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:
Austill Packaging
Jefferson Smurfit Corporation
3389 Powers Avenue
Jacksonville, Florida 32231

Permit Number: AC16-089528
Expiration Date: March 31, 1986
County: Duval
Latitude/Longitude: 30° 15' 55" N/
81° 37' 18" W
Project: Press #5 Catalytic Incinerator with associated capture and transport system

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the new rotogravure printing press designated Press #5. The overall capture and transport system efficiency and the destruction efficiency of the add-on control system was established in a LAER determination, pursuant to FAC Rule 17-2.510(4).

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted on pages 5 and 6 of the "Specific Conditions".

Attachments are as follows:

1. Applications to Construct Air Pollution Sources, DER Form 17-1.202 (1).
2. J.E. Woosley's letter, dated July 17, 1984.
3. C.H. Fancy's letter, dated July 31, 1984.
4. PEDCo Environmental, Inc., Memo to Bill Voshell, dated September 19, 1984.
5. Waiver of 90 Day Time Limit, dated September 28, 1984.
6. R.J. Stearley's letter, dated October 4, 1984.
7. C.H. Fancy's letter, October 19, 1984.
8. R.J. Stearley's letter, dated November 5, 1984.
9. R.J. Stearley's letter, dated November 29, 1984.
10. W.M. Greenwood's letter, dated December 6, 1984.
11. R.S. DuBose's letter, dated December 7, 1984.
12. Stipulation and Motion for Entry of Consent Final Judgement.

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. This permit also constitutes:

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

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

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

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 for the press shall not exceed 4,228 hours per year run time.

2. The maximum volatile organic compounds applied to the substrate shall not exceed 178.55 pounds per hour.

3. The source is subject to the emission standards established through a determination of LAER, which requires 80% overall capture and transport efficiency of the VOC delivered to the substrate and 95% total destruction of all VOC delivered to the inlet of the catalytic incinerator.

PERMITTEE:
Austill Packaging

Permit Number: AC16-089528
Expiration Date: March 31, 1986

SPECIFIC CONDITIONS:

4. Capture efficiency shall be demonstrated using the procedures specified in the July 7, 1980 EPA memorandum entitled "Determination of Capture Efficiency", from James Berry to Doug Cook (attached).

5. Destruction efficiency of the catalytic incinerator shall be demonstrated by determining the inlet and outlet VOC concentrations using EPA Method 25. Dividing the outlet concentration by the inlet concentration will provide the penetration. Destruction Efficiency = 1 - Penetration.

6. Compliance test shall be performed at maximum operating conditions for single press and multiple press operations. 95% total destruction of all VOC delivered to the inlet of the catalytic incinertor shall be demonstrated by these compliance tests.

7. The Department, BES, and EPA shall be notified, in writing, 15 days in advance of the EPA Method 25 compliance test.

8. Final compliance shall be demonstrated no later than December 31, 1985 and shall be submitted to the Department, BES, and EPA.

9. The use of all coatings and solvents shall be recorded daily and shall be submitted quarterly to DER's Northeast District office and Jacksonville's BES office.

10. Prior to 90 days before the expiration of this permit, a complete application for an operating permit shall be submitted to DER's Northeast District office and Jacksonville's BES office. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this 12 day of February, 1985.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel
VICTORIA J. TSCHINKEL, Secretary

_____ pages attached.

Lowest Achievable Emission Rate (LAER) Determination
Austill Packaging
Division of Smurfit Industries
Duval County

The applicant has installed an Intaroto eight color rotogravure press at their Jacksonville facility. The unit, Press No. 5, is used to print labels for various consumer goods. The substrate for the labels may be paper or foil laminated to paper. The press is scheduled to operate 6000 hours per year.

The rotogravure printing process uses a steel cylinder upon which an image has been engraved. The cylinder rotates in an ink trough. The inked image is transferred directly to the substrate by impression. The product is then dried. Basically, the process is the application of a relatively high solvent content ink to the surface of a moving web or film, then rapid solvent evaporation using heated air. The solvent-laden air is exhausted from the system.

The solvent-laden air, containing volatile organic solvents (VOC's) when discharged to the atmosphere, contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. VOC emissions are most significant as air pollutants in their role of photochemical oxidant percursors.

The dryer is the major source of VOC emissions with lesser amounts emitted at the ink fountain, the press, and the chill rolls. Vapor capture systems are necessary to minimize fugitive solvent vapor loss around the ink fountain and at the chill rolls. VOC emissions can also be reduced by using low solvent technology inks, if compatible with the planned line substrate.

The Austill Packaging plant is located in Duval County which is classified nonattainment for the pollutant ozone (VOC), Rule 17-2.410. The additional press will result in an ozone (VOC) emission increase above the significant emission rate and is considered to be a modification to a major facility thus subject to the provisions of Rule 17-2.510(2)(d)4.a. The application and employment of Lowest Achievable Emission Rate (LAER) is a preconstruction review requirement (Rule 17-2.510(4)(a).). The procedure for determining LAER is set forth in Section 17-2.640.

LAER Determination Requested by the Applicant:

Enclosures and ducts will be installed to capture 80 percent of the VOC vapors emitted at the press. The vapors will be conveyed to a new catalytic incinerator designed to convert 92-95 percent of the VOC's to innocuous CO_2 and water by rapid oxidation.

Date of Receipt of a LAER application:

November 15, 1984

Review Group Members:

The determination was based upon comments received from the New Source Review Section, the Northeast District Office, Jacksonville Division of Bio-Environmental Services, the Bureau Chief and Deputy Bureau Chief-Bureau of Air Quality Management, and USEPA-Region IV.

LAER Determined by DER:

Pollutant	Emission Limit
Ozone (VOC)	80 percent capture efficiency of the VOC vapors emitted at the press and 95 percent destruction of the collected VOC vapors by the catalytic incinerator.

LAER Determination Rationale:

In rotogravure printing from stationary sources, volatile organic compounds (VOC's) can be released to the atmosphere by evaporation from the inking, cleaning, and curing operations. Hydrocarbons comprise a class of VOC's containing only carbon and hydrogen in various combinations. Most of these compounds and their by-products are considered poisonous, but most are harmful only in very high concentrations. Hydrocarbons can react with other chemicals, notably in the photochemical reaction, which results in the oxidants commonly called smog.

To control VOC emissions the applicant first considered using waterborne inks instead of organic solvent inks. They experimented with waterborne inks but concluded that, even though promising, waterborne inks are not yet well enough developed for their printing requirements. Only add-on control devices remain for consideration.

The three most popular types of add-on devices are those for thermal and catalytic incineration or carbon absorption.

- Carbon absorption: The solvent laden air is passed through a bed of activated carbon. The solvent is absorbed onto the carbon. The solvent is recovered by steam desorption, condensation, and decantation. The applicant's printing products vary in color and substrate, which require different solvents, some of which are not amenable to this type of control technology. The department agrees, that in this case, carbon absorption is not the recommended control technology.

- o Incineration: The solvent-laden air is heated to ignition temperatures, burning the solvent vapors to carbon dioxide and water. Catalytic oxidation or thermal oxidation are two suitable methods and allows heat to be recovered from the exhaust gases. There are some rotogravure operations that use complex solvent mixtures. For such operations thermal incineration may be the most feasible control method, which is the case at press No. 5.

The applicant will use a catalytic incinerator to reduce by 95% the amount of VOC's discharged to the atmosphere when press 5 is operating. The add-on unit will be a ComCat catalytic incinerator manufactured by Pillar Corporation. The applicant will install the necessary enclosures and ducting at press 5 to capture 80 percent of the vapors generated. The VOC destruction efficiency of the catalytic incinerator will be 95%. The planned incinerator and press ducting modifications will result in 250 less tons of VOC's discharged into the atmosphere per year.

The Department, when preparing a Lowest Achievable Emission Rate (LAER) determination, shall give consideration to and make a determination that reflects: 1) any information published by the USEPA, including the BACT/LAER Clearinghouse, 2) the most stringent emission limitation which is contained in the implementation plan of any state, 3) the most stringent emission limitation which is achieved in practice, and 4) all scientific, engineering, technical material, or other relevant information available to the department.

The latest (May 1984) BACT/LAER Clearinghouse summary lists data for eight facilities in the graphic arts category, half of which are rotogravure systems. Most of the efficiencies reported were based on a stack test for the control device and did not include the capture efficiency of the vapors generated at the emission point. At one of the listed facilities a material balance around the control device and vapor collection system was done. The control device efficiency was 95% and the capture efficiency was 73%. This facility did not have to meet LAER. A control device destruction efficiency of 95% with a capture efficiency of 85% was recommended as LAER for Press 5 by PEDCO Environmental Inc.

The literature research indicates that a 95% destruction efficiency of a catalytic incinerator is obtainable and judged to be LAER. The efficiency of a vapor capture system is still debatable especially in the case where such a system was not considered in the original source design. The department has judged that the 80% capture efficiency proposed by the applicant is LAER. However, if the applicant can demonstrate that the system was properly installed, operated and maintained, and through compliance testing that the 95% efficiency cannot be achieved because it is beyond the limit of the technology of the DER approved system, the applicant can apply for a modification of the LAER for a lower efficiency of not less than 92%. If

application for such modification is filed within 60 days of the compliance test showing an efficiency of less than 95%, then during the pendency of such application, the facility can be operated provided that the efficiency shall not be less than 92%, and provided however, the system has been properly installed and is being properly operated and maintained.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, LAER Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

C. H. Fancy, Deputy Bureau Chief

Date: 2/12/85

Approved:

Victoria J. Tschinkel, Secretary

Date: 2/18/85

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

DATE: JUL 07 1980

SUBJECT: Determination of Capture Efficiency

FROM: James Berry, Chief
Chemical Applications Section, CPB (MD-13)

TO: Doug Cook
EPA Region IV

This is in response to your telephone call requesting an acceptable technique to measure the capture efficiency of hoods used in the control of surface coating operations. As you are aware, there is no official EPA test method for measuring capture efficiency. In fact we have gotten somewhat poor results when we have tried to measure this in actual plant tests. We have asked EPA's Office of Research and Development to develop a test method for this. Even though a standardized test method does not now exist, the technique outlined below will theoretically give an acceptable measure of capture efficiency.

A technique for measuring capture efficiency is needed because the VOC that is not captured by the hoods can represent a significant portion of the total VOC emitted to the atmosphere. The VOC not captured by the hoods could, in some cases, exceed the allowable emission rate established in the SIP's, even assuming 100 percent of the VOC which is captured by the hoods and directed to the control device is destroyed or recovered.

When carbon adsorbers are used, it is not necessary to determine capture efficiency since the VOC recovered can be compared directly to the emission standard. Our estimates for capture capability for web processes used in the CTG reports have been reinforced by observations by our engineers of overall control levels as high as 90-94 percent when carbon adsorbers are used. Since overall control is the product of the capture efficiency and the control device efficiency, even if we assume the carbon adsorbers are 100 percent efficient (which they're not), hood capture efficiencies of greater than 90 percent are demonstrated.

When incinerators are used, determination of compliance is more involved. A general procedure would be as follows. An example is provided as an attachment.

1. Calculate a potential emission rate in mass/time based on VOC content of the coating and amount of coating used.

2. Calculate an allowable emission rate in mass/time based on the SIP standard. (This can be tricky; less volume of coating is required since the solids content is greater.)

3. Determine the required reduction in VOC.

4. Measure the inlet concentration and flow rate to the incinerator and calculate the inlet emission rate in mass/time. If this is less than the required reduction, obviously the source is in violation, since enough emissions will not be destroyed in the incinerator to give the required reduction. This will result if an undesirably large portion of the emissions are emitted as fugitives.

5. If the inlet VOC mass flow rate is greater than the required reduction, measure the outlet concentration and flow rate for the incinerator and calculate the outlet emission rate in mass/time.

6. By difference, determine if the required reduction is achieved.

To measure the VOC concentration before and after the incinerator, two approaches are available: (1) FID; or (2) Reference Method 25.

If the FID is used, it must be calibrated with the solvent in the coating. This calibration will provide a good measure on the inlet to the incinerator, but it will not be accurate for the outlet. The outlet of an incinerator contains oxygenated compounds which have a depressed response in the FID. Therefore, outlet readings will be low compared to absolute values. An FID might be used for an easy to make measurement to check for non-compliance. If the FID shows the source to be in violation then, it undoubtedly will be in violation. If the FID shows that the incinerator outlet emissions are equal to or slightly less than the allowable emission level, the results will be somewhat in doubt. Method 25 may be resorted to in this case. An advantage of the FID is that measurements are easy to make and can be taken over a period of time, perhaps leading to a better measure of average emission rates compared to the short-term sampling with Reference Method 25.

If Reference Method 25 is used, VOC concentrations are made in terms of mass of carbon atoms (C). To compare the measured values with the allowable emission rates, the measured values must be corrected to mass VOC or the other terms must be corrected to mass C. This is done by obtaining formulation data for the solvents and calculating a mass VOC to C ratio. If the solvent formula is C_4H_8O, for example, the mass VOC to mass C ratio is 72/48 or 1.5. The major advantage of Reference Method 25 over the FID is that Reference Method 25 gives an accurate reading on the incinerator outlet. The need for this accuracy depends on incinerator efficiency and how close the emissions are to the standard. With low incinerator efficiency, an accurate measure of outlet emissions is more important than with a high incinerator efficiency.

Remember, however, that even a high efficiency control device would be ineffective if the capture device were very inefficient. The effectiveness of the control system is equally dependent on its two components, the capture and control devices. Because of the large number of sources which must come into compliance with a variety of State regulations in the near future, it probably is more realistic for a State to initially plan on determining compliance with the capture requirements of their regulations on the basis of engineering judgment. Recognizing that 90% capture means that almost all emissions must be contained and delivered to

the control device, it should be possible for an enforcement official to make some judgment that a system does or does not approach perfect capture. It would be well to train each enforcement person by having him inspect a web process that uses a carbon adsorber control device for which the overall recovery has actually been measured and found to be high. Its associated capture system would obviously have to be good. Ultimately, however, the enforcer and industry must recognize that achievement of emission limits based on 90% capture requires almost total containment of the emissions. Very little can be permitted to escape the control system.

Attachment

cc: CAS
Dave Patrick
Barry Perlmutter, Region V
Tom Williams

ATTACHMENT

DETERMINATION OF COMPLIANCE BY A COATING OPERATION
WHICH CONTROLS EMISSIONS WITH AN AFTERBURNER

Step 1. Determine the VOC emission rate from the process based on the VOC content of the coating and the rate of coating usage. (VOC content can be taken from the coating manufacturer's formulation or it can be determined by EPA Method 24.) Then calculate the solids content of the coating.

Coating Feed Rate	x	Factor to Convert Waterborne Coatings to Solvent Borne Equivalent	x	Coating Solvent Content	=	Actual Solvent Emission Rate	(Eq. 1)
$\frac{\text{Gal Coating}}{\text{hr}}$	x	$\frac{\text{Gal Coating less } H_2O}{\text{Gal coating}}$	x	$\frac{\text{\# VOC}}{\text{Gal Coating less } H_2O}$	=	$\frac{\text{\# VOC}}{\text{hr}}$	

As an example, consider the case of a coater using 100 gal/hr of a conventional solvent borne coating containing 5 pounds VOC per gallon of coating. Since a solvent borne coating contains no measurable amount of water, the units "gal coating less H_2O" and "gal coating" are synonymous and equation 1 becomes:

$$\frac{100 \text{ gal coating}}{\text{hr}} \times \frac{5\# \text{ VOC}}{\text{gal coating}} = \frac{500\# \text{ VOC}}{\text{hr}} \qquad \text{(Eq. 2)}$$

The solids content of this coating is then calculated by difference: (Assume the density of the solvent is 7.36 #/gal.)

$$\frac{5\# \text{ VOC}}{\text{gal coating}} \times \frac{1 \text{ gal VOC}}{7.36\# \text{ VOC}} = \frac{.68 \text{ gal VOC}}{\text{gal coating}} \qquad \text{(Eq. 3)}$$

1 gal coating - 0.68 gal VOC = 0.32 gal solids (Eq. 4)

Step 2. Determine the allowable exhaust rate based on use of a complying coating and calculate its solids content. Assume the regulation contains an emission limitation of 2.5 #VOC/gal coating less H_2O which, if we use the same solvent density, is equivalent to:

$$\frac{2.5\# \text{ VOC}}{\text{gal coating}} \times \frac{1 \text{ gal VOC}}{7.36\# \text{ VOC}} = \frac{0.34 \text{ gal VOC}}{\text{gal coating}} \qquad \text{(Eq. 5)}$$

The solids content is again calculated by difference.

1 gal coating - 0.34 gal VOC = .66 gal solids (Eq. 6)

If the facility used a complying coating with 66% solids instead of 32%, far fewer gallons of coating would be required to coat a specified article. Assuming both coatings are applied at the same transfer efficiency, the volume of complying coating required to coat at the same production rate would be:

$$\frac{100 \text{ gal noncomplying coating}}{\text{hr}} \times \frac{.32}{.66} = \frac{49 \text{ gal complying coating}}{\text{hr}} \quad \text{(Eq}$$

Therefore, the allowable emission rate is:

$$\frac{49 \text{ gallons complying coating}}{\text{hr}} \times \frac{2.5\# \text{ VOC}}{\text{gal complying coating}} = \frac{121\# \text{ VOC}}{\text{hr}} \quad \text{(Eq}$$

Step 3. Determine the required VOC reduction.

Actual emission rate - allowable rate = reduction required

$$500 \frac{\# \text{ VOC}}{\text{hr}} - 121 \frac{\# \text{ VOC}}{\text{hr}} = 379 \text{ lbs VOC/hr} \quad \text{(Eq.}$$

Step 4. Measure the mass flow rate of VOC to the incinerator using a flame ionization detector calibrated with the solvent in the coating feed to the coating line. If the measured VOC mass flow rate is less than or equal to 379 pounds per hour, the capture system is deficient and the source is not in compliance. (This presumes the control device could never achieve perfect control.)

Step 5. If the mass flow rate of VOC to the incinerator is greater than 379 pounds per hour, the destruction efficiency of the incinerator should be determined using the Total Gaseous Non-Methane Organics detector (Reference Method 25). The incinerator must be efficient enough to destroy no less than 379 pounds per hour of VOC in order for the coater to be in compliance.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

February 19, 1985

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Robert J. Stearley
Vice President, Consumer Packaging Division
Austill Packaging
Jeffersion Smurfit Corporation
3389 powers Avenue
Jacksonville, Florida 32231

Dear Mr. Stearley:

Enclosed are Permit Numbers AC 16-089528 and AC 16-093347 dated February 12, 1985, to Austill Packaging issued pursuant to Section 403, Florida Statutes.

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

Sincerely,

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

CHF/pa

Enclosure

cc: John Brown, DER Northeast District
Jerry Woosley, Duval County BES
Bill Voshell, EPA Region IV
William Greenwood, P.E., Wiley & Wilson
John Bottcher, DER Office of General Counsel

Final Determination

Austill Packaging
Jefferson Smurfit Corporation
Duval County
Jacksonville, Florida

Catalytic Incinerator with Associated Capture and Transport Systems for Packaging Rotogravure Press 4 and Press 5

Permit Numbers:
AC 16-089528
AC 16-093347

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

February 11, 1985

Final Determination

The applications for permits from Austill Packaging, Jefferson Smurfit Corporation to construct a catalytic incinerator with associated capture and transport systems for packaging rotogravure presses 4 and 5 at the company's facility in Duval County, Florida, have been reviewed by the Bureau of Air Quality Management. Public Notice of the department's Intent to Issue the construction permits was published in the Florida Times-Union and the Jacksonville Journal on January 7, 1985.

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

There were no letters of response as a result of the public notice period.

The final action of the department will be to issue the permits as noticed during the public notice period.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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PERMITTEE:
Austill Packaging
Jefferson Smurfit Corporation
3389 Powers Avenue
Jacksonville, Florida 32231

Permit Number: AC16-093347
Expiration Date: March 31, 1986
County: Duval
Latitude/Longitude: 30° 15' 55" N/
81° 37' 18" W
Project: Press #4 Catalytic Incinerator with associated capture and transport system

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the existing rotogravure printing press designated Press #4. The overall capture and transport system efficiency and the destruction efficiency of the add-on control system was established in a LAER determination for Press #5, pursuant to FAC Rule 17-2.510(4), and shall apply to Press #4 by the provisions of a Consent Final Judgement.

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted on pages 5 and 6 of the "Specific Conditions".

Attachments are as follows:

1. Applications to Construct Air Pollution Sources, DER Form 17-1.202 (1).
2. J.E. Woosley's letter, dated July 17, 1984.
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10. W.M. Greenwood's letter, dated December 6, 1984.
11. R.S. DuBose's letter, dated December 7, 1984.
12. Stipulation and Motion for Entry of Consent Final Judgement.

PERMITTEE:
Austill Packaging

Permit Number: AC16-093347
Expiration Date: March 31, 1986

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. This permit also constitutes:

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

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 for the press shall not exceed 6,566 hours per year run time.

2. The maximum volatile organic compounds applied to the substrate shall not exceed 247.62 pounds per hour.

3. The source is subject to the emission standards established through a determination of LAER by a Consent Final Judgement, which requires 80% overall capture and transport efficiency of the VOC delivered to the substrate and 95% total destruction of all VOC delivered to the inlet of the catalytic incinerator.

PERMITTEE:
Austill Packaging

Permit Number: AC16-093347
Expiration Date: March 31, 1986

SPECIFIC CONDITIONS:

4. Capture efficiency shall be demonstrated using the procedures specified in the July 7, 1980 EPA memorandum entitled "Determination of Capture Efficiency", from James Berry to Doug Cook (attached).

5. Destruction efficiency of the catalytic incinerator shall be demonstrated by determining the inlet and outlet VOC concentrations using EPA Method 25. Dividing the outlet concentration by the inlet concentration will provide the penetration. Destruction Efficiency = 1 - Penetration.

6. Compliance test shall be performed at maximum operating conditions for single press and multiple press operations. 95% total destruction of all VOC delivered to the inlet of the catalytic incinertor shall be demonstrated by these compliance tests.

7. The Department, BES, and EPA shall be notified, in writing, 15 days in advance of the EPA Method 25 compliance test.

8. Final compliance shall be demonstrated no later than December 31, 1985 and shall be submitted to the Department, BES, and EPA.

9. The use of all coatings and solvents shall be recorded daily and shall be submitted quarterly to DER's Northeast District office and Jacksonville's BES office.

10. Prior to 90 days before the expiration of this permit, a complete application for an operating permit shall be submitted to DER's Northeast District office and Jacksonville's BES office. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this 12 day of February, 1985.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Victoria J. Schinkel
VICTORIA J. SCHINKEL, Secretary

_____ pages attached.

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:
Austill Packaging
Jefferson Smurfit Corporation
3389 Powers Avenue
Jacksonville, Florida 32231

Permit Number: AC16-089528
Expiration Date: March 31, 1986
County: Duval
Latitude/Longitude: 30° 15' 55" N/
81° 37' 18" W
Project: Press #5 Catalytic Incinerator with associated capture and transport system

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the new rotogravure printing press designated Press #5. The overall capture and transport system efficiency and the destruction efficiency of the add-on control system was established in a LAER determination, pursuant to FAC Rule 17-2.510(4).

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted on pages 5 and 6 of the "Specific Conditions".

Attachments are as follows:

1. Applications to Construct Air Pollution Sources, DER Form 17-1.202 (1).
2. J.E. Woosley's letter, dated July 17, 1984.
3. C.H. Fancy's letter, dated July 31, 1984.
4. PEDCo Environmental, Inc., Memo to Bill Voshell, dated September 19, 1984.
5. Waiver of 90 Day Time Limit, dated September 28, 1984.
6. R.J. Stearley's letter, dated October 4, 1984.
7. C.H. Fancy's letter, October 19, 1984.
8. R.J. Stearley's letter, dated November 5, 1984.
9. R.J. Stearley's letter, dated November 29, 1984.
10. W.M. Greenwood's letter, dated December 6, 1984.
11. R.S. DuBose's letter, dated December 7, 1984.
12. Stipulation and Motion for Entry of Consent Final Judgement.

PERMITTEE:
Austill Packaging

Permit Number: AC16-089528
Expiration Date: March 31, 1986

GENERAL CONDITIONS:

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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.

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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.

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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.

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55.1

SPECIFIC CONDITIONS:

1. The hours of operation for the press shall not exceed 4,228 hours per year run time.

2. The maximum volatile organic compounds applied to the substrate shall not exceed 178.55 pounds per hour.

3. The source is subject to the emission standards established through a determination of LAER, which requires 80% overall capture and transport efficiency of the VOC delivered to the substrate and 95% total destruction of all VOC delivered to the inlet of the catalytic incinerator.

PERMITTEE:
Austill Packaging

Permit Number: AC16-089528
Expiration Date: March 31, 1986

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Issued this 12 day of February, 1985.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel
VICTORIA J. TSCHINKEL, Secretary

_____ pages attached.