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PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

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- Show to whom, date and address of delivery.
- Restricted Delivery.

3. Article Addressed to:  
 Mr. Robert E. Kindorf  
 Spiralkote, Inc.  
 1200 Central Florida Parkway  
 Orlando, FL 32809

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 408 532 041

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
 X

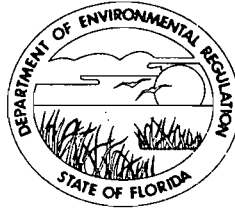
6. Signature - Agent  
 X *James Osby*

7. Date of Delivery  
*8/26/86*

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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809


August 25, 1986

Enclosed is Permit Number AC 48-117138 to Spiralkote, Inc. which authorizes the construction of a printing and coating unit and associated catalytic incinerator at the existing Spiralkote, Inc. facility in Orlando, Orange County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

Jerome J. Guidry, P.E.  
Tom Sawicki

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 26, 1986 to the listed persons.

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

Patricia G. Adams  
Clerk

August 26, 1986  
Date

Final Determination

Spiralkote, Inc.  
Orange County  
Orlando, Florida

Permit Number:  
AC 48-117138

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

August 21, 1986

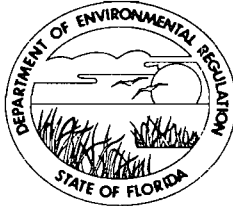
## Final Determination

The construction application and attachments have been reviewed by the department. Public notice of the department's intent to issue was published in The Orlando Sentinel issue of July 14, 1986. The technical evaluation and preliminary determination were available for public inspection at the DER's St. Johns River District office and Bureau of Air Quality Management office.

There were no comments received. Therefore, it is recommended that the construction permit be issued as drafted.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

**PERMITTEE:**  
Spiralkote, Inc.  
1200 Central Fla. Parkway  
Orlando, Florida 32809

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987  
County: Orange  
Latitude/Longitude: 28° 24' 21"N  
81° 23' 40"W/  
Project: Olympia 746 Flexographic  
Printing & Coating Unit & Associated  
Catalytic Incinerator System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility 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/installation of the Olympia Model 746 Central Impressions, which is a flexographic printing and coating unit with three associated natural gas dryers: a  $0.8 \times 10^6$  Btu/hr - overhead dryer, a  $0.5 \times 10^6$  Btu/hr overhead dryer, and a  $0.15 \times 10^6$  Btu/hr tunnel oven. The dryers will operate at an idling level when not being used for production. The associated catalytic incinerator system will have a minimum 70% capture and transport efficiency and 95% destruction efficiency. The incinerator system will be custom designed by Etter Engineering Company, Inc., and consist of two identical 2500 CFM natural gas fired ( $0.4 \times 10^6$  Btu/hr) units utilizing an Eclipse model 80-AHO burner. The duct work and collection system will be designed and installed by Dec-E-Tech Industrial Design Engineering. The source emits volatile organic compounds and organic solvents (used for clean-up). The Olympia 746 will replace the existing Kidder I. The UTM coordinates are Zone 17, 461.37 km East and 3142.05 km North.

The Standard Industrial Codes are: Major Group 27 - Printing/Publishing; Group No. 275 - Commercial Printing; Industrial Number 2751 - Commercial Printing, Letterpress and Screen.

The source shall be as reflected in the permit application, plans documents, drawings and amendments, except as otherwise noted on pages 5-7 of the "Specific Conditions."

**Attachments:**

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Jerome J. Guidry's cover letter dated March 3, 1986, and received March 7, 1986.
2. C. H. Fancy's letter dated April 1, 1986.
3. Jerome J. Guidry's letter dated April 24, 1986, and received April 28, 1986.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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

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

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

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

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

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

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

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



PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

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

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

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) Compliance with New Source Performance Standards.
- ( ) Determination of Lowest Achievable Emission Rate (LAER)

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

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

**PERMITTEE:**  
Spiralkote, Inc.

**Permit Number:** AC 48-117138  
**Expiration Date:** March 31, 1987

**GENERAL CONDITIONS:**

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

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

**SPECIFIC CONDITIONS:**

1. The hours of operation shall not exceed 520 per month and 6240 annually.
2. The maximum allowable VOC (volatile organic compounds-organic solvents) emission limit shall not exceed 22.8 pounds per hour, 5.9 tons per month, and 71.3 tons per year (based on minimum 70% capture and transport efficiency and 95% destruction efficiency (oxidizes at least 95% of the VOC measured as total combustible carbon, to carbon dioxide and water) and includes 1 TPY clean-up solvent). The maximum rated production capacity is 26 reams per hour (based on 3000 square feet per ream).

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

3. A compliance test shall be conducted to determine the control system's capture and transport efficiency and the incinerator's destruction efficiency. The compliance test shall be conducted while operating at 100% of the rated production capacity. All subsequent compliance test(s) can be conducted while the unit is operating at 90-100% of the rated production capacity.

o Destruction efficiency determination

The test method shall be EPA Method 25, Appendix A, 40 CFR 60, or other test method(s) approved by the department.

o Capture and transport efficiency determination

The procedure proposed by the permittee involves the determination and comparison of the amount of VOC used during the test and the VOC concentration measured at the inlet of the incinerator over the same period of time.

4. All compliance tests shall require written notification to the DER's St. Johns River District office fifteen (15) days prior to the day of a test. All test(s) results shall be submitted to the DER's St. Johns River District office forty-five (45) days after completion of the last test run.

5. Objectionable odors shall not be allowed off plant property.

6. The units are subject to the provisions of FAC Rule 17-2.250, Excess Emissions. When a report of excess emissions is required, notify the DER's St. Johns River District office.

7. According to FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

8. All VOC emissions shall be accounted for monthly and verifiable on a 24-hour basis, and should include clean-up solvents. The annual VOC use and emissions shall be submitted in an AOR (annual operating report) to the DER's St. Johns River District office within sixty (60) days after the anniversary date of the operating permit once acquired.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

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

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

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

10. Upon the completion of the requirements contained in Specific Condition #9 or the receipt of an operation permit, whichever occurs first, the permittee will surrender to the department all air pollution permits associated with Kidder I.

Issued this 22 day of August 1986

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
VICTORIA J. TSCHINKEL, Secretary

\_\_\_ pages attached.

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

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

TO: Victoria J. Tschinkel  
FROM: Clair Fancy *Clair Fancy*  
DATE: August 21, 1986  
SUBJ: Approval of Air Construction Permit

Attached for your approval and signature is one air construction permit to Spiralkote, Inc. to construct a flexographic printing and coating unit at the applicant's existing facility in Orlando, Orange County, Florida.

Day 90, after which the permit would be issued by default, is September 14, 1986.

The Bureau recommends your approval and signature.

CF/pa

Attachment

**RECEIVED**

AUG 23 1986

Office of the Secretary

DER

AUG 25 1986

BAQM

Check Sheet

Company Name: Spiralkete, Inc.  
Permit Number: AC 48-117138  
PSD Number: \_\_\_\_\_  
Permit Engineer: \_\_\_\_\_

**Application:**

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

**Cross References:**

- AC 48-117138
- 
- 

**Intent:**

- 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

**Final**

**Determination:**

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

SINCE



1934

October 15, 1990

## fp Spiralkote, Inc.

A Subsidiary Of Fleming Packaging Corporation

Mr. Clair Fancy, P.E.  
Bureau Chief, Air Regulation  
Division of Air  
Resources Management,  
Florida Department of  
Environmental Regulation  
2600 Blainstone Road  
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Re: KIDDER C-I COLOR PRESS WITH ONE DOWNSTREAM FLEKO COATER  
PERMIT #A048-146002

We wish to notify you that we are adding a second 2500 CFM catalytic incinerator to this press. This incinerator is identical to the existing incinerator on the press. The incinerator was left over after the sale of Kidder II and III stack presses. The incinerator will receive the solvent from the downstream coater deck. This addition will:

1. provide us with enough air volume to work on improving capture which is marginal with one incinerator.
2. allow us to run trials on water base coatings
3. extend catalyst life by eliminating peak temperatures which exceed 850°F (550°F is min. temp.)

No increase in emissions will occur as a result of this change. The existing 2500 CFM incinerator will continue to control the emissions of the central impression printed decks with their associated between color dryers and overhead tunnel oven.

If you have any questions on this matter, please call.

Sincerely,

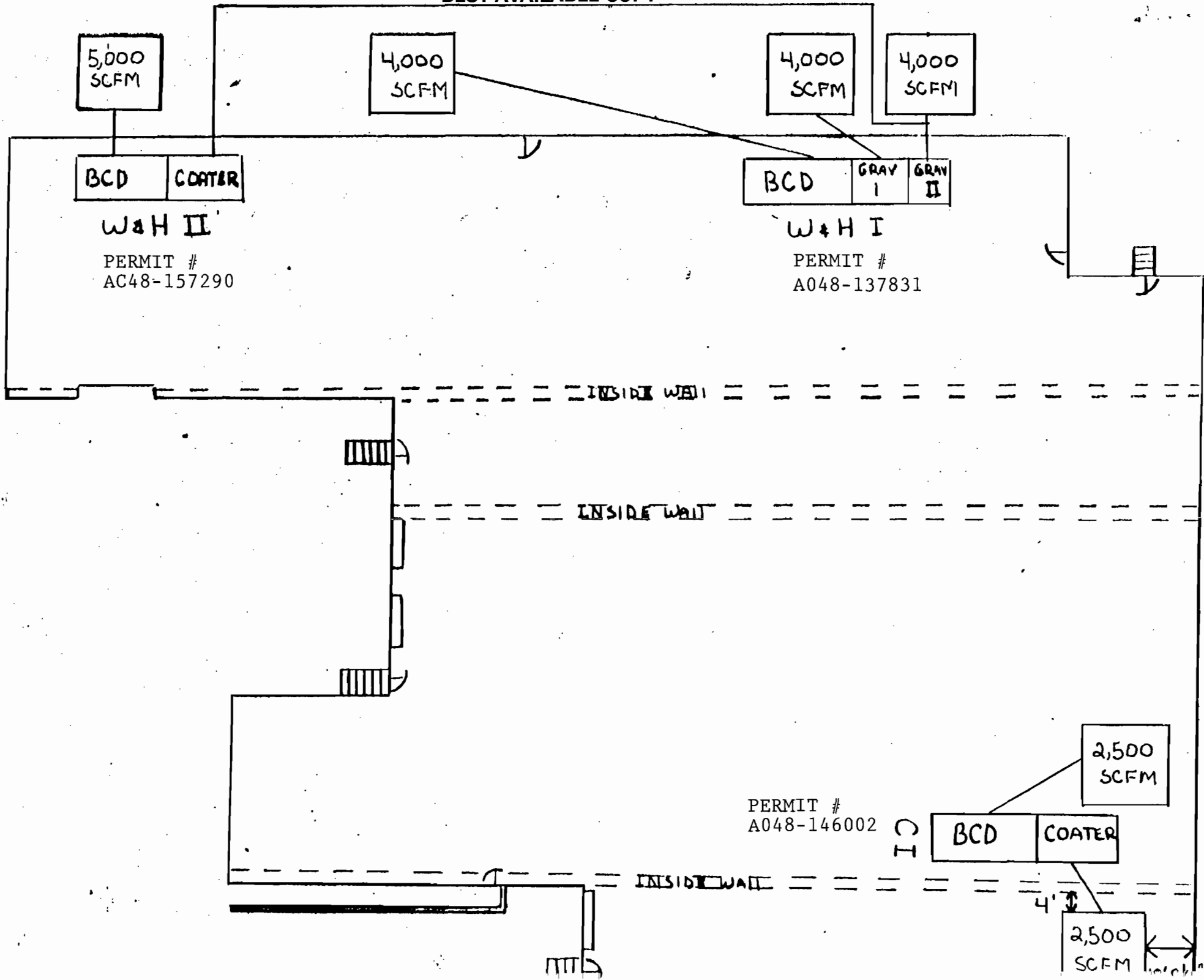
ED WARD  
Vice President Production

jac

encl.

cc: Bruce Mitchell, John Turner, Dennis Nester, Stephen Neck,  
Bruno Ferraro, Jerome Guidry, J.R. Wilson, Chris Johns

BEST AVAILABLE COPY





meeting @ BAA @ Spirakote, Inc.

11:00 p.m.

9/24/90

Bruce Mitchell

DEB/DARM/BAR

(808) 482-1344

Robert Wilson J.R.

Spirakote

(407) 857-7780

Chris Johns

" "

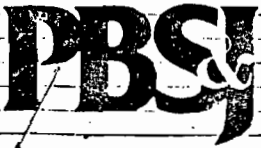
" "

E J WARD JR

"

"

"



ENVIRONMENTAL LABORATORIES

6635 EAST COLONIAL DRIVE  
ORLANDO, FLORIDA 32807  
305/277-4443

*Inter Office Mail  
Tom Sawicki  
Central Florida Dist*

*File copy*

November 19, 1987



DER  
DEC 02 1987  
BAQM

Mr. A. T. Sawicki, P.E.  
Florida Department of Environmental Regulation  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote Olympia 746 Printing Press  
Permit No. AC48-117138  
Completeness Summary Dated 10/28/87

Dear Mr. Sawicki:

The following are submitted in response to your request for additional information for the above referenced source:

Item 1: Table 1 (page 3) of the stack test report shows a higher level of pounds VOC captured than pounds VOC available for Run 1. Capture values are the result of laboratory analyses which involve an inherent analytical error. As a quality control measure, Air Consulting & Engineering submits its samples in duplicate to separate laboratories. If, for example, the lowest analytical results are reported from these laboratories summed, the level of pounds VOC captured would be 88.42, which is essentially equivalent to the 88.25 pounds VOC available. Similarly, the pounds VOC available are computed from measurements of material usage and the reported results involve an inherent analytical error. Considering the analytical error inherent in these measurements, the values for pounds VOC captured and pounds VOC available are essentially equivalent.

In addition, several operational problems occurred during Run 1 which resulted in intermittent stoppage of the press during the run. Consequently, the run time of 90.7 minutes reported in Table 2 (page 4) is an over-estimation of the actual time the press was in operation during the run. Since the calculational method used to estimate pounds VOC captured, results in increased pounds captured with an increase in the run time (direct proportion), the reported pounds VOC captured during Run 1 is probably too high.

Mr. A. T. Sawicki, P.E.

November 19, 1987

Page 2

Item 1

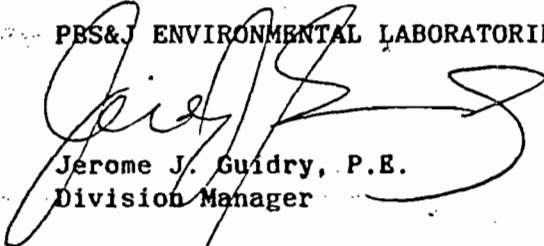
(Cont'd): These observations of the reported data suggest that, while the reported results show more pounds VOC captured than available, the actual pounds VOC captured were probably less than reported. Anomalies of this type are not atypical due to the statistical nature of the experiment techniques used to measure these chemicals and the inherent error in the measurements. All the other reported data support these observations.

Item 2: The modification for this source was submitted to Clair Fancy on 10/6/87, and we are awaiting his response.

Please call me if you have any questions.

Sincerely,

PBS&J ENVIRONMENTAL LABORATORIES



Jerome J. Guidry, P.E.  
Division Manager

JJG:daa

cc: Robert Kindorf  
Bruno Ferraro

Certified Mail No. P 609 605 231

A4:au

Copied: Bruce Mitchell }  
CHFIBT } 12/21/87 (M)

P 274 007 427

RECEIPT FOR CERTIFIED MAIL

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

U.S.G.P.O. 1985-480-794

PS Form 3800, June 1985

Robert E. Kindorf, V.P. Spiralkote, Inc. Street and No.	
1200 Central Florida Parkway P.O., State and ZIP Code Orlando, FL 32809	
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: 12/1/87 Permit: AC 48-117138 (Amendment)	

PS Form 3811, July 1983 447-845

**SENDER: Complete items 1, 2, 3 and 4.**

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

- Show to whom, date and address of delivery.
- Restricted Delivery.

**3. Article Addressed to:** Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, FL 32809

<b>4. Type of Service:</b> <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail	<b>Article Number</b> P 274 007 427
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**Always obtain signature of addressee or agent and DATE DELIVERED.**

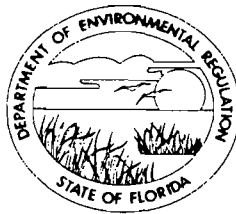
- 5. Signature - Addressee**  
X *Robert E. Kindorf*
- 6. Signature - Agent**  
X *[Signature]*
- 7. Date of Delivery**  
12-4-87
- 8. Addressee's Address (ONLY if requested and fee paid)**  
1200 CENT. FL. PKWY  
ORL FL 32809

DOMESTIC RETURN RECEIPT

Jie

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB MARTINEZ  
GOVERNOR  
DALE TWACHTMANN  
SECRETARY

November 23, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

Re: Amendment Request on the Construction Permit  
No. AC 48-117138

The Department is in receipt of Mr. Jerome J. Guidry's letters with attachments dated September 30 and October 6, 1987, requesting that the cover page to the above referenced construction permit be amended to accurately described the air source in the configuration that it was received by the facility and as reflected in the Certification of Completion. The source is an Olympia Model 746 Central Impressions, which is a flexographic printing and coating unit and was built in Germany. The permittee did not request an increase in the allowable pollutant emissions and final compliance has already been demonstrated. Based on the information submitted, the Department's Central Florida District and Bureau of Air Quality Management agrees with the request and the following shall be changed and added:

Construction Permit-Cover Page:  
2nd Paragraph:

From:

For the construction/installation of the Olympia Model 746 Central Impressions, which is a flexographic printing and coating unit with three associated natural gas dryers: a  $0.8 \times 10^6$  Btu/hr - overhead dryer, a  $0.5 \times 10^6$  Btu/hr overhead dryer, and a  $0.15 \times 10^6$  Btu/hr tunnel oven. The dryers will operate at an idling level when not being used for production. The associated catalytic incinerator system will have a minimum 70% capture and transport efficiency and 95% destruction efficiency. The incinerator system will be custom designed by Etter Engineering

Mr. Robert E. Kindorf  
Page Two  
November 23, 1987

Company, Inc., and consist of two identical 2500 CFM natural gas fired ( $0.4 \times 10^6$  Btu/hr) units utilizing an Eclipse model 80-AHO burner. The duct work and collection system will be designed and installed by Dec-E-Tech Industrial Design Engineering. The source emits volatile organic compounds and organic solvents (used for clean-up). The Olympia 746 will replace the existing Kidder I. The UTM coordinates are Zone 17, 461.37 km East and 3142.05 km North.

To:

For the construction/installation of the Olympia Model 746 Central Impressions, which is a flexographic printing and coating unit with three associated natural gas dryers: a  $0.8 \times 10^6$  Btu/hr overhead dryer, a  $0.5 \times 10^6$  Btu/hr overhead dryer, and a  $0.15 \times 10^6$  Btu/hr tunnel oven. The dryers will operate at an idling level when not being used for production. The associated catalytic incinerator system will have a minimum 70% capture and transport efficiency and 95% destruction efficiency. The incinerator system was custom designed by Etter Engineering Company, Inc., and consists of three incinerators (No. 1: 2252 dscfm; No. 2: 3065 dscfm; and, No. 3.: 2658 dscfm) and are natural gas fired ( $0.8 \times 10^6$  Btu/hr, maximum;  $0.1 \times 10^6$  Btu/hr, normal) using Eclipse Model 80-AHO burners. The duct work and collection system was designed and installed by Dec-E-Tech Industrial Design Engineering. The source emits volatile organic compounds and organic solvents (used for clean-up). The Olympia Model 746 CI will replace the existing Kidder I. The UTM coordinates are Zone 17, 461.37 km East and 3142.02 km North.

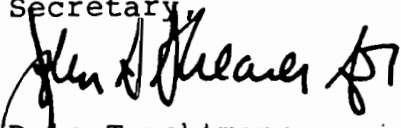
Attachments to be Incorporated:

7. Mr. Jerome Guidry's letter with attachment dated September 30, 1987, and received October 5, 1987.
8. Mr. Jerome Guidry's letter with attachment dated October 6, 1987, and received October 8, 1987.

Mr. Robert E. Kindorf  
Page Three  
November 23, 1987

This letter must be attached to your construction permit, No. AC 48-117138, and shall become a part of the permit.

Secretary

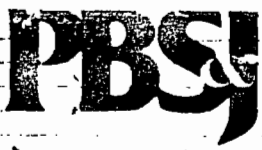
  
Dale Twachtmann  
Secretary

DT/ks

cc: T. Sawicki, Cent. FL Dist.  
J. Guidry, P.E.  
B. Pittman, Esq.

ATTACHMENT 7





POST, DUCKLEY, SCHUB & JENNISON, INC.  
800 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

BEST AVAILABLE COPY  
Full Copy

PM  
DER Mail H.P. 609-605-533  
2-Oct. 1987  
ORLANDO, FL

September 30, 1987

DER  
OCT 5 1987  
BAQM

Mr. A.T. Sawicki, P.E.  
Supervisor, Air Section  
Florida Department of Environmental Regulation  
St. Johns River District  
3319 MaGuire Blvd.  
Suite 232  
Orlando, Florida 32803

Re: Spiralkote, Inc.  
Olympia 746 Printing Press  
AC48-117138

Dear Mr. Sawicki:

We have prepared the following response to your September 2, 1987 letter to me concerning the above referenced source.

- Item #1 A sketch which relates the third incinerator to the process is attached.
- Item #2 The fuel utilization rate and geometry of the third incinerators are attached using pages from the air pollution construction permit application. Also see the stack test report dated May 19-20, 1987.

As with the other existing catalytic incinerators at Spiralkote, the primary fuel is the solvent laden air that is being controlled. Fuel is only used intermittently to maintain the catalyst bed temperature when the press shuts down for short periods of time. The maximum heat input when the burner is operating is 0.8 MMBTU/hr of natural gas. The manufacturer expects that the actual gas consumption is 0.1 MMBTU/hr during normal operation and incineration of VOC's. Therefore, when all three incinerators are operating simultaneously, the total natural gas consumption is 0.3 MMBTU/hr.

The stack geometry for this third incinerator is the same as the other two incinerators. Upon measuring their air flow during the May, 1987 stack test, we determined that the actual flow is different from that stated in the original application. The application states an air flow of 2500 ACFM while the actual measured flows are as follows: Incinerator 1 outlet 4211 ACFM and 2252 DSCFM; Incinerator 2 outlet 5463 ACFM and 3065 DSCFM; incinerator 3 outlet 5107 ACFM and 2658 DSCFM. The appropriate pages from the permit application have been amended and are enclosed.

Mr. A. T. Sawicki  
September 30, 1987  
Page 2

Item #3 The test report, dated May 19-20, 1987, was mailed to Orange County and according to September 17, 1987 telephone conversation between John Turner and Bruno Ferraro is forwarding a copy to your office for evaluation. Attached is a copy of the results for the CI press (AC48-82733). This incinerator has not met the emission limiting standard for both capture and destruction efficiency. The incinerator manufacture is presently working on correcting the problem and we will be scheduling a new test in the near future.

Attached is a letter dated July 15, 1987 from Roger Decelles (Incinerator Manufacturer) to Bob Kindorf (Spiralkote) addressing the problems with the CI incinerator. The manufacturer is now completing the final repairs to the incinerator and will be tested upon completion.

Item #4 In the original permit application we indicated that the central impressions printing deck of the Olympia 746 press was to have one incinerator while the two downstream decks would share an incinerator. (See Flow diagram from original application). During typical operation only one downstream deck is used at a time. On the rare occasion that both decks would be used the incinerator would have to control emissions from both decks. The German manufacturer decided that two separate incinerators would be necessary to make the system more efficient. We were not informed of this change until the unit was delivered and installed at Spiralkote at which time Bruno Ferraro (Grove Scientific Company) contacted you by telephone (May 14, 1987) to discuss this additional incinerator. In your discussion it was determined that there was no net increase in emissions, by adding this extra incinerator, because a portion of the VOC's were being re-routed to the third incinerator. Because no additional VOC's were being generated, you indicated that this design change should be explained when submitting the certificate of completion application (as we did). The appropriate pages of the application are being forwarded to DER Tallahassee with a copy of this letter.

Mr. A. T. Sawicki  
September 30, 1987  
Page 3

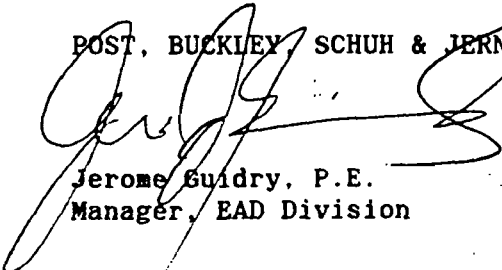
Kidder I Press (AC48-82735) has not been in operation since August, 1986 and will not be operated again at this facility. Spiralkote is currently trying to sell this press.

Item #5 The appropriate supporting information is being submitted to the central air permitting staff in Tallahassee by copy of this letter.

If you have any question regarding this matter, please call me at (305) 423-7275 or Bruno Ferraro at (305) 298-2298.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.



Jerome Guidry, P.E.  
Manager, EAD Division

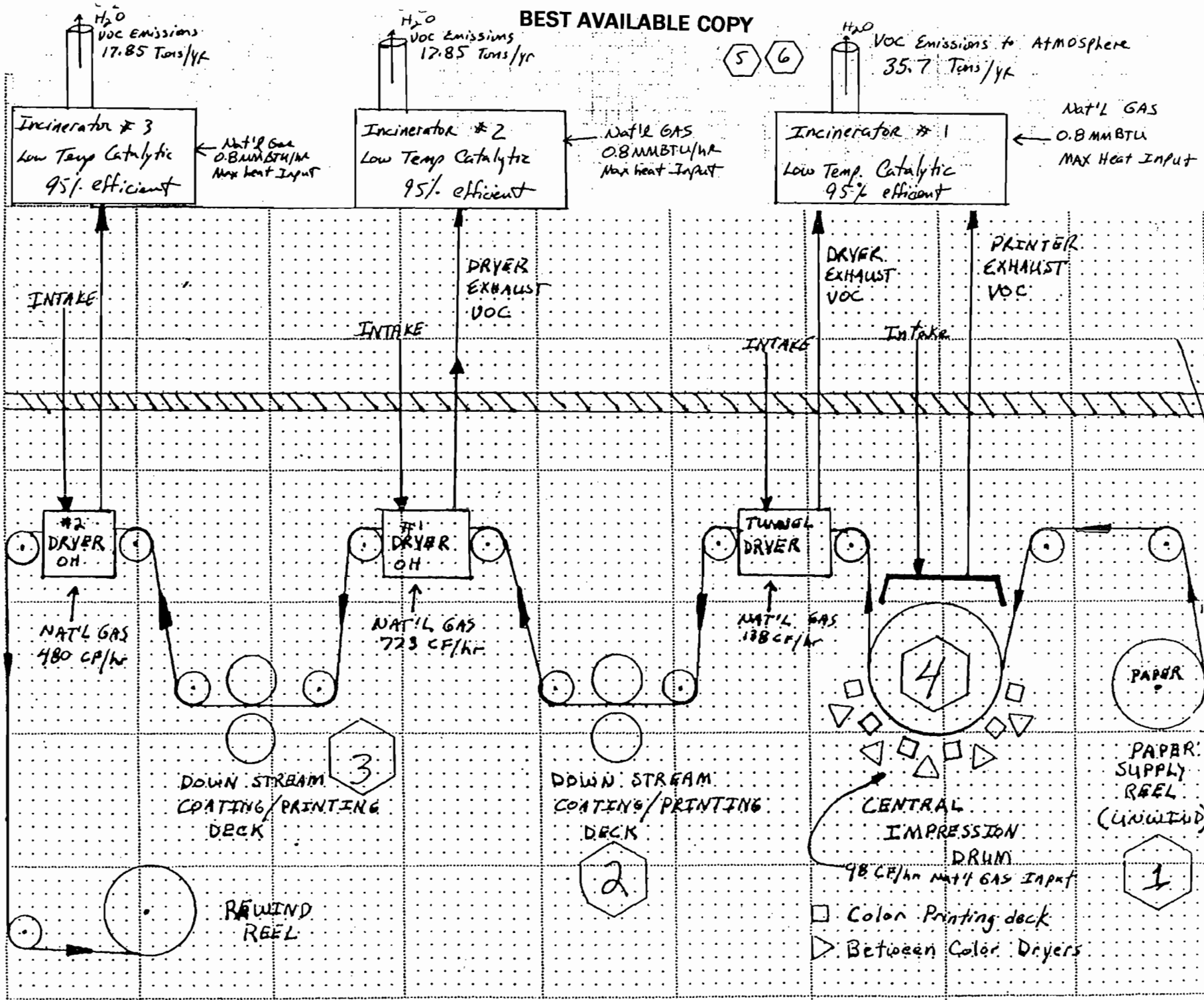
cc: ~~Clair Fancy, P.E.~~  
Bob Kindorff  
Bruno Ferraro

JJG:BAF:syp

Certified Mail No. P 609 605 532

A3:bg

BEST AVAILABLE COPY



5 6

H<sub>2</sub>O VOC Emissions to Atmosphere  
35.7 Tons/yr

Incinerator # 3  
Low Temp Catalytic  
95% efficient

Nat'l Gas  
0.8 MMBTU/hr  
Max Heat Input

INTAKE

Incinerator # 2  
Low Temp Catalytic  
95% efficient

Nat'l Gas  
0.8 MMBTU/hr  
Max Heat Input

INTAKE

DRYER  
EXHAUST  
VOC

Incinerator # 1  
Low Temp. Catalytic  
95% efficient

Nat'l Gas  
0.8 MMBTU  
MAX Heat Input

DRYER  
EXHAUST  
VOC

PRINTER  
EXHAUST  
VOC

#2  
DRYER  
OH

NAT'L GAS  
480 CF/hr

#1  
DRYER  
OH

NAT'L GAS  
728 CF/hr

TUNNEL  
DRYER

NAT'L GAS  
138 CF/hr

DOWN STREAM  
COATING/PRINTING  
DECK

DOWN STREAM  
COATING/PRINTING  
DECK

CENTRAL  
IMPRESSION  
DRUM  
98 CF/hr Nat'l Gas Input

PAPER  
SUPPLY  
REEL  
(UNWIND)

PAPER  
SUPPLY  
REEL  
(UNWIND)

REWIND  
REEL

□ Color Printing deck

▷ Between Color Dryers

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Incinerator 1	95	760	0.8
Incinerator 2	95	760	0.8
Incinerator 3	95	760	0.8

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

ITEM #2

Incinerator #1 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 1.86 ft.  
Gas Flow Rate: 4211 ACFM 2252 DSCFM Gas Exit Temperature: 480 °F.  
Water Vapor Content: 6.2 % Velocity: 25.88 FPS

Incinerator #2 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5463 ACFM 3065 DSCFM Gas Exit Temperature: 425 °F.  
Water Vapor Content: 6.2 % Velocity: 29.13 FPS

Incinerator #3 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5107 ACFM 2658 DSCFM Gas Exit Temperature: 494 °F.  
Water Vapor Content: 6.2 % Velocity: 27.2 FPS

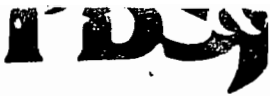
\*ALL FLOWS & STACK GEOMETRY REPRESENTS MEASURED VALUES FROM STACK TEST DATED MAY, 1987

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

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



August 5, 1987

Mr. A. T. Sawicki, P.E.  
Florida Department of Environmental Regulation  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote, Inc.  
Olympia 746 Press  
Permit No. AC48-117138

Dear Mr. Sawicki:

Enclosed are four copies of the above referenced Certificate of Completion of Construction (with attachments) and a check for \$500 for the application fee. Also attached is the compliance report as required by the specific conditions of the construction permit. If you have any questions, please call me.

Sincerely,

POST. BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.  
Manager, EAD Division

JJG:BAF:daa

cc: Robert E. Kindorf  
Bruno A. Ferraro

Certified Mail No. P 609 605 043

fp SPIRALKOTE, INC.

1200 CENTRAL FLORIDA PKWY.  
ORLANDO, FLA. 32821

Commercial National Bank

OF PEORIA  
Member Midwest Financial Group, Inc.  
PEORIA, ILLINOIS 61621

6903

70-4/711

PAY	-----Five hundred and 00/100-----	DATE	AMOUNT
TO THE ORDER OF	Florida Dept of Environmental Regulations	August 3, 1987	\$*500.00**



**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
AIR POLLUTION SOURCES  
CERTIFICATE OF COMPLETION OF CONSTRUCTION\***

PERMIT NO. AC48-117138 DATE: 7/28/87

Company Name: Spiralkote, Inc County: Orange

Source Identification(s): Olympia 746 flexographic printing & coating unit & associated catalytic incinerator system.

Actual costs of serving pollution control purpose: \$ 310,000

Operating Rates: 6240 hrs/yr Design Capacity: 26 reams/hr

Expected Normal 26 reams/hr During Compliance Test 25.1 reams/hr

Date of Compliance Test: 5/19/87 (Attach detailed test report)

Test Results:	Pollutant	Actual Discharge	Allowed Discharge
	VOC	3.37 lb VOC/hr as carbon (6.52 lb VOC/hr)	22.8 lb/hr
	Capture Effic	90.24 percent	70 percent
	Destruction Effic.	97.48 percent	95 percent

Date plant placed in operation: May 1987

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. AC48-117138 dated 8/22/86.

**A. Applicant:**

Robert E. Kindorf, Vice President  
Name of Person Signing (Type)

Robert E. Kindorf  
Signature of Owner or Authorized Representative and Title

Date: \_\_\_\_\_ Telephone: (305) 859-7780

**B. Professional Engineer:**

Jerome J. Guidry, P.E.  
Name of Person Signing (Type)

Jerome J. Guidry  
Signature of Professional Engineer

Post, Buckley, Schuh & Jernigan, Inc.  
Company Name

Florida Registration No. 32589

Date: 8-5-87

(Seal)

889 N. Orange Avenue, Orlando, FL 32801

Mailing Address

(305) 423-7275

Telephone Number

(407) 277 4443

\*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.

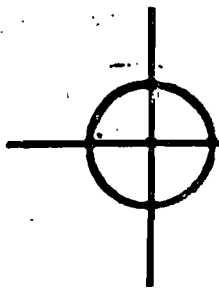
\*\*As built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.



STACK TEST RESULTS FOR CI PRESS

AC48-82733

Will be retested in October, 1987



# Dec-E-Tech

Industrial design engineering & manufacturing

P.O. Box 72 • Tyngsborough, MA • 01879 • Tel.# 617/649-3285  
July 15, 1987

JUL 22 1987

Mr. Bob Kindorf  
Spiralkote, Inc.  
Subsidiary of Fleming-Potter Co.  
1200 Central Florida Parkway  
Orlando, FL 32821

Dear Bob:

As per our meeting and conversation with Herb Etter the following is a summary of our conversation and agreements made to rectify the problem with the Kidder 6 Color Recirculation/Incineration system installed by Dec-E-Tech Inc.

As we discussed, Dec-E-Tech contracted to install an incineration system utilizing an Etter incinerator which uses Carulite 200 magnesium dioxide pellets. Etter has guaranteed an overall destruction of greater than 95% on their incinerator. All testing of this unit, to this point, however, has been in the area of 89% destruction efficiency.

Most recently the Carus' laboratory analysis of the second pellet charge indicated hydrocarbon soaking at low temperatures which led to the destruction of these pellets. Although one can only speculate as to the cause and time of pellet destruction, we can make the system less prone to this event by improving the 3 way valve and changing operational procedures whereby the incinerator will see less cycling.

In order to rectify and prove the incinerator to be viable, we agree to the following:

1. Dec-E-Tech will re-design, remove and install the 3 way valve prior to the incinerator.
2. All parties will witness and approve the effectiveness of the new 3 way prior to re-charging the incinerator.
3. Etter will ensure that the incinerator components have been installed properly and are operational.
4. Recharging of the incinerator will be supervised by Etter Engineering.
5. The unit will be run with the press and the incinerator will be tested with Etter's portable FID at time 0 and 10 hours later.

July 15, 1987

Page 2 of 2 Pages

6. If the FID indicates a destruction efficiency of less than 95%, Etter will immediately repair the unit and retest the system as noted in #5.

This I believe will satisfy all parties, whereby all the parameters can be controlled and properly analyzed if problems occur.

If we are all in agreement that these are the facts, we will proceed accordingly. If not, please notify all parties in writing.

I will notify everyone when the 3 way will be installed.

Sincerely,



Roger Decelles

RD/cac

cc: H. Etter  
J. R. Wilson

Table 1 Volatile Organic Compounds  
 CI Press Summary  
 Spiralkote, Inc.  
 May 18, 1987

Run No.	Inlet PPM C		Inlet Flow SCFMD	Run Time (Minutes)	Inlet lb C		Usage Lb C	Capture Efficiency		Outlet PPM C		Outlet Flow SCFMD	Outlet Lb C		Destruction Efficiency	
	RTL	CAE			RTL	CAE		RTL	CAE	RTL	CAE		RTL	CAE	RTL	CAE
1	2617	1822	----	103	17.14	11.93	29.85	57.42	40.00	213	371	----	1.68	2.87	90.20	75.94
2	2598	2720	----	103	17.02	17.82	33.32	51.07	53.48	249	258	----	1.96	2.00	88.46	88.78
3	1657	1588	----	87	9.17	8.77	12.98	70.62	87.56	162	182	----	1.08	1.21	88.23	88.20
AVG	----	----	2042	---	14.44	12.84	25.38	56.89	50.59	---	---	2460	1.57	2.03	89.13	84.19

## Factors for Calculating Ink/Varnish Solvent Content

Inmost White Ink = 44.6% VOC as supplied

20 lbs virgin Ink diluted with 2.25 lbs 90/10 Solvent

$$\frac{2.25 \text{ lbs of } 90/10 \text{ Solvent}}{20 \text{ lbs Ink}} \times 100 = 11.25\% \text{ cut}$$

- ∴ 0.1125 is the multiplier for ink/solvent mixture to determine quantity of virgin ink returned

Inmost Extender Varnish = 54.9% as supplied

20 lbs virgin Extender cut with 4.5 lbs 90/10 Solvent

$$\frac{4.5 \text{ lbs}}{20 \text{ lbs VARNISH}} \times 100 = 22.5\% \text{ Cut}$$

- ∴ 0.225 is the multiplier for varnish/solvent mixture to determine quantity of virgin varnish returned

Run 1 - CI Press

5-19-57

INK

Start with 80 # virgin Ink

Returned 25 # Ink/solvent mixture

To determine amount of virgin ink in Ink/solvent Mixture

$$25 - (25 \times 0.1125) = 22.1875 \text{ lbs virgin Ink in Mixture}$$

2.8125 lbs of 90/10 solvent in mixture

80 # virgin ink

- 22.1875 # virgin ink returned from Mixture

57.8125 # virgin ink used during run 1.

$$57.8125 \times 0.243 = \underline{\underline{14.048}} \text{ lbs Carbon used from Ink}$$

Run 1 - CI Press

5-19-37

VARNISH

Start with 42 # virgin Extender Varnish

Return 16 # Varnish/solvent mixture

To Determine amount of virgin varnish in mixture

$$16 - (16 \times 0.225) = 12.4 \# \text{ virgin varnish in mixture}$$

3.6 lbs of 90/10 solvent in mixture

42 # virgin varnish

- 12.4 # virgin varnish returned from mixture

29.6 # virgin varnish used during Run 1.

$$29.6 \# \times 0.313 = \underline{\underline{9.2648}} \text{ lbs Carbon From Varnish}$$

Run 1 - CI Press

5-19-87

SOLVENT

90% ETOH / 10% NPA Blend

Start with 71.5 # Solvent Blend

Returned - 47.5 #

24 #

also returned - 6.4125 # from Ink and Varnish solvent mixtures

17.5875 # of solvent used

$$(17.5875 \div 6.681 \text{ #/gal}) \times 2.4825 \text{ #C/gal} = \underline{\underline{6.535 \text{ #C used}}}$$



Run 1 Summary  
CI Press

5-19-37

	<u>Ink</u>	<u>Varnish</u>	<u>Solvent</u>
Total # USED	57.8125	29.6	17.5875
Total Carbon	14.048	9.2648	6.535

$$\begin{aligned} \text{Total Available Carbon} &= 14.048^* + 9.2648^* + 6.535^* \\ &= \underline{\underline{29.8478}} \# C \end{aligned}$$

Run Time = 1:42:55

Total Production = 43,500 ft or 12.98 Reams/hr

Run 2 - CI Press

5-19-87

INK

Started with 76.5 # virgin ink  
Returned 26.75 # Ink/solvent mixture

$$26.75 - (26.75 \times 0.1125) = 23.74 \# \text{ virgin ink in Mixture}$$

3.009 # of 90% Solvent in Mixture

$$\begin{array}{r} 76.5 \# \text{ virgin ink} \\ - \underline{23.74 \# \text{ virgin ink returned in Mixture}} \\ 52.76 \# \text{ virgin ink used during Run 2} \end{array}$$

$$52.76 \# \times 0.243 = \underline{\underline{12.82 \# \text{ Carbon used from Ink}}}$$

Run 2 - CI Press

5-19-87

VARNISH

Started with = 48.25 # virgin extender Varnish  
Returned 14.75 # Varnish/solvent mixture

$$14.75 - (14.75 \times 0.225) = 11.431 \text{ # virgin varnish in Mixture}$$

3.319 lbs of 90/10 solvent Blend in mixture

$$\begin{array}{r} 48.25 \text{ # virgin varnish} \\ - 11.431 \text{ # virgin varnish returned in mixture} \\ \hline 36.819 \text{ # virgin varnish used during Run 2} \end{array}$$

$$36.819 \text{ #} \times 0.313 = \underline{\underline{11.524}} \text{ lbs Carbon from Varnish}$$

Run 2 - CI Press

5-19-37

Solvent - 90/10 Blend

Start with 71.5 #

returned - 41 #

returned - 3.009 # From Ink/solvent mixture

returned - 3.319 # From Varnish/solvent mixture

24.172 # of Solvent used during Run 2

$$(24.172 \# \div 6.681 \#/\text{gal}) \times 2.4825 \#/\text{c}/\text{gal} = \underline{\underline{8.98 \# \text{ used}}}$$

Run 2 - Summary CI Press 5-19-87

	<u>INK</u>	<u>Varnish</u>	<u>Solvent</u>
Total * USED	52.76	36.819	24.172
Total Carbon	12.82	11.524	8.98

$$\begin{aligned} \text{Total Available Carbon} &= 12.82 + 11.524 + 8.98 \\ &= \underline{\underline{33.324}} \text{ \# C used Run 2} \end{aligned}$$

$$\text{Run Time} = 1:43:13$$

$$\text{Total Production} = 43,270 \text{ ft or } 12.91 \text{ beams/hr}$$

Run 3 - CI Press

5-17-87

Ink

Started with 70# virgin ink

returned 25# ink solvent mixture

$$29 - (29 \times 2.1125) = 25.7375 \# \text{ virgin ink in mixture}$$

$$3.2625 \# \text{ solvent 90/10 in mixture}$$

70# virgin ink

$$- \underline{25.7375} \# \text{ virgin ink returned in mixture}$$

$$44.2625 \# \text{ virgin ink used during Run 3}$$

$$44.2625 \# \times 0.243 = 10.756 \# \text{ Carbon used from Ink}$$

Run 3- CI Press

5-19-37

Varnish

Varnish Deck Malfunctioned during this Run  
no varnish applied to web.

Run 3 - CI Press      5-19-87  
Solvent

started with      35% 90% blend  
 returned      - 25.75% 90% blend  
 returned      - 3.2625% from ink/solvent mixture  
                   5.9375% of solvent used during Run 3

$$(5.9375\% \div 6.081\% \text{ per } \mu\text{m}) \times 2.4875 \text{ } \mu\text{m} = 2.22\% \text{ used}$$



Run 3 - CI Press  
Summary

5-19-87

	<u>INK</u>	<u>VARNISH</u>	<u>SOLVENT</u>
Total * USED	44.2625	NONE	5.9875
Total Carbon *	10.756	NONE	2.22

Total Available Carbon =  $10.756^* + 2.22^*$   
=  $12.976^* C$  used run 3

Run Time = 1:27:05

Production = 35,515 or 12.54 Reams/hr

EPA METHOD 5  
SOURCE TEST CALCULATIONS

Plant SPARKOTE Stack CI out Date 5-19-87 Run No. \_\_\_\_\_  
 Bar. Press, PB 29.98 Stack Press, PS 29.98 Stack Dimensions 26.75 x 30.75  
 CP, 84 Stack Area 5.71 ft<sup>2</sup>, Eff. Stack Area \_\_\_\_\_ ft<sup>2</sup>, Avg. Stack Temp. TS 896 R  
 Avg. Meter Temp. Tm., \_\_\_\_\_ °R. Avg.  $\sqrt{\Delta P}$ , 172 "H<sub>2</sub>O, Avg. Meter Orifice H" \_\_\_\_\_ H<sub>2</sub>O  
 Meter Vol, VM \_\_\_\_\_ ft<sup>3</sup>, Moisture Plus Silica Gel, Vic \_\_\_\_\_ ml, SAMPLE TIME \_\_\_\_\_ min  
 NOZZLE DIA. \_\_\_\_\_ in. NOZZLE AREA \_\_\_\_\_ ft<sup>2</sup> An: 1/8 - 0.000767 ft<sup>2</sup>;  
 3/16 - 0.0001916 ft<sup>2</sup>; 1/4 - 0.000341 ft<sup>2</sup>; 3/8 - 0.000767 ft<sup>2</sup>; 1/2 - 0.0013 ft<sup>2</sup>  
 ORSAT: CO<sub>2</sub> 0 %, O<sub>2</sub> 21 %, CO \_\_\_\_\_ %, N<sub>2</sub> 79 %

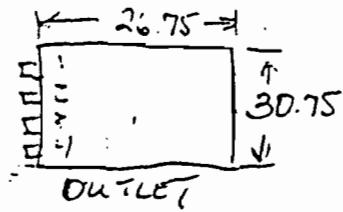
VWstd = (.04714) x (Vic) \_\_\_\_\_ SCF  
 \*VM (Leak Rate Correction) = VM - (CFM - 0.02 CFM) x Time \_\_\_\_\_ ft<sup>3</sup>  
 VMstd = [(17.647)(VM)(Y)] x [PB + (H ÷ 13.6)] ÷ TM \_\_\_\_\_ SCF  
 Bwo = Moisture Fraction = (VWstd) ÷ (VMstd + VWstd) 0.04  
 FDA = Fraction of dry air = (1.0) - (Bwo) 0.96  
 MD = 0.44 ( % CO<sub>2</sub>) + 0.32 ( % O<sub>2</sub>) + 0.28 ( % N<sub>2</sub> + % CO) = 28.84  
 MS = [(MD) x (FDA)] + [(18) x (Bwo)] 28.41  

$$\%EA = \frac{(\% O_2) - [0.5 - (\% CO)]}{[0.264(\% N_2)] - [(\% O_2) + 0.5(\% CO)]} \times 100$$
  
 (Vs)avg = Avg. Velocity = (85.48) x (CP) x  $\sqrt{\Delta P}$  x  $\sqrt{\frac{TS}{MS \times PS}}$  12.67 FPS  
 QS = gas flow rate - (Vs)avg x (AS) x (60) 4340 ACFM  
 (QS)std = (QS) x (FDA) x  $\frac{(528)}{TS}$  x  $\frac{(PS)}{29.92}$  2460 SCFMD  

$$I = TS \frac{[(0.00267 \times Vic) + (VMstd \div 17.647)]}{(TIME \times PS \times AN \times Vs \times 60)} \times 100$$
 \_\_\_\_\_ %  
 C's = Grains/DSCF = (0.0154) x (mg) ÷ (VMstd) \_\_\_\_\_ GR/DSCF  
 Grains/ACF = (C's) x (17.647) x (PS) x (FDA) ÷ (TS) \_\_\_\_\_ GR/ACF  
 C = lb/DSCF = (C's) ÷ 7000 \_\_\_\_\_ lb/DSCF  
 E<sub>12</sub> = (C's) x (12) ÷ ( % CO<sub>2</sub>) \_\_\_\_\_ GR/DSCF @ 12% CO<sub>2</sub>  
 E<sub>50</sub> = (C's) x (100 + %EA) ÷ (150) \_\_\_\_\_ GR/DSCF @ 50% EA  
 EM = Particulate emission rate = (C's) x (QS)std x (0.00857) \_\_\_\_\_ lbs/hr  
 E = (lb/MM Btu) = CF [(20.9) ÷ (20.9 - %O<sub>2</sub>)] \_\_\_\_\_ lb/MM Btu  
 F Factors: Anthracite Coal = 10140  
 Bituminous Coal = 9820  
 Liquid Fossil Fuels = 9220  
 Caseous Fossil Fuels = 8740

PRELIMINARY VELOCITY TRAVERSE

PLANT UNIT 12 EST  
 DATE 5/19/87  
 LOCATION STEAMER OUTLET  
 STACK I.D. (5.71 FT<sup>2</sup>)  
 BAROMETRIC PRESSURE, in. Hg 29.95  
 STACK GAUGE PRESSURE, in. H<sub>2</sub>O -0.09  
 OPERATORS HODGE GABEL NECK



SCHEMATIC OF TRAVERSE POINT LAYOUT

40% H<sub>2</sub>O 1220 TIME

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>v</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.03	344
2	.03	334
3	.04	342
4	.045	353
5	.045	360
6	.045	370
2-1	.035	356
2	.02	363
3	.01	372
4	.02	383
5	.04	395
6	.06	399
3-1	.04	393
2	.02	387
3	.01	388
4	.015	387
5	.03	407
6	.05	412
2-1	.035	398
2	.035	402
3	.03	413
4	.025	419
5	.025	422
6	.05	414
AVERAGE	.177	384

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>v</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.03	436
2	.045	488
3	.045	490
4	.05	490
5	.055	493
6	.055	491
2-1	.04	490
2	.03	490
3	.02	493
4	.02	493
5	.04	492
6	.06	493
3-1	.025	486
2	.015	486
3	.005	485
4	.01	488
5	.02	489
6	.03	489
4-1	.03	479
2	.025	480
3	.015	482
4	.02	484
5	.015	484
6	.02	485
AVERAGE	.167	488

overall avg T<sub>s</sub> = 436°F

4291 100%



air  
Consulting  
and  
Engineering

2601 N.W. 67th PLACE, SUITE 4  
GAINESVILLE, FLORIDA 32606

STACK SAMPLING FIELD DATA SHEET

TEST ID \_\_\_\_\_

PAGE \_\_\_\_\_ OF \_\_\_\_\_

PLANT SPIRALKOTE SOURCE CI OUTLET  
 PLANT LOCATION ORLANDO  
 TYPE OF SAMPLING TRAIN EPA 2  
 TYPE OF SAMPLES H<sub>2</sub>O  
 DATE 5-19-87 RUN NO. 2  
 TIME START 1453 TIME END 1553  
 SAMPLE TIME 10 min/pl 60 Total min  
 BAR PRESS. 29.98 "Hg STACK PRESS. \_\_\_\_\_ "Hg  
 ASSUMED MOISTURE 4 % FDA .96  
 WEATHER CLOUDY TEMP. \_\_\_\_\_ °F  
 METER BOX NO. 1 ΔH 2.00 Y 1.000  
 NOMOGRAPH C<sub>1</sub> \_\_\_\_\_ PITOT CORR. FACTOR 0.84  
 NOZZLE CALIBRATION \_\_\_\_\_  
 STACK DIMENSIONS \_\_\_\_\_  
 STACK AREA \_\_\_\_\_ (EFFECTIVE \_\_\_\_\_ ft<sup>2</sup>)  
 STACK HEIGHT \_\_\_\_\_ ft.  
 STACK DIAMETER: UPSTREAM \_\_\_\_\_ DOWNSTREAM \_\_\_\_\_  
 PORT SIZE \_\_\_\_\_ in. NIPPLE LENGTH \_\_\_\_\_  
 U CORD LENGTH: \_\_\_\_\_  
 REMARKS: \_\_\_\_\_

$.0472 \times 11 = \cancel{SCF} H_2O$   
 $= 1.77$   
 $\frac{528}{T_{m}} = SCF \frac{5.0}{5.0}$   
 $= 41.24$   
 $SCF H_2O$   
 $SCF_{SV} + SCF_{H_2O}$   
 $1.70 SCF H_2O$   
 $.96 \times = 41.263 \text{ ft}^3 \text{ std}$   
 $4.1 \times \frac{0.96}{1.0} \text{ moisture}$

MAT'L PROCESSING RATE \_\_\_\_\_  
 GAS METER READINGS: FINAL 529.405 II. 3  
 INITIAL 486.601 II. 3  
 NET 42.804 II. 3  
 IMPINGERS VOL. GAIN 26 ml.  
 SILICA GEL NO. 44 WT. GAIN 11.6  
 FILTER NO. \_\_\_\_\_ TOTAL CONDENSATE 37.6 ml

ORSAT

	1	2	3	4	AVG
% CO <sub>2</sub>					
% O <sub>2</sub>					
% CO					
% N <sub>2</sub>					

F<sub>0</sub> \_\_\_\_\_ F<sub>0</sub> RANGE \_\_\_\_\_

LEAK CHECKS: METER BOX/PUMP \_\_\_\_\_  
 ORSAT BAG \_\_\_\_\_ GAS SAMPLE SYSTEM \_\_\_\_\_  
 ORSAT ANALYZER \_\_\_\_\_  
 PRE-TEST 0.00 CFM 15 "Hg POST-TEST \_\_\_\_\_ CFM \_\_\_\_\_ "Hg  
 BOX OPERATOR Label PROBE HOLDER \_\_\_\_\_  
 PYROMETER NO. \_\_\_\_\_ PITOT TUBE NO. \_\_\_\_\_  
 PITOT TUBE LEAK CHECK: PRETEST \_\_\_\_\_  
 POST-TEST(+) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC  
 POST-TEST(-) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN.)	CLOCK TIME	GAS METER READING (FT <sup>3</sup> )	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF. ("H <sub>2</sub> O)		STACK GAS TEMP. (°F)	SAMPLE BOX TEMP. (°F)	LAST IMPINGER TEMP. (°F)	DRY GAS METER TEMP. (°F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1						2.0	415		82	89	2.5
			493.6			2.0	418		63	88	2.5
			501.0			2.0	425		62	88	3
			508.2			2.0	434		61	87	3
			515.3			2.0	430		62	87	3
			500.2			1.0	416		62	87	3

EPA METHOD 5

SOURCE TEST CALCULATIONS

Plant SPIRALKOTE Stack CI INLET Date 5-19-87 Run No. \_\_\_\_\_  
 Bar. Press, PB 29.98 Stack Press, PS 29.87 Stack Dimensions 16" x 16"  
 CP .84 Stack Area 1.78 ft<sup>2</sup>, Eff. Stack Area \_\_\_\_\_ ft<sup>2</sup>, Avg. Stack Temp. TS 592°R  
 Avg. Meter Temp. Tm., \_\_\_\_\_ °R. Avg.  $\sqrt{\Delta P}$ , .372 "H<sub>2</sub>O, Avg. Meter Orifice H" \_\_\_\_\_ H<sub>2</sub>O  
 Meter Vol, VM \_\_\_\_\_ ft<sup>3</sup>, Moisture Plus Silica Gel, Vic \_\_\_\_\_ ml, SAMPLE TIME \_\_\_\_\_ min  
 NOZZLE DIA. \_\_\_\_\_ in. NOZZLE AREA \_\_\_\_\_ ft<sup>2</sup> An: 1/8 - 0.000767 ft<sup>2</sup>;  
 3/16 - 0.0001916 ft<sup>2</sup>; 1/4 - 0.000341 ft<sup>2</sup>; 3/8 - 0.000767 ft<sup>2</sup>; 1/2 - 0.0013 ft<sup>2</sup>  
 ORSAT: CO<sub>2</sub> \_\_\_\_\_ %, O<sub>2</sub> \_\_\_\_\_ %, CO \_\_\_\_\_ %, N<sub>2</sub> \_\_\_\_\_ %

VWstd = (.04714) x (Vic) \_\_\_\_\_ SCF  
 \*VM (Leak Rate Correction) = VM - (CFM - 0.02 CFM) x Time \_\_\_\_\_ ft<sup>3</sup>  
 VMstd = [(17.647)(VM)(Y)] x [PB + (H ÷ 13.6)] ÷ TM \_\_\_\_\_ SCF  
 Bwo = Moisture Fraction = (VWstd) ÷ (VMstd + VWstd) 0.037  
 FDA = Fraction of dry air = (1.0) - (Bwo) 0.963  
 MD = 0.44 ( % CO<sub>2</sub>) + 0.32 ( % O<sub>2</sub>) + 0.28 ( % N<sub>2</sub> + % CO) = 28.84  
 MS = [(MD) x (FDA)] + [(18) x (Bwo)] 28.44  

$$ZEA = \frac{(\% O_2) - [0.5 - (\% CO)]}{[0.264(\% N_2)] - [(\% O_2) + 0.5(\% CO)]} \times 100$$
  
 (Vs)avg = Avg. Velocity = (85.48) x (CP) x  $\sqrt{\Delta P}$  x  $\sqrt{\frac{TS}{MS \times PS}}$  22.3 FPS  
 QS = gas flow rate = (Vs)avg x (AS) x (60) 2381 ACFM  
 (QS)std = (QS) x (FDA) x  $\frac{(528)}{TS}$  x  $\frac{(PS)}{29.92}$  2042 SCFMD  

$$I = TS \frac{[(0.00267 \times Vic) + (VMstd \div 17.647)]}{(TIME \times PS \times AN \times Vs \times 60)} \times 100$$
 \_\_\_\_\_ %  
 C's = Grains/DSCF = (0.0154) x (mg) ÷ (VMstd) \_\_\_\_\_ GR/DSCF  
 Grains/ACF = (C's) x (17.647) x (PS) x (FDA) ÷ (TS) \_\_\_\_\_ GR/ACF  
 C = lb/DSCF = (C's) ÷ 7000 \_\_\_\_\_ lb/DSCF  
 E<sub>12</sub> = (C's) x (12) ÷ (% CO<sub>2</sub>) \_\_\_\_\_ GR/DSCF @ 12% CO<sub>2</sub>  
 E<sub>50</sub> = (C's) x (100 + ZEA) ÷ (150) \_\_\_\_\_ GR/DSCF @ 50% EA  
 EM = Particulate emission rate = (C's) x (QS)std x (0.00857) \_\_\_\_\_ lbs/hr  
 E = (lb/MM Btu) = CF [(20.9) ÷ (20.9 - %O<sub>2</sub>)] \_\_\_\_\_ lb/MM Btu  
 F Factors: Anthracite Coal = 10140  
 Bituminous Coal = 9820  
 Liquid Fossil Fuels = 9220  
 Gaseous Fossil Fuels = 8740

PRELIMINARY VELOCITY TRAVERSE

PLANT SPITAL KOTE  
 DATE 5/19/57  
 LOCATION CE PRESS. INLET  
 STACK I.D. 16" x 16" (1.78 FT<sup>2</sup>)  
 BAROMETRIC PRESSURE, in. Hg 29.98  
 STACK GAUGE PRESSURE, in. H<sub>2</sub>O -1.5  
 OPERATORS \_\_\_\_\_



3.7% H<sub>2</sub>O

SCHEMATIC OF TRAVERSE POINT LAYOUT

Av. = .371

Av = 139.8 ± 138°F

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>s</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.11	140
2	.12	140
3	.14	139
4	.15	138
5	.17	138
6	.15	139
2-1	.11	135
2	.12	136
3	.13	138
4	.13	138
5	.16	139
6	.15	138
3-1	.12	136
2	.13	137
3	.12	138
4	.14	138
5	.15	139
6	.16	138
4-1	.12	135
2	.13	137
3	.15	138
4	.16	139
5	.16	138
6	.14	138
AVERAGE	.371	

2358 ACPM

2002 SCMPD

Av = .373

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>s</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.14	123
2	.15	120
3	.14	125
4	.15	128
5	.14	128
6	.16	128
2-1	.115	126
2	.115	126
3	.12	127
4	.13	127
5	.15	127
6	.17	127
3-1	.10	126
2	.12	127
3	.13	127
4	.15	128
5	.17	129
6	.15	129
4-1	.09	129
2	.12	130
3	.14	130
4	.17	129
5	.17	129
6	.165	129
AVERAGE	.373	127.3

≈ 127

$T_c = 132^\circ F + 460 = 592^\circ R$

STACK SAMPLING FIELD DATA SHEET



BEST AVAILABLE COPY

200 8701 A

TEST ID \_\_\_\_\_

PAGE 1 OF 1

2601 N.W. 67th PLACE, SUITE 4  
GAINESVILLE, FLORIDA 32608

PLANT SP. RALKOTE SOURCE CI. OUTLET  
 PLANT LOCATION ORLANDO  
 TYPE OF SAMPLING TRAIN EPA 2  
 TYPE OF SAMPLES H<sub>2</sub>O  
 DATE 5-19-87 RUN NO. 1  
 TIME START 1255 TIME END 1330  
 SAMPLE TIME \_\_\_\_\_ min/pl 35 Total min  
 BAR PRESS. 29.98 "Hg STACK PRESS. \_\_\_\_\_ "Hg  
 ASSUMED MOISTURE 4 % FDA 96  
 WEATHER \_\_\_\_\_ TEMP. \_\_\_\_\_ °F  
 METER BOX NO. 1 ΔH 2.00 γ 1.000  
 NOMOGRAPH C<sub>f</sub> \_\_\_\_\_ PITOT CORR. FACTOR 0.84  
 NOZZLE CALIBRATION \_\_\_\_\_ = n/a  
 STACK DIMENSIONS \_\_\_\_\_  
 STACK AREA \_\_\_\_\_ (EFFECTIVE \_\_\_\_\_ ft<sup>2</sup>)  
 STACK HEIGHT \_\_\_\_\_ ft.  
 STACK DIAMETER: UPSTREAM \_\_\_\_\_ DOWNSTREAM \_\_\_\_\_  
 PORT SIZE \_\_\_\_\_ in. NIPPLE LENGTH \_\_\_\_\_  
 U CORD LENGTH: 50  
 REMARKS: \_\_\_\_\_

SCF = 27.46  
 V<sub>wv</sub> = 1.14  
 % H<sub>2</sub>O = 4.0

MAT'L PROCESSING RATE \_\_\_\_\_  
 GAS METER READINGS: FINAL 489.958 ft<sup>3</sup>  
 INITIAL 461.400 ft<sup>3</sup>  
 NET 28.556 ft<sup>3</sup>  
 IMPINGERS VOL. GAIN 17 ml  
 SILICA GEL NO. 23 WT. GAIN 7.1  
 FILTER NO. \_\_\_\_\_ TOTAL CONDENSATE 24.1 ml

ORSAT

	1	2	3	4	AVG
% CO <sub>2</sub>					
% O <sub>2</sub>					
% CO					
% N <sub>2</sub>					

F<sub>0</sub> \_\_\_\_\_ F<sub>0</sub> RANGE \_\_\_\_\_

LEAK CHECKS: METER BOX/PUMP OK  
 ORSAT BAG \_\_\_\_\_ GAS SAMPLE SYSTEM OK  
 ORSAT ANALYZER \_\_\_\_\_  
 PRE-TEST 0.02 CFM 15 "Hg POST-TEST 0.02 CFM 6 "Hg  
 BOX OPERATOR GABEL PROBE HOLDER \_\_\_\_\_  
 PYROMETER NO. 1 PITOT TUBE NO. \_\_\_\_\_  
 PITOT TUBE LEAK CHECK: PRETEST OK  
 POST-TEST(+) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC  
 POST-TEST(-) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN.)	CLOCK TIME	GAS METER READING (FT <sup>3</sup> )	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF. ("H <sub>2</sub> O)		STACK GAS TEMP (°F)	SAMPLE BOX TEMP (°F)	LAST IMPINGER TEMP (°F)	DRY GAS METER TEMP (°F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1						2.0	412		72	87	2.5
			465.0			2.0	410		66	88	2.5
			468.5			2.0	408		65	89	2.5
			472.0			2.0	411		65	89	2.5
			475.5			2.0	412		65	90	2.5
			479.0			2.0	413		65	90	2.5

ATTACHMENT 8





POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

PM  
Oct. 6, 1987  
Orlando, FL  
CF: P-609-605-540

Full copy

2774443  
6635 E. Colonial Dr  
32807

DER

OCT 8 1987

BAQM

October 6, 1987

Mr. Clair Fancy, P.E.  
Deputy Chief BAQM  
Florida Department of Environmental Regulation  
Twin Towers Office Bldg.  
2600 Blairstone Road  
Tallahassee, Florida 32399-2400

Re: Spiralkote, Inc.  
Olympia 746 Flexographic Printing Press  
AC48-117138

Dear Mr. Fancy:

Enclosed are two (2) copies of a request for a modification for the above referenced source. This modification has been discussed briefly by Bruce Mitchell and Bruno Ferraro (Grove Scientific). If you have any questions concerning this source, please call Mr. Ferraro at (305) 298-2282 or me at (305) 423-7275. Two additional copies have been submitted to Tom Sawicki in Orlando.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.  
Manager, EAD Division

cc: Bob Kindorf  
Bruno Ferraro  
A.T. Sawicki, P.E.

JJG:BAF/syp

Certified Mail No. P 609 605 531

A3:bg

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER  
DISTRICT

3319 MAGUIRE BOULEVARD  
SUITE 232  
ORLANDO, FLORIDA 32803



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY  
ALEX SENKEVICH  
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Printing facility [ ] New<sup>1</sup> [X] Existing<sup>1</sup>  
APPLICATION TYPE: [ ] Construction [X] Operation [X] Modification  
COMPANY NAME: Spiralkote, Inc. COUNTY: Orange  
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) Olympia 746 Flexographic Printing press  
SOURCE LOCATION: Street 1200 Central Florida Parkway City Orlando, 32809  
UTM: East 461370 North 3142050  
Latitude 28 ° 24 ' 21 "N Longitude 81 ° 23 ' 40 "W  
APPLICANT NAME AND TITLE: Robert E. Kindorf, Vice President of Production  
APPLICANT ADDRESS: 1200 Central Florida Parkway, Orlando, Fl 32809

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Spiralkote, Inc

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

\*Attach letter of authorization

Signed: Robert E. Kindorf

Robert E. Kindorf, Vice President  
Name and Title (Please Type)

Date: 10-2-87 Telephone No. (305) 859-7780

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

<sup>1</sup> 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 Jerome J. Guidry

Jerome J. Guidry, P.E.

Name (Please Type)

Post, Buckley, Schuh & Jernigan, Inc.

Company Name (Please Type)

889 North Orange Avenue, Orlando, FL 32801

Mailing Address (Please Type)

Florida Registration No. 32589 Date: 10-6-87 Telephone No. (305) 423-7275

**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.

To modify the Olympia 746 Flexographic printing press by adding a third catalytic incinerator to control VOC emissions. No increase or decrease in VOC emissions will result and the project will result in full compliance with 17-2 FAC.

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

Start of Construction existing Completion of Construction existing

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.)

Catalytic Incinerator 1	\$155,000
Catalytic Incinerator 2	\$155,000
Catalytic Incinerator 3	\$155,000

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

AC48-117138

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 5 ; 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?  | <u>No</u>  |
| a. If yes, has "offset" been applied?   | <u>No</u>  |
| b. If yes, has "Lowest Achievable Emission Rate" been applied?  | <u>Yes</u> |
| c. If yes, list non-attainment pollutants. _____  | <u>N/A</u> |
| 2. Does best available control technology (BACT) apply to this source?<br>If yes, see Section VI.                                       | <u>No</u>  |
| 3. Does the State "Prevention of Significant Deterioration" (PSD)<br>requirement apply to this source? If yes, see Sections VI and VII. | <u>No</u>  |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS)<br>apply to this source?   | <u>No</u>  |
| 5. Do "National Emission Standards for Hazardous Air Pollutants"<br>(NESHAP) apply to this source?                                      | <u>No</u>  |
| H. Do "Reasonably Available Control Technology" (RACT) requirements apply<br>to this source?  | <u>No</u>  |
| a. If yes, for what pollutants? _____   | <u>N/A</u> |
| b. If yes, in addition to the information required in this form,<br>any information requested in Rule 17-2.650 must be submitted.       |            |

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation 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	N/A	519	①
Coating KJ 902	VOC	86	24.9	②
Coating NB 1061	VOC	66	17.7	③
Ink	VOC	74	46.2	④

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

- Total Process Input Rate (lbs/hr): 607.8
- Product Weight (lbs/hr): 540.5

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

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable Emission <sup>3</sup> lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
VOC	22.5	70.3	17-2.640	22.5	67.3	209.9	⑤ & ⑥
			LAER				
			70% Capture				
			95% Destruction				

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>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)

<sup>3</sup>Calculated from operating rate and applicable standard.

<sup>4</sup>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 Particle Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Three Catalytic Incineration systems custom built by Etter Engineering Co.	VOC	95%	N/A	Stack Test results attached.

E. Fuels Natural gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Between Color dryer	98 CF/hr	98 CF/hr	0.1035
Tunnel oven	138 CF/hr	138 CF/hr	0.145
#1 overhead dryer	773 CF/hr	773 CF/hr	0.814
#2 overhead dryer	480 CF/hr	480 CF/hr	0.506

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

Fuel Analysis:

Percent Sulfur: N/A Percent Ash: N/A

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

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

Annual Average N/A Maximum \_\_\_\_\_

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

Some solvents are reclaimed by distillation. Waste solvents, coating and inks are shipped to Oldover Corporation, Green Cove Springs, to be burned in their boilers. This procedure is currently being used by this generator.

SEE ATTACHMENT

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

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

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste \_\_\_\_\_  
 Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_  
 Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_  
 Manufacturer \_\_\_\_\_  
 Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

	Volume (ft) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_  
 Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

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

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

E. Fuels Natural Gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Incinerator 1	95	760	0.8
Incinerator 2	95	760	0.8
Incinerator 3	95	760	0.8

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



ITEM #2

Incinerator #1 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 1.86 ft.  
Gas Flow Rate: 4211 ACFM 2252 DSCFM Gas Exit Temperature: 480 °F.  
Water Vapor Content: 6.2 % Velocity: 25.88 FPS

Incinerator #2 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5463 ACFM 3065 DSCFM Gas Exit Temperature: 425 °F.  
Water Vapor Content: 6.2 % Velocity: 29.13 FPS

Incinerator #3 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5107 ACFM 2658 DSCFM Gas Exit Temperature: 494 °F.  
Water Vapor Content: 6.2 % Velocity: 27.2 FPS

\*ALL FLOWS & STACK GEOMETRY REPRESENTS MEASURED VALUES FROM STACK TEST DATED MAY, 1987

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

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

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY** N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes  No

Contaminant

Rate or Concentration

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

Contaminant	Rate or Concentration

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

Contaminant

Rate or Concentration

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:

7. Energy:

9. Emissions:

6. Operating Costs:

8. Maintenance Costs:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

- (5) Environmental Manager:
- (6) Telephone No.:
- (7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

- (8) Process Rate:<sup>1</sup>
- b. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:
- (7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

- (8) Process Rate:<sup>1</sup>
- 10. Reason for selection and description of systems:

<sup>1</sup>Applicant must provide this information when available. Should this information not be available, applicant must state the reason(a) why.

**SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION** N/A

A. Company Monitored Data

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ 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. Applicant's Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sub>2</sub>	_____ 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.

### Project Description

As originally permitted, this source was to have 2 catalytic incinerators to control VOC emissions from the Olympia 746 printing press. The manufacturer modified this source by adding a third incinerator to control emissions from the downstream decks. Originally the two downstream decks were to be controlled by a single shared incinerator, but, since typically only one of the downstream decks operates at a time, the third incinerator was added. DER was notified by telephone when we were made aware of this addition. The result is no decrease or increase in VOC emissions but a more efficient control system for this press. The stack test has been submitted to the Orlando DER and the source is in compliance with the permit specific conditions. By this application we are applying for both a modification and an operation permit. The certificate of completion application and the compliance report, submitted to the Orlando DER, and is attached to this modification. The application fee has been submitted to the Orlando DER (copy attached).



### SUPPLEMENTAL REQUIREMENTS

Supplement 1: Process input rate was determined by the manufacturer's designed printing rate. The product weight is the weight of the printed paper less the solvent weight.

Supplement 2: Emissions were calculated from the solvent content of the inks and coatings assuming 70% capture of VOCs and 95% destruction.

Total control efficiency is:

$$0.7 \times 0.95 \times 100 = 66.5\%$$

Compliance will be demonstrated by an EPA Method 25 VOC stack test (or the latest approved method) with capture efficiency being determined by the amount of solvent being used during the test and the concentration of VOCs collected at the inlet of the incinerator.

Supplement 3-9: Attached.

VOC EMISSION SUMMARY

<u>Raw Material</u>	<u>Potential</u>		<u>Actual</u>	
	<u>lbs/hr</u>	<u>Tons/yr</u>	<u>lbs/hr</u>	<u>Tons/yr</u>
KJ 902	21.414	66.811	7.1736	22.381
NB 1061	11.682	36.447	3.9134	12.210
Ink	<u>34.188</u>	<u>106.66</u>	<u>11.452</u>	<u>35.733</u>
Total	67.284	209.918	22.539	70.324

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING KJ 902

Chemical density: 0.6812 grams per cubic centimeter  
 or 5.68 pounds per gallon  
 VOC concentration: 4.8848 pounds per gallon  
 or 86.0 per cent  
 Usage rate: 4.3838 gallons per hour  
 or 24.9 pounds per hour  
 VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
 5 Days per week  
 52 Weeks per year

TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= (4.3838) \times (4.8848) \\
 &= 21.414 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\
 &= 66.811 \text{ Tons per year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times (1 - \text{Efficiency}) \\
 &= (21.414) \times (1 - 0.665) \\
 &= 7.1736 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 7.1736 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\
 &= 22.381 \text{ tons per year}
 \end{aligned}$$

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING NB 1061

Chemical density: 0.6048 grams per cubic centimeter  
 or 5.0427 pounds per gallon  
 VOC concentration: 3.3281 pounds per gallon  
 or 66.0 per cent  
 Usage rate: 3.5100 gallons per hour  
 or 17.7 pounds per hour  
 VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
 5 Days per week  
 52 Weeks per year  
 TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= ( 3.5100 ) \times ( 3.3281 ) \\
 &= 11.682 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 36.447 \text{ Tons per year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times ( 1 - \text{Efficiency} ) \\
 &= ( 11.682 ) \times ( 1 - 0.665 ) \\
 &= 3.9134 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 3.9134 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 12.210 \text{ tons per year}
 \end{aligned}$$

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: INK

Chemical density: 0.9021 grams per cubic centimeter  
 or 7.5213 pounds per gallon  
 VOC concentration: 5.5657 pounds per gallon  
 or 74.0 per cent  
 Usage rate: 6.1425 gallons per hour  
 or 46.2 pounds per hour  
 VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
 5 Days per week  
 52 Weeks per year

TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= ( 6.1425 ) \times ( 5.5657 ) \\
 &= 34.188 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 106.66 \text{ Tons per year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times ( 1 - \text{Efficiency} ) \\
 &= ( 34.188 ) \times ( 1 - 0.665 ) \\
 &= 11.452 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 11.452 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 35.733 \text{ tons per year}
 \end{aligned}$$

Post, Buckley, Schuh & Jernigan, Inc.

CONSULTING ENGINEERS and PLANNERS

COMP. BY: Ferraro

CHK. BY:

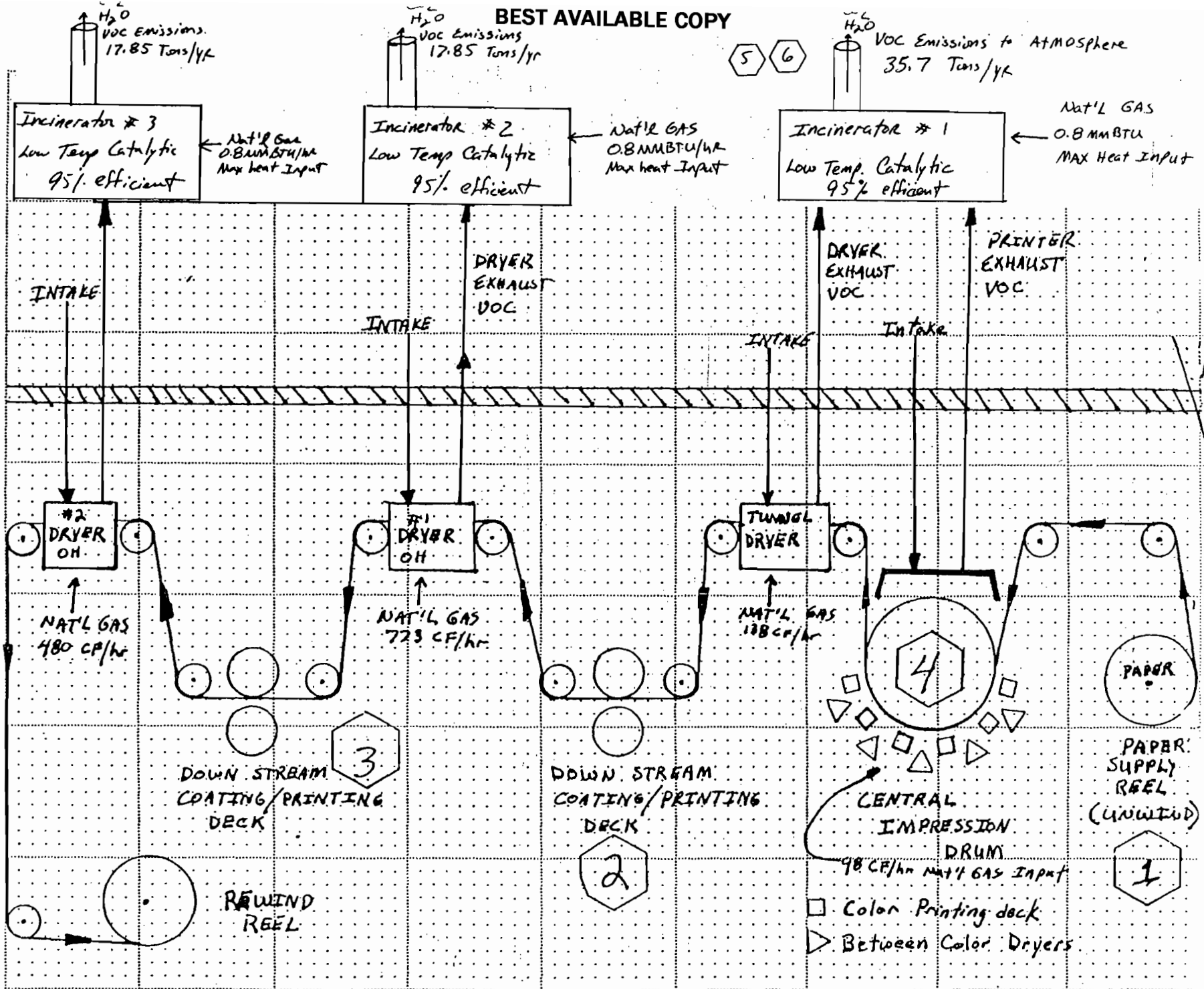
DATE: 9-28-87

SHEET NO.: 1

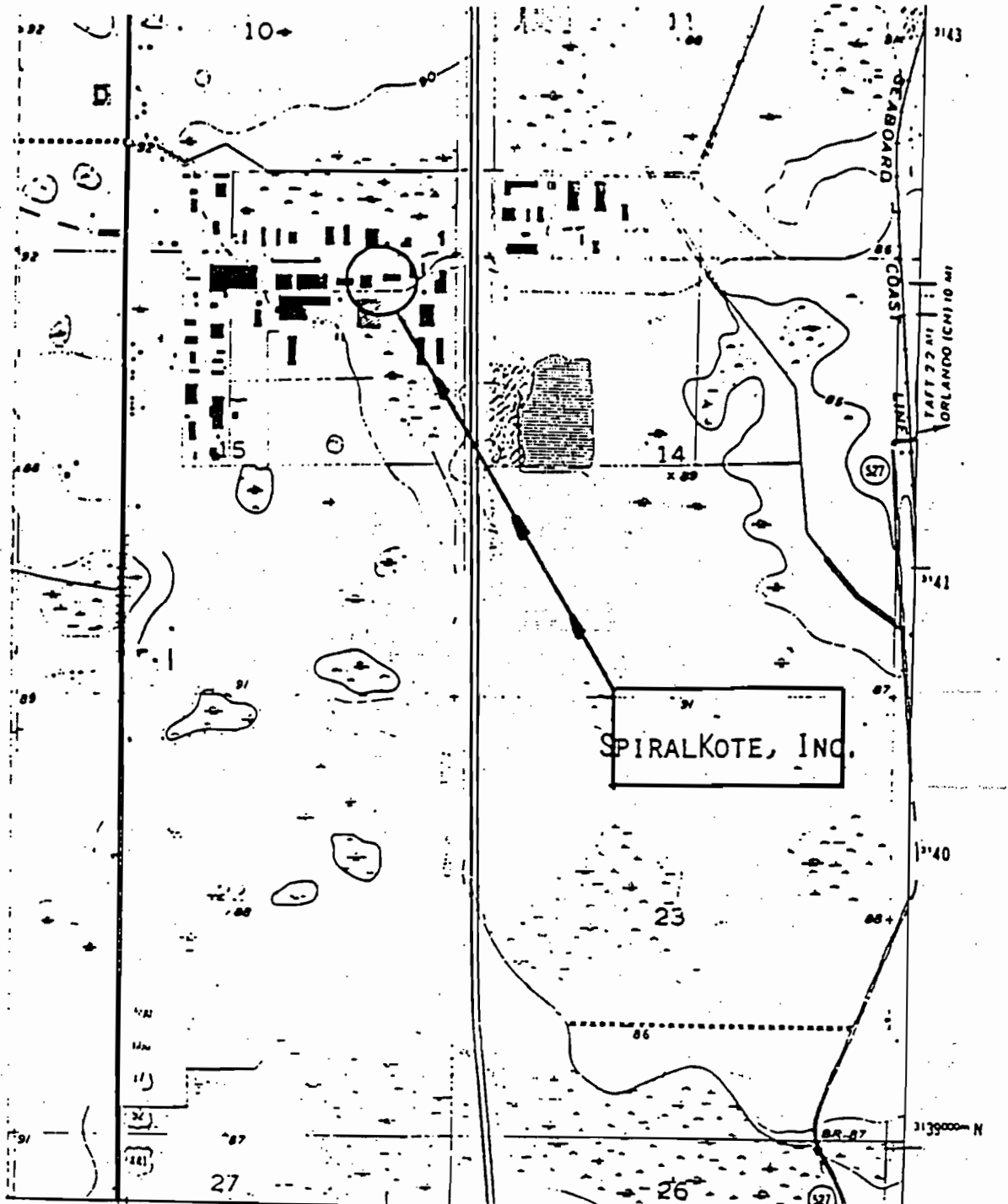
JOB NO.: 21-023-00

SUBJECT: Flow Diagram - Olympia 746 CI PRESS

BEST AVAILABLE COPY



SITE LOCATION MAP -- U.S.G.S. MAP SECTION  
SPIRALKOTE, INC.

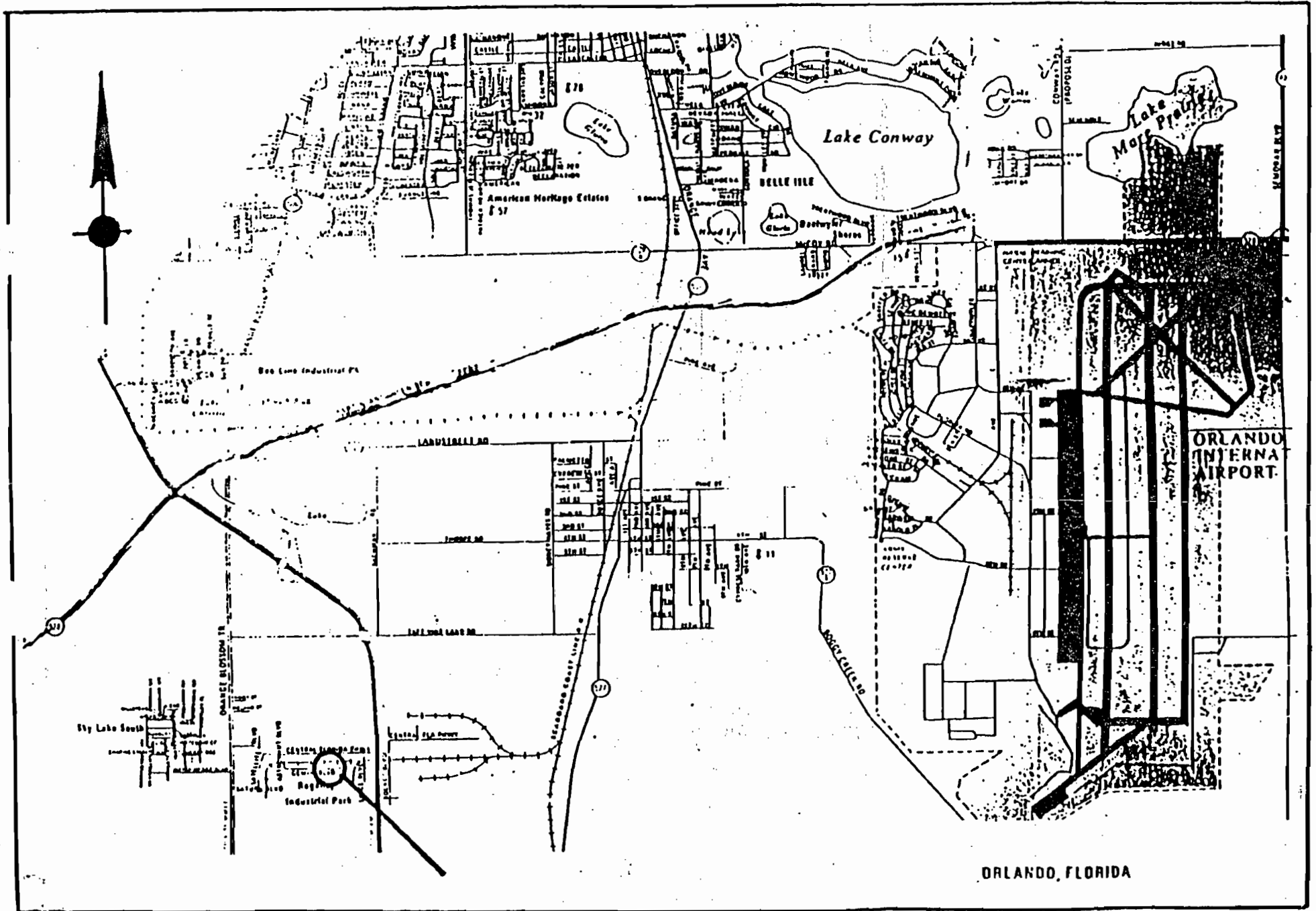


SPIRALKOTE, INC.

© INTERIOR GEOLOGICAL SURVEY REGION VIRGINIA-100' KISSIMEE (P.O.) 63 MI  
34° 10' U.S. IN. 28°22'30" 81°22'30" 3139000 N 463000 E

ROAD CLASSIFICATION

1ST. CL.



SPIRALKOTE, INC.      GENERAL LOCATION MAP

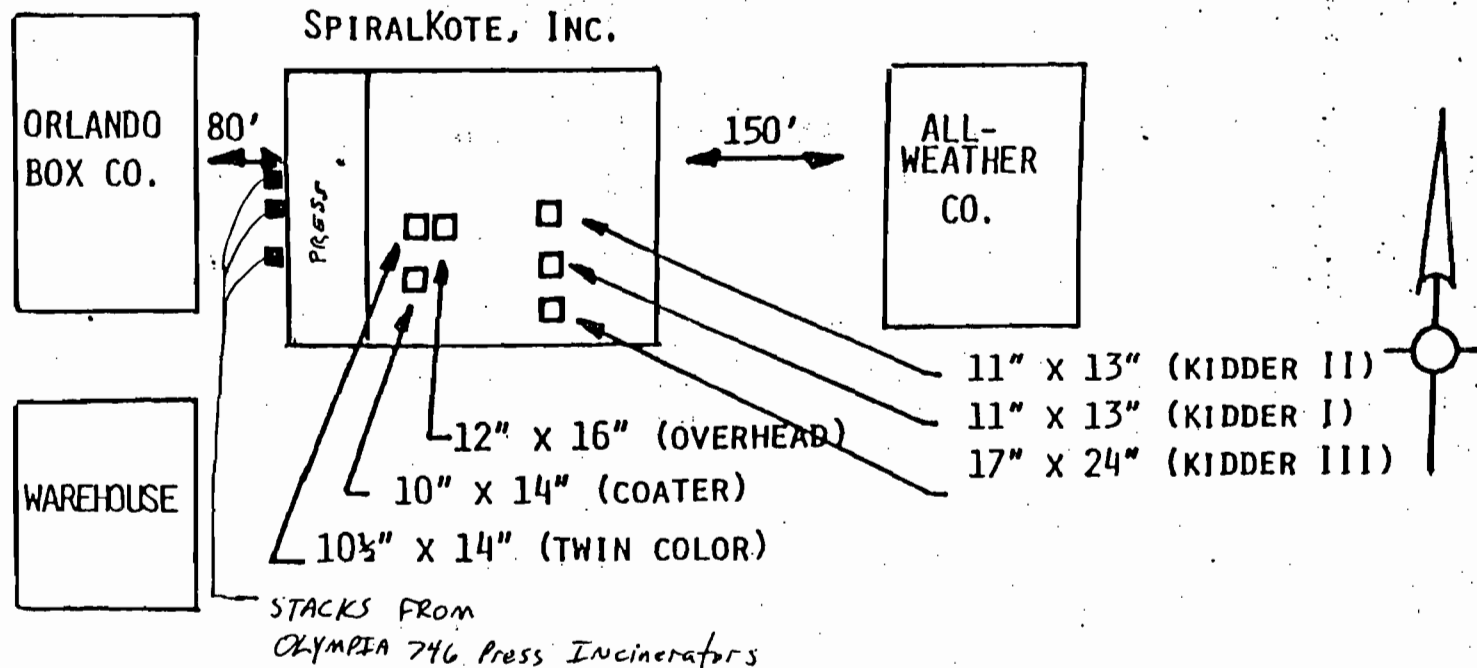


PLOT PLAN OF AREA/ROOF SKETCH SPIRALKOTE, INC.

LOCATED IN THE  
REGENCY INDUSTRIAL PARK

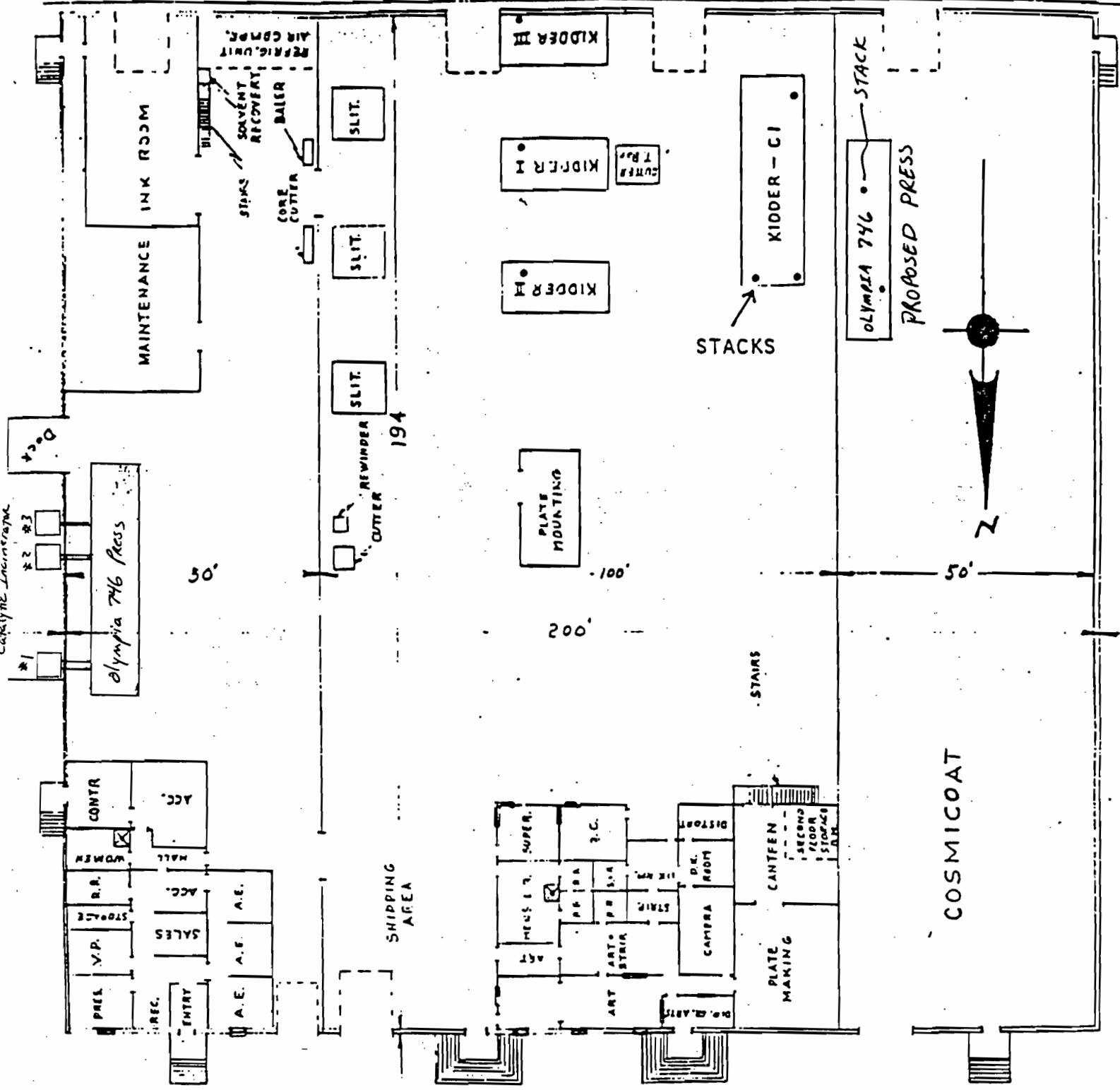


CENTRAL FLORIDA PARKWAY



NOT TO SCALE

PLOT PLAN OF FACILITY SPIRALKOTE, INC.



(FRONTS ON CENTRAL FLORIDA PARKWAY)



# Interoffice Memorandum

TO: Dale Twachtmann  
THRU: Howard Rhodes *[Signature]*  
FROM: Clair Fancy *[Signature]*  
DATE: November 23, 1987  
SUBJ: Amendment to Construction Permit No. AC 48-117138

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

FOR SIGNATURE

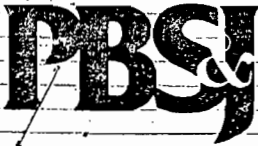
Spiralkote Inc. has requested an amendment to the above referenced construction permit issued August 22, 1986. The Bureau recommends approval.

CHF/BM/s  
attachment

DER  
NOV 30 1987  
DAQM

RECEIVED  
NOV 24 1987

Office of the Secretary



ENVIRONMENTAL LABORATORIES

6635 EAST COLONIAL DRIVE  
ORLANDO, FLORIDA 32807  
305/277-4443

A-7

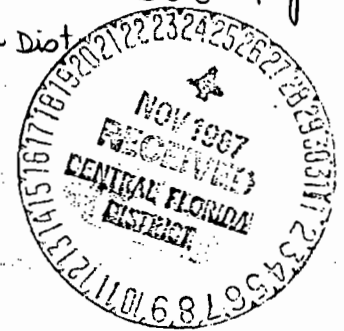
*Angie, please forward copy to C. Fung*

*Interoffice Mail  
Tom Sawicki  
Central Florida Dist  
Tom*

*File copy*

*LT*

November 19, 1987



Mr. A. T. Sawicki, P.E.  
Florida Department of Environmental Regulation  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote Olympia 746 Printing Press  
Permit No. AC48-117138  
Completeness Summary Dated 10/28/87

Dear Mr. Sawicki:

The following are submitted in response to your request for additional information for the above referenced source:

Item 1: Table 1 (page 3) of the stack test report shows a higher level of pounds VOC captured than pounds VOC available for Run 1. Capture values are the result of laboratory analyses which involve an inherent analytical error. As a quality control measure, Air Consulting & Engineering submits its samples in duplicate to separate laboratories. If, for example, the lowest analytical results are reported from these laboratories summed, the level of pounds VOC captured would be 88.42, which is essentially equivalent to the 88.25 pounds VOC available. Similarly, the pounds VOC available are computed from measurements of material usage and the reported results involve an inherent analytical error. Considering the analytical error inherent in these measurements, the values for pounds VOC captured and pounds VOC available are essentially equivalent.

In addition, several operational problems occurred during Run 1 which resulted in intermittent stoppage of the press during the run. Consequently, the run time of 90.7 minutes reported in Table 2 (page 4) is an over-estimation of the actual time the press was in operation during the run. Since the calculational method used to estimate pounds VOC captured, results in increased pounds captured with an increase in the run time (direct proportion), the reported pounds VOC captured during Run 1 is probably too high.

DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

*C. Tancy - BARM*

Initial

Date

2.

Initial

Date

3.

**DER**

Initial

Date

DEC 1 1987

4.

**BAQM**

Initial

Date

REMARKS:

*F. Y. I.*

*Clair: Bruce just mailed them an extension to this permit.*

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:

*A. T. Sawicki - Central Dist.*

DATE

*11/30/87*

PHONE

Mr. A. T. Sawicki, P.E.

November 19, 1987

Page 2

Item 1

(Cont'd): These observations of the reported data suggest that, while the reported results show more pounds VOC captured than available, the actual pounds VOC captured were probably less than reported. Anomalies of this type are not atypical due to the statistical nature of the experiment techniques used to measure these chemicals and the inherent error in the measurements. All the other reported data support these observations.

Item 2: The modification for this source was submitted to Clair Fancy on 10/6/87; and we are awaiting his response.

Please call me if you have any questions.

Sincerely,

PBS&J ENVIRONMENTAL LABORATORIES



Jerome J. Guidry, P.E.  
Division Manager

JJG:daa

cc: Robert Kindorf  
Bruno Ferraro

Certified Mail No. P 609 605 231

A4:au

Copied: Bruce Mitchell }  
CHFIBT } 12/21/87

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

**SENDER: Complete items 1, 2, 3 and 4.**

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

1.  Show to whom, date and address of delivery.

2.  Restricted Delivery.

3. Article Addressed to: Mr. Robert E. Kindorf  
 Vice President  
 Spiralkote, Inc.  
 1200 Central Florida Parkway  
 Orlando, FL 32809

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

Article Number: P 274 007 648

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
*Robert E. Kindorf*

6. Signature - Agent  
*[Signature]*

7. Date of Delivery  
 11/23/87

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

P 274 007 648

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

\* U.S.G.P.O. 1985-490-794  
 PS Form 3800, June 1985

Sent to Robert E. Kindorf, V.P.  
 Spiralkote, Inc.

Street and No.  
 1200 Central Florida Parkway

P.O., State and ZIP Code  
 Orlando, FL 32809

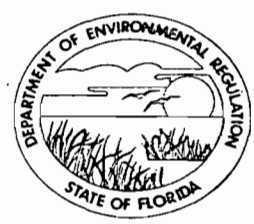
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

Mailed: 11/23/87  
 Permit: AC 48-117138  
 Expiration Dt. Extension

file

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB MARTINEZ  
GOVERNOR  
DALE TWACHTMANN  
SECRETARY

November 19, 1987

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

Re: Expiration Date Extension for the Construction Permit  
No. AC 48-117138

The Department is in receipt of Mr. Jerome J. Guidry's letter dated September 25, 1987, which requested an extension of the expiration date for the above referenced permit. The following shall be changed and added:

Expiration Date:

From: November 30, 1987  
To: March 31, 1988

Attachment to be Incorporated:

6. Mr. Jerome J. Guidry's letter dated September 25, 1987, and received by the Central Florida District office on September 28, 1987.

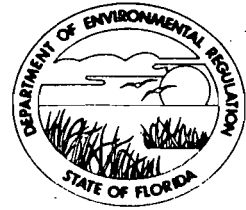
This letter must be attached to your construction permit, No. AC 48-117138, and shall become a part of the permit.

Sincerely,  
*Howard K Rhodes*  
for Dale Twachtmann  
Secretary

DT/ks

cc: T. Sawicki, CF District  
J. Guidry, P.E.





# Interoffice Memorandum

For Routing To Other Than The Addressee

To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

TO: Dale Twachtmann *[Signature]*

THRU: Howard Rhodes *[Signature]*

FROM: Clair Fancy *[Signature]*

DATE: November 19, 1987

SUBJ: Amendment to Construction Permit No. AC 48-117138

Spiralkote Inc. has requested an expiration date extension for the above referenced construction permit issued August 22, 1986. The Bureau recommends approval.

CHF/BM/s

attachment



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

*File Copy*

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

PM  
Oct. 6, 1987  
Orlando, FL  
CF: P-609-605-540

*3774443*  
*6635 E. Colonial Dr*  
*32807*

October 6, 1987

DER  
OCT 8 1987  
BAQM

Mr. Clair Fancy, P.E.  
Deputy Chief BAQM  
Florida Department of Environmental Regulation  
Twin Towers Office Bldg.  
2600 Blainstone Road  
Tallahassee, Florida 32399-2400

Re: Spiralkote, Inc.  
Olympia 746 Flexographic Printing Press  
AC48-117138

Dear Mr. Fancy:

Enclosed are two (2) copies of a request for a modification for the above referenced source. This modification has been discussed briefly by Bruce Mitchell and Bruno Ferraro (Grove Scientific). If you have any questions concerning this source, please call Mr. Ferraro at (305) 298-2282 or me at (305) 423-7275. Two additional copies have been submitted to Tom Sawicki in Orlando.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.  
Manager, EAD Division

cc: Bob Kindorf  
Bruno Ferraro  
A.T. Sawicki, P.E.

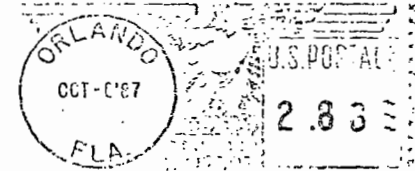
JJG:BAF/syp

Certified Mail No. P 609 605 531

A3:bg

10-14-87  
@ 10:35

Speake W T. Sawicki,  
To v out w cert. of  
completion and return  
the call. RBN



**PBSJ** POST, BUCKLEY, SCHUH & JERNIGAN, INC.  
889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088

to: Mr. Clair Fancy, P.E.  
Deputy Chief BAQM  
Florida Dept. of Env. Regulation  
Twin Towers Bldg  
2600 Blairstone Rd.  
Tallahassee, FL 32399-2400

ATTENTION:

Fold at line over top of envelope to the right  
of the return address.

CERTIFIED

P-609 605 540

MAIL

# ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Bruce

Initial

Date

2.

Initial

Date

3.

Initial

Date

4.

Initial

Date

REMARKS:

as with previous modification -- attached are the two copies of 1 permit to be modified and placed in file.

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:

Shanks,  
Maggie

DATE

10/8/87

PHONE

To Bruce Mitchell  
Date 10/26 Time 10:02

## WHILE YOU WERE OUT

M John Sumner  
of  
Phone (5C) 325-1403  
Area Code Number Extension

<input checked="" type="checkbox"/> TELEPHONED	<input checked="" type="checkbox"/> PLEASE CALL
<input type="checkbox"/> CALLED TO SEE YOU	<input type="checkbox"/> WILL CALL AGAIN
<input type="checkbox"/> WANTS TO SEE YOU	<input type="checkbox"/> URGENT
<input type="checkbox"/> RETURNED YOUR CALL	

Message: <sup>10-26-87</sup>  
@ 1:37 on another line. RCR per  
@ 3:15 (ST) No problem going with  
an amendment / signature. BOB

MO  
Operator

To Bruce Mitchell  
Date 10/28 Time 1:57

**WHILE YOU WERE OUT**

M. John Turner  
of  
Phone (503) 325-1403  
Area Code Number Extension

<input checked="" type="checkbox"/> TELEPHONED	<input checked="" type="checkbox"/> PLEASE CALL
<input checked="" type="checkbox"/> CALLED TO SEE YOU	<input type="checkbox"/> WILL CALL AGAIN
<input type="checkbox"/> WANTS TO SEE YOU	<input type="checkbox"/> URGENT
<input type="checkbox"/> RETURNED YOUR CALL	

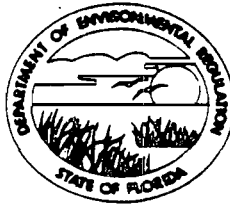
Message <sup>10-28-87</sup> to delete PATS # (cont FL)  
and go for amendment on  
Spiral Kate, Inc. AC 48-117138.

[Signature]  
Operator

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER  
DISTRICT

3319 MAGUIRE BOULEVARD  
SUITE 232  
ORLANDO, FLORIDA 32803



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

ALEX SENKEVICH  
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCE

SOURCE TYPE: Printing facility [ ] New<sup>1</sup> [X] Existing<sup>1</sup>  
APPLICATION TYPE: [ ] Construction [X] Operation [X] Modification  
COMPANY NAME: Spiralkote, Inc. COUNTY: Orange

Identify the specific emission point source(s) addressed in this application (i.e. Line  
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Olympia 746 Flexographic  
Printing press

SOURCE LOCATION: Street 1200 Central Florida Parkway City Orlando, 32809  
UTM: East 461370 North 3142050  
Latitude 28 ° 24 ' 21 "N Longitude 81 ° 23 ' 40 "W

APPLICANT NAME AND TITLE: Robert E. Kindorf, Vice President of Production

APPLICANT ADDRESS: 1200 Central Florida Parkway, Orlando, Fl 32809

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Spiralkote, Inc

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

\*Attach letter of authorization

Signed: Robert E. Kindorf  
Robert E. Kindorf, Vice President  
Name and Title (Please Type)

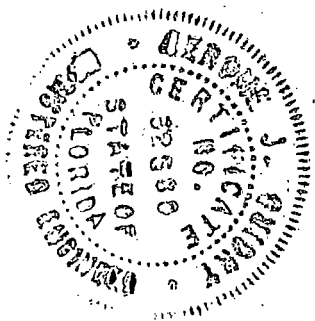
Date: 10-2-87 Telephone No. (305) 859-7780

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

<sup>1</sup> 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 Jerome J. Guidry  
 Jerome J. Guidry, P.E.  
 Name (Please Type)  
 Post, Buckley, Schuh & Jernigan, Inc.  
 Company Name (Please Type)  
 889 North Orange Avenue, Orlando, FL 32801  
 Mailing Address (Please Type)

Florida Registration No. 32589 Date: 10-6-87 Telephone No. (305) 423-7275

**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.

To modify the Olympia 746 Flexographic printing press by adding a third catalytic incinerator to control VOC emissions. No increase or decrease in VOC emissions will result and the project will result in full compliance with 17-2 FAC.

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

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.)

Catalytic Incinerator 1	\$155,000
Catalytic Incinerator 2	\$155,000
Catalytic Incinerator 3	\$155,000

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

AC48-117138

E. Requested permitted equipment operating time: hrs/day 24; days/wk 5; 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?  | <u>No</u>  |
| a. If yes, has "offset" been applied?   | <u>No</u>  |
| b. If yes, has "Lowest Achievable Emission Rate" been applied?  | <u>Yes</u> |
| c. If yes, list non-attainment pollutants.  | <u>N/A</u> |
| 2. Does best available control technology (BACT) apply to this source?<br>If yes, see Section VI.                                       | <u>No</u>  |
| 3. Does the State "Prevention of Significant Deterioration" (PSD)<br>requirement apply to this source? If yes, see Sections VI and VII. | <u>No</u>  |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS)<br>apply to this source?   | <u>No</u>  |
| 5. Do "National Emission Standards for Hazardous Air Pollutants"<br>(NESHAP) apply to this source?                                      | <u>No</u>  |
| H. Do "Reasonably Available Control Technology" (RACT) requirements apply<br>to this source?  | <u>No</u>  |
| a. If yes, for what pollutants?   | <u>N/A</u> |
| b. If yes, in addition to the information required in this form,<br>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	N/A	519	①
Coating KJ 902	VOC	86	24.9	②
Coating NB 1061	VOC	66	17.7	③
Ink	VOC	74	46.2	④

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

- Total Process Input Rate (lbs/hr): 607.8
- Product Weight (lbs/hr): 540.5

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

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
VOC	22.5	70.3	17-2.640	22.5	67.3	209.9	⑤ & ⑥
			LAER				
			70% Capture				
			95% Destruction				

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>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)

<sup>3</sup>Calculated from operating rate and applicable standard.

<sup>4</sup>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)
Three Catalytic Incineration systems custom built by Etter Engineering Co.	VOC	95%	N/A	Stack Test results attached.

E. Fuels Natural gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Between Color dryer	98 CF/hr	98 CF/hr	0.1035
Tunnel oven	138 CF/hr	138 CF/hr	0.145
#1 overhead dryer	773 CF/hr	773 CF/hr	0.814
#2 overhead dryer	480 CF/hr	480 CF/hr	0.506

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

Fuel Analysis:

Percent Sulfur: N/A Percent Ash: N/A

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

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

Annual Average N/A Maximum \_\_\_\_\_

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

Some solvents are reclaimed by distillation. Waste solvents, coating and inks are  
shipped to Oldover Corporation, Green Cove Springs, to burned in their boilers.  
This procedure is currently being used by this generator.

SEE ATTACHMENT

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

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

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

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

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

	Volume (ft) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

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

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

E. Fuels Natural Gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Incinerator 1	95	760	0.8
Incinerator 2	95	760	0.8
Incinerator 3	95	760	0.8

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

ITEM #2

Incinerator #1 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 1.86 ft.  
Gas Flow Rate: 4211 ACFM 2252 DSCFM Gas Exit Temperature: 480 °F.  
Water Vapor Content: 6.2 % Velocity: 25.88 FPS

Incinerator #2 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5463 ACFM 3065 DSCFM Gas Exit Temperature: 425 °F.  
Water Vapor Content: 6.2 % Velocity: 29.13 FPS

Incinerator #3 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5107 ACFM 2658 DSCFM Gas Exit Temperature: 494 °F.  
Water Vapor Content: 6.2 % Velocity: 27.2 FPS

\*ALL FLOWS & STACK GEOMETRY REPRESENTS MEASURED VALUES FROM STACK TEST DATED MAY, 1987

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

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

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY** N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes  No

Contaminant

Rate or Concentration

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

Contaminant	Rate or Concentration

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

Contaminant

Rate or Concentration

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

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- 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:<sup>1</sup>
- d. Capital Costs:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- 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:<sup>1</sup>
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:<sup>2</sup>
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
- a. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>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** N/A

**A. Company Monitored Data**

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ 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 <sub>2</sub>	_____ 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.

### Project Description

As originally permitted, this source was to have 2 catalytic incinerators to control VOC emissions from the Olympia 746 printing press. The manufacturer modified this source by adding a third incinerator to control emissions from the downstream decks. Originally the two downstream decks were to be controlled by a single shared incinerator, but, since typically only one of the downstream decks operates at a time, the third incinerator was added. DER was notified by telephone when we were made aware of this addition. The result is no decrease or increase in VOC emissions but a more efficient control system for this press. The stack test has been submitted to the Orlando DER and the source is in compliance with the permit specific conditions. By this application we are applying for both a modification and an operation permit. The certificate of completion application and the compliance report, submitted to the Orlando DER, and is attached to this modification. The application fee has been submitted to the Orlando DER (copy attached).

### SUPPLEMENTAL REQUIREMENTS

Supplement 1: Process input rate was determined by the manufacturer's designed printing rate. The product weight is the weight of the printed paper less the solvent weight.

Supplement 2: Emissions were calculated from the solvent content of the inks and coatings assuming 70% capture of VOCs and 95% destruction.

Total control efficiency is:

$$0.7 \times 0.95 \times 100 = 66.5\%$$

Compliance will be demonstrated by an EPA Method 25 VOC stack test (or the latest approved method) with capture efficiency being determined by the amount of solvent being used during the test and the concentration of VOCs collected at the inlet of the incinerator.

Supplement 3-9: Attached.

VOC EMISSION SUMMARY

<u>Raw Material</u>	<u>Potential</u>		<u>Actual</u>	
	<u>lbs/hr</u>	<u>Tons/yr</u>	<u>lbs/hr</u>	<u>Tons/yr</u>
KJ 902	21.414	66.811	7.1736	22.381
NB 1061	11.682	36.447	3.9134	12.210
Ink	<u>34.188</u>	<u>106.66</u>	<u>11.452</u>	<u>35.733</u>
Total	67.284	209.918	22.539	70.324



EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING KJ 902

Chemical density: 0.6812 grams per cubic centimeter  
or 5.68 pounds per gallon  
VOC concentration: 4.8848 pounds per gallon  
or 86.0 per cent  
Usage rate: 4.3838 gallons per hour  
or 24.9 pounds per hour  
VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
5 Days per week  
52 Weeks per year

TOTAL 6240 Hours per year

---

$$\begin{aligned} \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\ &= (4.3838) \times (4.8848) \\ &= 21.414 \text{ lb per hr} \times 6240 \text{ hr per year} \\ &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\ &= 66.811 \text{ Tons per year} \end{aligned}$$

$$\begin{aligned} \text{Maximum emissions} &= \text{Potential emissions} \times (1 - \text{Efficiency}) \\ &= (21.414) \times (1 - 0.665) \\ &= 7.1736 \text{ pounds per hour} \end{aligned}$$

$$\begin{aligned} \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\ &= 7.1736 \text{ lb/hr} \times 6240 \text{ hrs/year} \\ &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\ &= 22.381 \text{ tons per year} \end{aligned}$$

01-Jan-80

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING NB 1061

Chemical density: 0.6048 grams per cubic centimeter

or 5.0427 pounds per gallon

VOC concentration: 3.3281 pounds per gallon

or 66.0 per cent

Usage rate: 3.5100 gallons per hour

or 17.7 pounds per hour

VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day

5 Days per week

52 Weeks per year

TOTAL 6240 Hours per year

---

Potential emissions = ( Usage rate ) x ( VOC Concentration )

= ( 3.5100 ) x ( 3.3281 )

= 11.682 lb per hr x 6240 hr per year

x ( 1 ton / 2000 pounds )

= 36.447 Tons per year

Maximum emissions = Potential emissions x ( 1 - Efficiency )

= ( 11.682 ) x ( 1 - 0.665 )

= 3.9134 pounds per hour

Actual emissions = Maximum emissions x Operating schedule

= 3.9134 lb/hr x 6240 hrs/year

x ( 1 ton / 2000 pounds )

= 12.210 tons per year

01-Jan-80

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: INK

Chemical density: 0.9021 grams per cubic centimeter

or 7.5213 pounds per gallon

VOC concentration: 5.5657 pounds per gallon

or 74.0 per cent

Usage rate: 6.1425 gallons per hour

or 46.2 pounds per hour

VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
5 Days per week  
52 Weeks per year

TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= ( 6.1425 ) \times ( 5.5657 ) \\
 &= 34.188 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 106.66 \text{ Tons per year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times ( 1 - \text{Efficiency} ) \\
 &= ( 34.188 ) \times ( 1 - 0.665 ) \\
 &= 11.452 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 11.452 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 35.733 \text{ tons per year}
 \end{aligned}$$

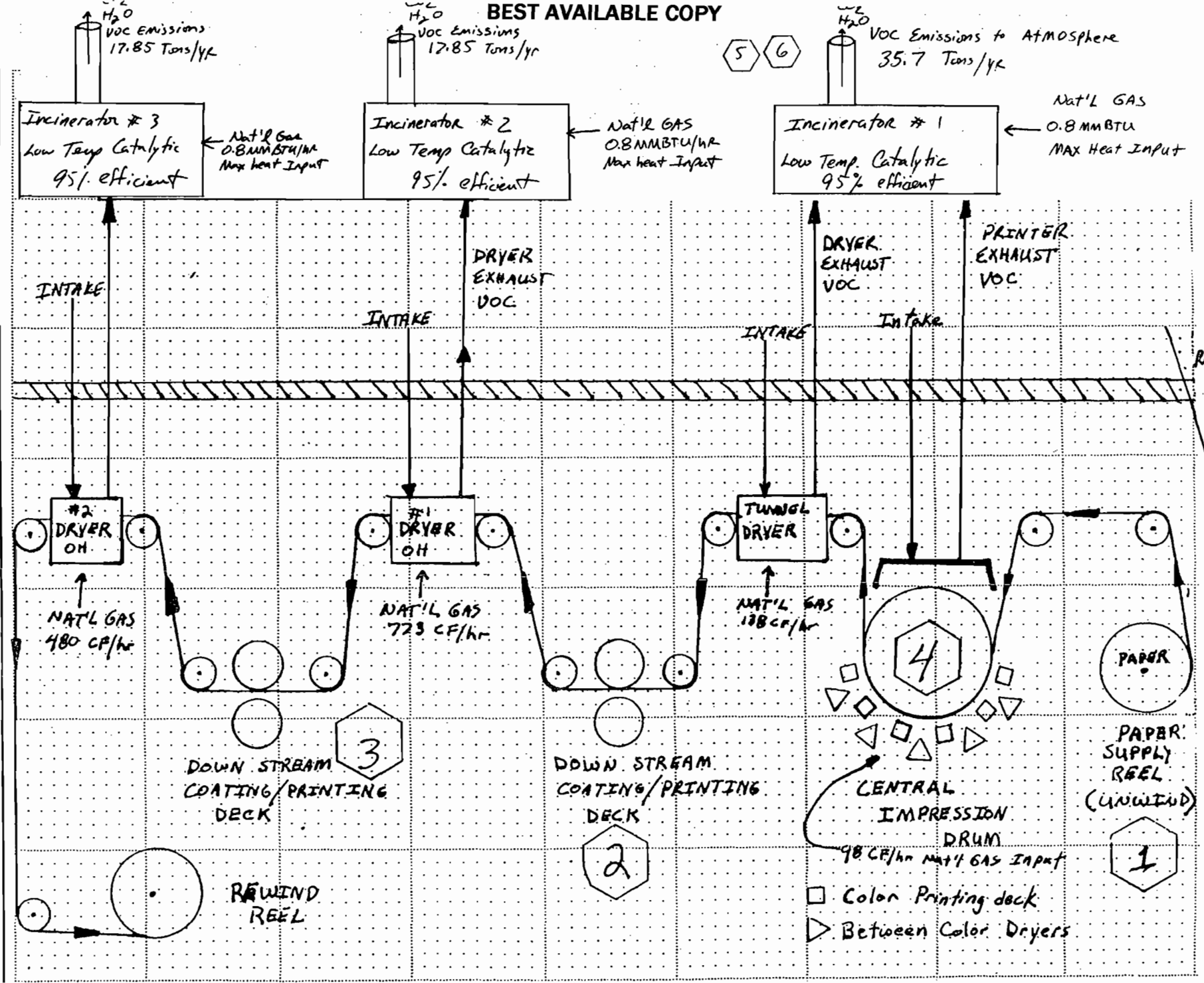
01-Jan-80

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COMP. BY: Ferraro  
 CHK. BY: \_\_\_\_\_  
 DATE: 9-29-87  
 SHEET NO.: 1  
 JOB NO.: 21-023.00

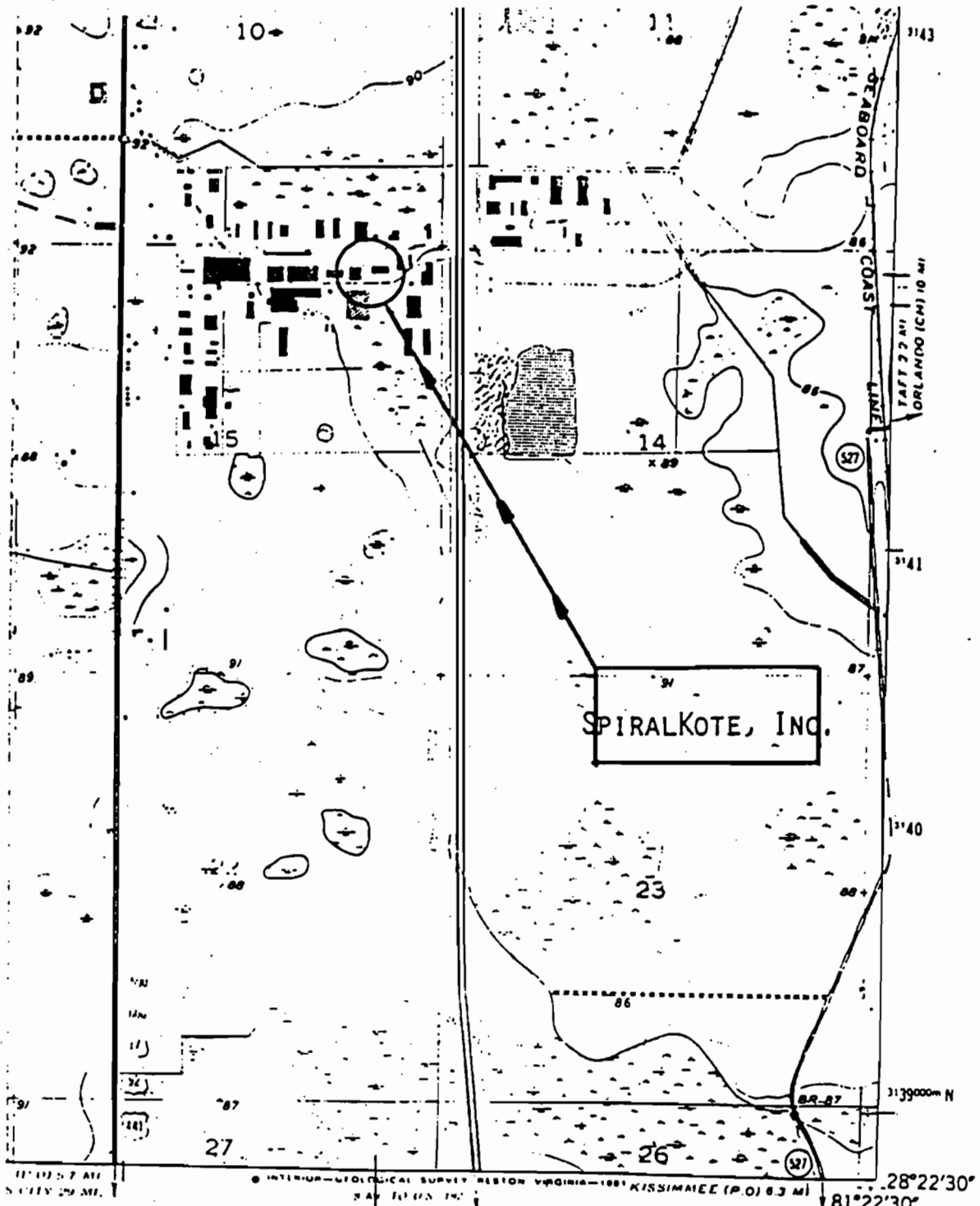
Post, Buckley, Schuh & Jernigan, Inc.  
 CONSULTING ENGINEERS and PLANNERS

SUBJECT: Flow Diagram - Olympia 746 CI PRESS



SITE LOCATION MAP -- U.S.G.S. MAP SECTION

SPIRALKOTE, INC.



SPIRALKOTE, INC.

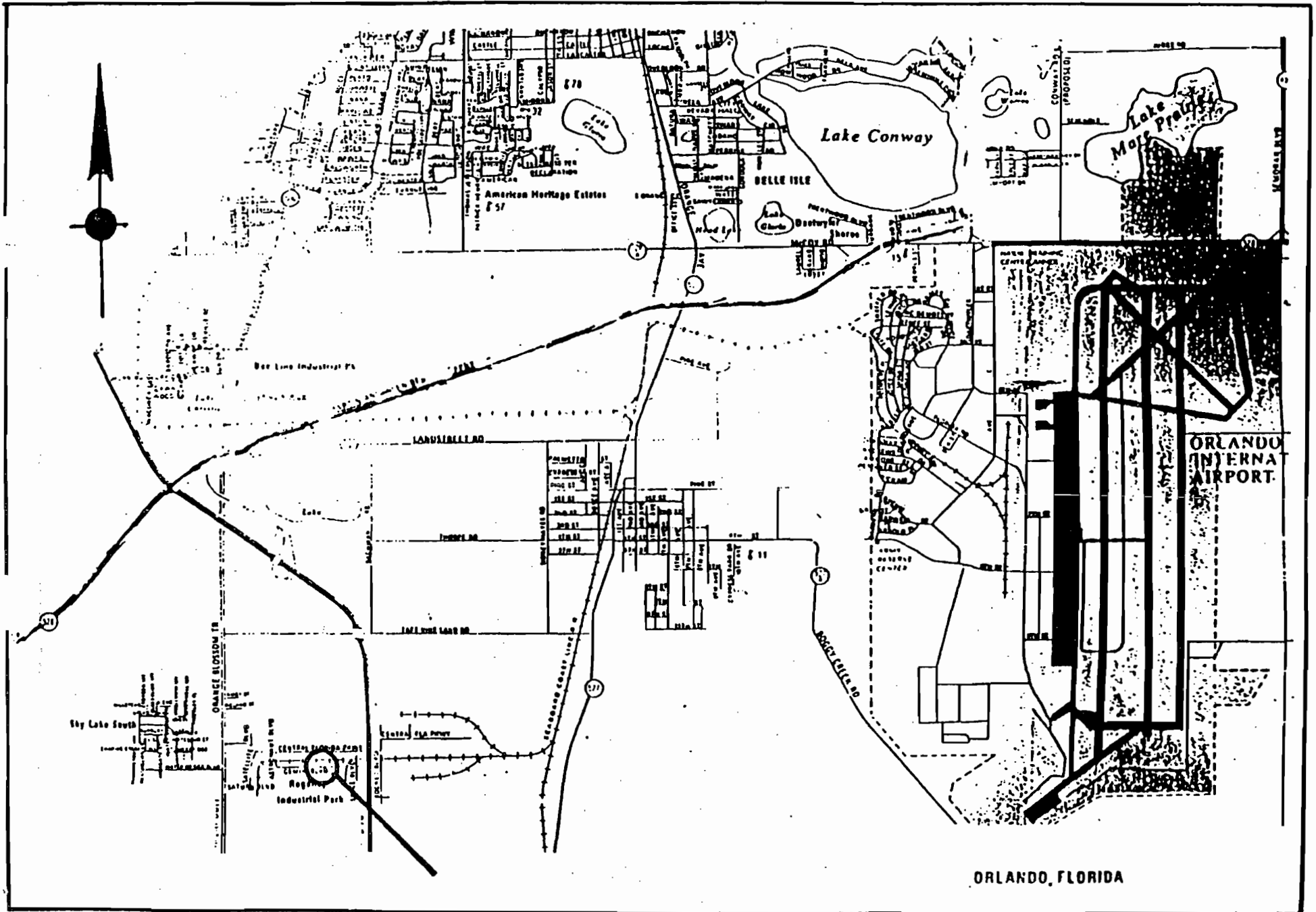
1" = 2.5 MI  
SCALE 2.5 MI

INTERIOR-GEOLOGICAL SURVEY REGION VIRGINIA-1881 KISSIMEE (P.O.) 8.3 MI  
MAP 10 U.S. 1881

28°22'30"  
81°22'30"

ROAD CLASSIFICATION

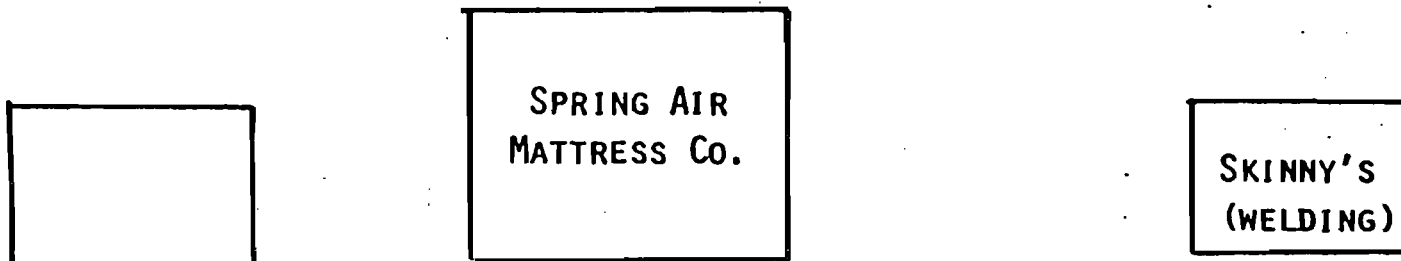
1ST. CL.



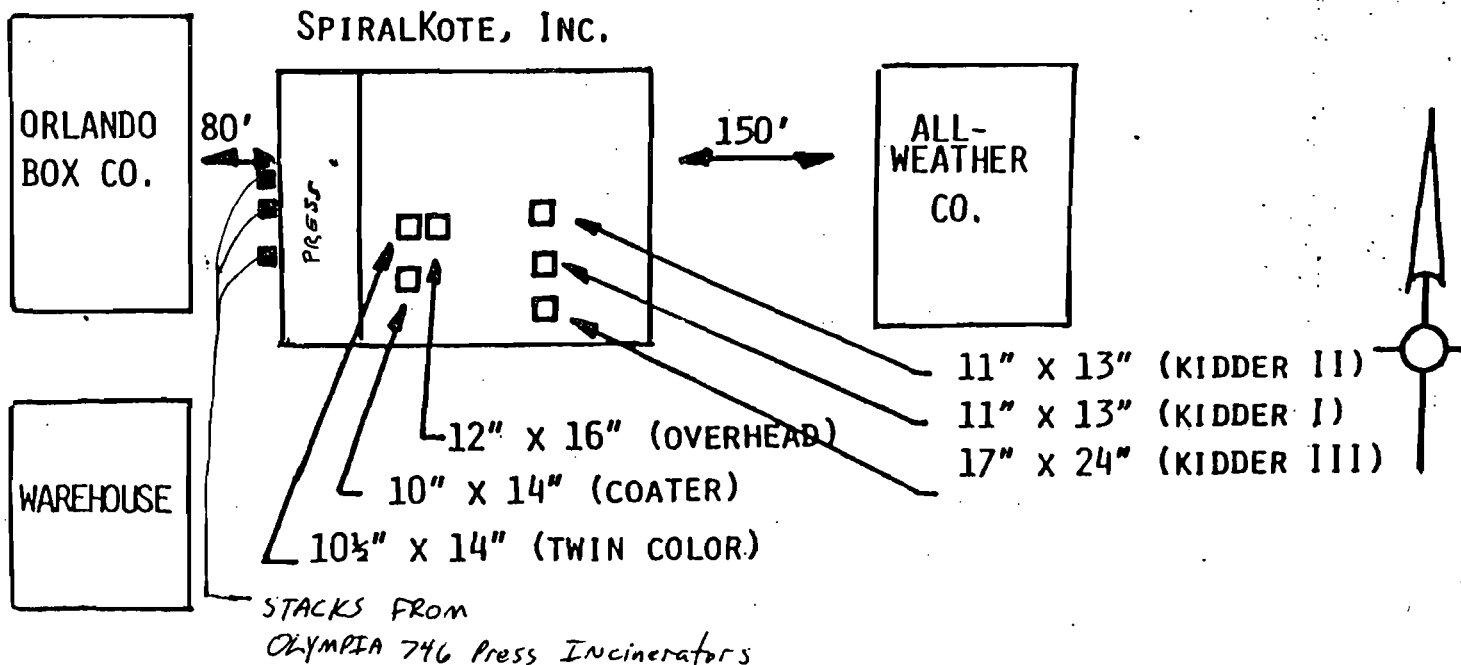
SPIRALKOTE, INC.      GENERAL LOCATION MAP

PLOT PLAN OF AREA/ROOF SKETCH SPIRALKOTE, INC.

LOCATED IN THE  
REGENCY INDUSTRIAL PARK

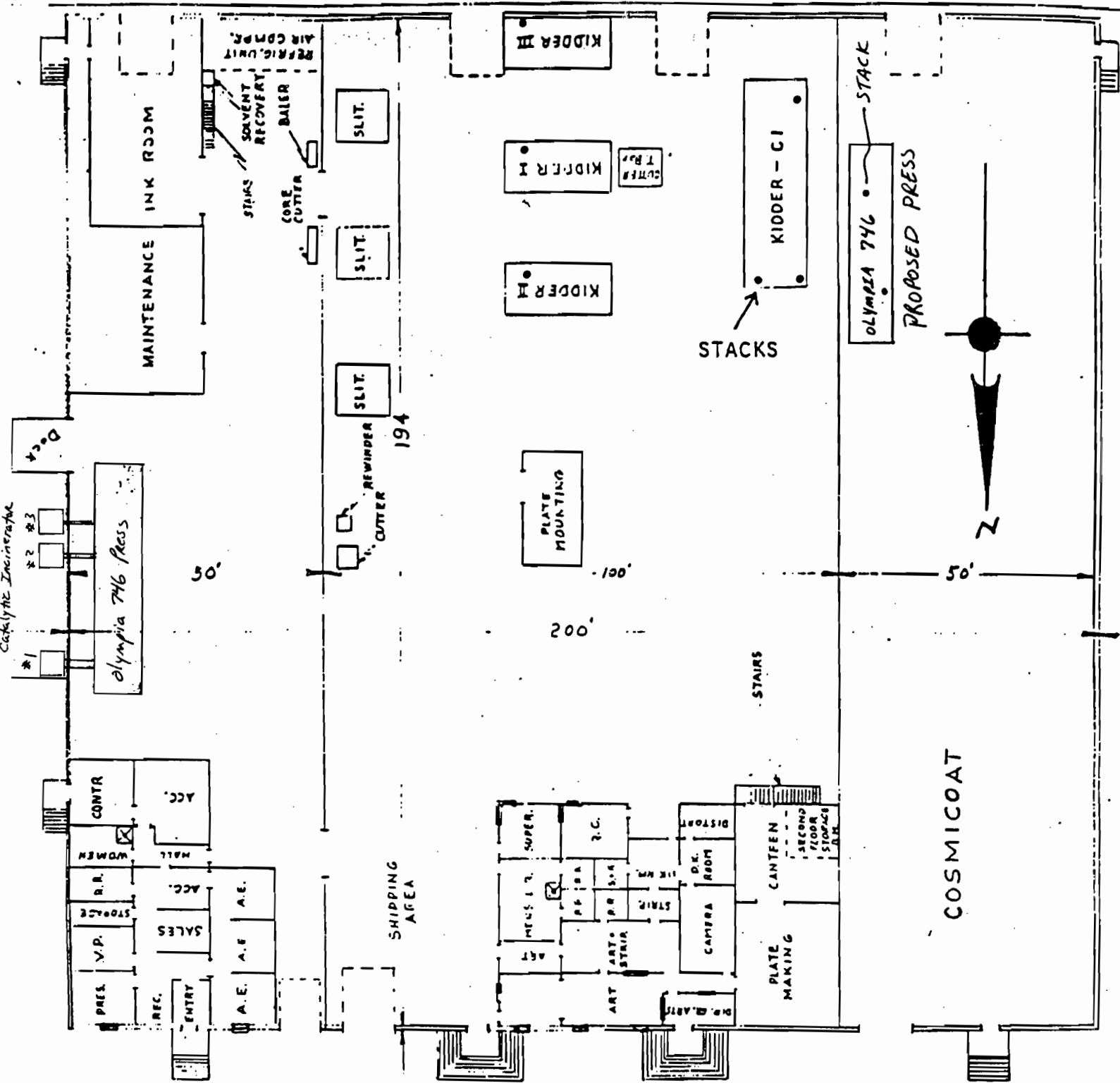


CENTRAL FLORIDA PARKWAY



NOT TO SCALE

PLOT PLAN OF FACILITY SPIRALKOTE, INC.



(FRONTS ON CENTRAL FLORIDA PARKWAY)





POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

File Copy  
PM  
CER Mail # P-609-605-533  
2-Oct-1987  
ORLANDO, FL

September 30, 1987

DER

OCT 5 1987

BAQM

Mr. A.T. Sawicki, P.E.  
Supervisor, Air Section  
Florida Department of Environmental Regulation  
St. Johns River District  
3319 MaGuire Blvd.  
Suite 232  
Orlando, Florida 32803

Re: Spiralkote, Inc.  
Olympia 746 Printing Press  
AC48-117138

10/5/87  
Disposition?  
Bruce  
I to see [unclear] who did it.  
then [unclear] from  
w [unclear]

Dear Mr. Sawicki:

We have prepared the following response to your September 2, 1987 letter to me concerning the above referenced source.

- Item #1 A sketch which relates the third incinerator to the process is attached.
- Item #2 The fuel utilization rate and geometry of the third incinerators are attached using pages from the air pollution construction permit application. Also see the stack test report dated May 19-20, 1987.

As with the other existing catalytic incinerators at Spiralkote, the primary fuel is the solvent laden air that is being controlled. Fuel is only used intermittently to maintain the catalyst bed temperature when the press shuts down for short periods of time. The maximum heat input when the burner is operating is 0.8 MMBTU/hr of natural gas. The manufacturer expects that the actual gas consumption is 0.1 MMBTU/hr during normal operation and incineration of VOC's. Therefore, when all three incinerators are operating simultaneously, the total natural gas consumption is 0.3 MMBTU/hr.

The stack geometry for this third incinerator is the same as the other two incinerators. Upon measuring their air flow during the May, 1987 stack test, we determined that the actual flow is different from that stated in the original application. The application states an air flow of 2500 ACFM while the actual measured flows are as follows: Incinerator 1 outlet 4211 ACFM and 2252 DSCFM; Incinerator 2 outlet 5463 ACFM and 3065 DSCFM; incinerator 3 outlet 5107 ACFM and 2658 DSCFM. The appropriate pages from the permit application have been amended and are enclosed.

Fold at line over top of envelope to the right  
of the return address.

CERTIFIED

P-609 605 533

MAIL



U.S. POSTAGE

2.52

NOV 11 1987  
TALLAHASSEE, FL



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088

TO: FDER  
Twin Towers Office Bldg.  
2600 Blair Stone Rd.  
Tallahassee, FL 32301

ATTENTION: Clair Fancy

Mr. A. T. Sawicki  
September 30, 1987  
Page 2

Item #3 The test report, dated May 19-20, 1987, was mailed to Orange County and according to September 17, 1987 telephone conversation between John Turner and Bruno Ferraro is forwarding a copy to your office for evaluation. Attached is a copy of the results for the CI press (AC48-82733). This incinerator has not met the emission limiting standard for both capture and destruction efficiency. The incinerator manufacture is presently working on correcting the problem and we will be scheduling a new test in the near future.

Attached is a letter dated July 15, 1987 from Roger Decelles (Incinerator Manufacturer) to Bob Kindorf (Spiralkote) addressing the problems with the CI incinerator. The manufacturer is now completing the final repairs to the incinerator and will be tested upon completion.

Item #4 In the original permit application we indicated that the central impressions printing deck of the Olympia 746 press was to have one incinerator while the two downstream decks would share an incinerator. (See Flow diagram from original application). During typical operation only one downstream deck is used at a time. On the rare occasion that both decks would be used the incinerator would have to control emissions from both decks. The German manufacturer decided that two separate incinerators would be necessary to make the system more efficient. We were not informed of this change until the unit was delivered and installed at Spiralkote at which time Bruno Ferraro (Grove Scientific Company) contacted you by telephone (May 14, 1987) to discuss this additional incinerator. In your discussion it was determined that there was no net increase in emissions, by adding this extra incinerator, because a portion of the VOC's were being re-routed to the third incinerator. Because no additional VOC's were being generated, you indicated that this design change should be explained when submitting the certificate of completion application (as we did). The appropriate pages of the application are being forwarded to DER Tallahassee with a copy of this letter.

Mr. A. T. Sawicki  
September 30, 1987  
Page 3

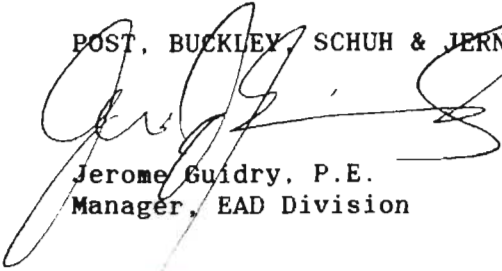
Kidder I Press (AC48-82735) has not been in operation since August, 1986 and will not be operated again at this facility. Spiralkote is currently trying to sell this press.

Item #5 The appropriate supporting information is being submitted to the central air permitting staff in Tallahassee by copy of this letter.

If you have any question regarding this matter, please call me at (305) 423-7275 or Bruno Ferraro at (305) 298-2298.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.



Jerome Guidry, P.E.  
Manager, EAD Division

cc: Clair Fancy, P.E.  
Bob Kindorff  
Bruno Ferraro

JJG:BAF:syp

Certified Mail No. P 609 605 532

A3:bg

COMP. BY: Ferraro

CHK. BY:

DATE: 9-28-87

SHEET NO.: 1

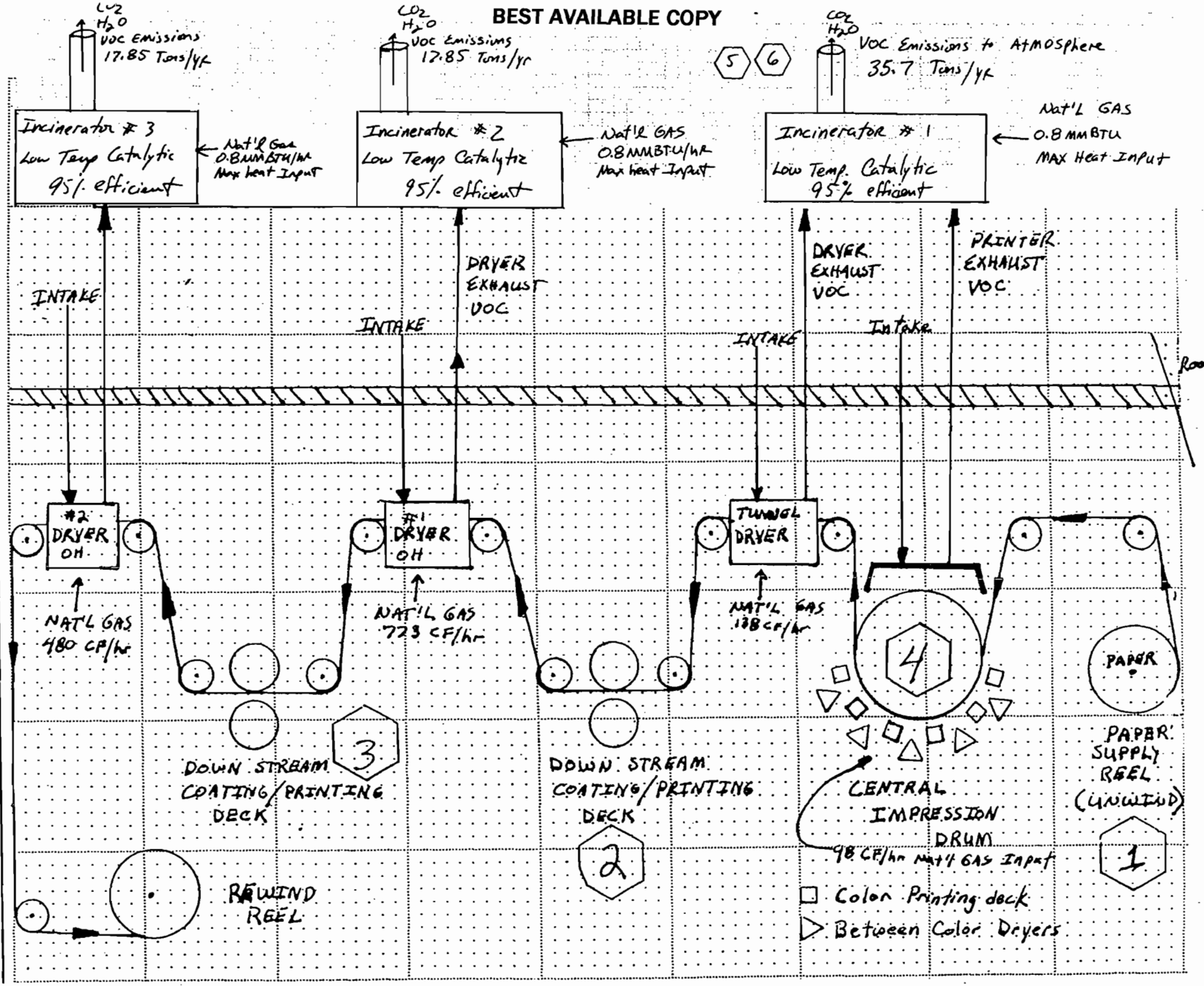
JOB NO.: 21-023.00

Post, Buckley, Schuh & Jernigan, Inc.

CONSULTING ENGINEERS AND PLANNERS

SUBJECT: Flow Diagram - Olympia 746 CI PRESS

BEST AVAILABLE COPY



Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Incinerator 1	95	760	0.8
Incinerator 2	95	760	0.8
Incinerator 3	95	760	0.8

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

ITEM #2

Incinerator #1 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 1.86 ft.  
Gas Flow Rate: 4211 ACFM 2252 DSCFM Gas Exit Temperature: 480 °F.  
Water Vapor Content: 6.2 % Velocity: 25.88 FPS

Incinerator #2 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5463 ACFM 3065 DSCFM Gas Exit Temperature: 425 °F.  
Water Vapor Content: 6.2 % Velocity: 29.13 FPS

Incinerator #3 \*

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

Stack Height: 30 ft. Effective Stack Diameter: 2.0 ft.  
Gas Flow Rate: 5107 ACFM 2658 DSCFM Gas Exit Temperature: 494 °F.  
Water Vapor Content: 6.2 % Velocity: 27.2 FPS

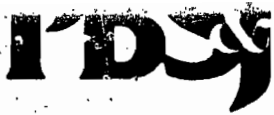
\*ALL FLOWS & STACK GEOMETRY REPRESENTS MEASURED VALUES FROM STACK TEST DATED MAY, 1987

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

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



ORLANDO, FLORIDA  
305/423-7275

BEST AVAILABLE COPY

August 5, 1987

Mr. A. T. Sawicki, P.E.  
Florida Department of Environmental Regulation  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote, Inc.  
Olympia 746 Press  
Permit No. AC48-117138

Dear Mr. Sawicki:

Enclosed are four copies of the above referenced Certificate of Completion of Construction (with attachments) and a check for \$500 for the application fee. Also attached is the compliance report as required by the specific conditions of the construction permit. If you have any questions, please call me.

Sincerely,

POST. BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.  
Manager, EAD Division

JJG:BAF:daa

cc: Robert E. Kindorf  
Bruno A. Ferraro

Certified Mail No. P 609 605 043

fp SPIRALKOTE, INC.

1200 CENTRAL FLORIDA PKWY.  
ORLANDO, FLA. 32821

Commercial National Bank

OF PEORIA  
Member Midwest Financial Group, Inc.  
PEORIA, ILLINOIS 61631

6903

70-4/711

PAY-----Five hundred and 00/100-----

TO  
THE  
ORDER  
OF

Florida Dept of Environmental  
Regulations

DATE

August 3, 1987

AMOUNT

\$\*500.00\*\*





**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
AIR POLLUTION SOURCES  
CERTIFICATE OF COMPLETION OF CONSTRUCTION\***

PERMIT NO. AC48-117138 DATE: 7/28/87

Company Name: Spiralkote, Inc County: Orange

Source Identification(s): Olympia 746 flexographic printing & coating unit & associated catalytic incinerator system.

Actual costs of serving pollution control purpose: \$ 310,000

Operating Rates: 6240 hrs/yr Design Capacity: 26 reams/hr

Expected Normal 26 reams/hr During Compliance Test 25.1 reams/hr

Date of Compliance Test: 5/19/87 (Attach detailed test report)

Test Results:	Pollutant	Actual Discharge	Allowed Discharge
	VOC	3.37 lb VOC/hr as carbon (6.52 lb VOC/hr)	22.8 lb/hr
	Capture Effic	90.24 percent	70 percent
	Destruction Effic.	97.48 percent	95 percent

Date plant placed in operation: May 1987

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. AC48-117138 dated 8/22/86.

**A. Applicant:**

Robert E. Kindorf, Vice President  
Name of Person Signing (Type)

Robert E. Kindorf  
Signature of Owner or Authorized Representative and Title

Date: \_\_\_\_\_ Telephone: (305) 859-7780

**B. Professional Engineer:**

Jerome J. Guidry, P.E.  
Name of Person Signing (Type)  
Post, Buckley, Schuh & Jernigan, Inc.  
Company Name

Jerome J. Guidry  
Signature of Professional Engineer

Florida Registration No. 32589

Date: 8-5-87

(Seal)

889 N. Orange Avenue, Orlando, FL 32801

Mailing Address

(305) 423-7275

Telephone Number

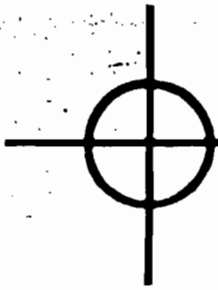
\*This form, satisfactorily completed, submitted in conjunction with an existing application to construct permit and payment of application processing fee will be accepted in lieu of an application to operate.

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

STACK TEST RESULTS FOR CI PRESS

AC48-82733

Will be retested in October, 1987



# Dec-E-Tech

Industrial design engineering & manufacturing

P.O. Box 72 • Tyngsborough, MA • 01879 • Tel.# 617/649-3285  
July 15, 1987

JUL 22 1987

Mr. Bob Kindorf  
Spiralkote, Inc.  
Subsidiary of Fleming-Potter Co.  
1200 Central Florida Parkway  
Orlando, FL 32821

Dear Bob:

As per our meeting and conversation with Herb Etter the following is a summary of our conversation and agreements made to rectify the problem with the Kidder 6 Color Recirculation/Incineration system installed by Dec-E-Tech Inc.

As we discussed, Dec-E-Tech contracted to install an incineration system utilizing an Etter incinerator which uses Carulite 200 magnesium dioxide pellets. Etter has guaranteed an overall destruction of greater than 95% on their incinerator. All testing of this unit, to this point, however, has been in the area of 89% destruction efficiency.

Most recently the Carus' laboratory analysis of the second pellet charge indicated hydrocarbon soaking at low temperatures which led to the destruction of these pellets. Although one can only speculate as to the cause and time of pellet destruction, we can make the system less prone to this event by improving the 3 way valve and changing operational procedures whereby the incinerator will see less cycling.

In order to rectify and prove the incinerator to be viable, we agree to the following:

1. Dec-E-Tech will re-design, remove and install the 3 way valve prior to the incinerator.
2. All parties will witness and approve the effectiveness of the new 3 way prior to re-charging the incinerator.
3. Etter will ensure that the incinerator components have been installed properly and are operational.
4. Recharging of the incinerator will be supervised by Etter Engineering.
5. The unit will be run with the press and the incinerator will be tested with Etter's portable FID at time 0 and 10 hours later.

July 15, 1987

Page 2 of 2 Pages

6. If the FID indicates a destruction efficiency of less than 95%, Etter will immediately repair the unit and retest the system as noted in #5.

This I believe will satisfy all parties, whereby all the parameters can be controlled and properly analyzed if problems occur.

If we are all in agreement that these are the facts, we will proceed accordingly. If not, please notify all parties in writing.

I will notify everyone when the 3 way will be installed.

Sincerely,

  
Roger Decelles

RD/cac

cc: H. Etter  
J. R. Wilson

Table 1 Volatile Organic Compounds  
 CI Press Summary  
 Spiralkote, Inc.  
 May 18, 1987

Run No.	Inlet PPM C		Inlet Flow SCFMD	Run Time (Minutes)	Inlet lb C		Usage Lb C	Capture Efficiency		Outlet PPM C		Outlet Flow SCFMD	Outlet Lb C		Destruction Efficiency	
	RTL	CAE			RTL	CAE		RTL	CAE	RTL	CAE		RTL	CAE	RTL	CAE
1	2617	1822	----	103	17.14	11.93	29.85	57.42	40.00	213	371	----	1.68	2.87	90.20	75.94
2	2598	2720	----	103	17.02	17.82	33.32	51.07	53.48	249	256	----	1.96	2.00	88.46	88.78
3	1657	1588	----	87	9.17	8.77	12.98	70.62	67.56	162	182	----	1.08	1.21	88.23	86.20
AVG	----	----	2042	---	14.44	12.84	25.38	56.89	50.59	---	---	2460	1.57	2.03	89.13	84.19

## Factors for Calculating Ink/Varnish Solvent Content

Inmost white Ink = 44.6% VOC as supplied

20 lbs virgin Ink diluted with 2.25 lbs 90/10 solvent

$$\frac{2.25 \text{ lbs of } 90/10 \text{ solvent}}{20 \text{ lbs Ink}} \times 100 = 11.25\% \text{ cut}$$

- ∴ 0.1125 is the multiplier for ink/solvent mixture to determine quantity of virgin ink returned

Inmost Extender Varnish = 54.9% as supplied

20 lbs virgin Extender cut with 4.5 lbs 90/10 solvent

$$\frac{4.5 \text{ lbs}}{20 \text{ lbs varnish}} \times 100 = 22.5\% \text{ Cut}$$

- ∴ 0.225 is the multiplier for varnish/solvent mixture to determine quantity of virgin varnish returned

Run 1 - CI Press

5-19-57

INK

Start with 80 # virgin Ink  
Returned 25 # INK/solvent mixture

To determine amount of virgin ink in Ink/solvent Mixture

$$25 - (25 \times 0.1125) = 22.1875 \text{ lbs virgin Ink in Mixture}$$

2.8125 lbs of 90/10 solvent in mixture

80 # virgin ink

- 22.1875 # virgin ink returned from Mixture

57.8125 # virgin ink used during run 1

$$57.8125 \# \times 0.243 = \underline{\underline{14.048}} \text{ lbs Carbon used from Ink}$$

Run 1 - CI Press

5-19-37

VARNISH

Start with 42 # virgin Extender Varnish

Return 16 # Varnish/Solvent mixture

To Determine amount of virgin Varnish in mixture

$$16 - (16 \times 0.225) = 12.4 \# \text{ virgin varnish in mixture}$$

3.6 lbs of 90/10 solvent in mixture

42 # virgin varnish

- 12.4 # virgin varnish returned from mixture

29.6 # virgin varnish used during Run 1

$$29.6 * 0.313 = \underline{\underline{9.2648}} \text{ lbs Carbon From Varnish}$$



Run 1 - CI Press

5-19-87

SOLVENT

90% ETOH / 10% NPA Blend

Start with 71.5 # Solvent Blend

Returned - 47.5 #

24 #

also returned - 6.4125 # from Ink and Varnish solvent mixtures

17.5875 # of solvent used

$$(17.5875 \div 6.681 \text{ #/gal}) \times 2.4825 \text{ #C/gal} = \underline{\underline{6.535 \text{ #C used}}}$$

Run 1 Summary  
CI Press

5-19-87

	<u>Ink</u>	<u>Varnish</u>	<u>Solvent</u>
Total # WED	57.8125	29.6	17.5875
Total Carbon	14.048	9.2648	6.535

$$\begin{aligned} \text{Total Available Carbon} &= 14.048^* + 9.2648^* + 6.535^* \\ &= \underline{\underline{29.8478}} \text{ \#C} \end{aligned}$$

Run Time = 1:42:55

Total Production = 43,500 ft or 12.98 Reams/hr

Run 2 - CI Press

5-19-87

INK

Started with 76.5# virgin ink  
Returned 26.75# Ink/solvent mixture

$$26.75 - (26.75 \times 0.1125) = 23.74 \# \text{ virgin ink in Mixture}$$

3.009 # of 90% Solvent in mixture

$$\begin{array}{r} 76.5 \# \text{ virgin ink} \\ - 23.74 \# \text{ virgin ink returned in Mixture} \\ \hline 52.76 \# \text{ virgin ink used during Run 2} \end{array}$$

$$52.76 \# \times 0.243 = \underline{\underline{12.82 \# \text{ Carbon used from Ink}}}$$

Run 2 - CI Press

5-19-87

VARNISH

Started with = 48.25 # virgin extender Varnish  
Returned 14.75 # Varnish/solvent mixture

$$14.75 - (14.75 \times 0.225) = 11.431 \text{ # virgin varnish in Mixture}$$

3.319 lbs of 90/10 solvent Blend in mixture

$$\begin{array}{r} 48.25 \text{ # virgin varnish} \\ - 11.431 \text{ # virgin varnish returned in mixture} \\ \hline 36.819 \text{ # virgin varnish used during Run 2} \end{array}$$

$$36.819 \text{ #} \times 0.313 = \underline{\underline{11.524}} \text{ lbs Carbon from Varnish}$$

Run 2 - CI Press

5-19-87

Solvent - 90/10 Blend

Start with 71.5 #

returned - 41 #

returned - 3.009 # From Ink/solvent mixture

returned - 3.319 # From Varnish/solvent mixture

24.172 # of Solvent used during Run 2

$$(24.172 \# \div 6.681 \#/\text{gal}) \times 2.4825 \#/\text{gal} = \underline{\underline{8.98 \# \text{ used}}}$$

Run 2 - Summary CI Press 5-19-87

	<u>INK</u>	<u>Varnish</u>	<u>Solvent</u>
Total # USED	52.76	36.819	24.172
Total Carbon	12.82	11.524	8.98

$$\begin{aligned} \text{Total Available Carbon} &= 12.82 + 11.524 + 8.98 \\ &= \underline{\underline{33.324}} \text{ \# C used Run 2} \end{aligned}$$

Run Time = 1:43:13

Total Production = 43,270 ft or 12.91 Reams/hr

Run 3 - CI Press

5-17-87

INK

Started with 70# virgin ink

returned 25# ink solvent mixture

$$29 - (29 \times 0.1125) = 25.7375 \# \text{ virgin ink in mixture}$$

$$3.2625 \# \text{ solvent } 90/10 \text{ in mixture}$$

70# virgin ink

$$- \underline{25.7375} \# \text{ virgin ink returned in mixture}$$

$$44.2625 \# \text{ virgin ink used during Run 3}$$

$$44.2625 \# \times 0.243 = 10.756 \# \text{ Carbon used from Ink}$$

Run 3- CI Press

5-14-37

Varnish

Varnish Deck Malfunctioned during this Run  
no varnish applied to web.



Run 3 - CI Press      5-19-87  
Solvent

started with      35# 90% blend  
 returned      - 25.75# 90% blend  
 returned      - 3.2625# from ink/solvent mixture  
                   5.9875# of solvent used during Run 3

$$(5.9875\# \div 6.1081\#/\text{gal}) \times 2.4825\#/\text{gal} = 2.22\# \text{ used}$$

Run 3 - CI Press  
Summary

5-19-87

	<u>INK</u>	<u>Varnish</u>	<u>Solvent</u>
Total * USED	44.2625	NONE	5.9875
Total Carbon *	10.756	NONE	2.22

$$\begin{aligned} \text{Total Available Carbon} &= 10.756^* + 2.22^* \\ &= 12.976^* \text{ C used run 3} \end{aligned}$$

Run Time = 1:27:05

Production = 35,515 or 12.54 Reams/hr

EPA METHOD 5

SOURCE TEST CALCULATIONS

Plant SPARKNOTE Stack CI out Date 5-19-87 Run No. \_\_\_\_\_  
 Bar. Press, PB 29.98 Stack Press, PS 29.98 Stack Dimensions 26.75 x 30.75  
 CP .84 Stack Area 5.71 ft<sup>2</sup>, Eff. Stack Area \_\_\_\_\_ ft<sup>2</sup>, Avg. Stack Temp. TS 896 R  
 Avg. Meter Temp. Tm, \_\_\_\_\_ °R. Avg.  $\sqrt{\Delta P}$ , .172 "H<sub>2</sub>O, Avg. Meter Orifice H" \_\_\_\_\_ H<sub>2</sub>O  
 Meter Vol, VM \_\_\_\_\_ ft<sup>3</sup>, Moisture Plus Silica Gel, Vic \_\_\_\_\_ ml, SAMPLE TIME \_\_\_\_\_ min  
 NOZZLE DIA. \_\_\_\_\_ in. NOZZLE AREA \_\_\_\_\_ ft<sup>2</sup> An: 1/8 - 0.000767 ft<sup>2</sup>;  
 3/16 - 0.0001916 ft<sup>2</sup>; 1/4 - 0.000341 ft<sup>2</sup>; 3/8 - 0.000767 ft<sup>2</sup>; 1/2 - 0.0013 ft<sup>2</sup>  
 ORSAT: CO<sub>2</sub> 0 %, O<sub>2</sub> 21 %, CO \_\_\_\_\_ %, N<sub>2</sub> 79 %

VWstd = (.04714) x (Vic) \_\_\_\_\_ SCF

\*VM (Leak Rate Correction) = VM - (CFM - 0.02 CFM) x Time \_\_\_\_\_ ft<sup>3</sup>

VMstd = [(17.647)(VM)(Y)] x [PB + (H ÷ 13.6)] ÷ TM \_\_\_\_\_ SCF

Bwo = Moisture Fraction = (VWstd) ÷ (VMstd + VWstd) 0.04

FDA = Fraction of dry air = (1.0) - (Bwo) 0.96

MD = 0.44 ( % CO<sub>2</sub>) + 0.32 ( % O<sub>2</sub>) + 0.28 ( % N<sub>2</sub> + % CO) = 28.84

MS = [(MD) x (FDA)] + [(18) x (Bwo)] 28.41

ZEa =  $\frac{(\% O_2) - [0.5 - (\% CO)]}{[0.264(\% N_2)] - [(\% O_2) + 0.5(\% CO)]} \times 100$  \_\_\_\_\_

(Vs)avg = Avg. Velocity = (85.48) x (CP) x  $\sqrt{\Delta P}$  x  $\sqrt{\frac{TS}{MS \times PS}}$  12.67 FPS

QS = gas flow rate - (Vs)avg x (AS) x (60) 4340 ACFM

(QS)std = (QS) x (FDA) x  $\frac{(528)}{TS}$  x  $\frac{(PS)}{29.92}$  2460 SCFMD

I = TS  $\frac{[(0.00267 \times Vic) + (VMstd 17.647)]}{(TIME \times PS \times AN \times Vs \times 60)}$  x 100 \_\_\_\_\_ %

C's = Grains/DSCF = (0.0154) x (mg) ÷ (VMstd) \_\_\_\_\_ GR/DSCF

Grains/ACF = (C's) x (17.647) x (PS) x (FDA) ÷ (TS) \_\_\_\_\_ GR/ACF

C = lb/DSCF = (C's) ÷ 7000 \_\_\_\_\_ lb/DSCF

E<sub>12</sub> = (C's) x (12) ÷ (% CO<sub>2</sub>) \_\_\_\_\_ GR/DSCF @ 12% CO<sub>2</sub>

E<sub>50</sub> = (C's) x (100 + ZEa) ÷ (150) \_\_\_\_\_ GR/DSCF @ 50% EA

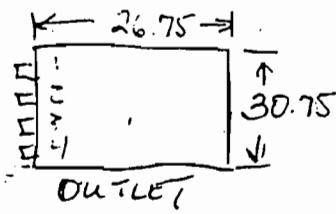
EM = Particulate emission rate = (C's) x (QS)std x (0.00857) \_\_\_\_\_ lbs/hr

E = (lb/MM Btu) = CF [(20.9) ÷ (20.9 - %O<sub>2</sub>)] \_\_\_\_\_ lb/MM Btu

- F Factors: Anthracite Coal = 10140  
 Bituminous Coal = 9820  
 Liquid Fossil Fuels = 9220  
 Gaseous Fossil Fuels = 8740

PRELIMINARY VELOCITY TRAVERSE

PLANT UNIT 2  
 DATE 5/19/87  
 LOCATION 5 - PIPING - OUTLET  
 STACK I.D. 5.71 FT<sup>2</sup>  
 BAROMETRIC PRESSURE, in. Hg 29.95  
 STACK GAUGE PRESSURE, in. H<sub>2</sub>O -0.09  
 OPERATORS HODGE GABEL NECK



SCHEMATIC OF TRAVERSE POINT LAYOUT

4% H<sub>2</sub>O 1220 Time

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>s</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.03	344
2	.03	334
3	.04	342
4	.045	353
5	.045	360
6	.045	370
2-1	.035	356
2	.02	363
3	.01	372
4	.02	383
5	.04	395
6	.06	399
2-1	.04	393
2	.02	387
3	.01	388
4	.015	387
5	.03	407
6	.05	412
2-1	.035	398
2	.035	402
3	.03	413
4	.025	419
5	.025	422
6	.05	414
AVERAGE	.177	384

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp <sub>s</sub> ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.03	486
2	.045	488
3	.045	490
4	.05	490
5	.055	493
6	.055	491
2-1	.04	490
2	.03	490
3	.02	493
4	.02	493
5	.04	492
6	.06	493
2-1	.025	486
2	.015	486
3	.005	485
4	.01	488
5	.02	489
6	.03	489
4-1	.03	479
2	.025	480
3	.015	482
4	.02	484
5	.015	484
6	.02	485
AVERAGE	.167	488

overall avg T<sub>s</sub> = 436°F

4271 ACPM  
 2500 ACPM



2601 N.W. 67th PLACE, SUITE 4  
GAINESVILLE, FLORIDA 32606

STACK SAMPLING FIELD DATA SHEET

TEST ID \_\_\_\_\_  
PAGE \_\_\_\_\_ OF \_\_\_\_\_

PLANT SPIRAKOTE SOURCE CI OUTLET  
 PLANT LOCATION ORLANDO  
 TYPE OF SAMPLING TRAIN EPA 2  
 TYPE OF SAMPLES H<sub>2</sub>O  
 DATE 5-19-87 RUN NO. 2  
 TIME START 1453 TIME END 1553  
 SAMPLE TIME 10 min/pl 60 Total min  
 BAR PRESS. 29.98 "Hg STACK PRESS. \_\_\_\_\_ "Hg  
 ASSUMED MOISTURE 4 % FDA .96  
 WEATHER CLOUDY TEMP. \_\_\_\_\_ °F  
 METER BOX NO. 1 ΔH 2.00 γ 1.000  
 NOMOGRAPH C<sub>1</sub> \_\_\_\_\_ PITOT CORR. FACTOR 0.84  
 NOZZLE CALIBRATION \_\_\_\_\_ = \_\_\_\_\_  
 STACK DIMENSIONS \_\_\_\_\_  
 STACK AREA \_\_\_\_\_ (EFFECTIVE \_\_\_\_\_) ft<sup>2</sup>  
 STACK HEIGHT \_\_\_\_\_ ft.  
 STACK DIAMETER: UPSTREAM \_\_\_\_\_ DOWNSTREAM \_\_\_\_\_  
 PORT SIZE \_\_\_\_\_ in. NIPPLE LENGTH \_\_\_\_\_  
 U CORD LENGTH: \_\_\_\_\_  
 REMARKS: \_\_\_\_\_

$1.0472 \times 1.1 = \cancel{SCF} H_2O$   
 $= 1.177$   
 $\frac{528}{T_{COR}} = SCF_{D.V.}$   
 $= 41.24$   
 $SCF_{N_2O}$   
 $SCF_{SV} + SCF_{H_2O}$   
 1.70 SCF H<sub>2</sub>O  
 $.96 \times = 41.263 \text{ ft}^3 \text{ std}$   
 4.1 ~~0.1~~ % moisture

MAT'L PROCESSING RATE \_\_\_\_\_  
 GAS METER READINGS: FINAL 529.405 ft.<sup>3</sup>  
 INITIAL 486.601 ft.<sup>3</sup>  
 NET 42.804 ft.<sup>3</sup>  
 IMPINGERS VOL. GAIN 26 ml.  
 SILICA GEL NO. 44 WT. GAIN 11.6  
 FILTER NO. \_\_\_\_\_ TOTAL CONDENSATE 37.6 ml.

ORSAT	1	2	3	4	AVG
% CO <sub>2</sub>					
% O <sub>2</sub>					
% CO					
% N <sub>2</sub>					

F<sub>0</sub> \_\_\_\_\_ F<sub>0</sub> RANGE \_\_\_\_\_  
 LEAK CHECKS: METER BOX/PUMP \_\_\_\_\_  
 ORSAT BAG \_\_\_\_\_ GAS SAMPLE SYSTEM \_\_\_\_\_  
 ORSAT ANALYZER \_\_\_\_\_  
 PRE-TEST 15 CFM "Hg POST-TEST \_\_\_\_\_ CFM "Hg  
 BOX OPERATOR Label PROBE HOLDER \_\_\_\_\_  
 PYROMETER NO. \_\_\_\_\_ PITOT TUBE NO. \_\_\_\_\_  
 PITOT TUBE LEAK CHECK: PRETEST \_\_\_\_\_  
 POST-TEST(+) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC  
 POST-TEST(-) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN.)	CLOCK TIME	GAS METER READING (FT <sup>3</sup> )	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF. ("H <sub>2</sub> O)		STACK GAS TEMP. (°F)	SAMPLE BOX TEMP. (°F)	LAST IMPINGER TEMP. (°F)	DRY GAS METER TEMP. (°F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1						2.0	415		82	89	2.5
			493.6			2.0	418		63	88	2.5
			501.0			2.0	425		62	88	3
			508.2			2.0	434		61	87	3
			515.3			2.0	430		62	87	3
			522.3			2.0	434		62	87	3

EPA METHOD 5  
SOURCE TEST CALCULATIONS

Plant SPIRALKOTE Stack CI INLET Date 5-19-87 Run No. \_\_\_\_\_  
 Bar. Press, PB 29.98 Stack Press, PS 29.87 Stack Dimensions 16" x 16"  
 CP .84 Stack Area 1.78 ft<sup>2</sup>, Eff. Stack Area \_\_\_\_\_ ft<sup>2</sup>, Avg. Stack Temp. TS 572°R  
 Avg. Meter Temp. Tm., \_\_\_\_\_ °R. Avg.  $\sqrt{\Delta P}$ , .372"H<sub>2</sub>O, Avg. Meter Orifice H" \_\_\_\_\_ H<sub>2</sub>O  
 Meter Vol, VM \_\_\_\_\_ ft<sup>3</sup>, Moisture Plus Silica Gel, Vic \_\_\_\_\_ ml, SAMPLE TIME \_\_\_\_\_ min  
 NOZZLE DIA. \_\_\_\_\_ in. NOZZLE AREA \_\_\_\_\_ ft<sup>2</sup> An: 1/8 - 0.000767 ft<sup>2</sup>;  
 3/16 - 0.0001916 ft<sup>2</sup>; 1/4 - 0.000341 ft<sup>2</sup>; 3/8 - 0.000767 ft<sup>2</sup>; 1/2 - 0.0013 ft<sup>2</sup>  
 ORSAT: CO<sub>2</sub> \_\_\_\_\_ %, O<sub>2</sub> \_\_\_\_\_ %, CO \_\_\_\_\_ %, N<sub>2</sub> \_\_\_\_\_ %

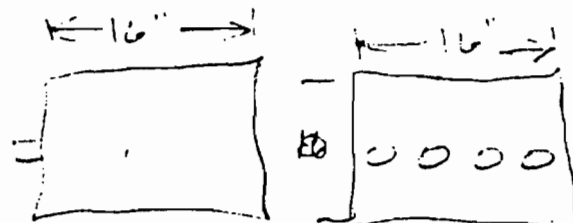
VWstd = (.04714) x (Vic) \_\_\_\_\_ SCF  
 \*VM (Leak Rate Correction) = VM - (CFM - 0.02 CFM) x Time \_\_\_\_\_ ft<sup>3</sup>  
 VMstd = [(17.647)(VM)(Y)] x [PB + (H ÷ 13.6)] ÷ TM \_\_\_\_\_ SCF  
 Bwo = Moisture Fraction = (VWstd) ÷ (VMstd + VWstd) 0.037  
 FDA = Fraction of dry air = (1.0) - (Bwo) 0.963  
 MD = 0.44 ( % CO<sub>2</sub>) + 0.32 ( % O<sub>2</sub>) + 0.28 ( % N<sub>2</sub> + % CO) = 28.84  
 MS = [(MD) x (FDA)] + [(18) x (Bwo)] 28.44  

$$\%EA = \frac{(\% O_2) - [0.5 - (\% CO)]}{[0.264(\% N_2)] - [(\% O_2) + 0.5 (\% CO)]} \times 100$$
  
 (Vs)avg = Avg. Velocity = (85.48) x (CP) x  $\sqrt{\Delta P}$  x  $\sqrt{\frac{TS}{MS \times PS}}$  22.3 FPS  
 QS = gas flow rate = (Vs)avg x (AS) x (60) 2381 ACFM  
 (QS)std = (QS) x (FDA) x  $\frac{(528)}{TS}$  x  $\frac{(PS)}{29.92}$  2042 SCFMD  

$$I = TS \frac{[(0.00267 \times Vic) + (VMstd \div 17.647)]}{(TIME \times PS \times AN \times Vs \times 60)} \times 100$$
 \_\_\_\_\_ %  
 C's = Grains/DSCF = (0.0154) x (mg) ÷ (VMstd) \_\_\_\_\_ GR/DSCF  
 Grains/ACF = (C's) x (17.647) x (PS) x (FDA) ÷ (TS) \_\_\_\_\_ GR/ACF  
 C = lb/DSCF = (C's) ÷ 7000 \_\_\_\_\_ lb/DSCF  
 E<sub>12</sub> = (C's) x (12) ÷ ( % CO<sub>2</sub>) \_\_\_\_\_ GR/DSCF @ 12% CO<sub>2</sub>  
 E<sub>50</sub> = (C's) x (100 + %EA) ÷ (150) \_\_\_\_\_ GR/DSCF @ 50% EA  
 EM = Particulate emission rate = (C's) x (QS)std x (0.00857) \_\_\_\_\_ lbs/hr  
 E = (lb/MM Btu) = CF [(20.9) ÷ (20.9 - %O<sub>2</sub>)] \_\_\_\_\_ lb/MM Btu  
 F Factors: Anthracite Coal = 10140  
 Bituminous Coal = 9820  
 Liquid Fossil Fuels = 9220  
 Gaseous Fossil Fuels = 8740

PRELIMINARY VELOCITY TRAVERSE

PLANT SPRAL KOTE  
 DATE 5/19/57  
 LOCATION CE PRESS - INLET  
 STACK I.D. 16" x 16" (1.78 FT<sup>2</sup>)  
 BAROMETRIC PRESSURE, in. Hg 29.98  
 STACK GAUGE PRESSURE, in. H<sub>2</sub>O -1.5  
 OPERATORS \_\_\_\_\_



3.7% H<sub>2</sub>O

SCHEMATIC OF TRAVERSE POINT LAYOUT

$A_v = .371$        $A_v = 137.8 \pm 138^\circ F$

TRAVERSE POINT NUMBER	VELOCITY HEAD ( $\Delta p_s$ ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1-1	.11	140
2	.12	140
3	.14	139
4	.15	138
5	.17	138
6	.15	139
2-1	.11	135
2	.12	136
3	.13	138
4	.13	138
5	.16	139
6	.15	138
3-1	.12	136
2	.13	137
3	.12	138
4	.14	138
5	.15	139
6	.16	138
4-1	.12	135
2	.13	137
3	.15	138
4	.16	139
5	.16	138
6	.14	137
AVERAGE	.1371	

IN

$A_v = .373$

TRAVERSE POINT NUMBER	VELOCITY HEAD ( $\Delta p_s$ ), in. H <sub>2</sub> O	STACK TEMPERATURE (T <sub>s</sub> ), °F
1410F DB 1-1	.14	123
940F WB 2	.15	120
3	.14	125
4	.15	128
5	.14	128
6	.16	128
2-1	.115	126
2	.115	126
3	.12	127
4	.13	127
5	.15	127
6	.17	127
3-1	.10	126
2	.12	127
3	.13	127
4	.15	128
5	.17	129
6	.15	129
4-1	.09	129
2	.12	130
3	.14	130
4	.17	129
5	.17	129
6	.165	129
AVERAGE	.1373	127.3

= 127

2358 ACPM  
 2002 SCFM

$T_s = 132^\circ F + 460 = 592^\circ R$

STACK SAMPLING FIELD DATA SHEET



2601 N.W. 67th PLACE, SUITE 4  
GAINESVILLE, FLORIDA 32606

200 8701 A

TEST ID \_\_\_\_\_  
PAGE 1 OF 1

PLANT SPIRALKOTE SOURCE CI. OUTLET  
 PLANT LOCATION ORLANDO  
 TYPE OF SAMPLING TRAIN EPA 2  
 TYPE OF SAMPLES H<sub>2</sub>O  
 DATE 5-19-87 RUN NO. 1  
 TIME START 1255 TIME END 1330  
 SAMPLE TIME \_\_\_\_\_ min/pl 35 Total min  
 BAR PRESS. 29.98 "Hg STACK PRESS. \_\_\_\_\_ "Hg  
 ASSUMED MOISTURE 4 % FDA 96  
 WEATHER \_\_\_\_\_ TEMP. \_\_\_\_\_ °F  
 METER BOX NO. 1 ΔH 2.00 γ 1.000  
 NOMOGRAPH C<sub>1</sub> \_\_\_\_\_ PITOT CORR. FACTOR 0.84  
 NOZZLE CALIBRATION \_\_\_\_\_ = n/a  
 STACK DIMENSIONS \_\_\_\_\_  
 STACK AREA \_\_\_\_\_ (EFFECTIVE \_\_\_\_\_ ft<sup>2</sup>)  
 STACK HEIGHT \_\_\_\_\_ ft.  
 STACK DIAMETER: UPSTREAM \_\_\_\_\_ DOWNSTREAM \_\_\_\_\_  
 PORT SIZE \_\_\_\_\_ in. NIPPLE LENGTH \_\_\_\_\_  
 U CORD LENGTH: 50  
 REMARKS: \_\_\_\_\_

SCF = 27.46  
 V<sub>WV</sub> = 1.14  
 % H<sub>2</sub>O = 4.0

MAT'L PROCESSING RATE \_\_\_\_\_  
 GAS METER READINGS: FINAL 489.958 ft.<sup>3</sup>  
 INITIAL 461.400 ft.<sup>3</sup>  
 NET 28.556 ft.<sup>3</sup>  
 IMPINGERS VOL. GAIN 17 ml.  
 SILICA GEL NO. 23 WT. GAIN 7.1  
 FILTER NO. \_\_\_\_\_ TOTAL CONDENSATE 24.1 ml.

ORSAT

	1	2	3	4	AVG
% CO <sub>2</sub>					
% O <sub>2</sub>					
% CO					
% N <sub>2</sub>					

F<sub>0</sub> \_\_\_\_\_ F<sub>0</sub> RANGE \_\_\_\_\_  
 LEAK CHECKS: METER BOX/PUMP OK  
 ORSAT BAG \_\_\_\_\_ GAS SAMPLE SYSTEM OK  
 ORSAT ANALYZER \_\_\_\_\_  
 PRE-TEST 0.02 CFM 15 "Hg POST-TEST 0.02 CFM 6 "Hg  
 BOX OPERATOR GABEL PROBE HOLDER \_\_\_\_\_  
 PYROMETER NO. 1 PITOT TUBE NO. \_\_\_\_\_  
 PITOT TUBE LEAK CHECK: PRETEST OK  
 POST-TEST(+) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC  
 POST-TEST(-) \_\_\_\_\_ H<sub>2</sub>O \_\_\_\_\_ SEC

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN.)	CLOCK TIME	GAS METER READING (FT <sup>3</sup> )	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF. ("H <sub>2</sub> O)		STACK GAS TEMP (°F)	SAMPLE BOX TEMP (°F)	LAST IMPINGER TEMP (°F)	DRY GAS METER TEMP (°F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1						2.0	412		72	87	2.5
			465.0			2.0	410		66	88	2.5
			468.5			2.0	408		65	89	2.5
			472.0			2.0	411		65	89	2.5
			475.5			2.0	412		65	90	2.5
			479.0			2.0	413		65	90	2.5





POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

*File Copy*

*JTG*



September 25, 1987

Mr. A. T. Sawicki, P.E.  
Florida Department of Environmental Regulation  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote  
Olympia 746 Flexographic Press  
AC48-117138

Dear Mr. Sawicki:

I wish to request an extension to the above referenced construction permit. Please change the expiration date from November 30, 1987 to March 31, 1988. The Certificate of Completion was submitted to the Department on August 5, 1987. This request is made to assure that the construction permit does not expire.

If you have any questions, please call me at (305) 423-7275.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.  
Manager, EAD Division

JJG:daa

cc: Robert Kindorf  
Bruno Ferraro

Certified Mail No. P 609 605 525

A3:az

DER  
OCT 27 1987  
BAQM

DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Bruce Mitchell

Initial

Date

2.

Bureau of Air Quality Manag.

Initial

Date

3. Department of Environmental Regulation  
Twin Towers Office Building

Initial

Date

4.

2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Initial

Date

REMARKS:

F.Y.R.

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

DER  
OCT 27 1987  
BAQM

FROM:

*John J. [Signature]*

DATE

10/26/87

PHONE

SC 325-1403

File Page

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB MARTINEZ  
GOVERNOR  
DALE TWACHTMANN  
SECRETARY

June 19, 1987

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

Re: Expiration Date Extension for the Construction Permits:  
AC 48-82733 and -117138

The Department is in receipt of Mr. Jerome J. Guidry's letter dated May 19, 1987, which requested an extension of the expiration date for the above referenced permits. The following shall be changed and added:

Expiration Date:

- o AC 48-82733  
From: June 30, 1987  
To: November 30, 1987
- o AC 48-117138  
From: July 31, 1987  
To: November 30, 1987

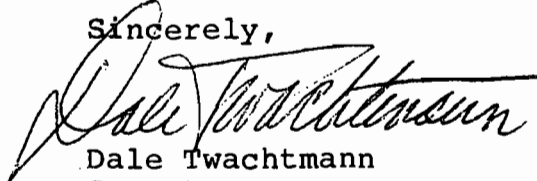
Attachment to be Incorporated:

- o AC 48-82733  
34. Mr. Jerome J. Guidry's letter dated May 19, 1987, and received May 26, 1987.
- o AC 48-117138  
5. Mr. Jerome J. Guidry's letter dated May 19, 1987, and received May 26, 1987.

Mr. Robert E. Kindorf  
Page Two  
June 19, 1987

This letter must be attached to your construction permits, Nos. AC 48-82733 and -117138, and shall become a part of the permits.

Sincerely,

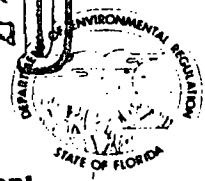


Dale Twachtmann  
Secretary

DT/ks

cc: T. Sawicki, P.E.  
J. Guidry, P.E.

RECEIVED



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

JUN 18 1987

Office of the Secretary

# Interoffice Memorandum

TO: Dale Twachtmann

THRU: Howard Rhodes *HR*

FROM: Clair Fancy *CF*

DATE: June 19, 1987

SUBJ: Amendment to Construction Permits Nos. AC 48-82733 and  
AC 48-117138  
Spiralkote, Inc.

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
FROM: _____	DATE: _____

Spiralkote Inc. has requested expiration date extensions for the referenced construction permits issued March 19, 1986, and August 22, 1986, respectively. The Bureau recommends approval.

CHF/BM/s

Attachment



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

PM  
5-21-87  
Orlando, FL

CM: [P-609-605-422]

filed

DER

MAY 26 1987

BAQM

May 19, 1987

Mr. C. H. Fancy, P.E.  
Deputy Chief, Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

RE: Spiralkote, Inc.  
Orange County, AP  
Kidder CI Press - AC48-82733  
Olympia 746 Press - AC48-117138

Dear Mr. Fancy:

We are requesting extensions to the expiration dates of the above referenced construction permits. We expect to have the stack test results by July 1, 1987 and the certificate of completion application submitted by July 30, 1987. In order to give the Department ample time to review the test results and the applications, we wish to extend the two permit expiration dates to November 30, 1987.

If you have any questions regarding this request, please contact either Bruno Ferraro at (305) 298-2282 or me at (305) 423-7275.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry, P.E.

cc: Robert E. Kindorf  
Bruno A. Ferraro  
A. T. Sawicki  
Rob Rhodes

Certified Mail No. P 609 605 422

P 408 531 146

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	
Mr. Robert E. Kindorf	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
1/28/87	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

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

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

3. Article Addressed to:  
Mr. Robert E. Kindorf  
Spiralkote, Inc.  
1200 Central Fla. Parkway  
Orlando, FL 32809

4. Type of Service:      Article Number  
 Registered       Insured  
 Certified       COD      P 408 531 146  
 Express Mail

\*Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
X

6. Signature - Agent  
X *[Handwritten Signature]*

7. Date of Delivery  
*1-30-87*

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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB MARTINEZ  
GOVERNOR  
DALE TWACHTMANN  
SECRETARY

January 21, 1987

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

Re: Expiration Date Extension for the Construction Permit:  
AC 48-117138

The department is in receipt of Mr. Jerome J. Guidry's letter dated January 5, 1987, which requested an extension of the expiration date for the above referenced permit. The bureau is in agreement with the request and the following shall be changed and added:

Expiration Date:

From: March 31, 1987  
To: July 31, 1987

Attachment to be Incorporated:

4. Mr. Jerome J. Guidry's letter dated January 5, 1987 and received January 8, 1987.

This letter must be attached to your construction permit No. AC 48-117138 and shall become a part of the permit.

Sincerely,

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

HLR/ks

cc: T. Sawicki  
J. Cobb Costas



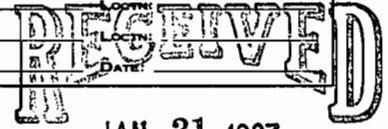
State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: \_\_\_\_\_ Locn: \_\_\_\_\_  
To: \_\_\_\_\_ Locn: \_\_\_\_\_  
To: \_\_\_\_\_ Locn: \_\_\_\_\_  
From: \_\_\_\_\_ Date: \_\_\_\_\_



TO: Howard L. Rhodes, Director

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

DATE: January 21, 1987 *CHF*

DIRECTOR - PROGRAMS

SUBJ: Approval and Signature of an Amendment to the Construction Permit, No. AC 48-117138, for Spiralkote, Inc., Issued August 22, 1986.

Enclosed is an amendment to the referenced construction permit and the bureau recommends approval.

BM/ks

DER

JAN 22 1987

BAQM



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275

PM  
1-6-87  
Delivered

DER

JAN 8 1987

BAQM

January 5, 1987

Mr. A. T. Sawicki, P.E.  
Air Permitting Section  
Florida Department of Environmental Regulation  
St. John's River District  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

RE: Spiralkote, Inc. - AC48-117138  
Olympia 746 Flexographic Printing  
& Coating Unit & Associated Catalytic  
Incineration System

Signed/Issued Aug 22, 86  
Exp. 5/31/87

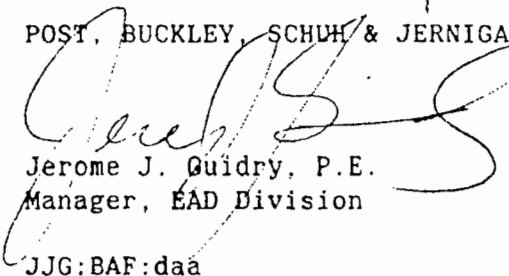
Dear Mr. Sawicki:

We are requesting a four (4) month extension on the expiration date of the above referenced permit. Please change the expiration date to July 31, 1987. We had some delays in acquiring and assembling the press, and we expect the press to be "on line" by mid February.

If you have any questions, please call me at (305) 423-7275.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

  
Jerome J. Quidry, P.E.  
Manager, EAD Division

JJG:BAF:daa

cc: Bruce Mitchell - Certified Mail # 755-303 542  
Bob Kindorf

Certified Mail No. P 387 903 541

21-023.00

**The Orlando Sentinel**

*JTG*

Published Daily  
Orlando, Orange County, Florida

ADVERTISING CHARGE \$94.27



State of Florida ss.  
COUNTY OF ORANGE

Before the undersigned authority personally appeared  
Catherine Deering

she is the Legal Advertising Representative of the Orlando Sentinel, a Daily newspaper published at Orlando, in Orange County, Florida; that the attached copy of advertisement, being a Notice of Intent Permit to Spiralkote, Inc. in the matter of

\_\_\_\_\_ in the \_\_\_\_\_ Court,  
was published in said newspaper in the issues of  
July 14, 1986

Affiant further says that the said Orlando Sentinel is a newspaper published at Orlando, in said Orange County, Florida, and that the said newspaper has heretofore been continuously published in said Orange County, Florida, each Week Day and has been entered as second-class mail matter at the post office in Orlando, in said Orange County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

*[Signature]*  
Sworn to and subscribed before me this 17th day

of July A.D., 19 86  
Nancy A. Pugliese  
Notary Public  
Notary Public, State of Florida at Large  
My Commission Expires May 25, 1987  
Banded by American Pioneer Casualty Ins. Co.

FORM NO. AD-262

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF INTENT

The Department gives notice of its intent to issue a permit to Spiralkote, Inc. for the construction of a printing and coating unit and associated catalytic incinerator system at the existing Spiralkote, Inc., facility located at 1200 Central Florida Parkway in Orlando, Orange County, Florida. A determination of best available control technology (BACT) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes.

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

(hearing) under Section 120.57, Florida Statutes.  
The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:  
Dept. of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
Dept. of Environmental Regulation  
St. Johns River District  
3319 Maguire Blvd., Suite 232  
Orlando, Florida 32803  
Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the department's final determination.  
CL-462 Jul. 14, 1986

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

**SENDER: Complete items 1, 2, 3 and 4.**

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

JUN 24 1986

1.  Show to whom, date and address of delivery.

2.  Restricted Delivery.

BAQM

3. Article Addressed to:  
Mr. Robert E. Kindorf  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 408 532 116

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
X

6. Signature - Agent  
X *Robert E. Kindorf*

7. Date of Delivery  
*6/23/86*

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

P 408 532 116

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Robert E. Kindorf	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
6/20/86	

PS Form 3800, Feb. 1982

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

June 20, 1986

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

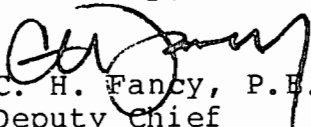
Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit to construct a flexographic printing and coating unit at your facility in Orlando, Orange County, Florida.

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

Sincerely,

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

CHF/pa

Attachments

cc: Jerome J. Guidry, P.E.  
Tom Sawicki

State of Florida  
Department of Environmental Regulation  
Notice of Intent

The Department gives notice of its intent to issue a permit to Spiralkote, Inc., for the construction of a printing and coating unit and associated catalytic incinerator system at the existing Spiralkote, Inc., facility located at 1200 Central Florida Parkway in Orlando, Orange County, Florida. A determination of best available control technology (BACT) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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

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

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

Dept. of Environmental Regulation  
St. Johns River District  
3319 Maguire Blvd., Suite 232  
Orlando, Florida 32803

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

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

---

DER File No. AC 48-117138

INTENT TO ISSUE

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

The applicant, Spiralkote, Inc., applied on March 7, 1986, to the Department of Environmental Regulation for a permit to construct a flexographic printing and coating unit and associated catalytic incinerator system to be located at the applicant's existing facility in Orlando, Orange County, Florida.

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

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

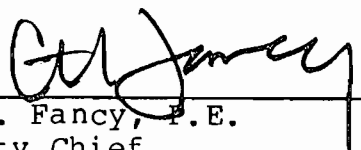


the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

Jerome J. Guidry, P.E.  
Tom Sawicki

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 June 20, 1986.

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

Patricia G. Adams June 20, 1986  
Clerk Date

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

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners;
  - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
  - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
  - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
  - (f) A demand for the relief to which the petitioner deems himself entitled; and
  - (g) Such other information which the petitioner contends is material.

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the applicant of the Department's notification, pursuant to Section 403.0876, F.S., that additional information is required.

Specific Authority: 120.53, 403.0876, 403.815, F.S. Law

Implemented: 120.53, F.S.

History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

**17-103.160 Uniformity in Approval and Denial of Applications for Department Permits and Certifications.** To the extent possible and consistent with the public interest, the Department approves and denies applications for permits and certifications on a uniform and consistent basis. Final Department actions on applications for permits and certifications shall be consistent with prior Department actions, unless deviation therefrom is explained by the Department in writing or the hearing officer who submits a recommended order to the Department for final agency action in accordance with Section 120.57, Florida Statutes.

Specific Authority: 120.53(1), F.S. Law Implemented: 120.53(1), 120.68(12), F.S. History: New 2-6-78, Transferred from 17-1.63, 6-1-84.

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

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

(1) Designation of Record. Within fifteen (15) days of rendition of the Department's final order, the appellant shall designate

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

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

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

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

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

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

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

occurs.

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

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

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

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

(c) any notices issued or published; and

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

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

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

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of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to an administrative determination (hearing) under Section 120.57, F.S.

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

(5)(a) Any applicant or person benefiting from the Department's action may elect to publish notice of proposed agency action in the manner provided by subsection (2) or (3). Any person who elects to publish notice of proposed agency action, upon presentation of proof of publication to the Department, prior to final agency action, shall be entitled to the same benefits under this rule as a person who is required to publish notice of proposed agency action. Since persons whose substantial interests are affected by a Department decision on a permit application may petition for an administrative proceeding within fourteen (14) days after receipt of notice and since, unless notice is given or published as prescribed in this rule, receipt of notice can occur at any time, the applicant or persons benefiting from the Department's action cannot justifiably rely on the finality of

the Department's decision without the notice having been duly given or published.

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

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

(6) Failure to publish any notice of application, notice of proposed agency action, or notice of agency action required by the Department shall be an independent basis for the denial of a permit.  
Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S.  
History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

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

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

17-103.150(3)(d) -- 17-103.155(1)(a)

Technical Evaluation  
and  
Preliminary Determination

Spiralkote, Inc.  
Orange County  
Orlando, Florida

Permit Number:  
AC 48-117138

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

June 20, 1986

I. Project Description

A. Applicant

Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

B. Project Description

The applicant proposes to replace an existing uncontrolled flexographic printing and coating unit designated Kidder I, which has potential VOC (volatile organic compounds or organic solvents) emissions of 49.6 tons per year (TPY; includes 1.9 TPY clean-up solvent), with a new Olympia Model 746 Central Impressions printing and coating unit. It will be equipped with an emissions collection system and two identical Etter Engineering catalytic incinerators to control VOC. The projected potential VOC emissions are 71.3 TPY (includes 1 TPY clean-up solvent), a net increase in facility VOC potential emissions of 21.7 TPY.

The incinerators are to be custom designed by Etter Engineering Company, Inc. and the duct work, collection system, and installation will be done by DEC-E-TECH Industrial Design Engineering. Each incinerator is a 2500 CFM natural gas fired system utilizing an Eclips Model 80-AHO burner. Heat recovery units associated with each incinerator will supply heat to the preheat chamber of the incinerator, thus reducing the amount of natural gas consumed.

The SIC (standard industrial codes) for the source are: Major Group 27 - Printing/Publishing; Group No. 275 - Commercial Printing; Industrial No. 2751 - Commercial Printing, Letterpress and Screen.

The UTM coordinates are Zone 17, 461.37 km East and 3142.05 km North.

C. Process and Controls

The flexographic printing and coating unit, the Olympia 746, will be used to produce composite can labels. While replacing Kidder I, the overall production will increase. The maximum rated production capacity for the Olympia 746 is 26 reams per hour (based on 3000 square feet per ream) while the Kidder I is rated at 9.17 reams per hour.

Two overhead dryers and one tunnel oven will be fired with natural gas and used to dry the production material. At times of



no production, the natural gas usage will be lowered to a minimum operating level.

Two catalytic incinerators utilizing natural gas will be used to destroy VOC emissions captured and transported to the inlet of the incinerator. The projected minimum capture/transport and destruction efficiencies are 70% and 95%, respectively.

## II. Rule Applicability

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code (FAC) Rules 17-2 and 17-4.

The application package was deemed complete on April 28, 1986.

The existing facility is located in Orange County, which is an area designated nonattainment for the pollutant ozone pursuant to FAC Rule 17-2.410(1)(b). The existing facility is a major facility for the pollutant VOC, which are defined pursuant to FAC Rules 17-2.100(110) and 17-2.100(209), respectively. VOC are considered precursors to ozone.

Other pollutants emitted from the facility are nitrogen oxides (NO<sub>x</sub>), sulfur dioxide, carbon monoxide, particulate matter and hydrocarbons as a result of the combustion of natural gas. With exception of NO<sub>x</sub>, the total facility projected potential emission for each pollutant is less than 0.5 TPY and considered insignificant. The total facility NO<sub>x</sub> emissions are estimated to be 1.5 TPY and also considered insignificant.

The projected potential VOC emissions associated with the Olympia 746 are exhibited in the following table:

Table 1

	<u>Potential VOC Emissions (TPY)</u>
Olympia 746	70.3
Clean-up Solvent	1.0
Total:	<u>71.3</u>

The contemporaneous VOC emissions decreases associated with Kidder I are exhibited in the following table:

Table 2

	<u>Contemporaneous VOC Emissions (TPY)</u>
Kidder I	47.7
Clean-up Solvent	1.9
Total:	<u>49.6</u>

The net VOC potential emissions increases associated with the proposed installation of the Olympia 746 and the retirement of Kidder I are exhibited in the following table:

Table 3

<u>Source</u>	<u>Net VOC Potential Emissions (TPY)</u>
Olympia 746	71.3
Kidder I	-49.6
Net:	<u>+21.7</u>

Based on Table 3, the proposed project would constitute a minor modification to a major facility. Since the increase is less than the significant levels pursuant to Table 500-2, the VOC emissions shall be exempt from new source review pursuant to FAC Rule 17-2.510(4) in accordance with FAC Rule 17-2.510(2)(d)4. Therefore, the proposed project's VOC emissions shall be subject to review pursuant to FAC Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

The source's allowable VOC emission limiting and performance standards shall be in accordance with FAC Rules 17-2.620, General Pollutant Emission Limiting Standards, and 17-2.650(1)(f)16., Graphic Arts Systems.

Since the associated VOC control system for the Olympia 746 was designed such that it is an integral part of the total operation, the department accepts the applicant's recommended VOC minimum capture and transport efficiency of 70% pursuant to FAC Rule 17-2.620(1)(a). Also, the department accepts the applicant's recommended VOC minimum destruction efficiency of 95% (oxidizes at least 95% of the VOC, measured as total combustible carbon, to carbon dioxide and water) pursuant to FAC Rules 17-2.620(1)(a) and 17-2.650(1)(f)16.b.(c).

No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly in accordance with FAC Rule 17-2.240, Circumvention.

The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions.

According to FAC Rule 17-2.620(2), no person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance according to FAC Rule 17-2.100(130). Therefore, objectionable odors shall not be allowed off plant property.

The applicant shall account for the VOC emissions from this unit. Accounting of the VOC emissions shall be maintained on a monthly basis and, due to EPA policy for ozone nonattainment areas, shall be verifiable on a 24-hour basis. The annual VOC emissions used by Olympia 746 shall be submitted in an annual operating report (AOR) within sixty (60) days after the anniversary date of the operating permit once it is acquired and shall be submitted to the DER's St. Johns River District office. Cleaning solvents shall be accounted for and included in the AOR.

Compliance testing shall be conducted on the catalytic incinerator system to determine the VOC capture and transport efficiency and the VOC destruction efficiency. The compliance test method to demonstrate the destruction efficiency shall be EPA Method 25 in accordance with Appendix A, 40 CFR 60. The applicant proposes to demonstrate the capture efficiency by comparing the amount of VOC used during a test and the VOC concentration measured at the inlet of the incinerator over the same period of time. The compliance tests shall be conducted while the unit is operating at 100% of its rated production capacity. Future compliance testing shall be conducted while the unit is operating at 90-100% of the rated production capacity.

### III. Summary of Emissions and Air Quality Analysis

#### A. Emission Limitations

The regulated pollutant emissions from the facility are VOC. The following table will reflect the maximum allowable VOC emissions for the Olympia 746:

Table 4

Source	Maximum Allowable VOC Emissions		
	lb/hr	tons/month	TPY
Olympia 746	22.5	5.85	70.3
Clean-up Solvent	0.3	0.08	1.0

Note: Based on 520 hours/month and 6240 hours/year; minimum 70% VOC capture and transport efficiency and 95% VOC destruction efficiency; 26 reams of paper per hour rated production capacity.

The permitted emissions are in compliance with all applicable requirements of FAC Rules 17-2 and 17-4.

#### IV. Conclusion

The installation of the Olympia 746 will allow the applicant to phase out the only uncontrolled flexographic printing and coating unit, Kidder I. With the addition of the Olympia 746 and the removal from service of the Kidder I, the total facility permitted VOC emissions becomes 151.9 TPY, which includes clean-up solvents of 6.7 TPY. However, Kidder I does not count against the new source allowance allotment (see Table 510.1, FAC Rule 17-2). Therefore, 102.3 tons (approximately 12%) of the Orange County's allotted new source allowance will be assigned to this facility. The modification net potential VOC emissions increase of 21.7 TPY will now be tracked for future facility modifications, which will allow an additional VOC emissions increase of 19.3 TPY before attaining the VOC significant emission rate of 40 TPY (Table 500-2, FAC Rule 17-2) and requiring review in accordance with FAC Rule 17-2.510(4), Preconstruction Review Requirements.

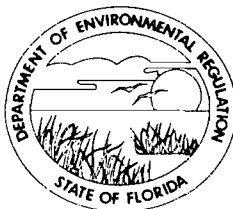
The net permitted VOC emissions increase from the proposed project should not cause any violation of Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all applicable requirements of FAC Rules 17-2 and 17-4.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

**PERMITTEE:**  
Spiralkote, Inc.  
1200 Central Fla. Parkway  
Orlando, Florida 32809

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987  
County: Orange  
Latitude/Longitude: 28° 24' 21"N  
81° 23' 40"W/  
Project: Olympia 746 Flexographic  
Printing & Coating Unit & Associated  
Catalytic Incinerator System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility 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/installation of the Olympia Model 746 Central Impressions, which is a flexographic printing and coating unit with three associated natural gas dryers: a  $0.8 \times 10^6$  Btu/hr - overhead dryer, a  $0.5 \times 10^6$  Btu/hr overhead dryer, and a  $0.15 \times 10^6$  Btu/hr tunnel oven. The dryers will operate at an idling level when not being used for production. The associated catalytic incinerator system will have a minimum 70% capture and transport efficiency and 95% destruction efficiency. The incinerator system will be custom designed by Etter Engineering Company, Inc., and consist of two identical 2500 CFM natural gas fired ( $0.4 \times 10^6$  Btu/hr) units utilizing an Eclipse model 80-AHO burner. The duct work and collection system will be designed and installed by Dec-E-Tech Industrial Design Engineering. The source emits volatile organic compounds and organic solvents (used for clean-up). The Olympia 746 will replace the existing Kidder I. The UTM coordinates are Zone 17, 461.37 km East and 3142.05 km North.

The Standard Industrial Codes are: Major Group 27 - Printing/Publishing; Group No. 275 - Commercial Printing; Industrial Number 2751 - Commercial Printing, Letterpress and Screen.

The source shall be as reflected in the permit application, plans documents, drawings and amendments, except as otherwise noted on pages 5-7 of the "Specific Conditions."

Attachments:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Jerome J. Guidry's cover letter dated March 3, 1986, and received March 7, 1986.
2. C. H. Fancy's letter dated April 1, 1986.
3. Jerome J. Guidry's letter dated April 24, 1986, and received April 28, 1986.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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

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

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

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

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

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

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

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

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

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

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

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) Compliance with New Source Performance Standards.
- ( ) Determination of Lowest Achievable Emission Rate (LAER)

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

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



PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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

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

**SPECIFIC CONDITIONS:**

1. The hours of operation shall not exceed 520 per month and 6240 annually.
2. The maximum allowable VOC (volatile organic compounds-organic solvents) emission limit shall not exceed 22.8 pounds per hour, 5.9 tons per month, and 71.3 tons per year (based on minimum 70% capture and transport efficiency and 95% destruction efficiency (oxidizes at least 95% of the VOC measured as total combustible carbon, to carbon dioxide and water) and includes 1 TPY clean-up solvent). The maximum rated production capacity is 26 reams per hour (based on 3000 square feet per ream).

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

3. A compliance test shall be conducted to determine the control system's capture and transport efficiency and the incinerator's destruction efficiency. The compliance test shall be conducted while operating at 100% of the rated production capacity. All subsequent compliance test(s) can be conducted while the unit is operating at 90-100% of the rated production capacity.

- o Destruction efficiency determination

The test method shall be EPA Method 25, Appendix A, 40 CFR 60, or other test method(s) approved by the department.

- o Capture and transport efficiency determination

The procedure proposed by the permittee involves the determination and comparison of the amount of VOC used during the test and the VOC concentration measured at the inlet of the incinerator over the same period of time.

4. All compliance tests shall require written notification to the DER's St. Johns River District office fifteen (15) days prior to the day of a test. All test(s) results shall be submitted to the DER's St. Johns River District office forty-five (45) days after completion of the last test run.

5. Objectionable odors shall not be allowed off plant property.

6. The units are subject to the provisions of FAC Rule 17-2.250, Excess Emissions. When a report of excess emissions is required, notify the DER's St. Johns River District office.

7. According to FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

8. All VOC emissions shall be accounted for monthly and verifiable on a 24-hour basis, and should include clean-up solvents. The annual VOC use and emissions shall be submitted in an AOR (annual operating report) to the DER's St. Johns River District office within sixty (60) days after the anniversary date of the operating permit once acquired.

PERMITTEE:  
Spiralkote, Inc.

Permit Number: AC 48-117138  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

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

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

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

10. Upon the completion of the requirements contained in Specific Condition #9 or the receipt of an operation permit, whichever occurs first, the permittee will surrender to the department all air pollution permits associated with Kidder I.

Issued this \_\_\_\_ day of \_\_\_\_\_, 19\_\_

**STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION**

---

VICTORIA J. TSCHINKEL, Secretary

\_\_\_\_ pages attached.



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275  
TELEX 808435

DER

APR 28 1986

BAQM

April 24, 1986

Mr. C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

RE: Response to completeness review  
Spiralkote construction permit application  
No. AC 48-117138

Dear Mr. Fancy:

This letter is in response to your April 1, 1986, completeness review to Mr. Robert E. Kindorf of Spiralkote, Inc., Orlando, Florida. We have researched your requests and the following represents Spiralkote's best estimates, based on historic data for the past three (3) years.

Item 1: The only information Spiralkote wishes to remain proprietary is technical details of the Olympia 746 press including drawings and production information.

Item 2: The projected solvent(s) usage for clean-up for this source and its operation has been extrapolated from historic data (based on solvent purchased versus quantity of hazardous solvents shipped out). The yearly estimate represents a conservative projection of solvent usage and the daily and monthly usage rates are based on this rate:

yearly = 2400 gal or 19,200 lbs  
based on 8 lbs/gal

weekly = 46.15 gal or 369.20 lbs  
daily = 9.23 gal or 73.84 lbs

Due to the advanced technology of the Olympia 746 press, clean-up solvent usage is projected to be reduced to half of the current usage. Also, Spiralkote is investigating new low solvent soaps to clean the floors around the press.

Mr. C. H. Fancy, P.E.  
April 24, 1986  
Page 2

It is conservatively estimated that no more than 10% of the solvent used in clean-up volatilizes to the atmosphere. This estimate is based on the volume of solvent used in clean-up versus the quantity collected as hazardous waste. Therefore, projected yearly emissions are:

$$19,200 \text{ lbs solvent/year} \times 0.1 = 1920 \text{ lbs VOC/yr}$$

$$1920 \text{ lbs} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.96 \text{ or } 1 \text{ ton/yr}$$

Item 3: Kidder I solvent usage for clean-up purposes has been estimated from this historic data mentioned above. Total solvent usage for each of the last three years has been determined and divided by the number of presses at the facility (4). It is not possible to determine solvent usage for individual presses based on Spiralkote's records. The actual VOC emissions from the printing operation have also been determined.

#### Clean-up Solvent Usage & Emissions

<u>Year</u>	<u>Solvent Usage</u>	<u>Yearly Emissions from clean-up solvents (10% of usage)</u>
1983	4250 gal or 34,000 lbs (based on 8 lbs/gal)	3400 lbs or 1.7 tons
1984	4710 gal or 37,680 lbs	3768 lbs or 1.88 tons
1985	4625 or 37,000 lbs	3700 lbs or 1.85 tons

Mr. C. H. Fancy, P.E.

April 24, 1986

Page 3

Actual emissions are based on the production history for the last three years. The permitted emission limit of 47.7 tons/year corresponds to a production rate of 100%. Since Kidder I has operated at 100 percent capacity for the last three years, then emissions from Kidder I are estimated to be 47.7 tons per year for those years. Therefore, total combined emissions for clean-up solvents and production are as follows:

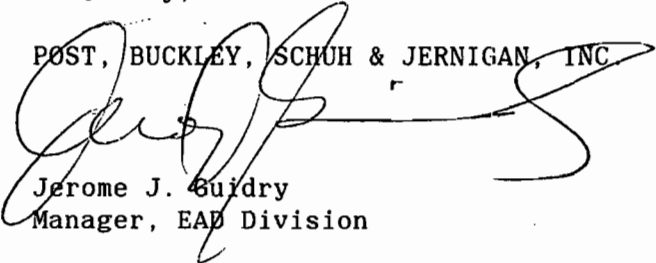
1983 emissions = 47.7 + 1.7 = 49.4 tons/yr  
1984 emissions = 47.7 + 1.88 = 49.6 tons/yr  
1985 emissions = 47.7 + 1.85 = 49.6 tons/yr

Kidder I has operated at its permitted capacity for the last three years. The Olympia 746 press is expected to replace the Kidder I while increasing overall production. The Olympia production rate is estimated at 26 reams of paper per hour or more than twice that of Kidder I.

This should satisfy the requirements of your completeness review so that the Department may proceed with the permitting process for this source. If you have any additional questions concerning Spiralkote, please call me or Bruno Ferraro at (305) 423-7275.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC

  
Jerome J. Guidry  
Manager, EAD Division

JJG:BAF:daa

cc: Bob Kindorf  
St. Johns River District office 4-24-86 Am  
Certified Mail No. P 387 903 506

21-023.00

PS Form 3811, July 1983

**SENDER: Complete items 1, 2, 3 and 4.**

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

1.  Show to whom, date and address of delivery.

2.  Restricted Delivery.

3. Article Addressed to:  
 Mr. Robert E. Kindorf  
 Spiralkote, Inc.  
 1200 Central Florida Parkway  
 Orlando, Florida 32809

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 408 533 207

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
*Robert E. Kindorf*

6. Signature - Agent  
 X

7. Date of Delivery  
 4-4-86

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

DOMESTIC RETURN RECEIPT

P 408 533 207

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL

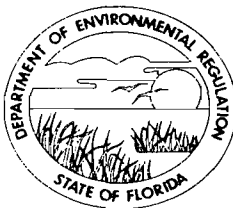
(See Reverse)

Sent to Mr. Robert E. Kindorf	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date  4/2/86	

PS Form 3800, Feb. 1982

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

April 1, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Robert E. Kindorf  
Vice President  
Spiralkote, Inc.  
1200 Central Florida Parkway  
Orlando, Florida 32809

Dear Mr. Kindorf:

RE: Completeness Review of an Application to Construct  
Air Pollution Source: No. AC 48-117138

The department received the above referenced application package and Mr. Jerome J. Guidry's cover letter on March 7, 1986. Technical review of the application package has been completed and the bureau deems it incomplete. Therefore, the following information, including all assumptions, calculations and reference documents, will have to be submitted to the department before the status can, again, be ascertained:


- o If there is any information that you want the department to consider proprietary pursuant to Section 403.11, Florida Statutes, please document and submit it as a separate addendum.
- o What is the projected daily, monthly, and annual VOC/organic solvent(s) usage for clean-up for this source and its operation.
- o Since the flexographic printing press Kidder I (facility I.D.) will be removed from service, document and submit its annual actual VOC/organic solvent(s) emissions for the last 3 years, which should include the projected usage of solvent(s) used for clean-up purposes. Present the two values separately.



Mr. Robert E. Kindorf  
Page Two  
April 1, 1986

If there are any questions, please call Bruce Mitchell at  
(904)488-1344 or write to me at the above address.

Sincerely,

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

CHF/BM/s

cc: Tom Sawicki  
Jerome J. Guidry



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

889 NORTH ORANGE AVENUE  
ORLANDO, FLORIDA 32801-1088  
305/423-7275  
TELEX 808435

March 3, 1986

Mr. Clair H. Fancy, P.E.  
Deputy Chief, Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32031

RE: Orange County Air Pollution  
Spiralkote, Inc.  
Olympia 746 Flexographic Printing Press

Dear Mr. Fancy:

Enclosed are three (3) copies of the above referenced application to construct an air pollution source along with the application fee of \$500. One (1) copy of the application has been forwarded to Mr. Tom Sawicki of the Orlando district office.

If you have any questions concerning this source, please contact Bruno Ferraro or me at (305) 423-7275.

Sincerely,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Jerome J. Guidry  
Manager, EAD Division

JJG:BAF:daa

cc: Bob Kindorf  
Tom Sawicki

Certified Mail No. P 034 188 328

DER

MAR 7 1986

BAQM

fp SPIRALKOTE, INC.

1200 CENTRAL FLORIDA PKWY.  
ORLANDO, FLA. 32821

BEST AVAILABLE COPY

Commercial National Bank

OF PEORIA  
Member Midwest Financial Group, Inc.  
PEORIA, ILLINOIS 61631

6290

70-4/711

PAY

February 26, 1986

\$500.00

DATE

AMOUNT

TO  
THE  
ORDER  
OF

Florida Department  
of Environmental Regulation

FP SPIRALKOTE, INC.  
ORLANDO, FLA.

DETACH AND RETAIN THIS STATEMENT  
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.  
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

DELUXE - FORM TWC-3 V-5

DATE	DESCRIPTION	AMOUNT	DISTRIBUTIONS	
			ACCT. NO.	AMOUNT
	Application Fee	\$500.00		

EMPLOYEE \_\_\_\_\_

PERIOD ENDING	TOTAL EARNINGS	DEDUCTIONS						TOTAL DEDUCTIONS	NET PAY
		SOCIAL SECURITY TAX	WITHHOLDING U. S. INC. TAX	STATE INCOME TAX					

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 76114

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Spiralkote, Inc. Date March 7, 1986

Address 1200 Central Fla. Parkway, Orlando, FL Dollars \$ 500.00

Applicant Name & Address Same as above 32821

Source of Revenue \_\_\_\_\_

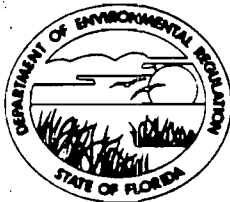
Revenue Code 001031 Application Number AC 48-117138

By Patricia G. Adams

AC 48-117134

STATE OF FLORIDA

## DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER  
DISTRICT3319 MAGUIRE BOULEVARD  
SUITE 232  
ORLANDO, FLORIDA 32803BOB GRAHAM  
GOVERNORVICTORIA J. TSCHINKEL  
SECRETARYALEX SENKEVICH  
DISTRICT MANAGER

## APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Printing facility  New<sup>1</sup>  Existing

APPLICATION TYPE:  Construction  Operation  Modification

COMPANY NAME: Spiralkote, Inc. COUNTY: Orange

Identify the specific emission point source(s) addressed in this application (i.e. Line  
Kila No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Olympia 746 Flexographic printing press

SOURCE LOCATION: Street 1200 Central Florida Parkway City Orlando (32809)

UTM: East 461370 North 3142050

Latitude 28° 24' 21" N Longitude 81° 23' 40" W

APPLICANT NAME AND TITLE: Robert E. Kindorf, Vice President of Production

APPLICANT ADDRESS: 1200 Central Florida Parkway, Orlando, FL 32809

## SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

## A. APPLICANT

I am the undersigned owner or authorized representative\* of Spiralkote, Inc.

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

\*Attach letter of authorization

Signed: Robert E. Kindorf

Robert E. Kindorf, Vice President  
Name and Title (Please Type)

Date: 2-26-86 Telephone No. (305) 859-7780

## 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

<sup>1</sup> 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 Jerome J. Guidry

Jerome J. Guidry, P.E.

Name (Please Type)

Post, Buckley, Schuh & Jernigan, Inc.

Company Name (Please Type)

889 N. Orange Avenue, Orlando, FL 32801-1088

Mailing Address (Please Type)

Florida Registration No. 32589

Date: 3-4-86

Telephone No. (305) 423-7275

**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.

To construct an Olympia 746 Flexographic printing press to replace Kidder I printing press in existence at this facility. Emissions will be controlled by two (2) incinerators and will result in full compliance with 17-2 FAC.

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

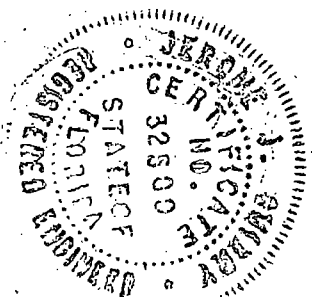
Start of Construction June, 1986 Completion of Construction August, 1986

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

\$310,000.

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

None



E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 5 ; 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? Yes  
c. If yes, list non-attainment pollutants. Ozone

2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? No

a. If yes, for what pollutants? N/A

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 justifi-  
cation 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	N/A	519	1
Coating KJ 902	VOC	86	24.9	2
Coating NB 1061	VOC	66	17.7	3
Ink	VOC	74	46.2	4

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

- Total Process Input Rate (lbs/hr): 607.8
- Product Weight (lbs/hr): 540.5

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

Name of Contaminant	Emission <sup>1</sup>		Allowed <sup>2</sup> Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
VOC	22.5	70.3	17-2.640	22.5	67.3	209.9	5 & 6
			LAER				
			70% Capture				
			95% Destruction				

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>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)

<sup>3</sup>Calculated from operating rate and applicable standard.

<sup>4</sup>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)
Two 2500 CFM-Catalytic Incineration System	VOC	95%	N/A	Manufacturer Specifications
Custom built by Etter Engineering Co., Inc.				See stack test report enclosed

E. Fuels Natural gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Between color dryer	98 cf/hr	98 cf/hr	0.1035
Tunnel oven	138 cf/hr	138 cf/hr	0.145
#1 overhead dryer	773 cf/hr	773 cf/hr	0.814
#2 overhead dryer	480 cf/hr	480 cf/hr	0.506

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

Fuel Analysis:

Percent Sulfur: N/A Percent Ash: N/A  
 Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_  
 Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

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

Annual Average N/A Maximum \_\_\_\_\_

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

Some solvents are reclaimed by distillation. Waste solvents, coating and inks  
are shipped to Oldover Corporation, Green Cove Springs, to be burned in their  
boilers. This procedure is currently being used by this generator.



Two identical incinerators and stacks.

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

Stack Height: 30 ft. Stack Diameter: 1.26 ft.  
 Gas Flow Rate: 2500 ACFM 1504 DSCFM Gas Exit Temperature: 400 °F.  
 Water Vapor Content: 2 % Velocity: 33.33 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) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

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

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

E. Fuels Natural gas used for all heating.

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Incinerator #1	95 cf/hr	380 cf/hr	0.4
Incinerator #2	95 cf/hr	380 cf/hr	0.4

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

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY** N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes  No

Contaminant

Rate or Concentration

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

Contaminant	Rate or Concentration

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

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

1. Control Device/System:

2. Operating Principles:

3. Efficiency:\*

4. Capital Costs:

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>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**

N/A

**A. Company Monitored Data**

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ 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 <sup>2</sup>	_____ grams/aec

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.



### SOURCE DESCRIPTION

Spiralkote, Inc. is proposing to replace Kidder I (flexographic printing press), which emits 47.7 tons/year of uncontrolled VOC emissions, with a new Olympia Model 746 Central Impressions printing press, equipped with a VOC Collection system and two Etter Engineering catalytic incinerators to control VOC emissions. Emissions from this new press are estimated to be 70.3 tons/year of VOC based on 70% capture and 95% destruction as required by "LAER".

Kidder I will be phased completely out of production by December 1, 1986 or sooner if the new Olympia press is up to estimated production, in compliance with the FDER construction permit, and an operation permit has been issued by the State.

Total VOC emissions from this proposed press is estimated at 70.3 tons/yr. Kidder I is presently emitting 47.7 tons/yr VOC. By phasing Kidder I out of production, total plant wide-VOC emissions increase by 22.6 tons/yr with the installation of this Olympia 746 press.

This press will be equipped with two (2) catalytic incinerators to control VOC emissions. These identical incinerators are custom designed by Etter Engineering Company, Inc. and the duct work, collection system, and installation will be done by Dec-E-Tech Industrial Design Engineering. Each incinerator is a 2500 CFM natural gas fired system utilizing an Eclips Model 80-AHO burner. Heat recovery units associated with each incinerator supply heat to the preheat chamber of the incinerator reducing the amount of natural gas consumed.

Enclosed in this application are drawings of the duct work, flow diagram of the incinerator and a stack test report on the incinerator.

### SUPPLEMENTAL REQUIREMENTS

Supplement 1: Process input rate was determined by the manufacturer's designed printing rate. The product weight is the weight of the printed paper less the solvent weight.

Supplement 2: Emissions were calculated from the solvent content of the inks and coatings assuming 70% capture of VOCs and 95% destruction.

Total control efficiency is:

$$0.7 \times 0.95 \times 100 = 66.5\%$$

Compliance will be demonstrated by an EPA Method 25 VOC stack test (or the latest approved method) with capture efficiency being determined by the amount of solvent being used during the test and the concentration of VOCs collected at the inlet of the incinerator.

Supplement 3-9: Attached.

VOC EMISSION SUMMARY

<u>Raw Material</u>	<u>Potential</u>		<u>Actual</u>	
	<u>lbs/hr</u>	<u>Tons/yr</u>	<u>lbs/hr</u>	<u>Tons/yr</u>
KJ 902	21.414	66.811	7.1736	22.381
NB 1061	11.682	36.447	3.9134	12.210
Ink	<u>34.188</u>	<u>106.66</u>	<u>11.452</u>	<u>35.733</u>
Total	67.284	209.918	22.539	70.324

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING KJ 902

Chemical density: 0.6812 grams per cubic centimeter  
 or 5.68 pounds per gallon  
 VOC concentration: 4.8848 pounds per gallon  
 or 86.0 per cent  
 Usage rate: 4.3838 gallons per hour  
 or 24.9 pounds per hour  
 VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day  
 5 Days per week  
 52 Weeks per year

TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= (4.3838) \times (4.8848) \\
 &= 21.414 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\
 &= 66.811 \text{ Tons per year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times (1 - \text{Efficiency}) \\
 &= (21.414) \times (1 - 0.665) \\
 &= 7.1736 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 7.1736 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times (1 \text{ ton} / 2000 \text{ pounds}) \\
 &= 22.381 \text{ tons per year}
 \end{aligned}$$

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: COATING NB 1061

Chemical density: 0.6048 grams per cubic centimeter

or 5.0427 pounds per gallon

VOC concentration: 3.3281 pounds per gallon

or 66.0 per cent

Usage rate: 3.5100 gallons per hour

or 17.7 pounds per hour

VOC control efficiency: 66.5 per cent

Operating schedule: 24 Hours per day

5 Days per week

52 Weeks per year

TOTAL 6240 Hours per year

---

Potential emissions = ( Usage rate ) x ( VOC Concentration )

= ( 3.5100 ) x ( 3.3281 )

= 11.682 lb per hr x 6240 hr per year

x ( 1 ton / 2000 pounds )

= 36.447 Tons per year

Maximum emissions = Potential emissions x ( 1 - Efficiency )

= ( 11.682 ) x ( 1 - 0.665 )

= 3.9134 pounds per hour

Actual emissions = Maximum emissions x Operating schedule

= 3.9134 lb/hr x 6240 hrs/year

x ( 1 ton / 2000 pounds )

= 12.210 tons per year

01-Jan-80

EMISSION CALCULATIONS FOR VOLATILE ORGANIC COMPOUNDS

Comment: OLYMPIA 746 PRESS

Chemical name: INK

Chemical density: 0.9021 grams per cubic centimeter

or 7.5213 pounds per gallon

VOC concentration: 5.5657 pounds per gallon

or 74.0 per cent

Usage rate: 6.1425 gallons per hour

or 46.2 pounds per hour

VOC control efficiency: 66.5 per cent

Operating shedule: 24 Hours per day  
5 Days per week  
52 Weeks per year

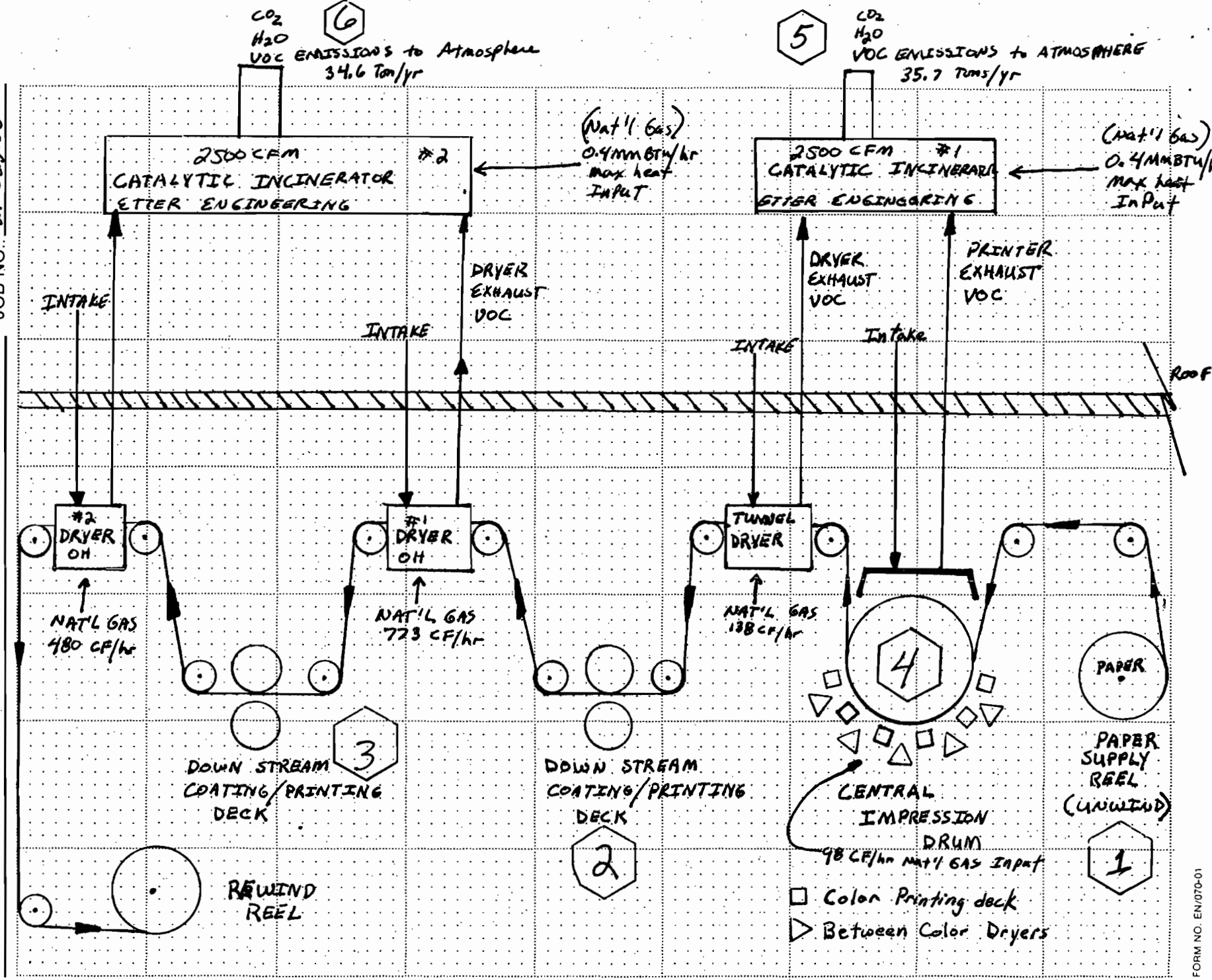
TOTAL 6240 Hours per year

$$\begin{aligned}
 \text{Potential emissions} &= (\text{Usage rate}) \times (\text{VOC Concentration}) \\
 &= ( 6.1425 ) \times ( 5.5657 ) \\
 &= 34.188 \text{ lb per hr} \times 6240 \text{ hr per year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 106.66 \text{ Tons per year}
 \end{aligned}$$

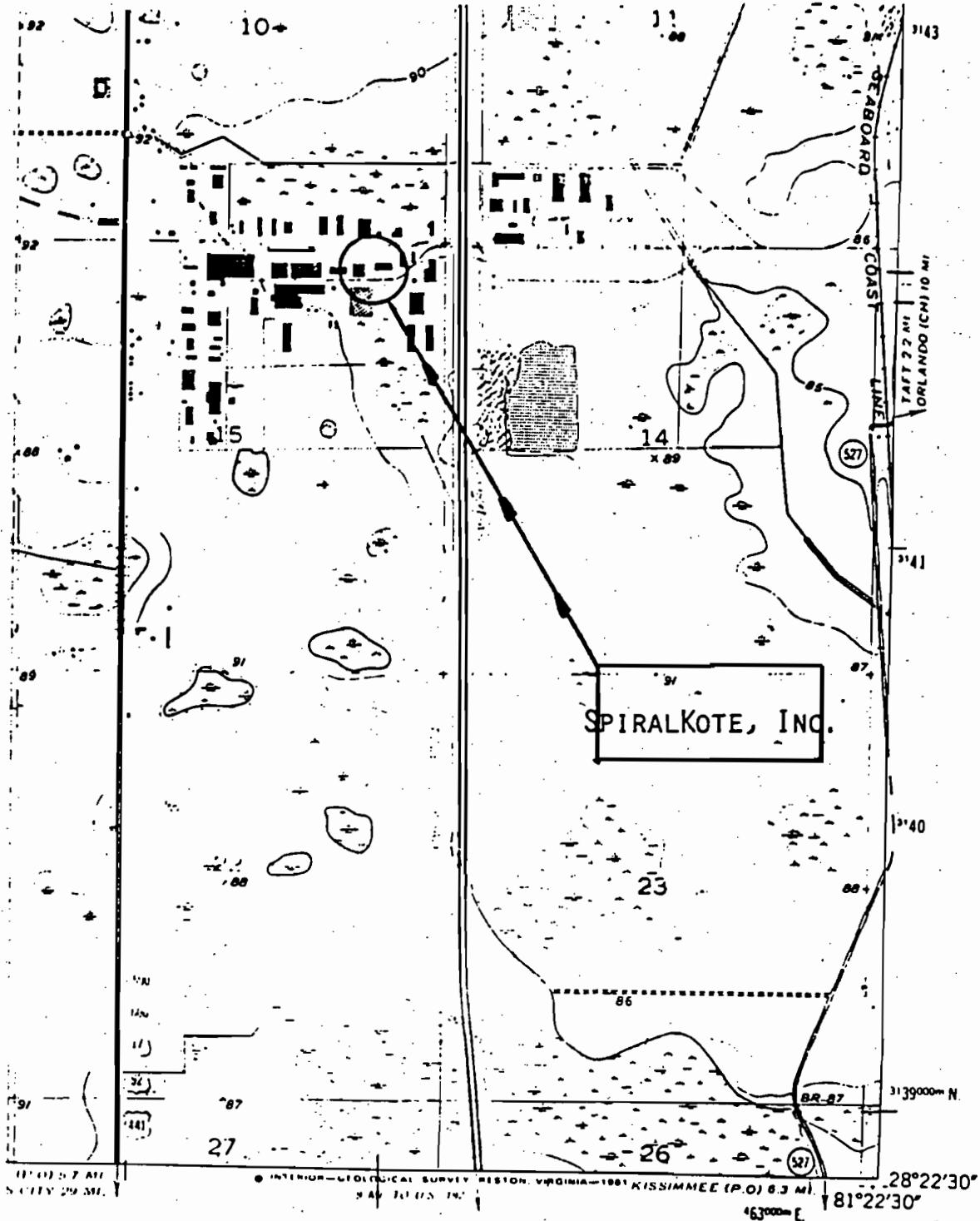
$$\begin{aligned}
 \text{Maximum emissions} &= \text{Potential emissions} \times ( 1 - \text{Efficiency} ) \\
 &= ( 34.188 ) \times ( 1 - 0.665 ) \\
 &= 11.452 \text{ pounds per hour}
 \end{aligned}$$

$$\begin{aligned}
 \text{Actual emissions} &= \text{Maximum emissions} \times \text{Operating schedule} \\
 &= 11.452 \text{ lb/hr} \times 6240 \text{ hrs/year} \\
 &\quad \times ( 1 \text{ ton} / 2000 \text{ pounds} ) \\
 &= 35.733 \text{ tons per year}
 \end{aligned}$$

SUBJECT: Flow Diagram - Olympia 746 CI PRESS



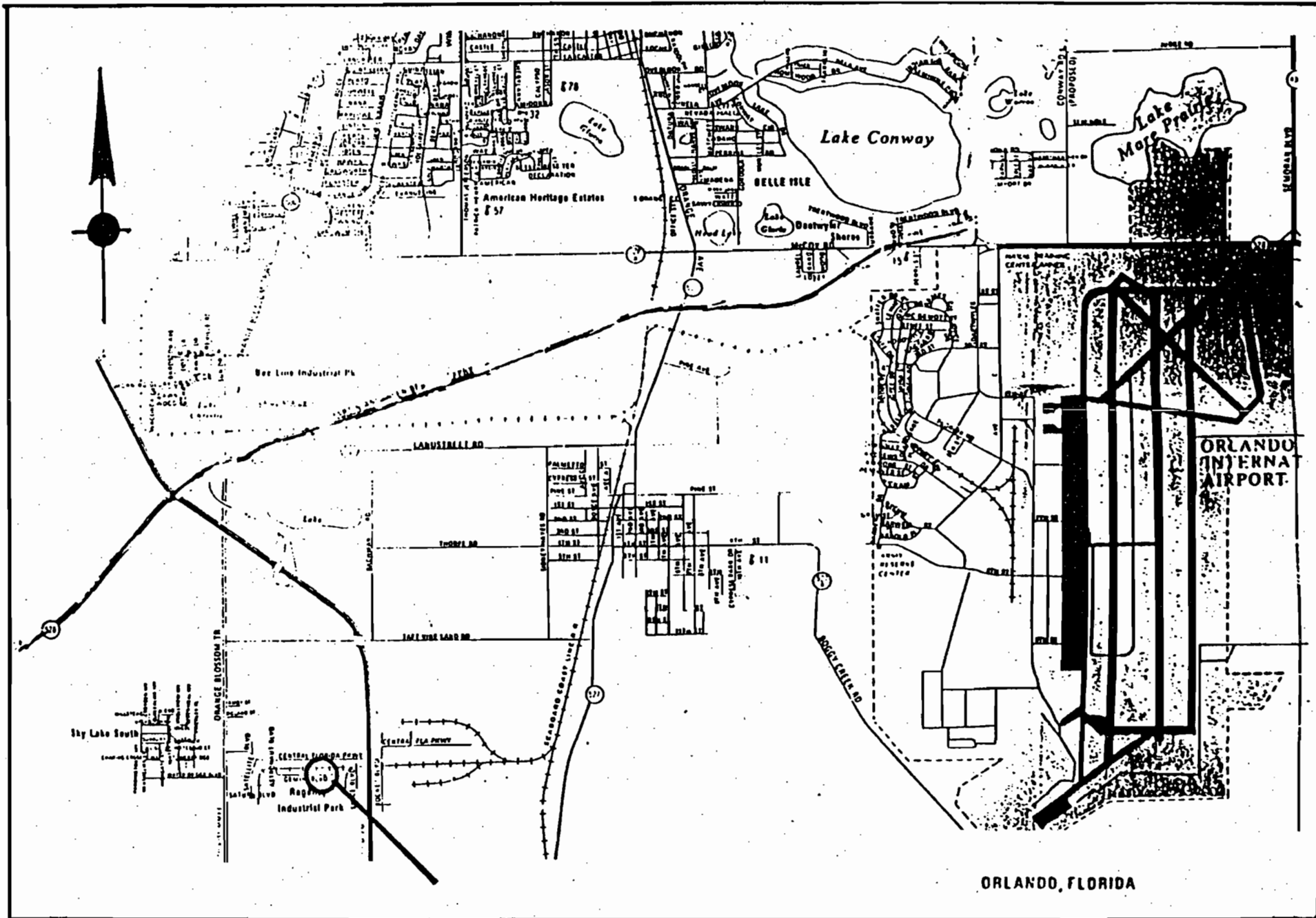
SITE LOCATION MAP -- U.S.G.S. MAP SECTION  
SPIRALKOTE, INC.



ROAD CLASSIFICATION

1ST. CL.

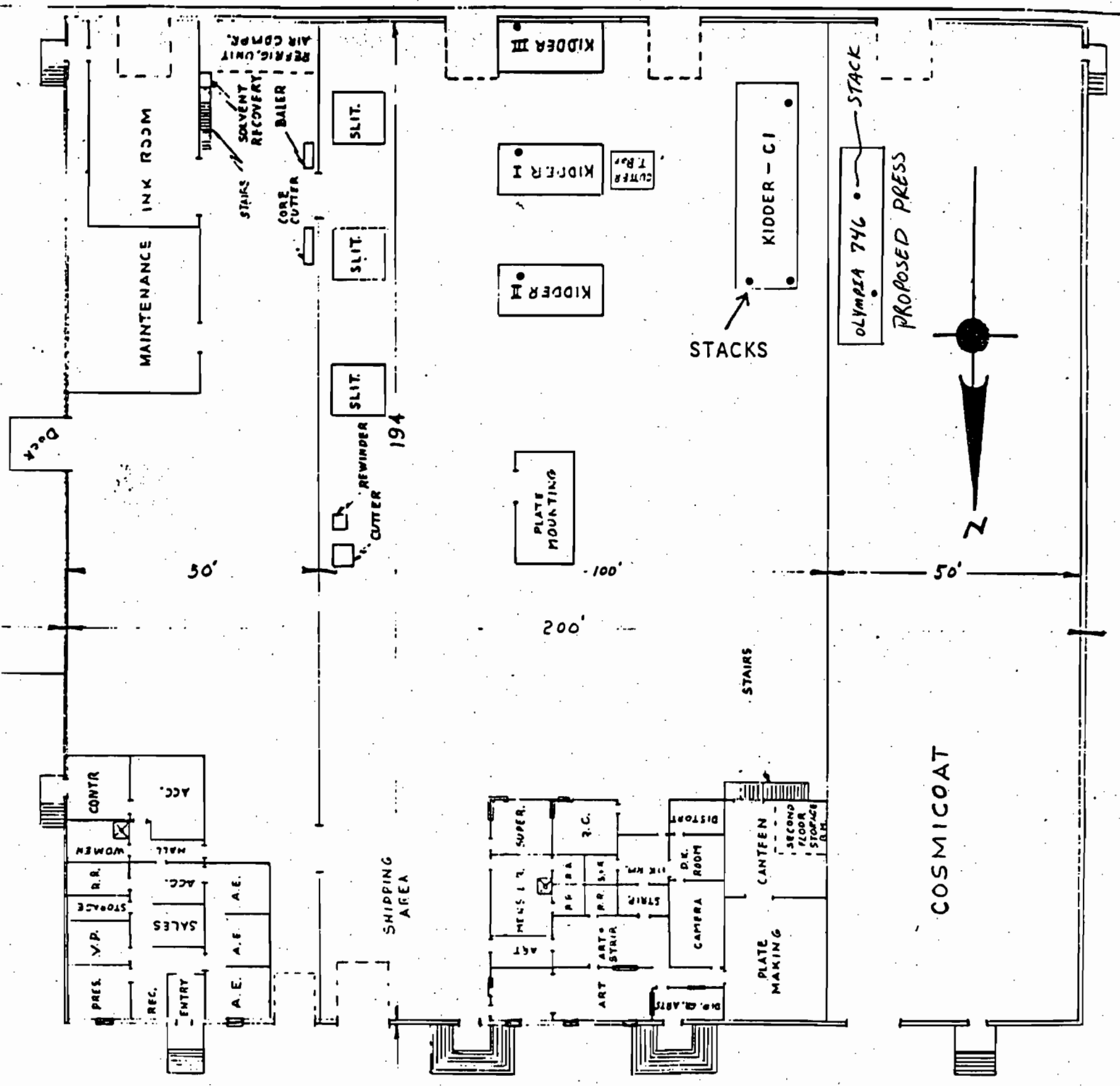




ORLANDO, FLORIDA

SPIRALKOTE, INC.      GENERAL LOCATION MAP

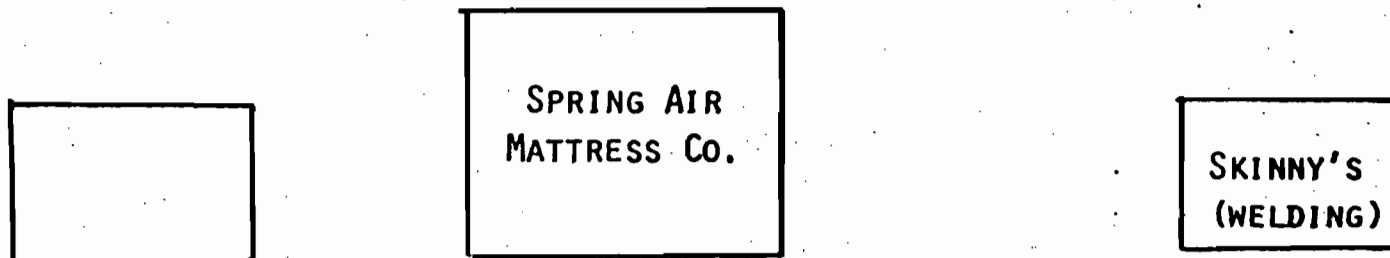
PLOT PLAN OF FACILITY SPIRALKOTE, INC.



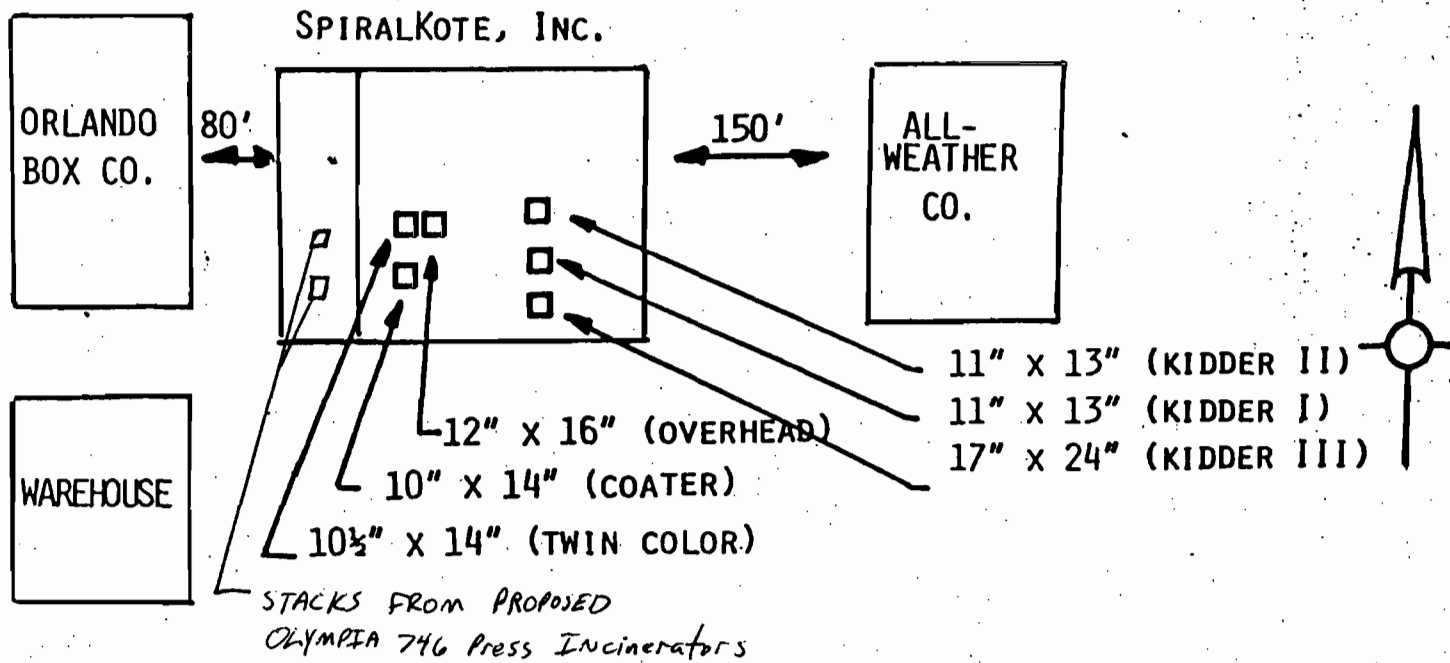
(FRONTS ON CENTRAL FLORIDA PARKWAY)

PLOT PLAN OF AREA/ROOF SKETCH SPIRALKOTE, INC.

LOCATED IN THE  
REGENCY INDUSTRIAL PARK



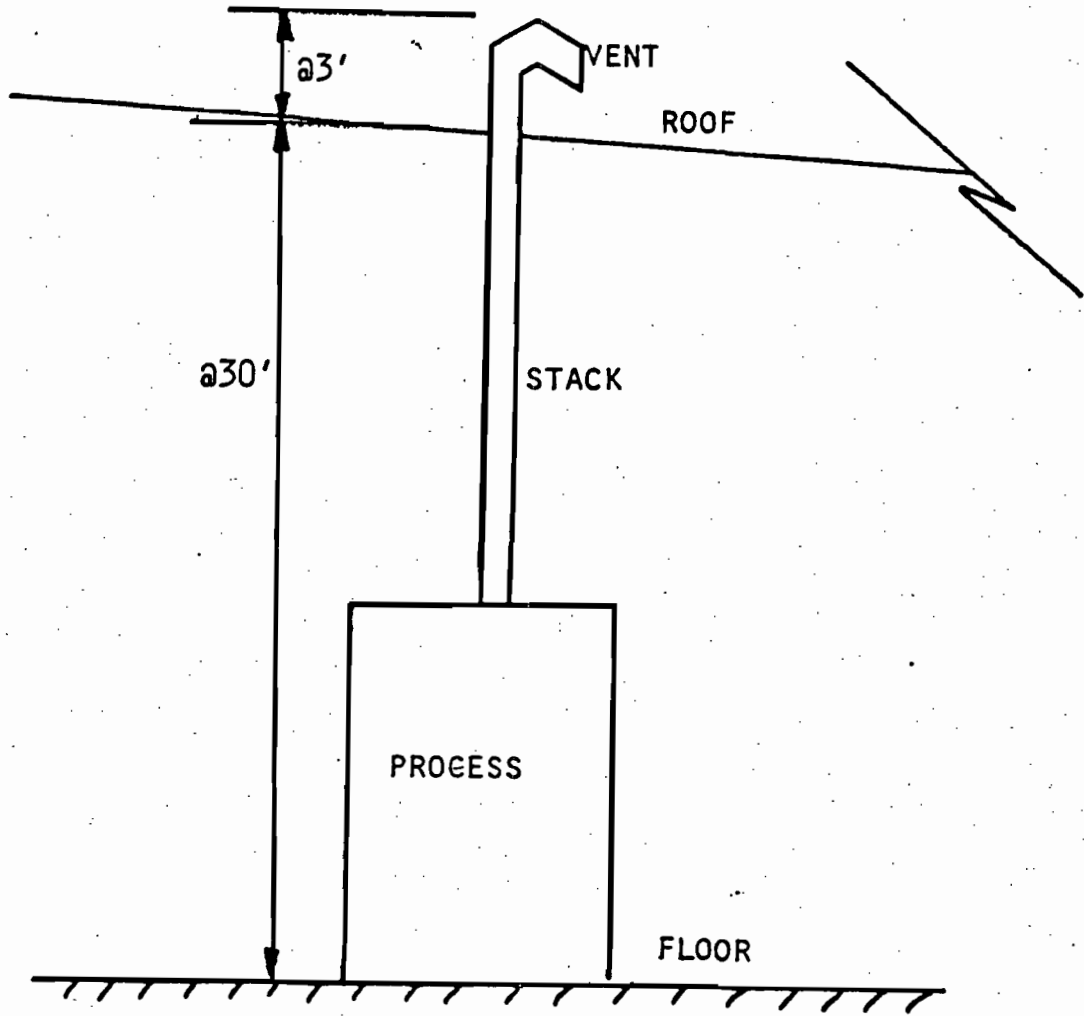
CENTRAL FLORIDA PARKWAY



NOT TO SCALE

TYPICAL SKETCH OF ROOF EXHAUST

SPIRALKOTE, INC.



File  
  
 EPA

## ETTER ENGINEERING COMPANY, INC.

4 KIDDER ROAD • CHELMSFORD, MASSACHUSETTS 01824

TELEPHONE: (617) 256-0980

January 8, 1985

REC

1985

Fleming Packaging Corp.  
 Spiralkote, Inc.  
 1200 Central Florida Pkwy.  
 Orlando, FL 32809

Attention: Robert Kindorf--Vice-President, Production

Reference: Catalytic Reactor Test

Dear Robert,

Enclosed is a copy of the test report done by Affiliated Environmental Services, Inc. of Sandusky, Ohio for Pillar Corporation at their C.B. Henschel Company installation in New Berlin, Wisconsin. They applied the Method 25 EPA stack test for Volatile Organic Compounds to the Pillar 15,000SCFM catalytic reactor. The reactor was connected to the 7 gravure laminating and coating machines employing the following solvents: ethyl acetate, I.P. acetate, isopropanol, and xyol alcohol. The sampling equipment and method was as follows:

- a) VOC test consisted of simultaneous sampling at the "inlet" and "outlet" for 60 minutes
- b) the VOC was sampled using two sets of EPA method 25 type
- c) Byron model 90 sample collection units, consisting of probes, heavy hydrocarbon traps, pump mass flow rate/integrator and Tedlar bag
- d) the heavy hydrocarbon trap sample is treated using Byron model 75 hydrocarbon converter
- e) introduced into a Byron 401 analyzer gas chromatograph (flame ionization detector)

The results of the test are as follows:

- a) at a preset inlet air temperature of 450°F, the efficiency is 98.8%
- b) at a preset inlet air temperature of 525°F, the efficiency is 98.9%
- c) at a preset inlet air temperature of 575°F, the efficiency is 99.3%



ETTER ENGINEERING COMPANY, INC.

January 8, 1985

Page 2

Catalytic Reactor Test

As you can see, the BTU/hr. required for pre-heats of 575°F versus 450°F doesn't derive any significant benefit in terms of efficiency i.e. 98.8% versus 99.3%. Therefore, a pre-heat of 450°F at 98.8% efficiency is more than adequate to meet EPA standards.

Further information on our design modifications and test results at Union Industries will be forthcoming as information is made available.

If I can be of further assistance, please let me know.

Sincerely,

Roger Decelles  
Vice-President, Manufacturing

Enclosures

RED/ef

# AFFILIATED ENVIRONMENTAL SERVICES, inc.

219 FREMONT AVENUE, SANDUSKY, OHIO 44870 (419) 627-1976

REPORT TO PILLER CORP.

ON

STACK V.O.C. SAMPLES  
COLLECTED AT  
C.B. HENSCHEL  
15805 OVERLAND DR.  
NEW BERLIN, WI

SUBMITTED BY

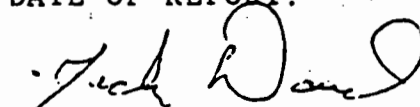
A.E. SERVICES, INC.  
219 FREMONT AVENUE  
SANDUSKY, OHIO 44870

DATE OF TESTING:

Nov. 14, 1984

DATE OF REPORT:

Nov. 23, 1984



FIELD TEST ENGINEER

# Affiliated Environmental Services, Inc.

## I. INTRODUCTION

This report contains the results of Volatile Organic Carbon (VOC) testing performed on the inlet gases & the outlet gases from a 15,000 cfm Pillar catalytic unit installed at the C.B. Henschel plant in New Berlin Wisc. This test was reviewed by and witnessed by the Wisc. State and the Federal EPA. Mr. Dick Dalton, the EPA Region V VOC expert, was present as was Mr. Frank Ecmann of Region V to witness the test. The operations tested at C.B. Henschel consists of printing and lamination. The facility has 6 out of the 7 lines (#6 not operational yet) available however only 4 or 5 lines are normally in use on any given day. On the day of the test lines 2,4,5 and 7 were in use during all 3 tests. Line 1 was in operation during the 2nd test only. Line 1 was a waterbase coating and should not produce any significant V.O.C. A summary of the make up of the coating for each line is attached to this report. Testing was only performed during full production (no testing during breaks or at lunch time. The VOC's from each line are captured by a series of hoods and exhaust take offs. Each line has its own local exhaust system (separate exhaust units) which then feed to a common plenum. The gases in this plenum next go to a gas fired preheat zone then to the catalytic unit.



## Affiliated Environmental Services, Inc.

The effluent from the catalytic unit is used (via counter flow heat exchange) to heat the plant and air to the lines (presses). A portion of this effluent is vented to atmosphere with the balance returning through the plenum to the preheat then the catalytic unit. The two test points were: inlet to the preheat and the outlet from the catalytic (plenum from which effluent is diverted to atmosphere or through the heat exchangers for the plant). Three sets of V.O.C. tests were performed. Each set consisted of simultaneous sampling at the "inlet" and "outlet" for 60 minutes. Test I was ran with the temperature of the gas to the catalytic incinerator (after preheat) at 450°F, Test II at 525°F and Test III at 575°F. This temperature, the temperature after the incinerator, the temperatures at each sample point and a listing of lines with exhausts fans on was monitored every 5 minutes (sheets attached). The V.O.C. was sampled using two sets of method 25 type stack trains. This consists of a Byron Model 90 sample collection unit which is made up of a probe, a heavy hydrocarbon trap, the pump and mass flow rate/integrator, and a Tedlar Bag. The sample is drawn into the probe and the heavy hydrocarbons are removed by the trap and the flow rate and volume are monitored by a mass flow meter. The light hydrocarbons and CO and CO<sub>2</sub> are collected in the Tedlar Bag. Analysis of the sample is performed using a Byron Model 401 analyzer. The Tedlar Bag fraction of the sample is analyzed directly on this analyzer. The heavy hydrocarbon trap requires treatment first using a Byron Model 75 heavy hydrocarbon converter. This converter

## Affiliated Environmental Services, Inc.

first removes at high temperature the hydrocarbons from the trap then converts the hydrocarbons to  $\text{CO}_2$  which is then introduced into the 401 analyzer. The 401 analyzer is a gas chromatograph (flame ionization detector) system specially equipped to separate the gas introduced into the following components;  $\text{CO}$ ,  $\text{CO}_2$ ,  $\text{CH}_4$ ,  $\text{C}_2$ 's and NMHC (none methane hydrocarbons). After separation all the individual components go through a catalytic oxidizer (converted to  $\text{CO}_2$ ) then reduced to  $\text{CH}_4$  by a catalytic reducer then they are measured by the FID as methane. Since all components follow through the same path (oxidizer/reducer/detector) greater system accuracy is assured. All measurements made in the detector are made on  $\text{CH}_4$  which is precisely proportional to the carbon content of the original hydrocarbon. The unit is calibrated using a minimum of two gases. The first is a 4 component mixture of  $\text{CH}_4$ ,  $\text{CO}$ ,  $\text{CO}_2$  and propane. This mixture checks out the catalytic oxidizer and reducer plus the condition of the gas chromatograph columns. It also is used to verify the calibration of each component ( $\text{CH}_4$ ,  $\text{CO}$ ,  $\text{CO}_2$  and NMHC). The second gas is a special zero gas that contains less than 0.1 ppm hydrocarbon. On the date of this test three additional gas mixtures were used as quality control checks. The first QC gas was mixture of  $\text{CO}_2$  in zero gas, the second QC gas was  $\text{CH}_4$  in zero gas, and the third gas was a different concentration of the same 4 components as in the primary calibration mixture. All the calibration gases and the QC gases were in specification (1% of scale). Two sets of

## Affiliated Environmental Services, Inc.

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## Affiliated Environmental Services, Inc.

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## Affiliated Environmental Services, Inc.

organic solvents were taken during VOC test II using charcoal absorption tubes which were ran (FID gas chromatograph/CS<sub>2</sub> desorbition) to look for new organics formed by the catalytic incinerator; none were found. In addition 2 thirty minute samples were taken at the "outlet" point during V.O.C. test II to determine concentrations of formaldehyde and other low molecular weight (C<sub>1</sub>-C<sub>5</sub>) aldehydes. The method used was Inter Society Committee 110; collection in 1% NaHSO<sub>3</sub> solution. The results were as follows (ppm):

COMPOUND	Run A	Run B
Formaldehyde	.26	.22
Acrolein	<.02	<.02
C <sub>2</sub> -C <sub>5</sub>	<.05	<.05

The formaldehyde method is subject to some inter ferences. In order to see if this was a problem a test was ran simultaneously with Run A using a "spiked" solution that would yield 0.54 ppm formaldehyde if no inter ference. It resulted in 0.59 ppm.

## Affiliated Environmental Services, Inc.

### II. V.O.C. TEST RESULTS

The V.O.C. test results are presented in Tables I, II and III.

The incinerator efficiency was:

Test I	98.8%
Test II	98.9%
Test III	99.3%

### III. EMISSIONS

During Test III the volume of air being exhausted from the system was measured at a 2' x 6' opening using an Alnor series 6000 velometer with a pitot probe. The opening was divided into 12 equal areas and the meter reading (ft/min) recorded. The top 4 openings were all less than 200; the 2nd row of 4 were 850, 600, 250 and 200 with the bottom row of 4 being 1600, 1550, 1450 and 1200. After correcting for temperature this results in an emission rate of 9950 cfm. Based on an emission concentration of 6.4 ppm of NMHC (as methane) this results in an emission of 0.12 lb/hr.

# Affiliated Environmental Services, Inc.

TABLE I

SUMMARY OF TEST DATA OBTAINED  
DURING TEST I  
PRESET TEMPERATURE 450°F

	Inlet	Outlet
Sampling Date	11-14-84	11-14-84
Barometric Pressure	29.88	29.88
Time Sampled	1044-1145	1046-1147
Volume (Liters)	6.094	7.294
<u>Concentration of Gases in ppm)</u>		
Carbon Monoxide	17	26
Carbon Dioxide	425	990
Methane	3	2
NMHC (1)	739	9.2

NMHC = non-methane hydrocarbon

TABLE II

SUMMARY OF TEST DATA OBTAINED  
DURING TEST II  
PRESET TEMPERATURE 525°F

	Inlet	Outlet
Sampling Date	11-14-84	11-14-84
Barometric Pressure	29.88	29.88
Time Sampled	1324-1424	1325-1425
Volume (Liters)	6.318	7.304
<u>Concentration of Gases in ppm)</u>		
Carbon Monoxide	22	31
Carbon Dioxide	390	1125
Methane	3	3
NMHC (1)	760	8.0

NMHC = non-methane hydrocarbon

(1) NMHC is reported in ppm as methane

# Affiliated Environmental Services, Inc.

TABLE III

SUMMARY OF TEST DATA OBTAINED  
DURING TEST III  
PRESET TEMPERATURE 575°F

Sampling Date	Inlet 11-14-84	Outlet 11-14-84
Barometric Pressure	29.88	29.88
Time Sampled	1532-1632	1534-1634
Volume (Liters)	6.311	7.528
<u>Concentration of Gases in ppm</u>		
Carbon Monoxide	24	27
Carbon Dioxide	460	1680
Methane	2	3
NMHC (1)	872	6.4
NMHC = non-methane hydrocarbon		

(1) NMHC is reported in ppm as methane



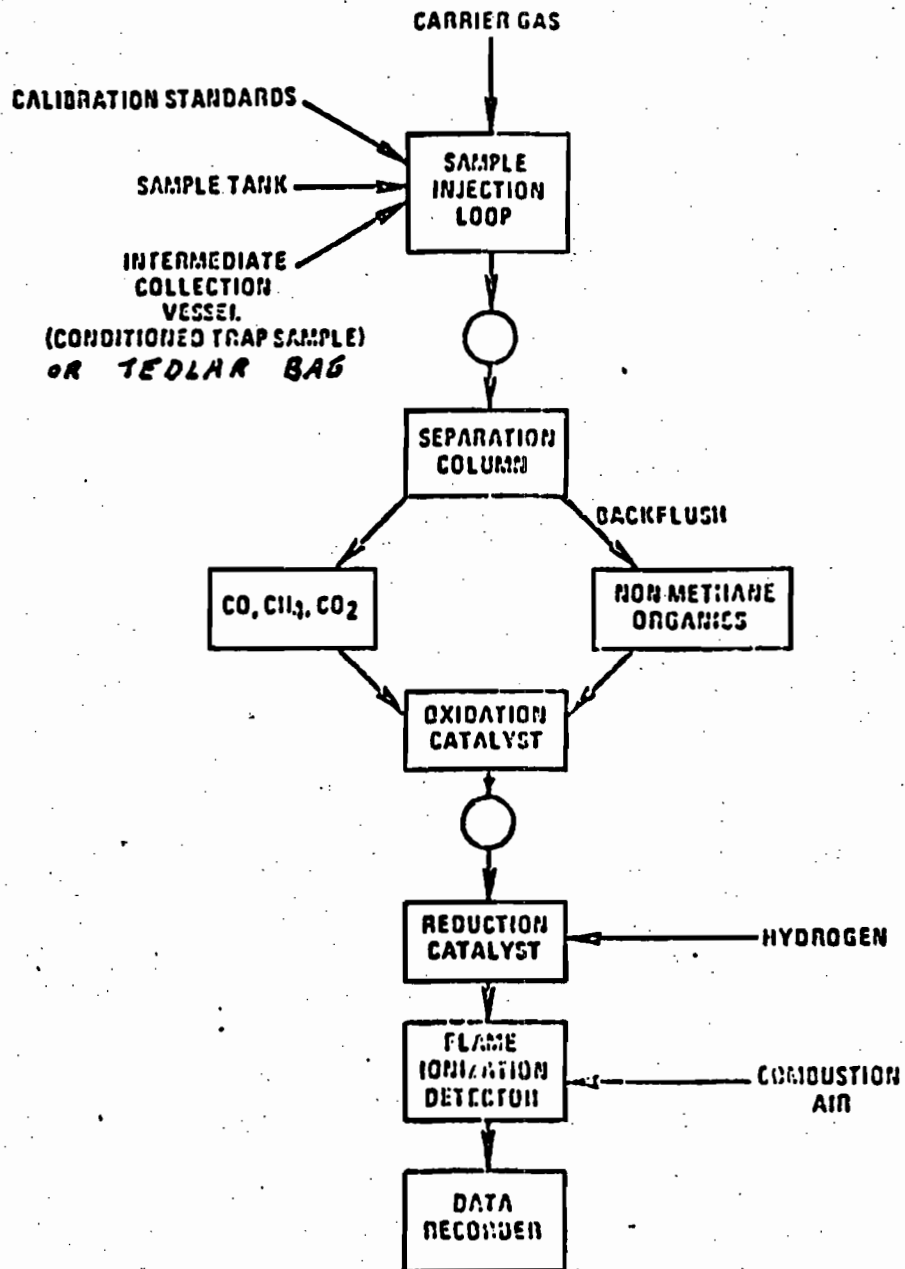


Figure 2. Simplified schematic of non-methane organic (NMO) analyzer

LINE #1 - WATERBASE COATING - NO SOLVENT

LINE #2 - #8760 - 1/2 GAL OF MIX PER HOUR

4 GAL OF MIX = 1/2 GAL I.P. ALCOHOL  
1/2 GAL NAPTHA-VMP  
3 GAL 8760 BASE

8760 BASE = 8.0 <sup>lbs</sup> PER GALLON  
42% VOC BY WEIGHT

THE 42% VOC ARE IN THESE

PROPORTIONS:

ALCOHOL	45%
AROMATIC	9%
VMP NAPTHA	46%

LINE #3 UV LACQUER - NO SOLVENT

LINE #4 # PC-15 COATING - 3 1/2 GAL MIX PER HOUR

5 GAL OF MIX = 1 GAL I.P. ALCOHOL  
4 GAL PC-15 BASE

PC-15 BASE = 8.1 LBS. PER GALLON  
35% VOC BY WEIGHT

THE VOLATILES INCLUDE: ISOPROPANOL  
VMP NAPHTHA  
XYLOL

(NO PROPORTION AVAILABLE -  
MFG - PROPRIETARY)

LINE #5 76FS93 ADHESIVE - 4 GAL MIX PER HOUR

5 GAL MIX = 3 GAL I.P. ACETATE  
2 GAL 76FS93 BASE

76FS93 BASE = 8.8 LBS PER GALLON  
40% VOC BY WEIGHT

THE VOLATILE IN 76FS93 IS  
100% ETHYL ACETATE

LINE #7 76FS93 ADHESIVE - 12 GAL MIX PER HOUR  
(SAME MIX AS LINE #5)