefs
Regions I - X

Regional Counsel
Regions I - X

VOC Coordinators

VOC CAPTURE EFFICIENCY
Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures

1. INTRODUCTION

1.1 **Applicability.** This procedure is applicable for determining the fugitive volatile organic compounds (VOC) emissions from a temporary total enclosure (TTE). It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations.

1.2 **Principle.** The amount of fugitive VOC emissions (F) from the TTE is calculated as the sum of the products of the VOC content (C_{Fj}), the flow rate (Q_{Fj}), and the sampling time (θ_F) from each fugitive emissions point.

1.3 **Estimated Measurement Uncertainty.** The measurement uncertainties are estimated for each fugitive emission point as follows: Q_{Fj} = ±5.5 percent and CFj = ±5.0 percent. Based on these numbers, the probable uncertainty for F is estimated at about ±7.4 percent.

1.4 **Sampling Requirements.** A capture efficiency test shall consist of at least three sampling runs. The sampling time for each run should be at least 8 hours, unless otherwise approved.

1.5 **Notes.** Because this procedure is often applied in highly explosive areas, caution and care should be exercised in choosing appropriate equipment and installing and using the equipment. Mention of trade names or company products does not constitute endorsement. All gas concentrations (percent, ppm) are by volume, unless otherwise noted.

2. APPARATUS AND REAGENTS

2.1 **Gas VOC Concentration.** A schematic of the measurement system is shown in Figure 1. The main components are described below:

2.1.1 **Sample Probe.** Stainless steel, or equivalent. The probe shall be heated to prevent VOC condensation.

2.1.2 **Calibration Valve Assembly.** Three-way valve assembly at the outlet of sample probe to direct the zero and calibration gases to the analyzer. Other methods, such as quick-connect lines, to route calibration gases to the outlet of the sample probe are acceptable.

2.1.3 **Sample Line.** Stainless steel or Teflon tubing to transport the sample gas to the analyzer. The sample line must be heated to prevent condensation.

2.1.4 **Sample Pump.** A leak-free pump, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system. The components of the pump that contact the gas stream

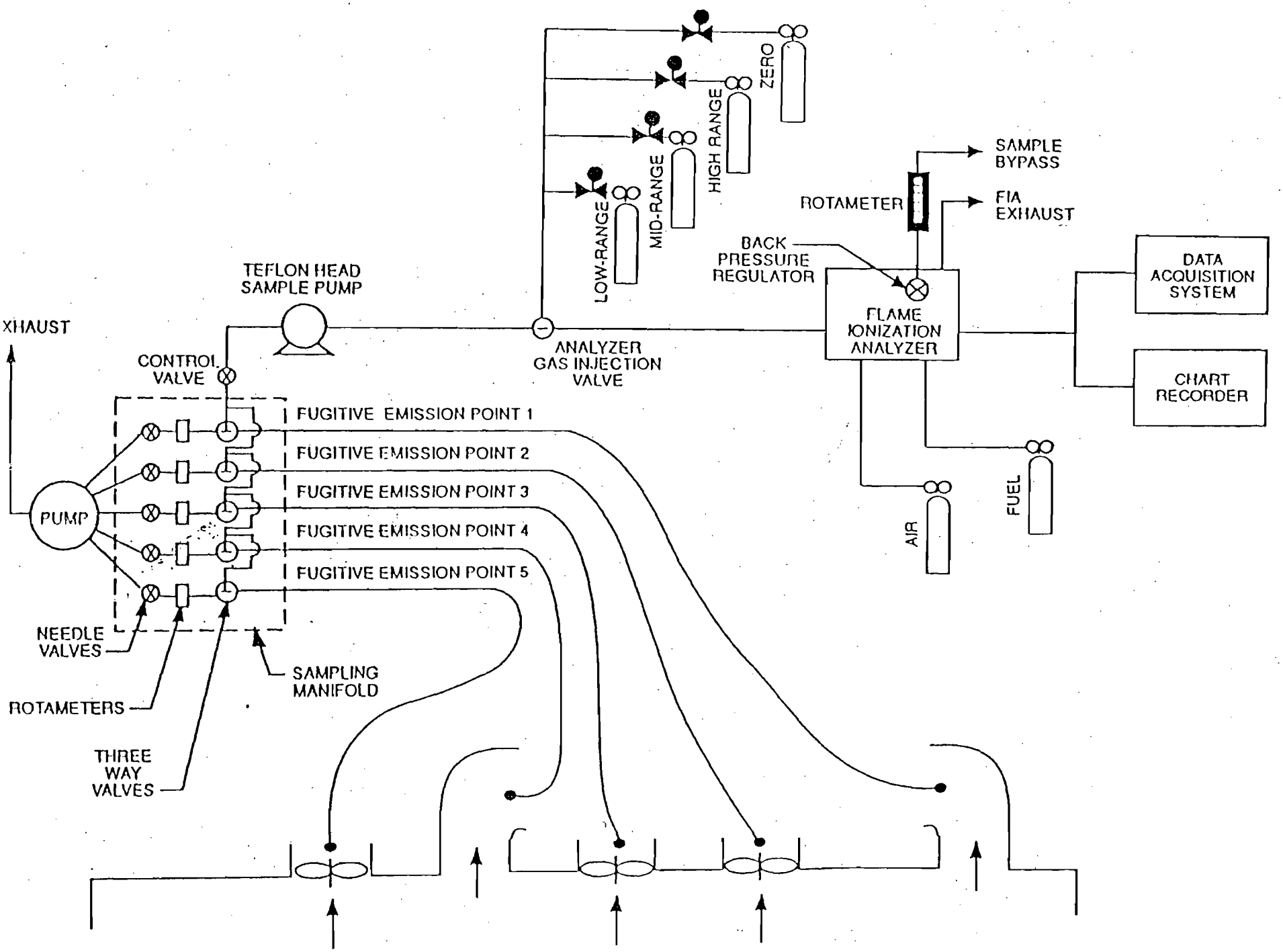


Figure 1. Fugitive emissions measurement system

shall be constructed of stainless steel or Teflon. The sample pump must be heated to prevent condensation.

2.1.5 **Sample Flow Rate Control.** A sample flow rate control valve and rotameter, or equivalent, to maintain a constant sampling rate within 10 percent. The flow control valve and rotameter must be heated to prevent condensation. A control valve may also be located on the sample pump bypass loop to assist in controlling the sample pressure and flow rate.

2.1.6 **Sample Gas Manifold.** Capable of diverting a portion of the sample gas stream to the flame ionization analyzer (FIA), and the remainder to the bypass discharge vent. The manifold components shall be constructed of stainless steel or Teflon. If emissions are to be measured at multiple locations, the measurement system shall be designed to use separate sampling probes, lines, and pumps for each measurement location and a common sample gas manifold and FIA. The sample gas manifold and connecting lines to the FIA must be heated to prevent condensation.

2.1.7 **Organic Concentration Analyzer.** An FIA with a span value of 1.5 times the expected concentration as propane; however, other span values may be used if it can be demonstrated that they would provide more accurate measurements. The system shall be capable of meeting or exceeding the following specifications:

2.1.7.1 **Zero Drift.** Less than ±3.0 percent of the span value.

2.1.7.2 **Calibration Drift.** Less than ±3.0 percent of the span value.

2.1.7.3 **Calibration Error.** Less than ±5.0 percent of the calibration gas value.

2.1.7.4 **Response Time.** Less than 30 seconds.

2.1.8 **Integrator/Data Acquisition System.** An analog or digital device or computerized data acquisition system used to integrate the FIA response or compute the average response and record measurement data. The minimum data sampling frequency for computing average or integrated values is one measurement value every 5 seconds. The device shall be capable of recording average values at least once per minute.

2.1.9 **Calibration and Other Gases.** Gases used for calibration, fuel, and combustion air (if required) are contained in compressed gas cylinders. All calibration gases shall be traceable to NIST standards and shall be certified by the manufacturer to ±1 percent of the tag value. Additionally, the manufacturer of the cylinder should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. For calibration gas values not generally available, alternative methods for preparing calibration gas mixtures, such as dilution systems, may be used with prior approval.

2.1.9.1 Fuel. A 40 percent H_2/60 percent He or 40 percent H_2/60 percent N_2 gas mixture is recommended to avoid an oxygen synergism effect that reportedly occurs when oxygen concentration varies significantly from a mean value.

2.1.9.2 Carrier Gas. High purity air with less than 1 ppm of organic material (as propane or carbon equivalent) or less than 0.1 percent of the span value, whichever is greater.

2.1.9.3 FIA Linearity Calibration Gases. Low-, mid-, and high-range gas mixture standards with nominal propane concentrations of 20-30, 45-55, and 70-80 percent of the span value in air, respectively. Other calibration values and other span values may be used if it can be shown that more accurate measurements would be achieved.

2.1.10 Particulate Filter. An in-stack or an out-of-stack glass fiber filter is recommended if exhaust gas particulate loading is significant. An out-of-stack filter must be heated to prevent any condensation unless it can be demonstrated that no condensation occurs.

2.2 Fugitive Emissions Volumetric Flow Rate.

2.2.1 Method 2 or 2A Apparatus. For determining volumetric flow rate.

2.2.2 Method 3 Apparatus and Reagents. For determining molecular weight of the gas stream. An estimate of the molecular weight of the gas stream may be used if it can be justified.

2.2.3 Method 4 Apparatus and Reagents. For determining moisture content, if necessary.

2.3 Temporary Total Enclosure. The criteria for designing a TTE are discussed in Procedure T.

3. DETERMINATION OF VOLUMETRIC FLOW RATE OF FUGITIVE EMISSIONS

3.1 Locate all points where emissions are exhausted from the TTE. Using Method 1, determine the sampling points. Be sure to check each site for cyclonic or swirling flow.

3.2 Measure the velocity at each sampling site at least once every hour during each sampling run using Method 2 or 2A.

4. DETERMINATION OF VOC CONTENT OF FUGITIVE EMISSIONS

4.1 Analysis Duration. Measure the VOC responses at each fugitive emission point during the entire test run or, if applicable, while the process is operating. If there are multiple emission locations, design a sampling system to allow a single FIA to be used to determine the VOC responses at all sampling locations.

4.2 Gas VOC Concentration.

4.2.1 Assemble the sample train as shown in Figure 1. Calibrate the FIA and conduct a system check according to the procedures in Sections 5.1 and 5.3, respectively.

4.2.2 Install the sample probe so that the probe is centrally located in the stack, pipe, or duct, and is sealed tightly at the stack port connection.

4.2.3 Inject zero gas at the calibration valve assembly. Allow the measurement system response to reach zero. Measure the system response time as the time required for the system to reach the effluent concentration after the calibration valve has been returned to the effluent sampling position.

4.2.4 Conduct a system check before and a system drift check after each sampling run according to the procedures in Sections 5.2 and 5.3. If the drift check following a run indicates unacceptable performance, the run is not valid. The tester may elect to perform system drift checks during the run not to exceed one drift check per hour.

4.2.5 Verify that the sample lines, filter, and pump temperatures are 120 ± 5°C.

4.2.6 Begin sampling at the start of the test period and continue to sample during the entire run. Record the starting and ending times and any required process information as appropriate. If multiple emission locations are sampled using a single FIA, sample at each location for the same amount of time (e.g., 2 minutes) and continue to switch from one location to another for the entire test run. Be sure that total sampling time at each location is the same at the end of the test run. Collect at least 4 separate measurements from each sample point during each hour of testing. Disregard the response measurements at each sampling location until two times the response time of the measurement system has elapsed. Continue sampling for at least 1 minute and record the concentration measurements.

4.3 Background Concentration.

4.3.1 Determination of VOC Background Concentration.

4.3.1.1 Locate all NDO's of the TTE. A sampling point shall be centrally located outside of the TTE at 4 equivalent diameters from each NDO, if possible. If there are more than 6 NDO's, choose 6 sampling points evenly spaced among the NDO's.

4.3.1.2 Assemble the sample train as shown in Figure 2. Calibrate the FIA and conduct a system check according to the procedures in Sections 5.1 and 5.3.

4.3.1.3 Position the probe at the sampling location.

4.3.1.4 Determine the response time, conduct the system check and sample according to the procedures described in Sections 4.2.3 to 4.2.6.

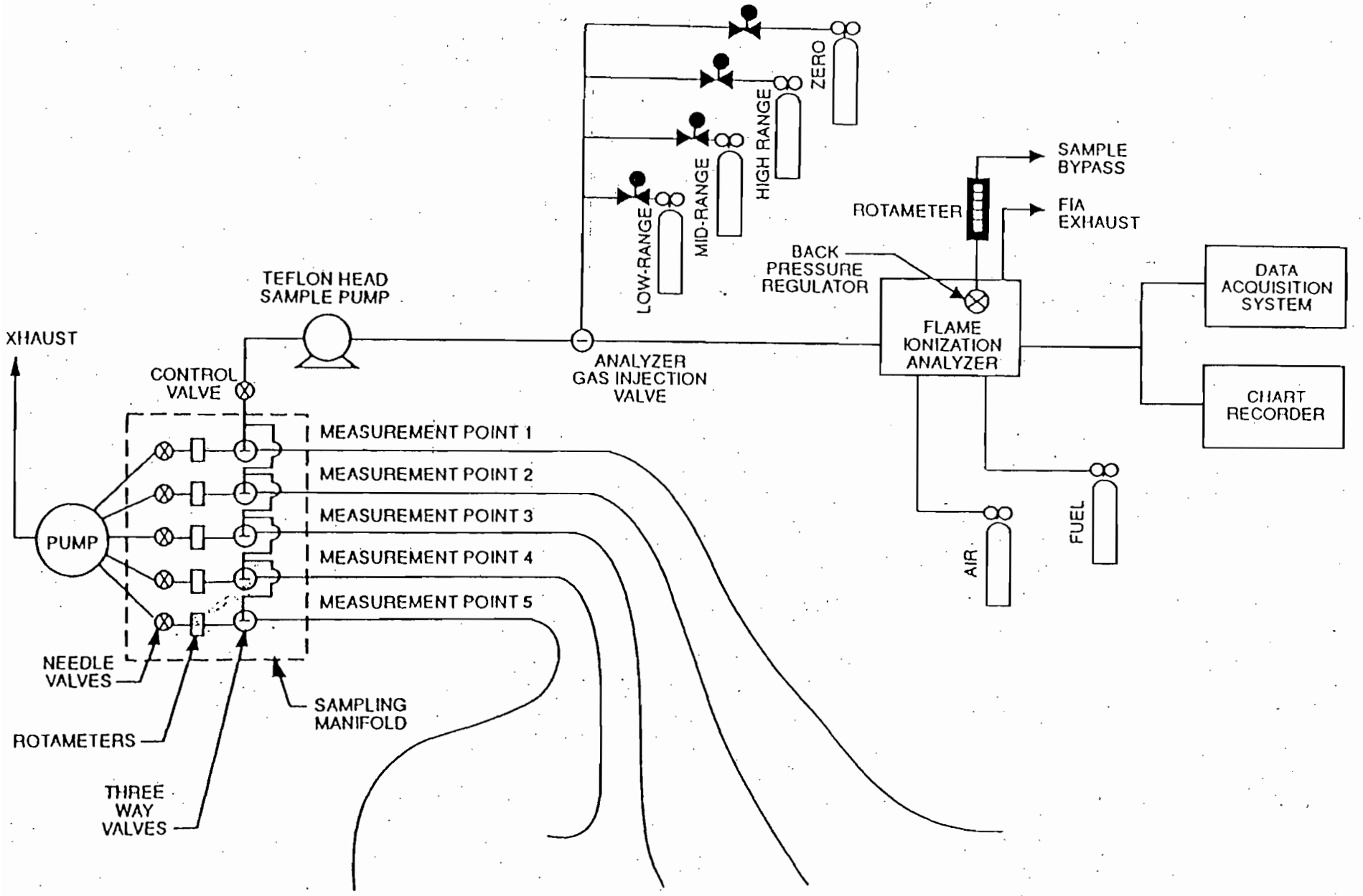


Figure 2. Background measurement system.

4.4 Alternative Procedure. The direct interface sampling and analysis procedure described in Section 7.2 of Method 18 may be used to determine the gas VOC concentration. The system must be designed to collect and analyze at least one sample every 10 minutes.

5. CALIBRATION AND QUALITY ASSURANCE

5.1 FIA Calibration and Linearity Check. Make necessary adjustments to the air and fuel supplies for the FIA and ignite the burner. Allow the FIA to warm up for the period recommended by the manufacturer. Inject a calibration gas into the measurement system and adjust the back-pressure regulator to the value required to achieve the flow rates specified by the manufacturer. Inject the zero- and the high-range calibration gases and adjust the analyzer calibration to provide the proper responses. Inject the low- and mid-range gases and record the responses of the measurement system. The calibration and linearity of the system are acceptable if the responses for all four gases are within 5 percent of the respective gas values. If the performance of the system is not acceptable, repair or adjust the system and repeat the linearity check. Conduct a calibration and linearity check after assembling the analysis system and after a major change is made to the system.

5.2 Systems Drift Checks. Select the calibration gas concentration that most closely approximates that of the fugitive gas emissions to conduct the drift checks. Introduce the zero and calibration gas at the calibration valve assembly and verify that the appropriate gas flow rate and pressure are present at the FIA. Record the measurement system responses to the zero and calibration gases. The performance of the system is acceptable if the difference between the drift check measurement and the value obtained in Section 5.1 is less than 3 percent of the span value. Conduct a system drift check at the end of each run.

5.3 System Check. Inject the high range calibration gas at the inlet of the sampling probe and record the response. The performance of the system is acceptable if the measurement system response is within 5 percent of the value obtained in Section 5.1 for the high range calibration gas. Conduct a system check before each test run.

5.4 Analysis Audit. Immediately before each test analyze an audit cylinder as described in Section 5.2. The analysis audit must agree with the audit cylinder concentration within 10 percent.

6. NOMENCLATURE

A_i = area of NDO i, ft^2.

A_N = total area of all NDO's in the enclosure, ft^2.

C_{Bi} = corrected average VOC concentration of background emissions at point i, ppm propane.

C_B = average background concentration, ppm propane.

C_{DH} = average measured concentration for the drift check calibration gas, ppm propane.

C_{DO} = average system drift check concentration for zero concentration gas, ppm propane.

C_{Fj} = corrected average VOC concentration of fugitive emissions at point j, ppm propane.

C_H = actual concentration of the drift check calibration gas, ppm propane.

C_i = uncorrected average background VOC concentration at point i, ppm propane.

C_j = uncorrected average VOC concentration measured at point j, ppm propane.

F = total VOC content of fugitive emissions, kg.

K_1 = 1.830×10^{-6} kg/(m^3-ppm).

n = number of measurement points.

Q_{Fj} = average effluent volumetric flow rate corrected to standard conditions at fugitive emissions point j, m^3/min.

θ_F = total duration of fugitive emissions sampling run, min.

7. CALCULATIONS

7.1 Total VOC Fugitive Emissions.

$$F = \sum_{j=1}^{n} (C_{Fj} - C_B)\, Q_{Fj}\, \theta_F\, K_1 \qquad \text{Eq. 1}$$

7.2 VOC Concentration of the Fugitive Emissions at Point j.

$$C_{Fj} = (C_j - C_{DO}) \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 2}$$

7.3 Background VOC Concentration at Point i.

$$C_{Bi} = (C_i - C_{DO}) \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 3}$$

7.4 Average Background Concentration.

$$C_B = \frac{\sum_{i=1}^{n} C_{Bi} A_i}{n A_N} \qquad \text{Eq. 4}$$

NOTE: If the concentration at each point is within 20 percent of the average concentration of all points, the terms "A_i" and "A_N" may be deleted from Equation 4.

VOC CAPTURE EFFICIENCY
Procedure F.2 - Fugitive VOC Emissions from Building Enclosures

1. INTRODUCTION

1.1 Applicability. This procedure is applicable for determining the fugitive volatile organic compounds (VOC) emissions from a building enclosure (BE). It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations.

1.2 Principle. The total amount of fugitive VOC emissions (F_B) from the BE is calculated as the sum of the products of the VOC content (C_{Fj}) of each fugitive emissions point, its flow rate (Q_{Fj}), and time (θ_F).

1.3 Measurement Uncertainty. The measurement uncertainties are estimated for each fugitive emissions point as follows: Q_{Fj} = ±5.0 percent and C_{Fj} = ±5.0 percent. Based on these numbers, the probable uncertainty for F_B is estimated at about ±11.2 percent.

1.4 Sampling Requirements. A capture efficiency test shall consist of at least three sampling runs. The sampling time for each run should be at least 8 hours, unless otherwise approved.

1.5 Notes. Because this procedure is often applied in highly explosive areas, caution and care should be exercised in choosing appropriate equipment and installing and using the equipment. Mention of trade names or company products does not constitute endorsement. All gas concentrations (percent, ppm) are by volume, unless otherwise noted.

2. APPARATUS AND REAGENTS

2.1 Gas VOC Concentration. A schematic of the measurement system is shown in Figure 1. The main components are described below:

2.1.1 Sample Probe. Stainless steel, or equivalent. The probe shall be heated to prevent VOC condensation.

2.1.2 Calibration Valve Assembly. Three-way valve assembly at the outlet of sample probe to direct the zero and calibration gases to the analyzer. Other methods, such as quick-connect lines, to route calibration gases to the outlet of the sample probe are acceptable.

2.1.3 Sample Line. Stainless steel or Teflon tubing to transport the sample gas to the analyzer. The sample line must be heated to prevent condensation.

2.1.4 Sample Pump. A leak-free pump, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system. The components of the pump that contact the gas stream

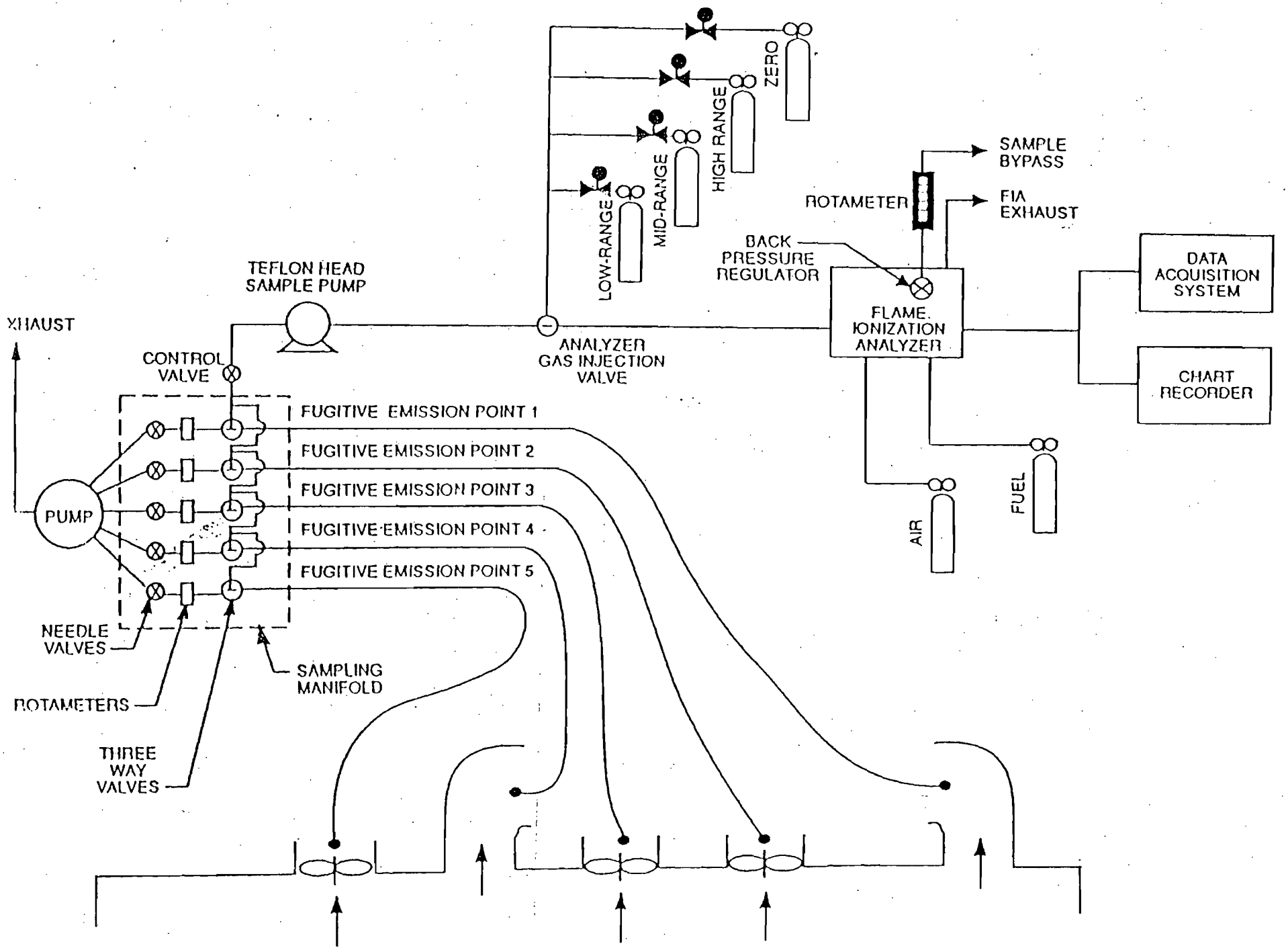


Figure 1. Fugitive emissions measurement system.

shall be constructed of stainless steel or Teflon. The sample pump must be heated to prevent condensation.

2.1.5 **Sample Flow Rate Control.** A sample flow rate control valve and rotameter, or equivalent, to maintain a constant sampling rate within 10 percent. The flow rate control valve and rotameter must be heated to prevent condensation. A control valve may also be located on the sample pump bypass loop to assist in controlling the sample pressure and flow rate.

2.1.6 **Sample Gas Manifold.** Capable of diverting a portion of the sample gas stream to the flame ionization analyzer (FIA), and the remainder to the bypass discharge vent. The manifold components shall be constructed of stainless steel or Teflon. If emissions are to be measured at multiple locations, the measurement system shall be designed to use separate sampling probes, lines, and pumps for each measurement location and a common sample gas manifold and FIA. The sample gas manifold must be heated to prevent condensation.

2.1.7 **Organic Concentration Analyzer.** An FIA with a span value of 1.5 times the expected concentration as propane; however, other span values may be used if it can be demonstrated that they would provide more accurate measurements. The system shall be capable of meeting or exceeding the following specifications:

2.1.7.1 **Zero Drift.** Less than ±3.0 percent of the span value.

2.1.7.2 **Calibration Drift.** Less than ±3.0 percent of the span value.

2.1.7.3 **Calibration Error.** Less than ±5.0 percent of the calibration gas value.

2.1.7.4 **Response Time.** Less than 30 seconds.

2.1.8 **Integrator/Data Acquisition System.** An analog or digital device or computerized data acquisition system used to integrate the FIA response or compute the average response and record measurement data. The minimum data sampling frequency for computing average or integrated values is one measurement value every 5 seconds. The device shall be capable of recording average values at least once per minute.

2.1.9 **Calibration and Other Gases.** Gases used for calibration, fuel, and combustion air (if required) are contained in compressed gas cylinders. All calibration gases shall be traceable to NIST standards and shall be certified by the manufacturer to ±1 percent of the tag value. Additionally, the manufacturer of the cylinder should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. For calibration gas values not generally available, alternative methods for preparing calibration gas mixtures, such as dilution systems, may be used with prior approval.

2.1.9.1 **Fuel.** A 40 percent H_2/60 percent He or 40 percent H_2/60 percent N_2 gas mixture is recommended to avoid an oxygen synergism effect that reportedly occurs when oxygen concentration varies significantly from a mean value.

2.1.9.2 Carrier Gas. High purity air with less than 1 ppm of organic material (propane or carbon equivalent) or less than 0.1 percent of the span value, whichever is greater.

2.1.9.3 FIA Linearity Calibration Gases. Low-, mid-, and high-range gas mixture standards with nominal propane concentrations of 20-30, 45-55, and 70-80 percent of the span value in air, respectively. Other calibration values and other span values may be used if it can be shown that more accurate measurements would be achieved.

2.1.10 Particulate Filter. An in-stack or an out-of-stack glass fiber filter is recommended if exhaust gas particulate loading is significant. An out-of-stack filter must be heated to prevent any condensation unless it can be demonstrated that no condensation occurs.

2.2 Fugitive Emissions Volumetric Flow Rate.

2.2.1 Flow Direction Indicators. Any means of indicating inward or outward flow, such as light plastic film or paper streamers, smoke tubes, filaments, and sensory perception.

2.2.2 Method 2 or 2A Apparatus. For determining volumetric flow rate. Anemometers or similar devices calibrated according to the manufacturer's instructions may be used when low velocities are present. Vane anemometers (Young-maximum response propeller), specialized pitots with electronic manometers (e.g., Shortridge Instruments Inc., Airdata Multimeter 860) are commercially available with measurement thresholds of 15 and 8 mpm (50 and 25 fpm), respectively.

2.2.3 Method 3 Apparatus and Reagents. For determining molecular weight of the gas stream. An estimate of the molecular weight of the gas stream may be used if it can be justified.

2.2.4 Method 4 Apparatus and Reagents. For determining moisture content, if necessary.

3. DETERMINATION OF VOLUMETRIC FLOW RATE OF FUGITIVE EMISSIONS

3.1 Preliminary Determinations. The purpose of this exercise is to determine which exhaust points should be measured for volumetric flow rates and VOC concentrations.

3.1.1 Forced Draft Openings. Identify all forced draft openings. Determine the volumetric flow rate according to Method 2.

3.1.2 NDO's Exhaust Points. The NDO's in the roof of a facility are considered to be exhaust points. Determine volumetric flow rate from these NDO's. Divide the cross-sectional area according to Method 1 using 12 equal areas. Use the appropriate velocity measurement devices, e.g., propeller anemometers.

3.1.3 Other NDO's.

3.1.3.1 This step is optional. Determine the exhaust flow rate, including that of the control device, from the enclosure and the intake air flow rate. If the exhaust flow rate divided by the intake air flow rate is greater than 1.1, then all other NDO's are not considered to be significant exhaust points.

3.1.3.2 If the option above is not taken, identify all other NDO's and other potential points through which fugitive emissions may escape the enclosure. Then use the following criteria to determine whether flow rates and VOC concentrations need to be measured:

3.1.3.2.1 Using the appropriate flow direction indicator, determine the flow direction. An NDO with zero or inward flow is not an exhaust point.

3.1.3.2.2 Measure the outward volumetric flow rate from the remainder of the NDO's. If the collective flow rate is 2 percent, or less, of the flow rate from Sections 3.1.1 and 3.1.2, then these NDO's, except those within two equivalent diameters (based on NDO opening) from VOC sources, may be considered to be non-exhaust points.

3.1.3.2.3 If the percentage calculated in Section 3.1.3.2.2 is greater than 2 percent, those NDO's (except those within two equivalent diameters from VOC sources) whose volumetric flow rate total 2 percent of the flow rate from Sections 3.1.1 and 3.1.2 may be considered as non-exhaust points. All remaining NDO's shall be measured for volumetric flow rate and VOC concentrations during the CE test.

3.1.3.2.4 The tester may choose to measure VOC concentrations at the forced exhaust points and the NDO's. If the total VOC emissions from the NDO's are less than 2 percent of the emissions from the forced draft and roof NDO's, then these NDO's may be eliminated from further consideration.

3.2 Determination of Flow Rates.

3.2.1 Measure the volumetric flow rate at all locations identified as exhaust points in Section 3.1.. Divide each exhaust opening into 9 equal areas for rectangular openings and 8 for circular openings.

3.2.2 Measure the velocity at each site at least once every hour during each sampling run using Method 2 or 2A, if applicable, or using the low velocity instruments in Section 2.2.2.

4. DETERMINATION OF VOC CONTENT OF FUGITIVE EMISSIONS

4.1 Analysis Duration. Measure the VOC responses at each fugitive emission point during the entire test run or, if applicable, while the process is operating. If there are multiple emissions locations, design a sampling system to allow a single FIA to be used to determine the VOC responses at all sampling locations.

4.2 Gas VOC Concentration.

4.2.1 Assemble the sample train as shown in Figure 1. Calibrate the FIA and conduct a system check according to the procedures in Sections 5.1 and 5.3, respectively.

4.2.2 Install the sample probe so that the probe is centrally located in the stack, pipe, or duct, and is sealed tightly at the stack port connection.

4.2.3 Inject zero gas at the calibration valve assembly. Allow the measurement system response to reach zero. Measure the system response time as the time required for the system to reach the effluent concentration after the calibration valve has been returned to the effluent sampling position.

4.2.4 Conduct a system check before and a system drift check after each sampling run according to the procedures in Sections 5.2 and 5.3. If the drift check following a run indicates unacceptable performance, the run is not valid. The tester may elect to perform drift checks during the run not to exceed one drift check per hour.

4.2.5 Verify that the sample lines, filter, and pump temperatures are 120 ± 5°C.

4.2.6 Begin sampling at the start of the test period and continue to sample during the entire run. Record the starting and ending times and any required process information as appropriate. If multiple emission locations are sampled using a single FIA, sample at each location for the same amount of time (e.g., 2 minutes) and continue to switch from one location to another for the entire test run. Be sure that total sampling time at each location is the same at the end of the test run. Collect at least 4 separate measurements from each sample point during each hour of testing. Disregard the response measurements at each sampling location until two times the response time of the measurement system has elapsed. Continue sampling for at least 1 minute and record the concentration measurements.

4.3 Alternative Procedure The direct interface sampling and analysis procedure described in Section 7.2 of Method 18 may be used to determine the gas VOC concentration. The system must be designed to collect and analyze at least one sample every 10 minutes.

5. CALIBRATION AND QUALITY ASSURANCE

5.1 FIA Calibration and Linearity Check. Make necessary adjustments to the air and fuel supplies for the FIA and ignite the burner. Allow the FIA to warm up for the period recommended by the manufacturer. Inject a calibration gas into the measurement system and adjust the back-pressure regulator to the value required to achieve the flow rates specified by the manufacturer. Inject the zero- and the high-range calibration gases and adjust the analyzer calibration to provide the proper responses. Inject the low- and mid-range gases and record the responses of the measurement system. The calibration and linearity of the system are acceptable if the responses for all four gases are

within 5 percent of the respective gas values. If the performance of the system is not acceptable, repair or adjust the system and repeat the linearity check. Conduct a calibration and linearity check after assembling the analysis system and after a major change is made to the system.

5.2 Systems Drift Checks. Select the calibration gas that most closely approximates the concentration of the captured emissions for conducting the drift checks. Introduce the zero and calibration gas at the calibration valve assembly and verify that the appropriate gas flow rate and pressure are present at the FIA. Record the measurement system responses to the zero and calibration gases. The performance of the system is acceptable if the difference between the drift check measurement and the value obtained in Section 5.1 is less than 3 percent of the span value. Conduct a system drift check at the end of each run.

5.3 System Check. Inject the high range calibration gas at the inlet of the sampling probe and record the response. The performance of the system is acceptable if the measurement system response is within 5 percent of the value obtained in Section 5.1 for the high range calibration gas. Conduct a system check before each test run.

5.4 Analysis Audit. Immediately before each test analyze an audit cylinder as described in Section 5.2. The analysis audit must agree with the audit cylinder concentration within 10 percent.

6. NOMENCLATURE

C_{DH} = average measured concentration for the drift check calibration gas, ppm propane.

C_{DO} = average system drift check concentration for zero concentration gas, ppm propane.

C_{Fj} = corrected average VOC concentration of fugitive emissions at point j, ppm propane.

C_H = actual concentration of the drift check calibration gas, ppm propane.

C_j = uncorrected average VOC concentration measured at point j, ppm propane.

F_B = total VOC content of fugitive emissions from the building, kg.

K_1 = 1.830×10^{-6} kg/(m^3-ppm).

n = number of measurement points.

Q_{Fj} = average effluent volumetric flow rate corrected to standard conditions at fugitive emissions point j, m^3/min.

θ_F = total duration of capture efficiency sampling run, min.

7. CALCULATIONS

7.1 Total VOC Fugitive Emissions From the Building.

$$F_B = \sum_{j=1}^{R} C_{Fj}\, Q_{Fj}\, \theta_F\, K_1 \qquad \text{Eq. 1}$$

7.2 VOC Concentration of the Fugitive Emissions at Point j.

$$C_{Fj} = (C_j - C_{DO}) \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 2}$$

VOC CAPTURE EFFICIENCY
Procedure G.1 - Captured VOC Emissions

1. INTRODUCTION

1.1 **Applicability.** This procedure is applicable for determining the volatile organic compounds (VOC) content of captured gas streams. It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations. The procedure may not be acceptable in certain site-specific situations, e.g., when: (1) direct fired heaters or other circumstances affect the quantity of VOC at the control device inlet; and (2) particulate organic aerosols are formed in the process and are present in the captured emissions.

1.2 **Principle.** The amount of VOC captured (G) is calculated as the sum of the products of the VOC content (C_{Gj}), the flow rate (Q_{Gj}), and the sample time (θ_C) from each captured emissions point.

1.3 **Estimated Measurement Uncertainty.** The measurement uncertainties are estimated for each captured or fugitive emissions point as follows: Q_{Gj} = ±5.5 percent and C_{Gj} = ±5.0 percent. Based on these numbers, the probable uncertainty for G is estimated at about ±7.4 percent.

1.4 **Sampling Requirements.** A capture efficiency test shall consist of at least three sampling runs. The sampling time for each run should be at least 8 hours, unless otherwise approved.

1.5 **Notes.** Because this procedure is often applied in highly explosive areas, caution and care should be exercised in choosing appropriate equipment and installing and using the equipment. Mention of trade names or company products does not constitute endorsement. All gas concentrations (percent, ppm) are by volume, unless otherwise noted.

2. APPARATUS AND REAGENTS

2.1 **Gas VOC Concentration.** A schematic of the measurement system is shown in Figure 1. The main components are described below:

2.1.1 **Sample Probe.** Stainless steel, or equivalent. The probe shall be heated to prevent VOC condensation.

2.1.2 **Calibration Valve Assembly.** Three-way valve assembly at the outlet of sample probe to direct the zero and calibration gases to the analyzer. Other methods, such as quick-connect lines, to route calibration gases to the outlet of the sample probe are acceptable.

2.1.3 **Sample Line.** Stainless steel or Teflon tubing to transport the sample gas to the analyzer. The sample line must be heated to prevent condensation.

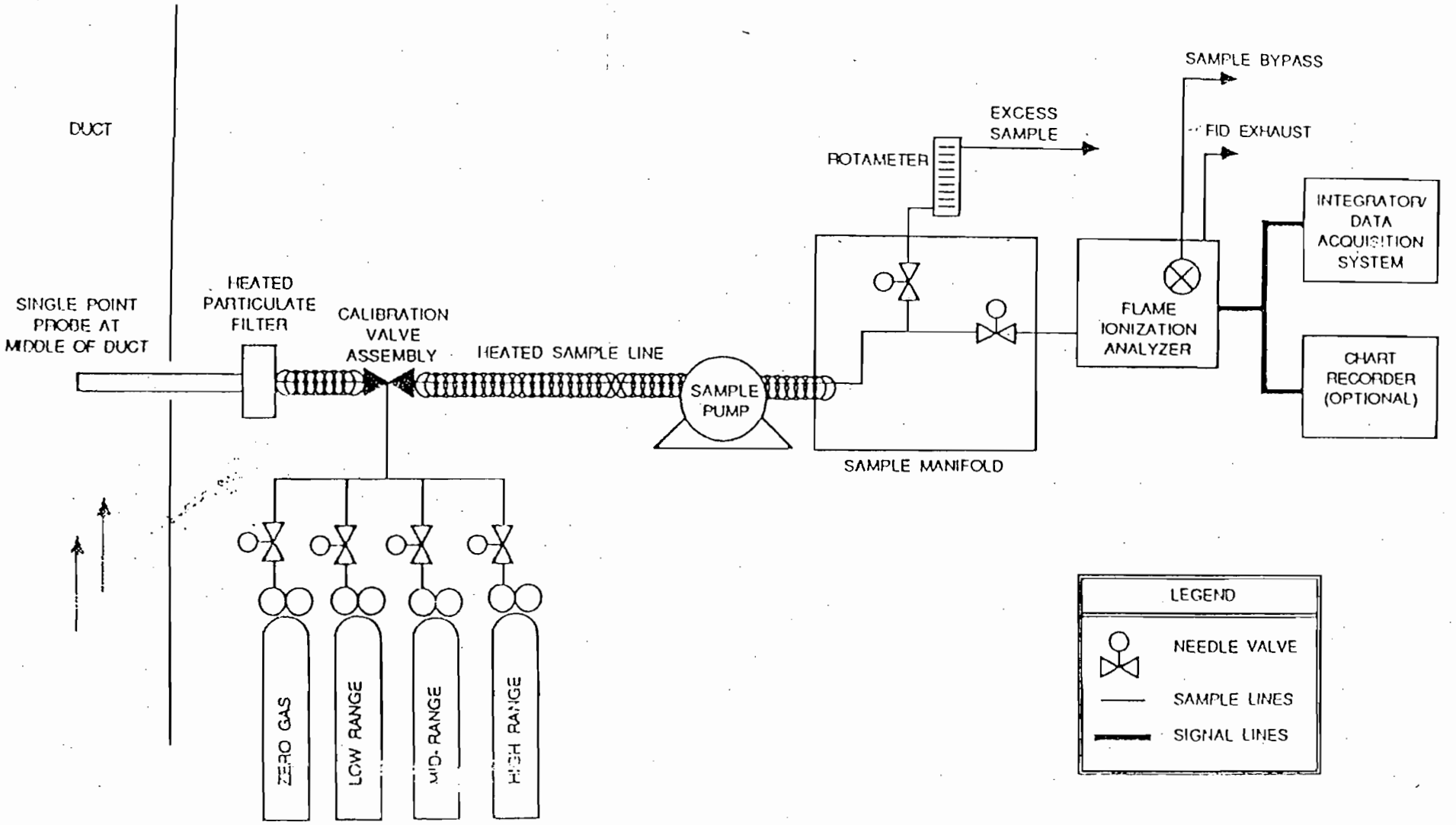


Figure 1. Gas VOC concentration measurement system.

.4 **Sample Pump.** A leak-free pump, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system. The components of the pump that contact the gas stream shall be constructed of stainless steel or Teflon. The sample pump must be heated to prevent condensation.

2.1.5 **Sample Flow Rate Control.** A sample flow rate control valve and rotameter, or equivalent, to maintain a constant sampling rate within 10 percent. The flow rate control valve and rotameter must be heated to prevent condensation. A control valve may also be located on the sample pump bypass loop to assist in controlling the sample pressure and flow rate.

2.1.6 **Sample Gas Manifold.** Capable of diverting a portion of the sample gas stream to the flame ionization analyzer (FIA), and the remainder to the bypass discharge vent. The manifold components shall be constructed of stainless steel or Teflon. If captured or fugitive emissions are to be measured at multiple locations, the measurement system shall be designed to use separate sampling probes, lines, and pumps for each measurement location and a common sample gas manifold and FIA. The sample gas manifold and connecting lines to the FIA must be heated to prevent condensation.

2.1.7 **Organic Concentration Analyzer.** An FIA with a span value of 1.5 times the expected concentration as propane; however, other span values may be used if it can be demonstrated that they would provide more accurate measurements. The system shall be capable of meeting or exceeding the following specifications:

2.1.7.1 **Zero Drift.** Less than ±3.0 percent of the span value.

2.1.7.2 **Calibration Drift.** Less than ±3.0 percent of the span value.

2.1.7.3 **Calibration Error.** Less than ±5.0 percent of the calibration gas value.

2.1.7.4 **Response Time.** Less than 30 seconds.

2.1.8 **Integrator/Data Acquisition System.** An analog or digital device or computerized data acquisition system used to integrate the FIA response or compute the average response and record measurement data. The minimum data sampling frequency for computing average or integrated values is one measurement value every 5 seconds. The device shall be capable of recording average values at least once per minute.

2.1.9 **Calibration and Other Gases.** Gases used for calibration, fuel, and combustion air (if required) are contained in compressed gas cylinders. All calibration gases shall be traceable to NIST standards and shall be certified by the manufacturer to ±1 percent of the tag value. Additionally, the manufacturer of the cylinder should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. For calibration gas values not generally available, alternative methods for preparing calibration gas mixtures, such as dilution systems, may be used with prior approval.

2.1.9.1 **Fuel.** A 40 percent H_2/60 percent He or 40 percent H_2/60 percent N_2 gas mixture is recommended to avoid an oxygen synergism effect that reportedly occurs when oxygen concentration varies significantly from a mean value.

2.1.9.2 **Carrier Gas.** High purity air with less than 1 ppm of organic material (as propane or carbon equivalent) or less than 0.1 percent of the span value, whichever is greater.

2.1.9.3 **FIA Linearity Calibration Gases.** Low-, mid-, and high-range gas mixture standards with nominal propane concentrations of 20-30, 45-55, and 70-80 percent of the span value in air, respectively. Other calibration values and other span values may be used if it can be shown that more accurate measurements would be achieved.

2.1.10 **Particulate Filter.** An in-stack or an out-of-stack glass fiber filter is recommended if exhaust gas particulate loading is significant. An out-of-stack filter must be heated to prevent any condensation unless it can be demonstrated that no condensation occurs.

2.2 Captured Emissions Volumetric Flow Rate.

2.2.1 Method 2 or 2A Apparatus. For determining volumetric flow rate.

2.2.2 Method 3 Apparatus and Reagents. For determining molecular weight of the gas stream. An estimate of the molecular weight of the gas stream may be used if it can be justified.

2.2.3 Method 4 Apparatus and Reagents. For determining moisture content, if necessary.

3. DETERMINATION OF VOLUMETRIC FLOW RATE OF CAPTURED EMISSIONS

3.1 Locate all points where emissions are captured from the affected facility. Using Method 1, determine the sampling points. Be sure to check each site for cyclonic or swirling flow.

3.2 Measure the velocity at each sampling site at least once every hour during each sampling run using Method 2 or 2A.

4. DETERMINATION OF VOC CONTENT OF CAPTURED EMISSIONS

4.1 **Analysis Duration.** Measure the VOC responses at each captured emissions point during the entire test run or, if applicable, while the process is operating. If there are multiple captured emission locations, design a sampling system to allow a single FIA to be used to determine the VOC responses at all sampling locations.

4.2 Gas VOC Concentration.

4.2.1 Assemble the sample train as shown in Figure 1. Calibrate the FIA according to the procedure in Section 5.1.

4.2.2 Conduct a system check according to the procedure in Section 5.3.

4.2.3 Install the sample probe so that the probe is centrally located in the stack, pipe, or duct, and is sealed tightly at the stack port connection.

4.2.4 Inject zero gas at the calibration valve assembly. Allow the measurement system response to reach zero. Measure the system response time as the time required for the system to reach the effluent concentration after the calibration valve has been returned to the effluent sampling position.

4.2.5 Conduct a system check before and a system drift check after each sampling run according to the procedures in Sections 5.2 and 5.3. If the drift check following a run indicates unacceptable performance, the run is not valid. The tester may elect to perform system drift checks during the run not to exceed one drift check per hour.

4.2.6 Verify that the sample lines, filter, and pump temperatures are 120 ± 5°C.

4.2.7 Begin sampling at the start of the test period and continue to sample during the entire run. Record the starting and ending times and any required process information as appropriate. If multiple captured emission locations are sampled using a single FIA, sample at each location for the same amount of time (e.g., 2 minutes) and continue to switch from one location to another for the entire test run. Be sure that total sampling time at each location is the same at the end of the test run. Collect at least 4 separate measurements from each sample point during each hour of testing. Disregard the measurements at each sampling location until two times the response time of the measurement system has elapsed. Continue sampling for at least 1 minute and record the concentration measurements.

4.3 Background Concentration.

4.3.1 Locate all NDO's of the TTE. A sampling point shall be centrally located outside of the TTE at 4 equivalent diameters from each NDO, if possible. If there are more than 6 NDO's, choose 6 sampling points evenly spaced among the NDO's.

4.3.2 Assemble the sample train as shown in Figure 2. Calibrate the FIA and conduct a system check according to the procedures in Sections 5.1 and 5.3. NOTE: This sample train shall be a separate sampling train from the one to measure the captured emissions.

4.3.3 Position the probe at the sampling location.

4.3.4 Determine the response time, conduct the system check and sample according to the procedures described in Sections 4.2.4 to 4.2.7.

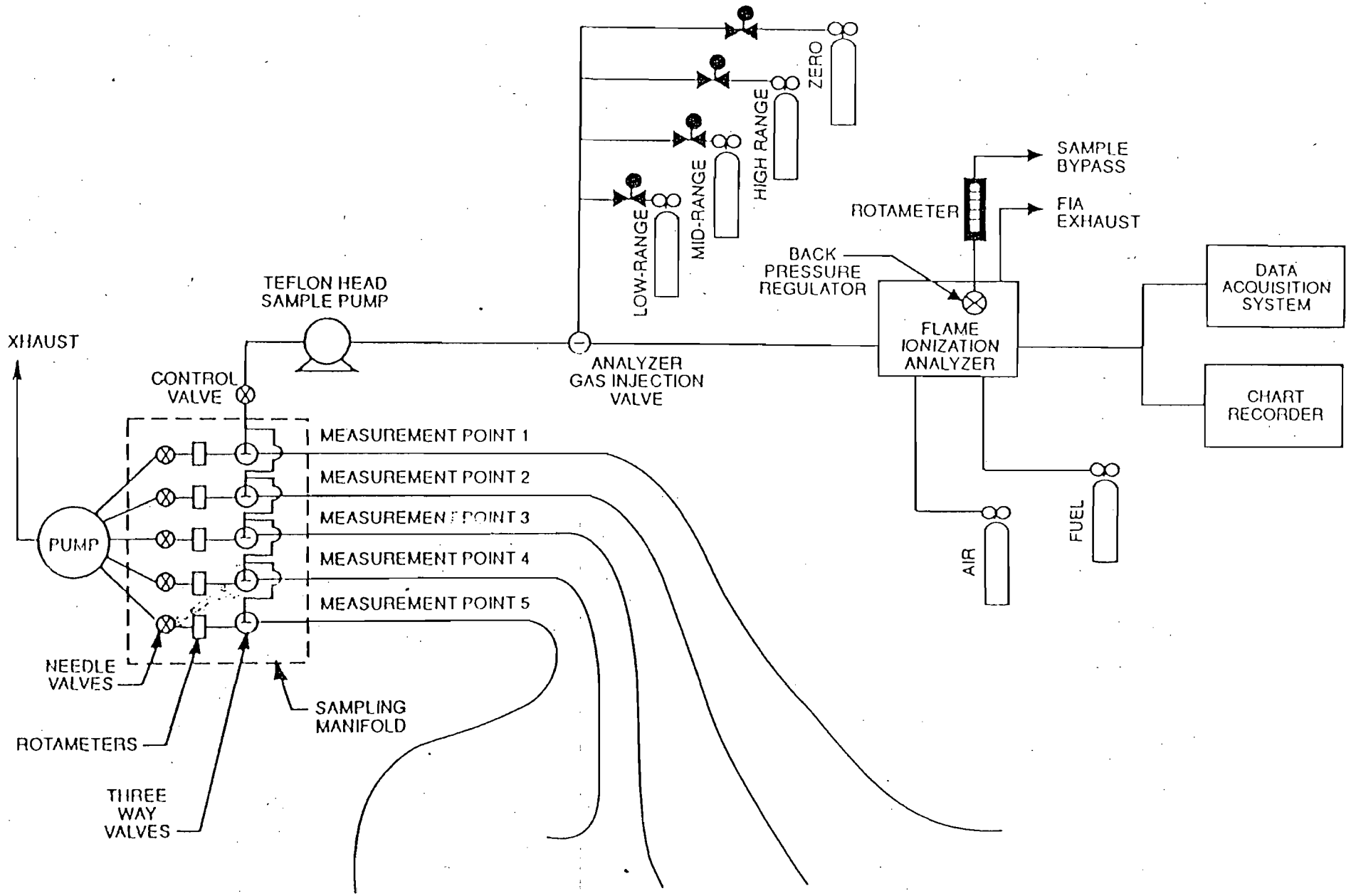


Figure 2. Background measurement system.

4.4 **Alternative Procedure.** The direct interface sampling and analysis procedure described in Section 7.2 of Method 18 may be used to determine the gas VOC concentration. The system must be designed to collect and analyze at least one sample every 10 minutes.

5. CALIBRATION AND QUALITY ASSURANCE

5.1 FIA Calibration and Linearity Check. Make necessary adjustments to the air and fuel supplies for the FIA and ignite the burner. Allow the FIA to warm up for the period recommended by the manufacturer. Inject a calibration gas into the measurement system and adjust the back-pressure regulator to the value required to achieve the flow rates specified by the manufacturer. Inject the zero- and the high-range calibration gases and adjust the analyzer calibration to provide the proper responses. Inject the low- and mid-range gases and record the responses of the measurement system. The calibration and linearity of the system are acceptable if the responses for all four gases are within 5 percent of the respective gas values. If the performance of the system is not acceptable, repair or adjust the system and repeat the linearity check. Conduct a calibration and linearity check after assembling the analysis system and after a major change is made to the system.

5.2 Systems Drift Checks. Select the calibration gas that most closely approximates the concentration of the captured emissions for conducting the drift checks. Introduce the zero and calibration gas at the calibration valve assembly and verify that the appropriate gas flow rate and pressure are present at the FIA. Record the measurement system responses to the zero and calibration gases. The performance of the system is acceptable if the difference between the drift check measurement and the value obtained in Section 5.1 is less than 3 percent of the span value. Conduct the system drift checks at the end of each run.

5.3 System Check. Inject the high range calibration gas at the inlet of the sampling probe and record the response. The performance of the system is acceptable if the measurement system response is within 5 percent of the value obtained in Section 5.1 for the high range calibration gas. Conduct a system check before and after each test run.

5.4 Analysis Audit. Immediately before each test analyze an audit cylinder as described in Section 5.2. The analysis audit must agree with the audit cylinder concentration within 10 percent.

6. NOMENCLATURE

A_i = area of NDO i, ft^2.

A_N = total area of all NDO's in the enclosure, ft^2.

C_{Bi} = corrected average VOC concentration of background emissions at point i, ppm propane.

C_B = average background concentration, ppm propane.

C_{Gj} = corrected average VOC concentration of captured emissions at point j, ppm propane.

C_{DH} = average measured concentration for the drift check calibration gas, ppm propane.

C_{DO} = average system drift check concentration for zero concentration gas, ppm propane.

C_H = actual concentration of the drift check calibration gas, ppm propane.

C_i = uncorrected average background VOC concentration measured at point i, ppm propane.

C_j = uncorrected average VOC concentration measured at point j, ppm propane.

G = total VOC content of captured emissions, kg.

K_1 = 1.830×10^{-6} kg/(m^3-ppm).

n = number of measurement points.

Q_{Gj} = average effluent volumetric flow rate corrected to standard conditions at captured emissions point j, m^3/min.

θ_C = total duration of captured emissions sampling run, min.

7. CALCULATIONS

7.1 Total VOC Captured Emissions.

$$G = \sum_{j=1}^{n} (C_{Gj} - C_B)\ Q_{Gj}\ \theta_C\ K_1 \qquad \text{Eq. 1}$$

7.2 VOC Concentration of the Captured Emissions at Point j.

$$C_{Gj} = (C_j - C_{DO}) \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 2}$$

7.3 Background VOC Concentration at Point i.

$$C_{Bi} = (C_i - C_{DO}) \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 3}$$

7.4 Average Background Concentration.

$$C_B = \frac{\sum_{i=1}^{n} C_{Bi} A_i}{n A_N} \qquad \text{Eq. 4}$$

NOTE: If the concentration at each point is within 20 percent of the average concentration of all points, the terms "A_i" and "A_N" may be deleted from Equation 4.

VOC CAPTURE EFFICIENCY
Procedure G.2 - Captured VOC Emissions (Dilution Technique)

1. INTRODUCTION

1.1 **Applicability.** This procedure is applicable for determining the volatile organic compounds (VOC) content of captured gas streams. It is intended to be used as a segment in the development of a gas/gas protocol in which fugitive emissions are measured for determining VOC capture efficiency (CE) for surface coating and printing operations. A dilution system is used to reduce the VOC concentration of the captured emission to about the same concentration as the fugitive emissions. The procedure may not be acceptable in certain site-specific situations, e.g., when: (1) direct fired heaters or other circumstances affect the quantity of VOC at the control device inlet; and (2) particulate organic aerosols are formed in the process and are present in the captured emissions.

1.2 **Principle.** The amount of VOC captured (G) is calculated as the sum of the products of the VOC content (C_{Gj}), the flow rate (Q_{Gj}), and the sampling time (θ_C) from each captured emissions point.

1.3 **Estimated Measurement Uncertainty.** The measurement uncertainties are estimated for each captured or fugitive emissions point as follows: Q_{Gj} = ±5.5 percent and C_{Gj} = ±5 percent. Based on these numbers, the probable uncertainty for G is estimated at about ±7.4 percent.

1.4 **Sampling Requirements.** A capture efficiency test shall consist of at least three sampling runs. The sampling time for each run should be at least 8 hours, unless otherwise approved.

1.5 **Notes.** Because this procedure is often applied in highly explosive areas, caution and care should be exercised in choosing appropriate equipment and installing and using the equipment. Mention of trade names or company products does not constitute endorsement. All gas concentrations (percent, ppm) are by volume, unless otherwise noted.

2. APPARATUS AND REAGENTS

2.1 **Gas VOC Concentration.** A schematic of the measurement system is shown in Figure 1. The main components are described below:

2.1.1 **Dilution System.** A Kipp in-stack dilution probe and controller or similar device may be used. The dilution rate may be changed by substituting different critical orifices or adjustments of the aspirator supply pressure. The dilution system shall be heated to prevent VOC condensation. **Note:** An out-of-stack dilution device may be used.

2.1.2 **Calibration Valve Assembly.** Three-way valve assembly at the outlet of sample probe to direct the zero and calibration gases to the analyzer.

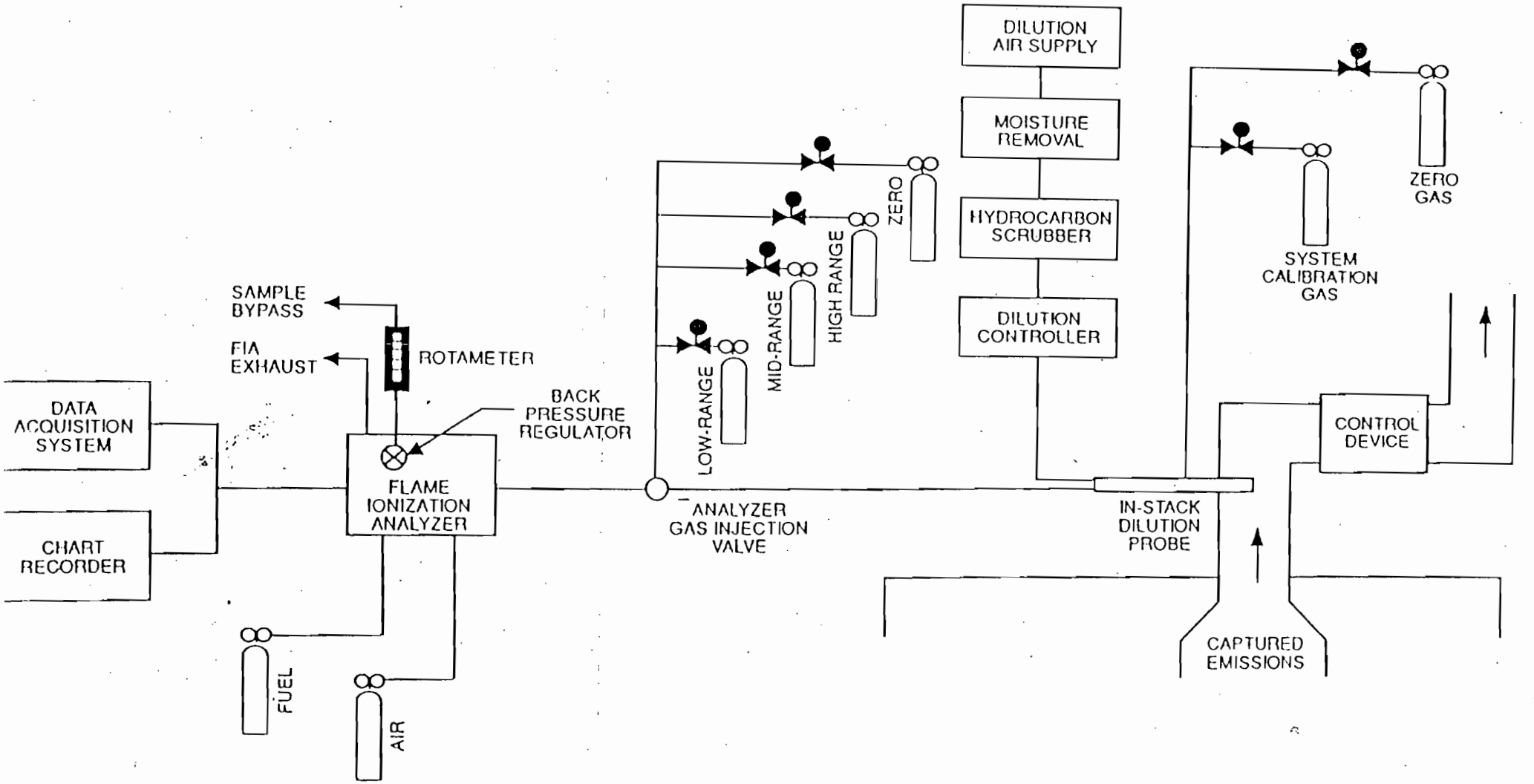


Figure 1. Captured emissions measurement system.

Other methods, such as quick-connect lines, to route calibration gases to the outlet of the sample probe are acceptable.

2.1.3 **Sample Line.** Stainless steel or Teflon tubing to transport the sample gas to the analyzer. The sample line must be heated to prevent condensation.

2.1.4 **Sample Pump.** A leak-free pump, to pull the sample gas through the system at a flow rate sufficient to minimize the response time of the measurement system. The components of the pump that contact the gas stream shall be constructed of stainless steel or Teflon. The sample pump must be heated to prevent condensation.

2.1.5 **Sample Flow Rate Control.** A sample flow rate control valve and rotameter, or equivalent, to maintain a constant sampling rate within 10 percent. The flow control valve and rotameter must be heated to prevent condensation. A control valve may also be located on the sample pump bypass loop to assist in controlling the sample pressure and flow rate.

2.1.6 **Sample Gas Manifold.** Capable of diverting a portion of the sample gas stream to the flame ionization analyzer (FIA), and the remainder to the bypass discharge vent. The manifold components shall be constructed of stainless steel or Teflon. If captured or fugitive emissions are to be measured at multiple locations, the measurement system shall be designed to use separate sampling probes, lines, and pumps for each measurement location and a common sample gas manifold and FIA. The sample gas manifold and connecting lines to the FIA must be heated to prevent condensation.

2.1.7 **Organic Concentration Analyzer.** An FIA with a span value of 1.5 times the expected concentration as propane; however, other span values may be used if it can be demonstrated that they would provide more accurate measurements. The system shall be capable of meeting or exceeding the following specifications:

2.1.7.1 **Zero Drift.** Less than ±3.0 percent of the span value.

2.1.7.2 **Calibration Drift.** Less than ±3.0 percent of the span value.

2.1.7.3 **Calibration Error.** Less than ±5.0 percent of the calibration gas value.

2.1.7.4 **Response Time.** Less than 30 seconds.

2.1.8 **Integrator/Data Acquisition System.** An analog or digital device or computerized data acquisition system used to integrate the FIA response or compute the average response and record measurement data. The minimum data sampling frequency for computing average or integrated values is one measurement value every 5 seconds. The device shall be capable of recording average values at least once per minute.

2.1.9 **Calibration and Other Gases.** Gases used for calibration, fuel, and combustion air (if required) are contained in compressed gas cylinders. All calibration gases shall be traceable to NIST standards and shall be certified

by the manufacturer to ±1 percent of the tag value. Additionally, the manufacturer of the cylinder should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. For calibration gas values not generally available, alternative methods for preparing calibration gas mixtures, such as dilution systems, may be used with prior approval.

2.1.9.1 Fuel. A 40 percent H_2/60 percent He or 40 percent H_2/60 percent N_2 gas mixture is recommended to avoid an oxygen synergism effect that reportedly occurs when oxygen concentration varies significantly from a mean value.

2.1.9.2 Carrier Gas and Dilution Air Supply. High purity air with less than 1 ppm of organic material (as propane or carbon equivalent) or less than 0.1 percent of the span value, whichever is greater.

2.1.9.3 FIA Linearity Calibration Gases. Low-, mid-, and high-range gas mixture standards with nominal propane concentrations of 20-30, 45-55, and 70-80 percent of the span value in air, respectively. Other calibration values and other span values may be used if it can be shown that more accurate measurements would be achieved.

2.1.9.4 Dilution Check Gas. Gas mixture standard containing propane in air, approximately half the span value after dilution.

2.1.10 Particulate Filter. An in-stack or an out-of-stack glass fiber filter is recommended if exhaust gas particulate loading is significant. An out-of-stack filter must be heated to prevent any condensation unless it can be demonstrated that no condensation occurs.

2.2 Captured Emissions Volumetric Flow Rate.

2.2.1 Method 2 or 2A Apparatus. For determining volumetric flow rate.

2.2.2 Method 3 Apparatus and Reagents. For determining molecular weight of the gas stream. An estimate of the molecular weight of the gas stream may be used if it can be justified.

2.2.3 Method 4 Apparatus and Reagents. For determining moisture content, if necessary.

3. DETERMINATION OF VOLUMETRIC FLOW RATE OF CAPTURED EMISSIONS

3.1 Locate all points where emissions are captured from the affected facility. Using Method 1, determine the sampling points. Be sure to check each site for cyclonic or swirling flow.

3.2 Measure the velocity at each sampling site at least once every hour during each sampling run using Method 2 or 2A.

4. DETERMINATION OF VOC CONTENT OF CAPTURED EMISSIONS

4.1 Analysis Duration. Measure the VOC responses at each captured emissions point during the entire test run or, if applicable, while the process is operating. If there are a multiple captured emissions locations, design a sampling system to allow a single FIA to be used to determine the VOC responses at all sampling locations.

4.2 Gas VOC Concentration.

4.2.1 Assemble the sample train as shown in Figure 1. Calibrate the FIA according to the procedure in Section 5.1.

4.2.2 Set the dilution ratio and determine the dilution factor according to the procedure in Section 5.3.

4.2.3 Conduct a system check according to the procedure in Section 5.4.

4.2.4 Install the sample probe so that the probe is centrally located in the stack, pipe, or duct, and is sealed tightly at the stack port connection.

4.2.5 Inject zero gas at the calibration valve assembly. Measure the system response time as the time required for the system to reach the effluent concentration after the calibration valve has been returned to the effluent sampling position.

4.2.6 Conduct a system check before and a system drift check after each sampling run according to the procedures in Sections 5.2 and 5.4. If the drift check following a run indicates unacceptable performance, the run is not valid. The tester may elect to perform system drift checks during the run not to exceed one drift check per hour.

4.2.7 Verify that the sample lines, filter, and pump temperatures are 120 ± 5°C.

4.2.8 Begin sampling at the start of the test period and continue to sample during the entire run. Record the starting and ending times and any required process information as appropriate. If multiple captured emission locations are sampled using a single FIA, sample at each location for the same amount of time (e.g., 2 minutes) and continue to switch from one location to another for the entire test run. Be sure that total sampling time at each location is the same at the end of the test run. Collect at least 4 separate measurements from each sample point during each hour of testing. Disregard the measurements at each sampling location until two times the response time of the measurement system has elapsed. Continue sampling for at least 1 minute and record the concentration measurements.

4.3 Background Concentration.

4.3.1 Locate all NDO's of the TTE. A sampling point shall be centrally located outside of the TTE at 4 equivalent diameters from each NDO, if possible. If there are more than 6 NDO's, choose 6 sampling points evenly spaced among the NDO's.

4.3.2 Assemble the sample train as shown in Figure 2. Calibrate the FIA and conduct a system check according to the procedures in Sections 5.1 and 5.4.

4.3.3 Position the probe at the sampling location.

4.3.4 Determine the response time, conduct the system check and sample according to the procedures described in Sections 4.2.4 to 4.2.8.

4.4 Alternative Procedure. The direct interface sampling and analysis procedure described in Section 7.2 of Method 18 may be used to determine the gas VOC concentration. The system must be designed to collect and analyze at least one sample every 10 minutes.

5. CALIBRATION AND QUALITY ASSURANCE

5.1 FIA Calibration and Linearity Check. Make necessary adjustments to the air and fuel supplies for the FIA and ignite the burner. Allow the FIA to warm up for the period recommended by the manufacturer. Inject a calibration gas into the measurement system after the dilution system and adjust the back-pressure regulator to the value required to achieve the flow rates specified by the manufacturer. Inject the zero- and the high-range calibration gases and adjust the analyzer calibration to provide the proper responses. Inject the low- and mid-range gases and record the responses of the measurement system. The calibration and linearity of the system are acceptable if the responses for all four gases are within 5 percent of the respective gas values. If the performance of the system is not acceptable, repair or adjust the system and repeat the linearity check. Conduct a calibration and linearity check after assembling the analysis system and after a major change is made to the system.

5.2 Systems Drift Checks. Select the calibration gas that most closely approximates the concentration of the diluted captured emissions for conducting the drift checks. Introduce the zero and calibration gas at the calibration valve assembly and verify that the appropriate gas flow rate and pressure are present at the FIA. Record the measurement system responses to the zero and calibration gases. The performance of the system is acceptable if the difference between the drift check measurement and the value obtained in Section 5.1 is less than 3 percent of the span value. Conduct the system drift check at the end of each run.

5.3 Determination of Dilution Factor. Inject the dilution check gas into the measurement system before the dilution system and record the response. Calculate the dilution factor using Equation 3.

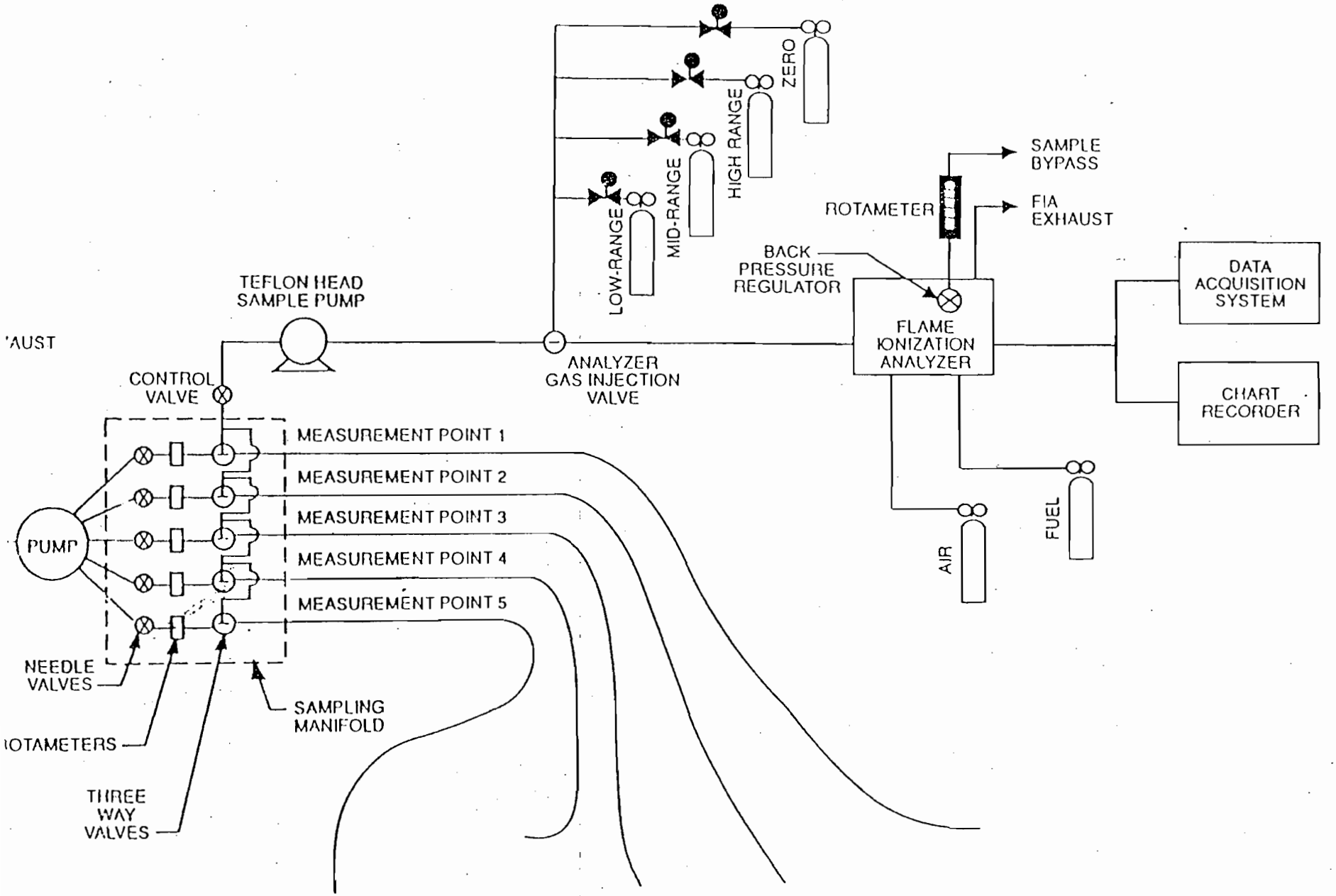


Figure 2. Background measurement system

5.4 **System Check.** Inject the high range calibration gas at the inlet to the sampling probe while the dilution air is turned off. Record the response. The performance of the system is acceptable if the measurement system response is within 5 percent of the value obtained in Section 5.1 for the high range calibration gas. Conduct a system check before and after each test run.

5.5 Analysis Audit. Immediately before each test analyze an audit cylinder as described in Section 5.2. The analysis audit must agree with the audit cylinder concentration within 10 percent.

6. NOMENCLATURE

A_i = area of NDO i, ft^2.

A_N = total area of all NDO's in the enclosure, ft^2.

C_A = actual concentration of the dilution check gas, ppm propane.

C_{Bi} = corrected average VOC concentration of background emissions at point i, ppm propane.

C_B = average background concentration, ppm propane.

C_{DH} = average measured concentration for the drift check calibration gas, ppm propane.

C_{DO} = average system drift check concentration for zero concentration gas, ppm propane.

C_H = actual concentration of the drift check calibration gas, ppm propane.

C_i = uncorrected average background VOC concentration measured at point i, ppm propane.

C_j = uncorrected average VOC concentration measured at point j, ppm propane.

C_M = measured concentration of the dilution check gas, ppm propane.

DF = dilution factor.

G = total VOC content of captured emissions, kg.

K_1 = 1.830×10^{-6} kg/(m^3-ppm).

n = number of measurement points.

Q_{Gj} = average effluent volumetric flow rate corrected to standard conditions at captured emissions point j, m^3/min.

θ_C = total duration of capture efficiency sampling run, min.

7. CALCULATIONS

7.1 Total VOC Captured Emissions.

$$G = \sum_{j=1}^{p} C_{Gj}\, Q_{Gj}\, \theta_C\, K_1 \qquad \text{Eq. 1}$$

7.2 VOC Concentration of the Captured Emissions at Point j.

$$C_{Gj} = DF\ (C_j - C_{DO})\ \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 2}$$

7.3 Dilution Factor.

$$DF = \frac{C_A}{C_M} \qquad \text{Eq. 3}$$

7.4 Background VOC Concentration at Point i.

$$C_{Bi} = (C_i - C_{DO})\ \frac{C_H}{C_{DH} - C_{DO}} \qquad \text{Eq. 4}$$

7.5 Average Background Concentration.

$$C_B = \frac{\sum_{i=1}^{n} C_{Bi}\, A_i}{n\, A_N} \qquad \text{Eq. 5}$$

NOTE: If the concentration at each point is within 20 percent of the average concentration of all points, the terms "A_i" and "A_N" may be deleted from Equation 4.

VOC CAPTURE EFFICIENCY
Procedure L - VOC Input

1. INTRODUCTION

1.1 Applicability. This procedure is applicable for determining the input of volatile organic compounds (VOC). It is intended to be used as a segment in the development of liquid/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations.

1.2 Principle. The amount of VOC introduced to the process (L) is the sum of the products of the weight (W) of each VOC containing liquid (ink, paint, solvent, etc.) used and its VOC content (V). A sample of each VOC containing liquid is analyzed with a flame ionization analyzer (FIA) to determine V.

1.3 Estimated Measurement Uncertainty. The measurement uncertainties are estimated for each VOC containing liquid as follows: W = ±2.0 percent and V = ±12.0 percent. Based on these numbers, the probable uncertainty for L is estimated at about ±12.2 percent for each VOC containing liquid.

1.4 Sampling Requirements. A capture efficiency test shall consist of at least three sampling runs. The sampling time for each run should be at least 8 hours, unless otherwise approved.

1.5 Notes. Because this procedure is often applied in highly explosive areas, caution and care should be exercised in choosing appropriate equipment and installing and using the equipment. Mention of trade names or company products does not constitute endorsement. All gas concentrations (percent, ppm) are by volume, unless otherwise noted.

2. APPARATUS AND REAGENTS

2.1 Liquid Weight.

2.1.1 Balances/Digital Scales. To weigh drums of VOC containing liquids to within 0.2 lb.

2.1.2 Volume Measurement Apparatus (Alternative). Volume meters, flow meters, density measurement equipment, etc., as needed to achieve same accuracy as direct weight measurements.

2.2 VOC Content (Flame Ionization Analyzer Technique). The liquid sample analysis system is shown in Figures 1 and 2. The following equipment is required:

2.2.1 Sample Collection Can. An appropriately sized metal can to be used to collect VOC containing materials. The can must be constructed in such a way that it can be grounded to the coating container.

2.2.2 Needle Valves. To control gas flow.

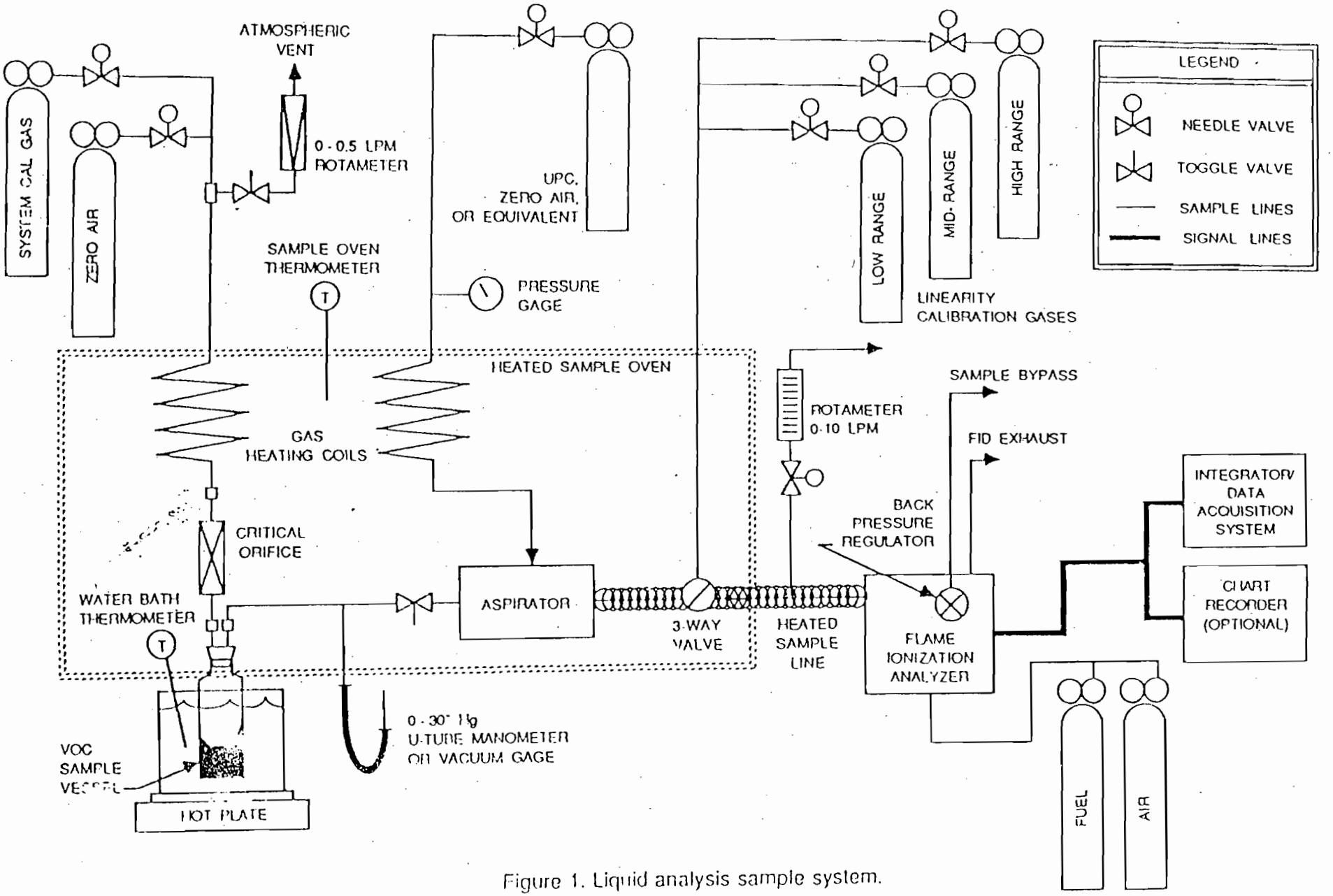


Figure 1. Liquid analysis sample system.

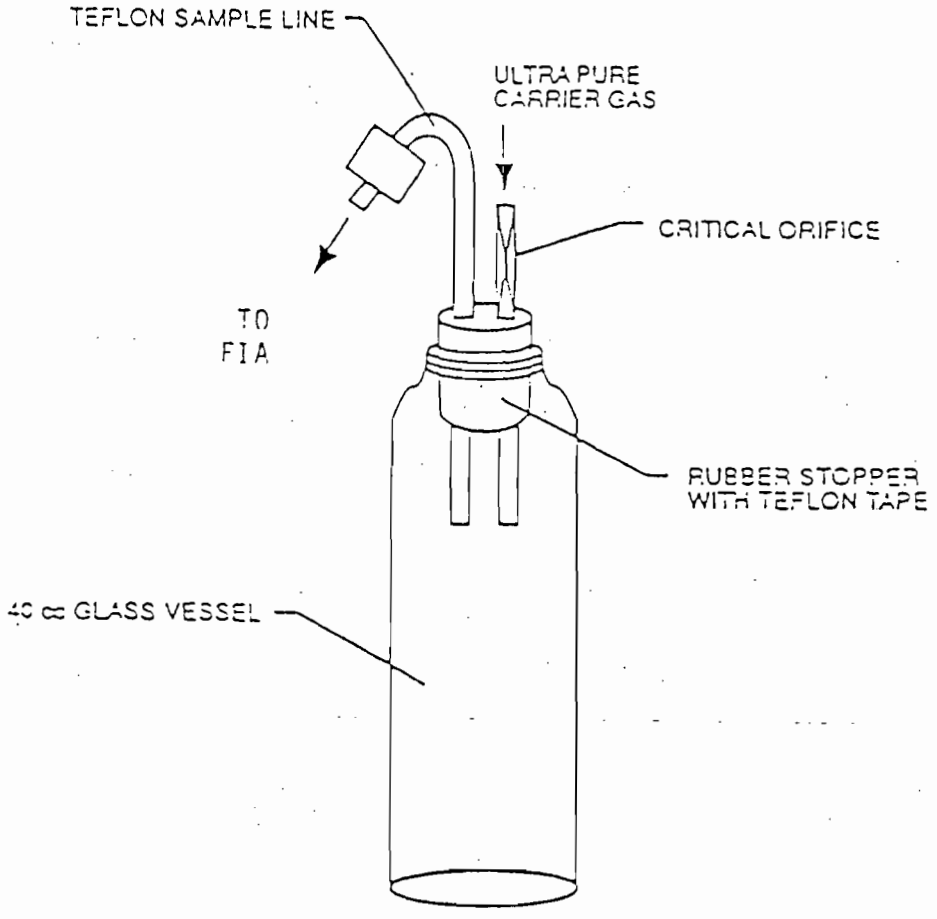


Figure 2. VOC sampling vessel.

2.2.2 Needle Valves. To control gas flow.
2.2.3 Regulators. For carrier gas and calibration gas cylinders.

2.2.4 Tubing. Teflon or stainless steel tubing with diameters and lengths determined by connection requirements of equipment. The tubing between the sample oven outlet and the FIA shall be heated to maintain a temperature of 120 ± 5°C.

2.2.5 Atmospheric Vent. A tee and 0- to 0.5-liter/min rotameter placed in the sampling line between the carrier gas cylinder and the VOC sample vessel to release the excess carrier gas. A toggle valve placed between the tee and the rotameter facilitates leak tests of the analysis system.

2.2.6 Thermometer. Capable of measuring the temperature of the hot water bath to within 1°C.

2.2.7 Sample Oven. Heated enclosure, containing calibration gas coil heaters, critical orifice, aspirator, and other liquid sample analysis components, capable of maintaining a temperature of 120 ± 5°C.

2.2.8 Gas Coil Heaters. Sufficient lengths of stainless steel or Teflon tubing to allow zero and calibration gases to be heated to the sample oven temperature before entering the critical orifice or aspirator.

2.2.9 Water Bath. Capable of heating and maintaining a sample vessel temperature of 100 ± 5°C.

2.2.10 Analytical Balance. To measure ±0.001 g.

2.2.11 Disposable Syringes. 2-cc or 5-cc.

2.2.12 Sample Vessel. Glass, 40-ml septum vial. A separate vessel is needed for each sample.

2.2.13 Rubber Stopper. Two-hole stopper to accommodate 3.2-mm (1/8-in.) Teflon tubing, appropriately sized to fit the opening of the sample vessel. The rubber stopper should be wrapped in Teflon tape to provide a tighter seal and to prevent any reaction of the sample with the rubber stopper. Alternatively, any leak-free closure fabricated of non-reactive materials and accommodating the necessary tubing fittings may be used.

2.2.14 Critical Orifices. Calibrated critical orifices capable of providing constant flow rates from 50 to 250 ml/min at known pressure drops. Sapphire orifice assemblies (available from O'Keefe Controls Company) and glass capillary tubing have been found to be adequate for this application.

2.2.15 Vacuum Gauge. 0- to 760-mm (0- to 30-in.) Hg U-Tube manometer or vacuum gauge.

2.2.16 Pressure Gauge. Bourdon gauge capable of measuring the maximum air pressure at the aspirator inlet (e.g., 100 psig).

2.2.17 Aspirator. A device capable of generating sufficient vacuum at the sample vessel to create critical flow through the calibrated orifice when sufficient air pressure is present at the aspirator inlet. The aspirator must also provide sufficient sample pressure to operate the FIA. The sample is also mixed with the dilution gas within the aspirator.

2.2.18 Soap Bubble Meter. Of an appropriate size to calibrate the critical orifices in the system.

2.2.19 Organic Concentration Analyzer. An FIA with a span value of 1.5 times the expected concentration as propane; however other span values may be used if it can be demonstrated that they would provide more accurate measurements. The system shall be capable of meeting or exceeding the following specifications:

2.2.19.1 Zero Drift. Less than ±3.0 percent of the span value.

2.2.19.2 Calibration Drift. Less than ±3.0 percent of span value.

2.2.19.3 Calibration Error. Less than ±5.0 percent of the calibration gas value.

2.2.20 Integrator/Data Acquisition System. An analog or digital device or computerized data acquisition system used to integrate the FIA response or compute the average response and record measurement data. The minimum data sampling frequency for computing average or integrated values is one measurement value every 5 seconds. The device shall be capable of recording average values at least once per minute.

2.2.21 Chart Recorder (Optional). A chart recorder or similar device is recommended to provide a continuous analog display of the measurement results during the liquid sample analysis.

2.2.22 Calibration and Other Gases. For calibration, fuel, and combustion air (if required) contained in compressed gas cylinders. All calibration gases shall be traceable to NIST standards and shall be certified by the manufacturer to ±1 percent of the tag value. Additionally, the manufacturer of the cylinder should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. For calibration gas values not generally available, alternative methods for preparing calibration gas mixtures, such as dilution systems, may be used with prior approval.

2.2.22.1 Fuel. A 40 percent H_2/60 percent He or 40 percent H_2/60 percent N_2 gas mixture is recommended to avoid an oxygen synergism effect that reportedly occurs when oxygen concentration varies significantly from a mean value.

2.2.22.2 Carrier Gas. High purity air with less than 1 ppm of organic material (as propane) or less than 0.1 percent of the span value, whichever is greater.

2.2.22.3 FIA Linearity Calibration Gases. Low-, mid-, and high-range gas mixture standards with nominal propane concentrations of 20-30, 45-55, and 70-80 percent of the span value in air, respectively. Other calibration values and other span values may be used if it can be shown that more accurate measurements would be achieved.

2.2.22.4 System Calibration Gas. Gas mixture standard containing propane in air, approximating the undiluted VOC concentration expected for the liquid samples.

3. DETERMINATION OF LIQUID INPUT WEIGHT

3.1 Weight Difference. Determine the amount of material introduced to the process as the weight difference of the feed material before and after each sampling run. In determining the total VOC containing liquid usage, account for: (a) the initial (beginning) VOC containing liquid mixture; (b) any solvent added during the test run; (c) any coating added during the test run; and (d) any residual VOC containing liquid mixture remaining at the end of the sample run.

3.1.1 Identify all points where VOC containing liquids are introduced to the process. To obtain an accurate measurement of VOC containing liquids, start with an empty fountain (if applicable). After completing the run, drain the liquid in the fountain back into the liquid drum (if possible), and weigh the drum again. Weigh the VOC containing liquids to ±0.5 percent of the total weight (full) or ±0.1 percent of the total weight of VOC containing liquid used during the sample run, whichever is less. If the residual liquid cannot be returned to the drum, drain the fountain into a preweighed empty drum to determine the final weight of the liquid.

3.1.2 If it is not possible to measure a single representative mixture, then weigh the various components separately (e.g., if solvent is added during the sampling run, weigh the solvent before it is added to the mixture). If a fresh drum of VOC containing liquid is needed during the run, then weigh both the empty drum and fresh drum.

3.2 Volume Measurement (Alternative). If direct weight measurements are not feasible, the tester may use volume meters and flow rate meters (and density measurements) to determine the weight of liquids used if it can be demonstrated that the technique produces results equivalent to the direct weight measurements. If a single representative mixture cannot be measured, measure the components separately.

4. DETERMINATION OF VOC CONTENT IN INPUT LIQUIDS

4.1 Collection of Liquid Samples.

4.1.1 Collect a 100-ml or larger sample of the VOC containing liquid mixture at each application location at the beginning and end of each test run. A separate sample should be taken of each VOC containing liquid added to the application mixture during the test run. If a fresh drum is needed during the

sampling run, then obtain a sample from the fresh drum.

4.1.2 When collecting the sample, ground the sample container to the coating drum. Fill the sample container as close to the rim as possible to minimize the amount of headspace.

4.1.3 After the sample is collected, seal the container so the sample cannot leak out or evaporate.

4.1.4 Label the container to identify clearly the contents.

4.2 Liquid Sample VOC Content.

4.2.1 Assemble the liquid VOC content analysis system as shown in Figure 1.

4.2.2 Permanently identify all of the critical orifices that may be used. Calibrate each critical orifice under the expected operating conditions (i.e., sample vacuum and temperature) against a volume meter as described in Section 5.3.

4.2.3 Label and tare the sample vessels (including the stoppers and caps) and the syringes.

4.2.4 Install an empty sample vessel and perform a leak test of the system. Close the carrier gas valve and atmospheric vent and evacuate the sample vessel to 250 mm (10 in.) Hg absolute or less using the aspirator. Close the toggle valve at the inlet to the aspirator and observe the vacuum for at least one minute. If there is any change in the sample pressure, release the vacuum, adjust or repair the apparatus as necessary and repeat the leak test.

4.2.5 Perform the analyzer calibration and linearity checks according to the procedure in Section 5.1. Record the responses to each of the calibration gases and the back-pressure setting of the FIA.

4.2.6 Establish the appropriate dilution ratio by adjusting the aspirator air supply or substituting critical orifices. Operate the aspirator at a vacuum of at least 25 mm (1 in.) Hg greater than the vacuum necessary to achieve critical flow. Select the dilution ratio so that the maximum response of the FIA to the sample does not exceed the high-range calibration gas.

4.2.7 Perform system calibration checks at two levels by introducing compressed gases at the inlet to the sample vessel while the aspirator and dilution devices are operating. Perform these checks using the carrier gas (zero concentration) and the system calibration gas. If the response to the carrier gas exceeds ±0.5 percent of span, clean or repair the apparatus and repeat the check. Adjust the dilution ratio as necessary to achieve the correct response to the upscale check, but do not adjust the analyzer calibration. Record the identification of the orifice, aspirator air supply pressure, FIA back-pressure, and the responses of the FIA to the carrier and system calibration gases.

4.2.8 After completing the above checks, inject the system calibration gas

for approximately 10 minutes. Time the exact duration of the gas injection using a stopwatch. Determine the area under the FIA response curve and calculate the system response factor based on the sample gas flow rate, gas concentration, and the duration of the injection as compared to the integrated response using Equations 2 and 3.

4.2.9 Verify that the sample oven and sample line temperatures are 120 ± 5°C and that the water bath temperature is 100° ± 5°C.

4.2.10 Fill a tared syringe with approximately 1 g of the VOC containing liquid and weigh it. Transfer the liquid to a tared sample vessel. Plug the sample vessel to minimize sample loss. Weigh the sample vessel containing the liquid to determine the amount of sample actually received. Also, as a quality control check, weigh the empty syringe to determine the amount of material delivered. The two coating sample weights should agree within ±0.02 g. If not, repeat the procedure until an acceptable sample is obtained.

4.2.11 Connect the vessel to the analysis system. Adjust the aspirator supply pressure to the correct value. Open the valve on the carrier gas supply to the sample vessel and adjust it to provide a slight excess flow to the atmospheric vent. As soon as the initial response of the FIA begins to decrease, immerse the sample vessel in the water bath. (Applying heat to the sample vessel too soon may cause the FID response to exceed the calibrated range of the instrument, and thus invalidate the analysis.)

4.2.12 Continuously measure and record the response of the FIA until all of the volatile material has been evaporated from the sample and the instrument response has returned to the baseline (i.e., response less than 0.5 percent of the span value). Observe the aspirator supply pressure, FIA back-pressure, atmospheric vent, and other system operating parameters during the run; repeat the analysis procedure if any of these parameters deviate from the values established during the system calibration checks in Section 4.2.7. After each sample perform the drift check described in Section 5.2. If the drift check results are acceptable, calculate the VOC content of the sample using the equations in Section 7. Integrate the area under the FIA response curve, or determine the average concentration response and the duration of sample analysis.

5. CALIBRATION AND QUALITY ASSURANCE

5.1 FIA Calibration and Linearity Check. Make necessary adjustments to the air and fuel supplies for the FIA and ignite the burner. Allow the FIA to warm up for the period recommended by the manufacturer. Inject a calibration gas into the measurement system and adjust the back-pressure regulator to the value required to achieve the flow rates specified by the manufacturer. Inject the zero- and the high-range calibration gases and adjust the analyzer calibration to provide the proper responses. Inject the low- and mid-range gases and record the responses of the measurement system. The calibration and linearity of the system are acceptable if the responses for all four gases are within 5 percent of the respective gas values. If the performance of the system is not acceptable, repair or adjust the system and repeat the linearity

check. Conduct a calibration and linearity check after assembling the analysis system and after a major change is made to the system.

5.2 Systems Drift Checks. After each sample, repeat the system calibration checks in Section 4.2.7 before any adjustments to the FIA or measurement system are made. If the zero or calibration drift exceeds ±3 percent of the span value, discard the result and repeat the analysis.

5.3 Critical Orifice Calibration.

5.3.1 Each critical orifice must be calibrated at the specific operating conditions that it will be used. Therefore, assemble all components of the liquid sample analysis system as shown in Figure 3. A stopwatch is also required.

5.3.2 Turn on the sample oven, sample line, and water bath heaters and allow the system to reach the proper operating temperature. Adjust the aspirator to a vacuum of 380 mm (15 in.) Hg vacuum. Measure the time required for one soap bubble to move a known distance and record barometric pressure.

5.3.3 Repeat the calibration procedure at a vacuum of 406 mm (16 in.) Hg and at 25-mm (1-in.) Hg intervals until three consecutive determinations provide the same flow rate. Calculate the critical flow rate for the orifice in ml/min at standard conditions. Record the vacuum necessary to achieve critical flow.

6. NOMENCLATURE

A_L = area under the response curve of the liquid sample, area count.

A_S = area under the response curve of the calibration gas, area count.

C_S = actual concentration of system calibration gas, ppm propane.

K = 1.830×10^{-9} g/(ml-ppm).

L = total VOC content of liquid input, kg.

M_L = mass of liquid sample delivered to the sample vessel, g.

Q = flow rate through critical orifice, ml/min.

RF = liquid analysis system response factor, g/area count.

θ_S = total gas injection time for system calibration gas during integrator calibration, min.

V_{Fj} = final VOC fraction of VOC containing liquid j.

V_{Ij} = initial VOC fraction of VOC containing liquid j.

V_{Aj} = VOC fraction of VOC containing liquid j added during the run.

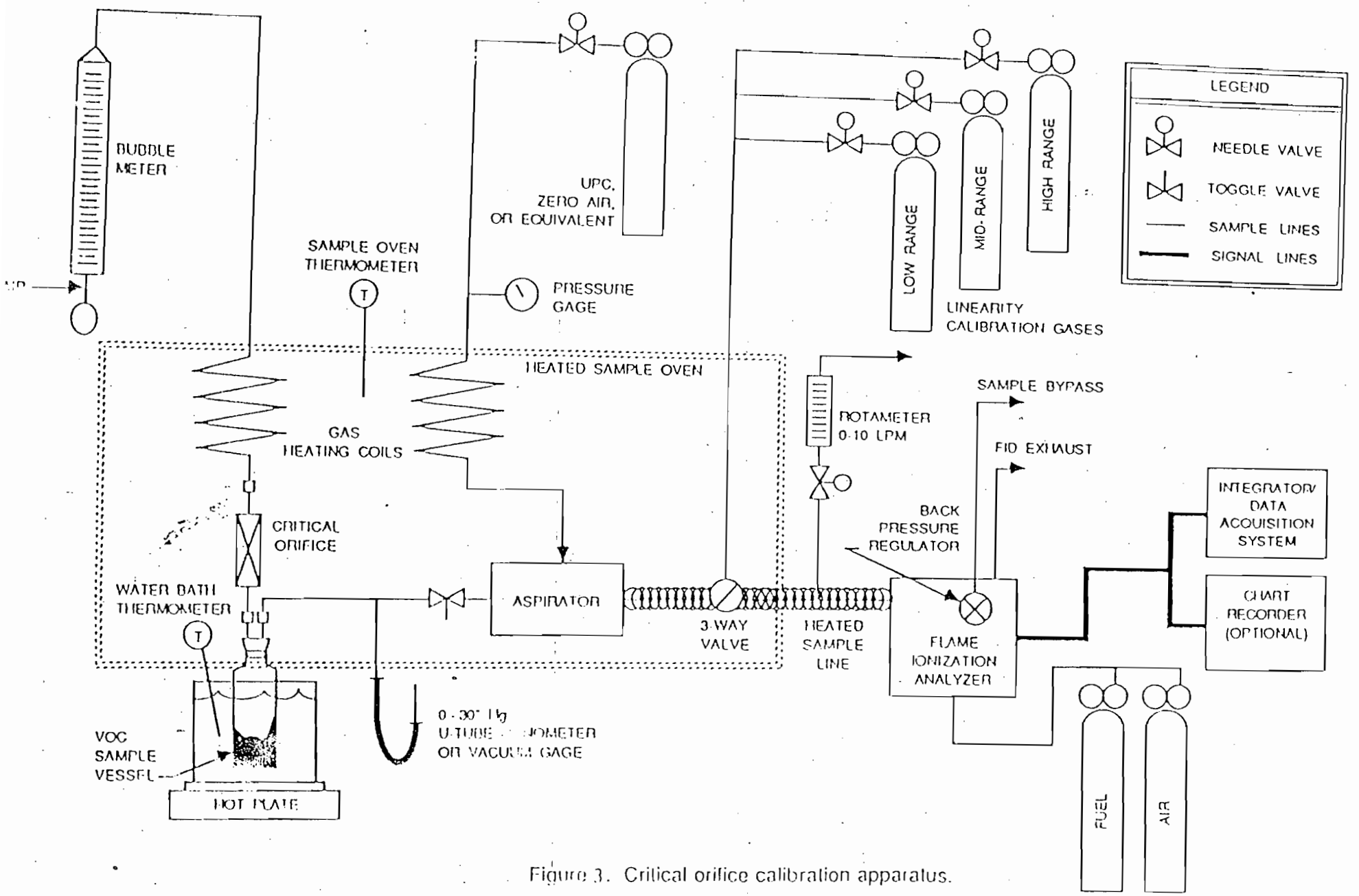


Figure 3. Critical orifice calibration apparatus.

V = VOC fraction of liquid sample.

W_{Fj} = weight of VOC containing liquid j remaining at end of the run, kg.

W_{Ij} = weight of VOC containing liquid j at beginning of the run, kg.

W_{Aj} = weight of VOC containing liquid j added during the run, kg.

7. CALCULATIONS

7.1 Total VOC Content of the Input VOC Containing Liquid.

$$L = \sum_{j=1}^{n} V_{Ij} W_{Ij} - \sum_{j=1}^{n} V_{Fj} W_{Fj} + \sum_{j=1}^{n} V_{Aj} W_{Aj} \qquad \text{Eq. 1}$$

7.2 Liquid Sample Analysis System Response Factor for Systems Using Integrators, Grams/Area Counts.

$$RF = \frac{C_S \, q \, \theta_S \, K}{A_S} \qquad \text{Eq. 2}$$

7.3 VOC Content of the Liquid Sample.

$$V = \frac{A_L \, RF}{M_L} \qquad \text{Eq. 3}$$

VOC CAPTURE EFFICIENCY
Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure

1. INTRODUCTION

1.1 Applicability. This procedure is used to determine whether a permanent or temporary enclosure meets the criteria of a total enclosure.

1.2 Principle. An enclosure is evaluated against a set of criteria. If the criteria are met and if all the exhaust gases are ducted to a control device, then the volatile organic compounds (VOC) capture efficiency (CE) is assumed to be 100 percent and CE need not be measured. However, if part of the exhaust gas stream is not ducted to a control device, CE must be determined.

2. DEFINITIONS

2.1 Natural Draft Opening (NDO) -- Any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct in which a fan is installed.

2.2 Permanent Total Enclosure (PTE) -- A permanently installed enclosure that completely surrounds a source of emissions such that all VOC emissions are captured and contained for discharge through a control device.

2.3 Temporary Total Enclosure (TTE) -- A temporarily installed enclosure that completely surrounds a source of emissions such that all VOC emissions are captured and contained for discharge through ducts that allow for the accurate measurement of VOC rates.

3. CRITERIA OF A TEMPORARY TOTAL ENCLOSURE

3.1 Any NDO shall be at least 4 equivalent opening diameters from each VOC emitting point.

3.2 Any exhaust point from the enclosure shall be at least 4 equivalent duct or hood diameters from each NDO.

3.3 The total area of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.

3.4 The average facial velocity (FV) of air through all NDO's shall be at least 3,600 m/hr (200 fpm). The direction of air through all NDO's shall be into the enclosure.

3.5 All access doors and windows whose areas are not included in Section 3.3 and are not included in the calculation in Section 3.4 shall be closed during routine operation of the process.

4. CRITERIA OF A PERMANENT TOTAL ENCLOSURE

4.1 Same as Sections 3.1 and 3.3 - 3.5.

4.2 All VOC emissions must be captured and contained for discharge through a control device.

5. PROCEDURE

5.1 Determine the equivalent diameters of the NDO's and determine the distances from each VOC emitting point to all NDO's. Determine the equivalent diameter of each exhaust duct or hood and its distance to all NDO's. Calculate the distances in terms of equivalent diameters. The number of equivalent diameters shall be at least 4.

5.2 Measure the total area (A_t) of the enclosure and the total area (A_N) of all NDO's of the enclosure. Calculate the NDO to enclosure area ratio (NEAR) as follows:

$$NEAR = A_N/A_t$$

The NEAR must be ≤ 0.05.

5.3 Measure the volumetric flow rate, corrected to standard conditions, of each gas stream exiting the enclosure through an exhaust duct or hood using EPA Method 2. In some cases (e.g., when the building is the enclosure), it may be necessary to measure the volumetric flow rate, corrected to standard conditions, of each gas stream entering the enclosure through a forced makeup air duct using Method 2. Calculate FV using the following equation:

$$FV = [Q_O - Q_I]/ A_N$$

where:

Q_O = the sum of the volumetric flow from all gas streams exiting the enclosure through an exhaust duct or hood.

Q_I = the sum of the volumetric flow from all gas streams into the enclosure through a forced makeup air duct; zero, if there is no forced makeup air into the enclosure.

A_N = total area of all NDO's in enclosure.

The FV shall be at least 3,600 m/hr (200 fpm).

5.4 Verify that the direction of air flow through all NDO's is inward. Use streamers, smoke tubes, tracer gases, etc. Strips of plastic wrapping film have been found to be effective. Monitor the direction of air flow at intervals of at least 10 minutes for at least 1 hour.

6. QUALITY ASSURANCE

6.1 The success of this protocol lies in designing the TTE to simulate the conditions that exist without the TTE, i.e., the effect of the TTE on the normal flow patterns around the affected facility or the amount of fugitive VOC emissions should be minimal. The TTE must enclose the application stations, coating reservoirs, and all areas from the application station to the oven. The oven does not have to be enclosed if it is under negative pressure. The NDO's of the temporary enclosure and a fugitive exhaust fan must be properly sized and placed.

6.2. Estimate the ventilation rate of the TTE that best simulates the conditions that exist without the TTE, i.e., the effect of the TTE on the normal flow patterns around the affected facility or the amount of fugitive VOC emissions should be minimal. Figure 1 may be used as an aid. Measure the concentration (C_G) and flow rate (Q_G) of the captured gas stream, specify a safe concentration (C_F) for the fugitive gas stream, estimate the CE, and then use the plot in Figure 1 to determine the volumetric flowrate of the fugitive gas stream (Q_F). A fugitive VOC emission exhaust fan that has a variable flow control is desirable.

6.2.1 Monitor the concentration of VOC into the capture device without the TTE. To minimize the effect of temporal variation on the captured emissions, the baseline measurement should be made over as long a time period as practical. However, the process conditions must be the same for the measurement in Section 6.2.3 as they are for this baseline measurement. This may require short measuring times for this quality control check before and after the construction of the TTE.

6.2.2 After the TTE is constructed, monitor the VOC concentration inside the TTE. This concentration shall not continue to increase and must not exceed the safe level according to OSHA requirements for permissible exposure limits. An increase in VOC concentration indicates poor TTE design or poor capture efficiency.

6.2.3 Monitor the concentration of VOC into the capture device with the TTE. To limit the effect of the TTE on the process, the VOC concentration with and without the TTE must be within ±10 percent. If the measurements do not agree, adjust the ventilation rate from the TTE until they agree within 10 percent.

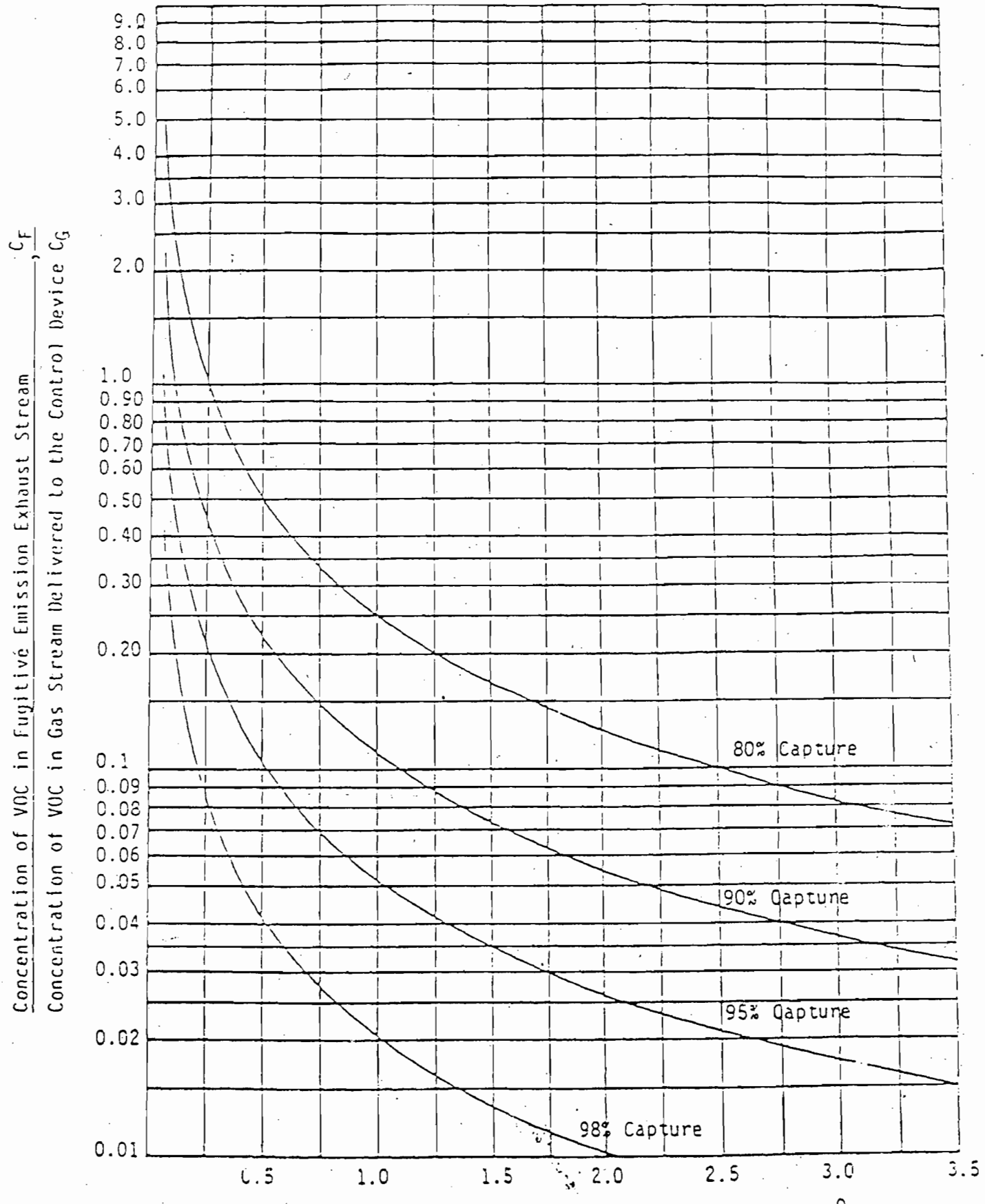


Figure 1. The Crumpler Chart