

Check Sheet

Company Name:
Permit Number:
PSD Number:
Permit Engineer:

Reichhold Chemicals, Inc.
AC 17 - 142284

Cross References:

-
-
-

Application:

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

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



P 062 921 958

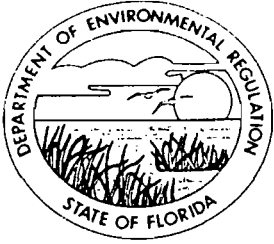


Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Bradford Crawford</i>	
Street and No. <i>Reichhold Chetn.</i>	
P.O. Box and ZIP Code <i>PO Box 13582</i>	
Postage <i>Research Triangle, NC</i>	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	<i>AC 17-142284 1-24-93</i>

PS Form 3800, June 1991



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 12, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bradford S. Crawford
Regional Environmental Engineer
Reichhold Chemicals, Inc.
Corporate Headquarters
P.O. Box 13582
Research Triangle Park, NC 27709-3582

Dear Mr. Crawford:

Re: Permits AC17-142284, Chemical Reactor R-5
Permit Extension Request

The Department is in receipt of your letter dated December 22, 1992, requesting an extension of the expiration date of the above mentioned permit. This request is acceptable to the Department. The expiration date of this permit will be changed as follows:

FROM: December 31, 1992
TO: March 31, 1993

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

The Petition shall contain the following information:

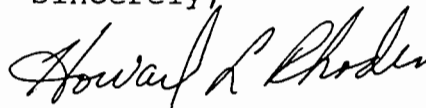
- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

A copy of this letter shall be attached to the above mentioned permit and shall become a part of that permit.

Sincerely,



Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/TH/plm

Attachment to Be Incorporated:

Mr. Bradford Crawford's letter of December 17, 1992

cc: Ed Middleswart, NWD



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Howard L. Rhodes
FROM: C. H. Fancy *CHF*
DATE: January 12, 1993
SUBJ: Amendment to Construction Permit **AC17-142284**
Reichhold Chemicals, Inc.

Attached for your approval and signature is a letter extending the expiration date for the above referenced construction permit.

Reichhold Chemicals requested the extension to incorporate this existing construction permit and other operating permits into the new consolidated construction permit for the chemical reactors facility currently under review.

The Bureau recommends approval of this amendment.

CHF/TH/plm

Attachment

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Bradford S. Crawford
 Reichhold Chem. Inc.
 PO BOX 13582
 Research Triangle Park, NC
 27709-3582

4a. Article Number
 P 710 058 462

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
 5/8/92

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form 3811, November, 1990 * U.S. GPO: 1991-287-068

DOMESTIC RETURN RECEIPT

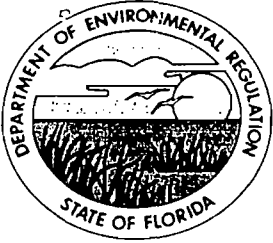
P 710 058 462



Certified Mail Receipt
 No Insurance Coverage Provided
 Do not use for International Mail
 (See Reverse)

Sent to	Bradford Crawford
Street & No.	Reichhold Chem.
P.O., State & ZIP Code	Research T P, NC
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees ^a	\$
Postmark or Date	5-6-92 AC17-142284

PS Form 3800, June 1990



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 28, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bradford S. Crawford
Reichhold Chemicals, Inc.
P. O. Box 13582
Research Triangle Park, NC 27709-3582

Dear Mr. Crawford:

Re: Permit No. AC 17-142284, Chemical Reactor R-5

The Department is in receipt of your letter dated March 31, 1992, requesting an extension to the expiration date of the above mentioned permit. This source is located at the Reichhold Chemicals facility in Pensacola, Florida. This request is acceptable. The expiration date for this permit will be changed as follows:

From: March 31, 1992
To: December 31, 1992

This letter must be attached to the above mentioned permit and shall become a part of each permit.

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

The Petition shall contain the following information:


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

Mr. Bradford S. Crawford
Page 2 of 2

- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

Sincerely,

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

SS/TH/plm

Attachment to be Incorporated

Bradford S. Crawford's letter of March 31, 1992

c: R. Prusa, DER



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood
FROM: Clair Fancy
DATE: April 28, 1992
SUBJ: Amendment to Construction Permit AC AC 17-142284
Reichhold Chemicals, Inc.

I signed

Attached for your approval and signature is a letter extending the expiration date for the above referenced construction permit.

The Bureau recommends approval of this amendment.

CF/TH/plm

Attachment

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Bradford S. Crawford
 Regional Env. Eng.
 Reichhold Chemicals, Inc.
 P.O. BOX 13582
 Research Triangle, NC

4a. Article Number
 P 832 538 971

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
 4/8/92

5. Signature (Addressee) 27704-3582

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

6. Signature (Agent)
 [Signature]

P 832 538 971



Certified Mail Receipt

No Insurance Coverage Provided
 Do not use for International Mail
 (See Reverse)

Sent to Bradford Crawford	
Street & No. Reichhold Chem.	
P.O., State & ZIP Code Research Triangle, NC	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	4-6-92
	RC 17-142284
	R-5

PS Form 3800, June 1990



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 3, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance
Reichhold Chemicals, Inc.
P. O. Box 13582
Research Triangle Park, NC 27709-3582

Dear Mr. Crawford:

RE: Reichhold Chemicals, Inc. - Pensacola, Florida
Permit No. AC 17-142284, Chemical Reactor R-5

The Bureau of Air Regulation received your March 31, 1992, request to extend the above referenced air construction permit. On October 30, 1991, Rule 17-4.050(4)(o), F.A.C., (copy enclosed) was changed to require a \$50 processing fee for permit extensions; therefore, we will not be able to take action on your request until the fee is received. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

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

CHF/pa

Enclosure

cc: Teresa Heron

\$50.00 pd
4-16-92

Reichhold Chemicals, Inc.

Corporate Headquarters
P.O. Box 13582
Research Triangle Park, NC 27709-3582

RECEIVED

APR 3 1992

Division of Air **REICHHOLD**
Resources Management

March 31, 1992

Mr. Preston Lewis
Division of Air Resources Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Reichhold Chemicals, Inc. - Pensacola, Florida
Permit No. AC 17-142284, Chemical Reactor R-5

Dear Mr. Lewis:

In response to a Reichhold Chemicals, Incorporated request dated December 6, 1991, on January 9, 1992, the Florida DER extended the expiration date for the above-referenced construction permit until March 31, 1992. The extension was requested to allow DER time to prepare an Order which would change the emissions testing requirement to EPA Method 25A. Reichhold did not receive the Order until March 17, 1992 which did not allow enough time to perform emissions testing before construction permit expiration. Therefore, an additional extension of the construction permit will be necessary.

In addition, plans are underway to significantly change the line of products being produced in Reactor R-5. Therefore, we are planning to meet with DER air permit personnel within the next 2-3 weeks to discuss these changes and determine if additional modifications to the permit are necessary.

Because Reichhold has only recently received the Order from DER, and because additional changes may be necessary due to the new products being produced in Reactor R-5, an extension of the construction permit expiration date is requested. A six month extension, until September 30, 1992, is requested to allow time for any necessary amendments to be incorporated, and to allow time for emission testing to be performed.

If you have any questions concerning this request, please call me at (919) 990-7540.

Sincerely,



Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance

BSC/gc

cc: Mr. Mike Harley - DER/Tallahassee
Mr. Ed Middleswart - DER/Pensacola

Tel: (919) 990-7500
Fax: (919) 990-7711

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the matter of:)	Permit No.	AC 17-142284
)		
Reichhold Chemicals,))		ASP-91-I-01
)		
Petitioner.)	OGC File No.	92-0287
_____)		

ORDER ON REQUEST
FOR
ALTERNATE TEST PROCEDURES AND REQUIREMENTS

Pursuant to Rule 17-2.700(3), Florida Administrative Code, Reichhold Chemicals, petitioner, submitted a request for approval to use a set of surrogate parameters, in lieu of EPA Method 25 as the compliance verification procedure for Chemical Reactor R-5, permit number AC 17-142284, located in Escambia County.

Having considered petitioner's written request and all supporting documentation, the following Findings of Fact, Conclusions of Law, and Order are entered.

FINDINGS OF FACT

1. Reichhold Chemicals, petitioner, specifically requested approval to use surrogate parameters (nitrogen blanket flow rate, condenser outlet temperature, and scrubber exit temperature) in lieu of EPA Method 25 as the procedure used to verify compliance of Chemical Reactor R-5, permit number AC 17-142284, with the applicable emission limitations.

2. The R-5 reactor is used for the production of synthetic organic chemicals.

3. As justification for the use of the surrogate parameters, the petitioner states, "Due to the low flow of nitrogen on a blanket and no induced draft on the scrubber a total VOC would be difficult to measure. Secondly, because of the different raw materials in each batch, VOC testing for one product would not be representative of the total emission for other products as noted in the Weston letter" (Exhibit 1).

4. The letter from Weston, Inc. further states, "Finally, specific permit limitations given in pounds per batch and pounds per year require an accurate measurement of air volume flow and a consistent measurement of concentration to be meaningful. The current operational mode of R-5 does not provide either of these conditions. Because the scrubber exhaust fan is not used, the air flowrate at the scrubber exhaust represents at best natural draft conditions which are low or non-existent. Measurable flows occur primarily during filling. However, air flow conditions during the reactions may be negligible. The low and variable airflow rate is very difficult to measure accurately and provides less than meaningful data" (Exhibit 2).

5. The Clean Air Act Amendments of 1990 presently identifies 189 compounds as toxic air pollutants. Four of the typical raw materials and two of the potential emission constituents identified by the petitioner are among the air toxics listed in the Clean Air Act Amendments of 1990.

6. Rule 17-2.700(3)(b)4. states that a request for an alternate sampling procedure shall include, ". . . a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in Chapter 17-2 or any permit issued pursuant to that Chapter 17-2."

7. Data showing the correlation between volatile organic compound emission measurements [EPA Method 25] and the proposed surrogate parameters was not provided.

8. The permit requires the use of EPA Method 25 for compliance testing which is inconsistent with the compliance test procedure that is required for federally regulated sources within the synthetic organic chemical manufacturing industry. EPA Region IV verbally suggested that EPA Method 25A may be more suitable than EPA Method 25 for the measurement of volatile organic compound emissions from Chemical Reactor R-5.

CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider petitioner's request pursuant to Section 403.061, Florida Statutes, and Rule 17-2.700(3), Florida Administrative Code.

2. Petitioner has not provided data to demonstrate that the proposed alternative procedure would be adequate to demonstrate compliance with the mass emission limitations in the Specific Condition No. 1 of permit No. AC 17-142286.

ORDER

Having considered petitioner's written request and supporting documentation, it is hereby ordered that:

1. The petitioner's request for approval to demonstrate compliance on a calculated basis using surrogate parameters in lieu of EPA Method 25 is denied;

2. However, pursuant to an agreement with the petitioner (Exhibit 3), volatile organic compound emissions shall be measured as carbon using EPA Method 25A;

3. Petitioner shall conduct the required emission tests using equipment that complies with the provisions of, and the procedures specified in Rule 17-2.700, Florida Administrative Code;

4. The emission tests shall include those periods representative of normal operation when emissions are most likely to occur (i.e., charging of materials, reaction of materials, and unloading of materials);

5. The sample collection rate shall not exceed the reactor exhaust flow rate; and,

6. Petitioner shall submit the test report (which shall include the test results and all other required information) to the Director of the Northwest District office upon completion of the initial compliance test and prior to each renewal of the operation permit thereafter.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, 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 the Notice of Agency Action is filed with the Clerk of the Department.

PETITION FOR ADMINISTRATIVE REVIEW

1. A person whose substantial interests are affected by the Department's decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 21 days of receipt of this Order. Petitioner shall mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

2. The petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name address, and the Department File Number;

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

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

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

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

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

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

3. If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Order. Persons whose substantial interests will be affected by any decision of the Department with regard to the applicant have the right to petition to become a party to the proceeding. The petition must conform with the requirements specified above and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only

be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

4. This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 103.070, Florida Administrative Code. Upon timely filing of a petition or a request for an extension of time this Order will not be effective until further Order of the Department.

DONE AND ORDERED this 16th day of March, 1992
in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



CAROL M. BROWNER

Secretary

Twin Towers Office Building

2600 Blair Stone Road

Tallahassee, Florida 32399-2400

Telephone (904) 488-4805

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing Order has been mailed, postage prepaid, to Michael G. Long, Plant Engineer, Reichhold Chemicals, Inc., P. O. Box 1433, Pensacola, Florida 32596-1433, this 15th day of March, 1992.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



GARY C. SMALLRIDGE
Assistant General Counsel
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone (904) 488-9730

Reichhold Chemicals, Inc.
Coating Polymers & Resins Division
407 South Pace Boulevard
P.O. Box 1433
Pensacola, Florida 32596-1433

RECEIVED

MAR 15 1991

REICHHOLDCERTIFIED MAIL

DER-BAQM

March 13, 1991

Mr. Steve Smallwood, P.E.
Director
Division of Air Resource Management
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, FL 32399-2410

RE: Permit No. AC17-142284 - Chemical Reactor R-5

Dear Mr. Smallwood,

The following is a request to amend the above referenced construction permit. This request is being made pursuant to conversations with Jack Preece (DER NW Florida District).

- 1) It is desired to make this permit consistent with the operating permits for the similar reactor and scrubber systems in the facility. The existing permits being referred to are:

Permit No.Source

A017-171914

R-1 Fusion Scrubber

A017-171914

R-2 Fusion Scrubber

A017-171913

Main Process Scrubber

- 2) The reactor is being used to make significantly different products than originally planned. UV Oligomer and toner resins referenced in specific conditions No. 1 and No. 4 are no longer being made. Therefore, specific chemical emission limits and batch quantity limitations are not applicable. We request that limits employed be general enough to allow flexibility in operation.
- 3) Specific condition No. 5 requires VOC testing based on Method 25. Because of the operating parameters of the reactor (low process flow rate) the data requested is usually unreproducible and unrepresentative. (Please see attached letter from Weston.)

Tel.: (904) 433-7621
(800) 874-0868
FAX: (904) 444-7652

Exhibit 1

Page Two
Mr. Steve Smallwood
RE: Permit No. AC17-142284

DESCRIPTION OF R-5 REACTOR SYSTEM

The R-5 reactor is a small semiworks kettle. Its purpose is to produce small scale-up batches before full scale production is achieved in any of RCI's plants. A new batch is first produced in a lab flask. After successfully being produced in a lab flask, the pilot plant produces a small 150 to 300 gallon batch. After three successful batches in the pilot plant, R-5 would produce a small nominal 1000 gallon batch of the product. If R-5 successfully produces the batch, the market place is interested in the product, R-5 would continue to produce for a period of time until large scale production is successful in any one of RCI's plants.

The installation of R-5 varies from the initial drawing submitted by one important detail. The reactor system does not use a fan on the scrubber. The reactor is blanketed at all times during operation with a flow rate of 0.1 - 1.0 scfh of nitrogen (see attached sketch). This significantly reduces emissions from the reactor.

The primary emission control device on the reactor is the condenser (Apparatus No. C-005). Condensers are also the main control device on all other reactor and scrubber in this facility (refer to list on front page). The condenser outlet is operated at a temperature below the boiling point of the solvent used in the process. The outlet temperature of the condenser is monitored continuously during reactor operation and recorded every 30 minutes. The secondary control device is the wet scrubber. All vents on the reactor R-5 system go through this scrubber. This is also consistent with the other reactor and scrubber permits in operation at the plant.

Because of the operation of the reactor, RCI would propose to amend the specific conditions of the permit as follows:

Special Condition Amendments

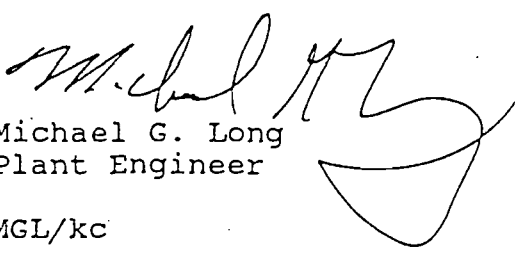
- No. 1 Amend total allowable VOC emissions to reflect total emissions of 1200 lb/yr and not be specific with individual compounds to allow flexibility.
- No. 4 Amend statement limiting total volume of batches:
- This source is allowed to operate continuously (8760 hours per year). Batch made type operation shall not exceed 250 batches/yr of production.

Page Three
Mr. Steve Smallwood
RE: Permit No. AC17-142284

No. 5 Amend compliance statement on VOCs to allow emission limit compliance on a calculated basis, using the nitrogen blanket flow rate, condenser outlet temperature, and scrubber exit temperature. Due to the low flow of nitrogen on a blanket and no induced draft on the scrubber a total VOC would be difficult to measure. Secondly, because of the different raw materials in each batch, VOC testing for one product would not be representative of the total emission for other products as noted in the Weston letter.

If you have any questions please contact me at (904) 433-7621, ext. 348.

Sincerely,


Michael G. Long
Plant Engineer

MGL/kc

cc: B. Crawford - RTP
J. Preece - DER NW Florida District
J. Alton



ROY F. WESTON, INC.
1635 PUMPHREY AVE.
AUBURN, AL 36830
PHONE: (205) 826-6100
FAX: (205) 826-8232

21 February 1991

Mr. Michael Long
Reichhold Chemicals
P.O. Box 1433
Pensacola, FL 32596

Re: Summary of Source Testing Conditions
Reactor 5 (R-5)
Reichhold P.O. No. 126661
WESTON No. 0148-22-01

Dear Mr. Long:

This letter is a summary of our understanding of the current operation of Reactor R-5 and our assessment of the conditions for source testing for the unit. Based on our discussion with you on 15 November 1990, we believe that source testing for R-5 is not appropriate or meaningful under the current mode of operation. The following paragraphs describe our findings and recommendations.

R-5 Operational Mode

Currently, R-5 operates as a batch reactor for the production of a variety of compounds. After appropriate raw materials are placed in R-5, a nitrogen blanket is added and the reactions are carried out. Nitrogen is replaced at a rate of about 0.5 scfh.

R-5 is equipped with a condenser for control of volatile organic compound (VOC) emissions. Also a scrubber is in place for additional control of emissions. The scrubber solution is circulated through packing, but the scrubber fan is not used. The only air flow reaching the scrubber occurs by gravity or pressure differential during filling. The condenser is thought to be adequate for the recovery of any VOC emissions.



Mr. Michael Long
21 February 1991
Page 2

Construction Permit Provisions

The Florida Department of Environmental Regulation (FDER) construction permit for R-5 was based on the production of compounds different from the current operation. Also, the permit was based on the use of the scrubber fan but not any use of a nitrogen blanket. Obviously, the use of the scrubber fan now would deplete the nitrogen blanket at a rapid and uneconomical rate.

The FDER construction permit also contains provisions for source testing to demonstrate compliance prior to issuance of an operating permit. The source testing requirements are also based on the scrubber utilizing the fan during all operating periods.

The specific conditions of the construction permit require compliance with batch and annual limitations for nine (9) compounds in pounds per batch and pounds per year, respectively as shown in Table 1. Limitations are not given in concentrations.

Also, the reference method specified in the permit to demonstrate compliance with the permit conditions is EPA Method 25. Other methods may be used provided they are approved by FDER prior to performing the tests. Method 25 (and related protocols) is a nonspecific procedure for VOCs using a calibration gas (methane, propane, etc.). The tests results do not give quantities of specific compounds. There are no provisions in the permit conditions for equating pounds (per batch or per year) of specific compounds to the type of test results that Method 25 (and related protocols) will give.

Finally, specific permit limitations given in pounds per batch and pounds per year require an accurate measurement of air volume flow and a consistent measurement of concentration to be meaningful. The current operational mode of R-5 does not provide either of these conditions. Because the scrubber exhaust fan is not used, the air flowrate at the scrubber exhaust represents, at best, natural draft conditions which are low or non-existent. Measurable flows occur primarily during filling. However, air flow conditions during the reactions may be negligible. The low and variable air flowrate is very difficult to measure accurately and provides less than meaningful data.



Mr. Michael Long

21 February 1991

Page 3

Concentration data derived from low (or no) flow sources is usually unreproducible and unrepresentative. This is particularly true when calculating mass emission rates from the concentration data and air flowrates. Although the detection limits are of Method 25 (and related protocols) can be low, the meaningfulness of the concentration data at very low (or no) flowrates is questionable.

If you have any questions or need further information, please contact me.

Sincerely,

ROY F. WESTON, INC.

A handwritten signature in cursive script that reads "Randal M. Reynolds".

Randal M. Reynolds, P.E.

Senior Project Manager

wwc

Attachment



TABLE 1. EMISSION LIMITATIONS FOR R-5
FDER PERMIT NO. AC17-142284

U.V. Oligemers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Acrylic Acid	2.8 pounds	280 pounds
Ethyl Alcohol	1.5 pounds	150 pounds
Isoprophyl Alcohol	4.8 pounds	480 pounds

TONER RESINS (50 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Butyl Acrylate	0.7 pounds	31 pounds
Ethyl Acrylate	1.2 pounds	60 pounds
Methacrylic Acid	0.1 pounds	3 pounds
Styrene	0.6 pounds	25 pounds
Xylene	1.6 pounds	79 pounds
Methyl Methacrylate	0.5 pounds	25 pounds

Reichhold Chemicals, Inc.

10000 Highway 90, Suite 100
Pensacola, Florida 32504
Phone: (904) 433-1000
Telex: Reichhold Chemicals, Inc. 32504

RECEIVED REICHHOLD

December 9, 1991

DEC 10 1991

Mr. Michael D. Harley
Division of Air
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Division of Air
Resources Management

RE: Reichhold Chemicals, Inc. - Pensacola, Florida
Permit No. AC17-142284

Dear Mr. Harley:

While Reichhold Chemicals, Incorporated still believes stack testing is not necessary or appropriate for Reactor R-5, we do not object to the draft Order provided us, and Reichhold will not appeal the Order, if issued.

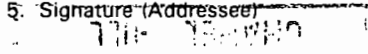
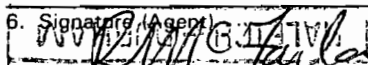
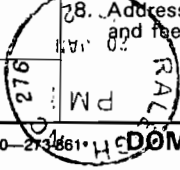
As stated in my December 6, 1991 telephone conversation with you, Reichhold believes the DER Order, is unnecessary, and we will comply with a simple letter from the DER amending the permit to use Method 25A and an appropriate EPA method for flow measurement.

Upon final resolution of this issue, Reichhold will set-up an appropriate stack test as quickly as possible. If you have any questions concerning this issue, please call me at (919) 990-7540.

Sincerely,

Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance

BSC/gc

SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece next to the article number.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: Mr. Bradford S. Crawford Reichhold Chemicals, Inc. P. O. Box 13582 Research Triangle Park, NC 27709		4a. Article Number P 832 538 763
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
		7. Date of Delivery 1/20/92
5. Signature (Addressee) 		8. Addressee's Address (Only if requested and fee is paid)
6. Signature (Agent) 		
PS Form 3800, June 1990 U.S. GPO: 1990-272-861		DOMESTIC RETURN RECEIPT

P 832 538 763



Certified Mail Receipt

No Insurance Coverage Provided
 Do not use for International Mail
 (See Reverse)

Sent to	
Mr. Bradford S. Crawford	
Street & No.	
P. O. Box 13582	
P.O., State & ZIP Code	
Research Triangle Park, NC	
Postage	\$ 27709
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	
Mailed: 1-13-92	
Permit: AC 17-142284	

PS Form 3800, June 1990



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 9, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bradford S. Crawford
Reichhold Chemicals, Inc.
P. O. Box 13582
Research Triangle Park, NC 27709

Dear Mr. Crawford:


Re: Permit No. AC 17-142284, Chemical Reactor R-5

The Department is in receipt of your letter dated December 6, requesting an extension of the expiration date of the above mentioned permit. This source is located at the Reichhold Chemicals facility in Pensacola, Florida. This request is acceptable. The expiration date for this permit will be changed as follows:

From: November 30, 1991
To: March 31, 1992

This letter must be attached to the above mentioned permit and shall become a part of each permit.

Sincerely,


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

SS/TH/plm

Attachment to be Incorporated

Bradford S. Crawford's letter of December 6, 1991

c: J. Preece, DER

Reichhold Chemicals, Inc.

Corporate Headquarters
800 Capitola Drive
Durham, NC 27713

P.O. Box 13582
Research Triangle Park, NC 27709

RECEIVED
DER - MAIL ROOM
1991 DEC 20 AM 11: 01

REICHHOLD

December 16, 1991

Mr. Preston Lewis
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Reichhold Chemicals, Inc. - Pensacola, Florida
Permit No. AC17-142284
Chemical Reactor R-5

Dear Mr. Lewis:

Enclosed is a check in the amount of \$50.00, in support of Reichhold's permit extension request, dated December 6, 1991. At the time Reichhold filed the permit extension request, we were unaware of the new fee requirement.

If you have any questions concerning this matter, please call me at (919) 990-7540.

Sincerely,



Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance

BSC/gc

Enclosure

001031

REICHHOLD

COATING POLYMERS & RESINS DIVISION

00108945

62-26
311

1110-09

CHECK DATE

12 13 91

MO. DAY YR.

DOLLARS CENTS

PAY *****50.00***

TO THE
ORDER
OF

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

REICHHOLD CHEMICALS, INC.

MANUFACTURERS HANOVER, BANK (DELAWARE)

Permit No. AC17-142284
Chemical Reactor R-5

Dear Mr. Lewis:

Enclosed is a check in the amount of \$50.00, in support of Reichhold's permit extension request, dated December 6, 1991. At the time Reichhold filed the permit extension request, we were unaware of the new fee requirement.

If you have any questions concerning this matter, please call me at (919) 990-7540.

Sincerely,

Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance

BSC/gc

Enclosure

001031

Reichhold Chemicals, Inc.

Corporate Headquarters
800 Capitola Drive
Durham, NC 27713

P.O. Box 13582
Research Triangle Park, NC 27709

December 6, 1991

Mr. Preston Lewis
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Reichhold Chemicals, Inc. - Pensacola, Florida
Permit No. AC17-142284
Chemical Reactor R-5

Dear Mr. Lewis:

Reichhold Chemicals, Incorporated has been negotiating the compliance sampling method specified in the above-referenced construction permit. While waiting for a response from the Florida DER to our June 25, 1991 submittal, the construction permit expired on November 30, 1991.

In order to allow time to complete discussions with the DER, , arrange and perform stack testing, and receive, review and submit results to the DER, Reichhold requests an extension of the permit until March 31, 1992. In a telephone conversation, Mr. Michael D. Harley (who is discussing compliance sampling methods with Reichhold) indicated due to the circumstances he would support the permit extension.

If you have any questions concerning this request, please call me at (919) 990-7540.

Sincerely,

Bradford S. Crawford
Regional Environmental Engineer
Environmental Compliance

BSC/gc

*Patty
This was forced
and I gave copy
to Jessica - Distribute
if required!
Shonda Preston 12/13/91*

REICHHOLD
RECEIVED
DEC 12 1991
Division of Air
Resources Management

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

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

3. Article Addressed to:
 Mr. Michael G. Long
 Reichhold Chemicals, Inc
 P.O. Box 1433
 Pensacola, FL 32596-1433

4. Article Number
 P 407 852 708

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

Always obtain signature of addressee or agent and DATE DELIVERED.

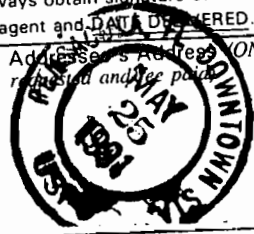
5. Signature - Addressee
 X

6. Signature - Agent
 X *John Young*

7. Date of Delivery

8. Addressee's Address ONLY if registered and fee paid

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



P 407 852 708
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

PS Form 3800, June 1985

Sent to	<i>Michael G Long</i>
Street and No.	<i>Reichhold Chem.</i>
P.O., State and ZIP Code	<i>Pensacola, FL</i>
Postage	S
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	S
Postmark or Date	



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

May 22, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Michael G. Long, Plant Engineer
Reichhold Chemicals, Inc.
P. O. Box 1433
Pensacola, Florida 32596-1433

Dear Mr. Long:

Re: Permit No. AC 17-142286, Chemical Reactor R-5

The Department is in receipt of your letter dated March 13 requesting specific condition modifications of the above mentioned permit. The modifications as requested are acceptable. Specific conditions of permit AC 17-142286 will be changed as follows:

Specific Condition No. 1

FROM:

Expected total allowable VOC emissions from this operation shall not exceed the emissions listed in the following table:

U.V. Oligomers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Acrylic Acid	2.8 pounds	280 pounds
Ethyl Alcohol	1.5 pounds	150 pounds
Isopropyl Alcohol	4.8 pounds	480 pounds

TONER RESINS (50 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Butyl Acrylate	0.7 pounds	31 pounds
Ethyl Acrylate	1.2 pounds	60 pounds
Methacrylic Acid	0.1 pounds	3 pounds
Styrene	0.6 pounds	25 pounds
Xylene	1.6 pounds	79 pounds
Methyl Methacrylate	0.5 pounds	25 pounds

Mr. Michael G. Long
Page 2 of 3

TO:

- A. Total allowable VOC emissions from this operation shall not exceed 10 lbs/batch and 1,133 lbs/yr. The permittee shall maintain records of the chemical compounds used for the most recent two year period.
- B. Unless the Department has determined other concentrations are required to protect public health and safety, predicted ambient air impact of any chemical compound used (before production) shall not exceed the concentration calculated by the following formula:

$$\text{AAC} = \frac{(\text{OEL})}{\text{safety factor}}$$

where,

AAC = acceptable ambient concentration

Safety Factor = 100 for category A substances (8 hrs/day)
420 for category A substances (24 hrs/day)

OEL = Occupational exposure level such as ACGIH, OSHA,
and NIOSH published standards for toxic materials.

This information shall be made available upon request.

Specific Condition No. 4

FROM:

This source is allowed to operate continuously (8760 hours per year). Batch mode type operations shall not exceed 100 batches/year for U.V. oligomers production and 50 batches/year for Toner Resins Production.

TO:

This source is allowed to operate continuously (8760 hours per year). Batch operation shall not exceed 250 batches/year of production.

Mr. Michael G. Long
Page 3 of 3

Specific Condition No. 5

Compliance with the VOC emission standard shall be determined by performance tests conducted in accordance with the provisions of reference Method 25, Determination of Volatile Organic Compound Emissions, or any other method approved by the Department. Compliance tests shall be conducted during that part of the process expected to produce the highest emissions. Test results will be the average of 3 valid runs. The Northwest District office shall be notified at least 15 days prior to testing.

COMMENT: This condition will not be changed at the present time since it involved an alternate standard procedure (ASP). Your request has been forwarded to Jim Pennington of the Bureau of Air Regulation's Compliance Section.

In addition, the expiration date of this permit will be extended as follows:

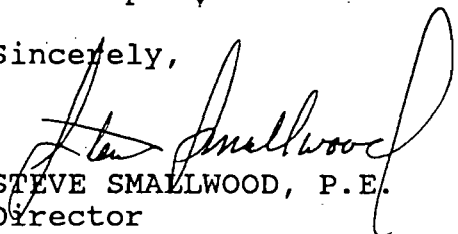
FROM: March 30, 1991
TO: November 30, 1991

Attachment to be Incorporated

Mr. Michael Long's letter of March 13, 1991.

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

Sincerely,


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

SS/TH/plm

c: Jack Preece



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood
FROM: Clair Fancy *CF*
DATE: May 22, 1991
SUBJ: Amendments to Construction Permit AC 17-142286
Reichhold Chemicals, Inc.

Attached for your approval and signature is a letter amending the above referenced construction permit.

The Bureau recommends approval of this amendment.

CF/TH/plm

Attachment

OK/OK *[Signature]*
5-23-91

Reichhold Chemicals, Inc.
Coating Polymers & Resins Division
407 South Pace Boulevard
P.O. Box 1433
Pensacola, Florida 32596-1433

RECEIVED

MAR 15 1991

REICHHOLD

CERTIFIED MAIL

DER-BAQM

March 13, 1991

Mr. Steve Smallwood, P.E.
Director
Division of Air Resource Management
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, FL 32399-2410

RE: Permit No. AC17-142284 - Chemical Reactor R-5

Dear Mr. Smallwood,

The following is a request to amend the above referenced construction permit. This request is being made pursuant to conversations with Jack Preece (DER NW Florida District).

- 1) It is desired to make this permit consistent with the operating permits for the similar reactor and scrubber systems in the facility. The existing permits being referred to are:

<u>Permit No.</u>	<u>Source</u>
A017-171914	R-1 Fusion Scrubber
A017-171914	R-2 Fusion Scrubber
A017-171913	Main Process Scrubber

- 2) The reactor is being used to make significantly different products than originally planned. UV Oligomer and toner resins referenced in specific conditions No. 1 and No. 4 are no longer being made. Therefore, specific chemical emission limits and batch quantity limitations are not applicable. We request that limits employed be general enough to allow flexibility in operation.
- 3) Specific condition No. 5 requires VOC testing based on Method 25. Because of the operating parameters of the reactor (low process flow rate) the data requested is usually unreproducible and unrepresentative. (Please see attached letter from Weston.)

Tel.: (904) 433-7621
(800) 874-0868
FAX: (904) 444-7652

Page Two
Mr. Steve Smallwood
RE: Permit No. AC17-142284

DESCRIPTION OF R-5 REACTOR SYSTEM

The R-5 reactor is a small semiworks kettle. Its purpose is to produce small scale-up batches before full scale production is achieved in any of RCI's plants. A new batch is first produced in a lab flask. After successfully being produced in a lab flask, the pilot plant produces a small 150 to 300 gallon batch. After three successful batches in the pilot plant, R-5 would produce a small nominal 1000 gallon batch of the product. If R-5 successfully produces the batch, the market place is interested in the product, R-5 would continue to produce for a period of time until large scale production is successful in any one of RCI's plants.

The installation of R-5 varies from the initial drawing submitted by one important detail. The reactor system does not use a fan on the scrubber. The reactor is blanketed at all times during operation with a flow rate of 0.1 - 1.0 scfh of nitrogen (see attached sketch). This significantly reduces emissions from the reactor.

The primary emission control device on the reactor is the condenser (Apparatus No. C-005). Condensers are also the main control device on all other reactor and scrubber in this facility (refer to list on front page). The condenser outlet is operated at a temperature below the boiling point of the solvent used in the process. The outlet temperature of the condenser is monitored continuously during reactor operation and recorded every 30 minutes. The secondary control device is the wet scrubber. All vents on the reactor R-5 system go through this scrubber. This is also consistent with the other reactor and scrubber permits in operation at the plant.

Because of the operation of the reactor, RCI would propose to amend the specific conditions of the permit as follows:

Special Condition Amendments

No. 1 Amend total allowable VOC emissions to reflect total emissions of 1200 lb/yr and not be specific with individual compounds to allow flexibility.

No. 4 Amend statement limiting total volume of batches:

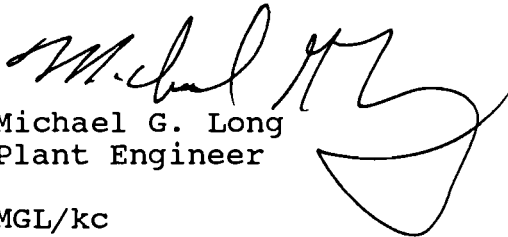
This source is allowed to operate continuously (8760 hours per year). Batch made type operation shall not exceed 250 batches/yr of production.

Page Three
Mr. Steve Smallwood
RE: Permit No. AC17-142284

No. 5 Amend compliance statement on VOCs to allow emission limit compliance on a calculated basis, using the nitrogen blanket flow rate, condenser outlet temperature, and scrubber exit temperature. Due to the low flow of nitrogen on a blanket and no induced draft on the scrubber a total VOC would be difficult to measure. Secondly, because of the different raw materials in each batch, VOC testing for one product would not be representative of the total emission for other products as noted in the Weston letter.

If you have any questions please contact me at (904) 433-7621, ext. 348.

Sincerely,


Michael G. Long
Plant Engineer

MGL/kc

cc: B. Crawford - RTP
J. Preece - DER NW Florida District
J. Alton



ROY F. WESTON, INC.
1635 PUMPHREY AVE.
AUBURN, AL 36830
PHONE: (205) 826-6100
FAX: (205) 826-8232

21 February 1991

Mr. Michael Long
Reichhold Chemicals
P.O. Box 1433
Pensacola, FL 32596

Re: Summary of Source Testing Conditions
Reactor 5 (R-5)
Reichhold P.O. No. 126661
WESTON No. 0148-22-01

Dear Mr. Long:

This letter is a summary of our understanding of the current operation of Reactor R-5 and our assessment of the conditions for source testing for the unit. Based on our discussion with you on 15 November 1990, we believe that source testing for R-5 is not appropriate or meaningful under the current mode of operation. The following paragraphs describe our findings and recommendations.

R-5 Operational Mode

Currently, R-5 operates as a batch reactor for the production of a variety of compounds. After appropriate raw materials are placed in R-5, a nitrogen blanket is added and the reactions are carried out. Nitrogen is replaced at a rate of about 0.5 scfh.

R-5 is equipped with a condenser for control of volatile organic compound (VOC) emissions. Also a scrubber is in place for additional control of emissions. The scrubber solution is circulated through packing, but the scrubber fan is not used. The only air flow reaching the scrubber occurs by gravity or pressure differential during filling. The condenser is thought to be adequate for the recovery of any VOC emissions.



Mr. Michael Long

21 February 1991

Page 2

Construction Permit Provisions

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The FDER construction permit also contains provisions for source testing to demonstrate compliance prior to issuance of an operating permit. The source testing requirements are also based on the scrubber utilizing the fan during all operating periods.

The specific conditions of the construction permit require compliance with batch and annual limitations for nine (9) compounds in pounds per batch and pounds per year, respectively as shown in Table 1. Limitations are not given in concentrations.

Also, the reference method specified in the permit to demonstrate compliance with the permit conditions is EPA Method 25. Other methods may be used provided they are approved by FDER prior to performing the tests. Method 25 (and related protocols) is a nonspecific procedure for VOCs using a calibration gas (methane, propane, etc.). The tests results do not give quantities of specific compounds. There are no provisions in the permit conditions for equating pounds (per batch or per year) of specific compounds to the type of test results that Method 25 (and related protocols) will give.

Finally, specific permit limitations given in pounds per batch and pounds per year require an accurate measurement of air volume flow and a consistent measurement of concentration to be meaningful. The current operational mode of R-5 does not provide either of these conditions. Because the scrubber exhaust fan is not used, the air flowrate at the scrubber exhaust represents, at best, natural draft conditions which are low or non-existent. Measurable flows occur primarily during filling. However, air flow conditions during the reactions may be negligible. The low and variable air flowrate is very difficult to measure accurately and provides less than meaningful data.



Mr. Michael Long
21 February 1991
Page 3

Concentration data derived from low (or no) flow sources is usually unreproducible and unrepresentative. This is particularly true when calculating mass emission rates from the concentration data and air flowrates. Although the detection limits are of Method 25 (and related protocols) can be low, the meaningfulness of the concentration data at very low (or no) flowrates is questionable.

If you have any questions or need further information, please contact me.

Sincerely,

ROY F. WESTON, INC.

A handwritten signature in cursive script that reads "Randal M. Reynolds".

Randal M. Reynolds, P.E.
Senior Project Manager

wwc

Attachment



TABLE 1. EMISSION LIMITATIONS FOR R-5
FDER PERMIT NO. AC17-142284

U.V. Oligemers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
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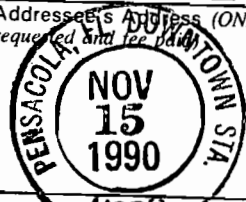
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Ethyl Acrylate	1.2 pounds	60 pounds
Methacrylic Acid	0.1 pounds	3 pounds
Styrene	0.6 pounds	25 pounds
Xylene	1.6 pounds	79 pounds
Methyl Methacrylate	0.5 pounds	25 pounds

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

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

3. Article Addressed to: Daniel B. Smith, U.P. Baskerville-Donovan Eng. P.O. Box 13370 Pensacola, FL 32591	4. Article Number P 256 396 229
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X Robert J. Case	
7. Date of Delivery	



PS Form 3811, Apr. 1989

*U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

P 256 396 229

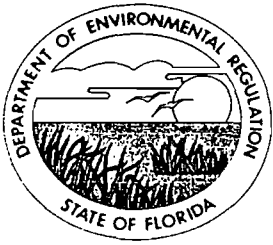
RECEIPT FOR CERTIFIED MAIL

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

*U.S.G.P.O. 1989-234-555

Sent to	Daniel B. Smith	
Street and No.	Baskerville-Donovan	
P.O. State and ZIP Code	P.O. Box 13370	
Postage	Pensacola, FL	\$
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt showing to whom and Date Delivered		
Return Receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees		\$
Postmark or Date	11-13-90	
	8 pmtz.	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 7, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Daniel B. Smith, Vice President
Baskerville-Donovan Engineering, Inc.
Post Office Box 13370
Pensacola, Florida 32591

Dear Mr. Smith:

Re: Amendment of Air Construction Permits for Reichhold Chemicals
AC 17-154330 Storage Tank TK-806
AC 17-154331 Storage Tank TK-500
AC 17-154332 Storage Tank TK-504
AC 17-154333 Storage Tank TK-709
AC 17-154335 Storage Tank TK-613
AC 17-154336 Storage Tank TT-9
AC 17-154337 Storage Tank TK-500
AC 17-142284 Chemical Reactor R-5

The expiration dates for the construction permits referenced above shall be changed as follows:

Storage Tanks

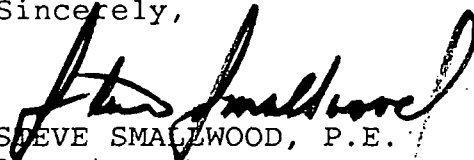
From: November 1, 1990
To: March 30, 1991

Chemical Reactor R-5

From: November 1, 1990
To: March 30, 1991

A copy of this letter shall be attached to the above construction permits and shall become a part of each permit.

Sincerely,


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

SS/TH/plm

c: Jack Preece, DER
Carolyn Salmon, DER



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood
FROM: Clair Fancy *CF*
DATE: November 7, 1990
SUBJ: Amendment of Air Construction Permits for Reichhold
Chemicals
AC 17-154330 Storage Tank TK-806
AC 17-154331 Storage Tank TK-500
AC 17-154332 Storage Tank TK-504
AC 17-154333 Storage Tank TK-709
AC 17-154335 Storage Tank TK-613
AC 17-154336 Storage Tank TT-9
AC 17-154337 Storage Tank TK-500
AC 17-142284 Chemical Reactor R-5

Attached for your approval and signature is a letter extending the expiration dates for the above referenced construction permits at the request of Mr. Jack Preece, Engineer, of the NW District office.

The Bureau recommends approval of this amendment.

CF/TH/plm

Attachment

OK / Jan 11-9-90

569

*OK
BA*



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

September 21, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Daniel B. Smith, Vice President
Baskerville-Donovan Engineering, Inc.
Post Office Box 13370
Pensacola, Florida 32591

Dear Mr. Smith:

Re: Amendment of Air Construction Permits
AC 17-154330 Storage Tank TK-806
AC 17-154331 Storage Tank TK-500
AC 17-154332 Storage Tank TK-504
AC 17-154333 Storage Tank TK-709
AC 17-154335 Storage Tank TK-613
AC 17-154336 Storage Tank TT-9
AC 17-154337 Storage Tank TK-500
AC 17-142284 Chemical Reactor R-5

The Department is in receipt of your letter dated August 23, 1990, on behalf of Reichhold Chemicals requesting an extension of the expiration dates for the construction permits referenced above. The request is acceptable and the expiration date of these permits shall be changed as follows:

Storage Tanks

From: July 31, 1989
To: November 1, 1990

Chemical Reactor R-5

From: February 13, 1989
To: November 1, 1990

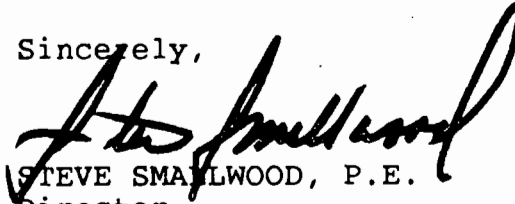
Attachment to be Incorporated:

- Mr. Daniel B. Smith's letter received on August 24, 1990.

A copy of this letter shall be attached to the above construction permits and shall become a part of each permit.

Mr. Daniel B. Smith
Re: Amendment of Air Construction Permits
September 21, 1990
Page 2

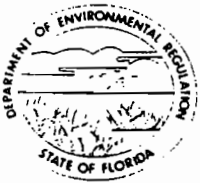
Sincerely,



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

SS/TH/plm

c: Jack Preece, DER
Carolyn Salmon, DER
Reading File }
Teresa Heron } 10/1/90 :KT



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood

FROM: Clair Fancy *CF*

DATE: September 21, 1990

SUBJ: Amendment of Air Construction Permits
 AC 17-154330 Storage Tank TK-806
 AC 17-154331 Storage Tank TK-500
 AC 17-154332 Storage Tank TK-504
 AC 17-154333 Storage Tank TK-709
 AC 17-154335 Storage Tank TK-613
 AC 17-154336 Storage Tank TT-9
 AC 17-154337 Storage Tank TK-500
 AC 17-142284 Chemical Reactor R-5

Attached for your approval and signature is a letter extending the expiration dates for the above referenced construction permits.

The NW District office initiated enforcement action on August 16, 1990. Currently, the NW District office is negotiating a settlement in accordance with the penalty policy.

The Bureau recommends approval of this amendment.

CF/TH/plm

Attachment

NO

CHF

What is the rationale for asking for when we just said no to MFM on the same type of request. Please explain.

file
9-25-90



**BASKERVILLE
DONOVAN
ENGINEERS, INC.**

REC-1

AUG 24 1990

DER-6A

August 23, 1990

Mr. Williard Hanks
Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399

Dear Williard:

Per our conversation, we respectfully request that the Department of Environmental Regulation reinstate the above referenced construction permit and extend the expiration date until November, 1, 1990.

Reactor R-5 is a batch process vessel and is used very infrequently to produce low volume, specialty products. As such, Reichold cannot conduct VOC emissions tests until the next production batch, which is scheduled for the third week in September 1990. We hope you can understand the need for this permit extension and the inadvertent failure to inform you in a more timely manner.

Please review this request and contact me at your convenience regarding your Department's decision.

Very truly yours,

BASKERVILLE-DONOVAN ENGINEERS, INC.

Daniel B. Smith, P.E.
Vice-President

DBS/077301A.111

c: Jack Preece, DER
Carolyn Salmon, DER
Michael Long, RCI
Phil Ulichney, RCI
Brad Crawford, RCI

S. Nelson
CHF/13A

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

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

3. Article Addressed to: Mr. Philip P. Ulichney Plant Manager Reichhold Chemicals, Inc. P. O. Box 1433 Pensacola, FL 32596	4. Article Number P 274 007 591
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>J. Hart</i>	
7. Date of Delivery	

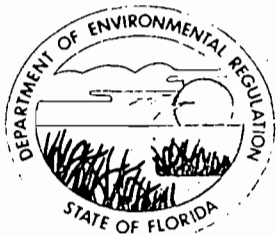
PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 274 007 591
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

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

Sent to Mr. Philip P. Ulichney	
Street and No. Reichhold Chem. P.O. Box 1433	
P.O. State and ZIP Code Pensacola, FL 32596	
Postage	S
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	S
Postmark or Date Mailed: 2-20-89 Permit: AC 17-142284	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF PERMIT

Mr. Philip P. Ulichney
Plant Manager
Reichhold Chemicals, Inc.
Post Office Box 1433
Pensacola, Florida 32596


February 17, 1989

Enclosed is permit No. AC 17-142284 for Reichhold Chemicals, Inc. to construct a chemical reactor (R-5) to be located at the Reichhold Chemical Complex in Pensacola, Escambia County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copy furnished to:

E. Middleswart, NW District
D. Smith, P.E., Baskerville-Donovan Engineers

Final Determination

Reichhold Chemicals
Escambia County

Permit Number: AC 17-142284
Chemical Reactor (R-5)

Division of Air Resources Management
Bureau of Air Quality Management
Central Air Permitting

February 6, 1989

Final Determination

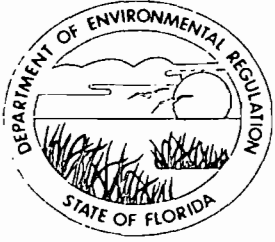
Reichhold Chemicals Inc.'s application for a permit to construct a chemical reactor (R-5) at their existing facility in Escambia County, Florida, has been reviewed by the Bureau of Air Quality Management.

Public Notice of the Department's Intent to Issue the construction permit was published in the Pensacola News Journal on December 16, 1988.

Copies of the Preliminary Determination have been available for public inspection at the Department's Northwest District office in Pensacola, Florida, and the Department's Bureau of Air Quality Management in Tallahassee.

No comments were received as a result of the public notice period.

The final action of the Department will be to issue the permit as noted during the public notice period.



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

PERMITTEE:

Reichhold Chemicals, Inc.
P. O. Drawer 1433
Pensacola, FL 32596

Permit Number: AC 17-142284

Expiration Date: July 31, 1989

County: Escambia

Latitude/Longitude: 30° 24' 30"N
87° 14' 40"W

Project: Chemical Reactor (R-5)

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

For the establishment of a permit for a Chemical Reactor (R-5) to be used at the applicant's existing chemical complex located at Pensacola, Escambia County, Florida to produce U.V. Oligomers and Toner Resins.

Construction shall be in accordance with the permit application and plans, documents, and reference material submitted unless otherwise stated in the Preliminary Determination and Technical Evaluation or the General and Specific Conditions herein.

Attachments:

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1) dated October 6, 1988.

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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 noncompliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

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

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

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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. Expected total allowable VOC emissions from this operation shall not exceed the emissions listed in the following table:

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

SPECIFIC CONDITIONS:

U.V. Oligemers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Acrylic Acid	2.8 pounds	280 pounds
Ethyl Alcohol	1.5 pounds	150 pounds
Isopropyl Alcohol	4.8 pounds	480 pounds

TONER RESINS (50 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Butyl Acrylate	0.7 pounds	31 pounds
Ethyl Acrylate	1.2 pounds	60 pounds
Methacrylic Acid	0.1 pounds	3 pounds
Styrene	0.6 pounds	25 pounds
Xylene	1.6 pounds	79 pounds
Methyl Methacrylate	0.5 pounds	25 pounds

2. If any spills, leaks, etc. occur, the DER's Northwest District office shall be promptly notified.

3. The applicant must prevent pollutant odors from reaching off-plant property.

4. This source is allowed to operate continuously (8760 hours per year). Batch mode type operations shall not exceed 100 batches/year for U.V. oligemers production and 50 batches/year for Toner Resins Production.

5. Compliance with the VOC emission standard shall be determined by performance tests conducted in accordance with the provisions of reference Method 25, Determination of Volatile Organic Compound Emissions, or any other method approved by the Department. Compliance tests shall be conducted during that part of the process expected to produce the highest emissions. Test results will be the average of 3 valid runs. The Northwest District office shall be notified at least 15 days prior to testing.

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

SPECIFIC CONDITIONS:

6. Sampling procedures used to determine compliance shall be as specified in Rule 17-2.700, Stationary Point Sources Emissions Test Procedures.

7. A pressure meter shall be installed on the scrubber system for this reactor operation to measure the scrubbing liquid supply pressure. The pressure sensor or tap shall be located close to the scrubber liquid discharge point. The monitoring device is to be certified by the manufacturer to be accurate within ± 15 percent of design scrubbing liquid supply pressure.

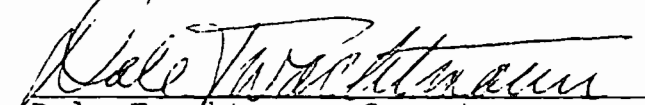
8. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).

9. An application for an operation permit must be submitted the Northwest District office in Pensacola at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit an application, the appropriate fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

10. Upon obtaining a permit to operate the permittee will be required to submit annual reports on the actual operating rates and emissions from this source. Annual reports shall be sent to the Department's Northwest District office.

Issued this 13 day of Feb,
1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


Dale Twachtmann, Secretary



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Dale Twachtmann

FROM: Steve Smallwood *[Signature]*

SUBJ: Approval of Construction Permit No. AC 17-142284
Reichhold Chemicals, Inc.

DATE: February 6, 1989

Attached for your approval and signature is a permit prepared by Central Air Permitting for the above mentioned company to construct a chemical reactor (R-5) at their existing facility in Escambia County, Florida. No comments were received during the public notice period.

Day 90, after which this permit will be issued by default, is February 21, 1989.

I recommend your approval and signature.

SS/TH/s

attachments

RECEIVED
FEB 10 1989

Office of the Secretary



316 S. BAYLEN ST., SUITE 300
 P.O. BOX 13370, PENSACOLA, FL 32591
 (904) 438-9661

LETTER OF TRANSMITTAL

DATE	Jan 18, 1989	JOB NO.	77301
ATTENTION	Mr. Clair Fancy		
RE:	Reichhold Chemicals, Inc.		

TO Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

GENTLEMEN:

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
1			Proof of Publication - Permit to Construct Chemical Reactor (R-5) DER File No. AC 17-142284

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ 19 _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

RECEIVED

JAN 19 1989

DER-BAQM

COPY TO _____

SIGNED  Daniel B. Smith, P.E.

RECEIVED ^{PENSACOLA} News Journal

JAN 19 1989

DER: BAOM PUBLISHED DAILY PENSACOLA, ESCAMBIA COUNTY, FLORIDA

State of Florida, County of Escambia.

Before the undersigned authority personally appeared

J. Diane Deal

who on oath says that she is Legal Advertising Supervisor of the Pensacola News Journal, a daily newspaper published at Pensacola in Escambia County, Florida; with general circulation in Escambia, Santa Rosa, Okaloosa and Walton Counties that the attached copy of advertisement, being a NOTICE in the matter of

Intent in the _____ Court,

was published in said newspaper in the issues of Dec. 16, 1988

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

J. Diane Deal

Sworn to and subscribed before me this 20 day of Dec. A.D., 1988

Dolly J. Linton NOTARY PUBLIC.

My Commission Expires October 26, 1991

LEGAL NOTICE LEGAL NOTICE

State of Florida Department of Environmental Regulation Notice of Intent

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Reichhold Chemicals Inc. to construct a chemical reactor (R-5) to produce U.V. oligomers and toner resins. The source will be located at the existing Reichhold Chemical Complex at 407 South Pace Boulevard, Pensacola, Escambia County, Florida. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

Dept. of Environmental Regulation Northwest District Office 160 Governmental Center Pensacola, Florida 32501

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

Legal No. 35391 1T Dec. 16, 1988

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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

ⓁⓅ Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

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

Cont Ⓛ

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

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

3. Article Addressed to:
 Mr. Philip P. Ulichney
 Plant Manager
 Reichhold Chemicals, Inc.
 P. O. Box 1433
 Pensacola, FL 32596

4. Article Number
 P 274 007 526

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

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Address
 X

6. Signature - Agent
 X *Barbara Rogers*

7. Date of Delivery

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

DOMESTIC RETURN RECEIPT

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865



P. 274 007 526

RECEIPT FOR CERTIFIED MAIL

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

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

Sent to Mr. Philip P. Ulichney,	
Street and No. Reichhold Chem. P.O. Box 1433	
P.O., State and ZIP Code Pensacola, FL 32596	
Postage	S
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	S
Postmark or Date Mailed: 12-7-88 Permit: AC 17-142284	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

December 7, 1988

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Philip P. Ulichney
Plant Manager
Reichhold Chemicals, Inc.
Post Office Box 1433
Pensacola, Florida 32596

Dear Mr. Ulichney:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Reichhold Chemicals, Inc., to construct a chemical reactor (R-5) to be located at the Reichhold Chemical complex in Pensacola, Escambia County, Florida.

Please submit any written comments 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/ks

Attachments

cc: E. Middleswart, N.W. District
D. Smith, P.E., Baskerville-Donovan Engineers

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Reichhold Chemicals, Inc.
Post Office Box 1433
Pensacola, Florida 32596

DER File No. AC 17-142284

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copies 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, Reichhold Chemicals, Inc., applied on October 6, 1988, to the Department of Environmental Regulation for a permit to construct a chemical reactor (R-5) to produce U.V. oligomers and toner resins. The source will be located at the existing Reichhold Chemical Complex in Pensacola, Escambia 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 is needed for the proposed work.

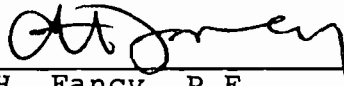
Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit applications. The notice must be published one time only in a section of a major local newspaper of general circulation 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 a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copies furnished to:

P. Ulichney, Reichhold Chemicals, Inc.
D. Smith, P.E., Baskerville-Donovan Engineers, Inc.
E. Middleswart, N.W. District

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.

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 December 7, 1988.

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.

Martha J. Wise December 7, 1988
Clerk Date

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Reichhold Chemicals, Inc. to construct a chemical reactor (R-5) to produce U.V. oligemers and toner resins. The source will be located at the existing Reichhold Chemical Complex at 407 South Pace Boulevard, Pensacola, Escambia County, Florida. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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

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

Dept. of Environmental Regulation
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501

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

Technical Evaluation
and
Preliminary Determination

Reichhold Chemicals, Inc.

Chemical Reactor (R-5)

Permit Number:
AC 17-142284

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

November 29, 1988

I. NAME AND ADDRESS OF APPLICANT

Reichhold Chemicals, Inc.
Post Office Box 1433
Pensacola, Florida 32596

II. REVIEWING AND PROCESS SCHEDULE

Date of Receipt of Application: October 6, 1988.

Application Completeness Date: October 6, 1988.

III. FACILITY INFORMATION

III.1 Facility Location

The proposed source is located at 407 South Pace Boulevard in Pensacola, Escambia County, Florida. The latitude and longitude coordinates are 30° 24' 30" North and 87° 14' 40" West.

III.2 Standard Industrial Classification Code (SIC)

This facility is classified as follows:

Major Group No. 28 - Chemicals and Allied Products.

Industry Group No. 282 - Plastics, Materials, and Synthetic Resins, Synthetic Rubbers, Synthetic and other man-made fibers, except glass.

Industry No. 2821 - Plastics.

III.3 Facility Category

Reichhold Chemicals, Inc. is a major facility. Emissions of volatile organic compounds will be increased by approximately 1 ton per year as a result of this project.

IV. PROJECT DESCRIPTION

This project involves the construction of a production type, chemical reactor (R-5) to blend and make U.V. Oligomers and Toner Resins. These products are both made via a batch process.

V. RULE APPLICABILITY

This project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida

Statutes (F.S.) and Chapter 17-2, Florida Administrative Code (F.A.C.).

The proposed sources are located at the Reichhold Chemical complex in an area (Escambia County) currently designated attainment for all criteria pollutants in accordance with Florida Administrative Code, Rule 17-2.420.

Reichhold Chemicals, Inc. is a major emitting facility for particulate matter and volatile organic compounds as defined in Rule 17-2.100, F.A.C.

This facility category, Chemical Process Plant, is in the list of the 28, Table 500-1, Major Facility Category, Rule 17-2.500, F.A.C.

The proposed project is exempt from provisions of Rule 17-2.500, Prevention of Significant Deterioration because its emissions do not exceed the PSD significance levels.

The proposed project shall be permitted under Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

The proposed facility shall comply with Rule 17-2.620(1) and (2) General Pollutant Emissions Limiting Standards.

VI. SOURCE IMPACT ANALYSIS

VI.1 EMISSIONS SUMMARY

The installation of the proposed reactor (R-5) will produce emissions of volatile organic compounds (VOC).

The estimated potential VOC emissions due to the processing of the different raw materials are summarized in Table 1.

These permitted emissions are in compliance with all applicable requirements of Chapter 17-2, F.A.C.

VI.2 AIR TOXICS INFORMATION

Currently, the department is developing acceptable ambient concentrations for toxic substances. Specifically, sources classified as Category A (carcinogens and highly toxics) and Category B (moderately toxic substances).

In the event toxics emission limits are set during the term of this permit or any subsequent permit which are different than

the permitted emissions, the Department may seek modification to this permit.

VI.3 AIR QUALITY ANALYSIS

From a technical review of the application, the Department has determined that the construction and operation of this source will not have a detrimental impact on Florida's ambient air quality standards.

VII. CONCLUSIONS

Based on the information provided by Reichhold Chemicals, Inc., the Department has reasonable assurance that the proposed projects, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapter 17-2 of the Florida Administrative Code.



Table 1

U.V. Oligemers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Acrylic Acid	2.731 pounds	273.1 pounds
Ethyl Alcohol	1.484 pounds	148.4 pounds
Isopropyl Alcohol	4.756 pounds	475.6 pounds

TONER RESINS (50 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Butyl Acrylate	0.613 pounds	30.65 pounds
Ethyl Acrylate	1.168 pounds	58.40 pounds
Methacrylic Acid	0.043 pounds	2.15 pounds
Styrene	0.603 pounds	30.15 pounds
Xylene	1.561 pounds	78.05 pounds
Methyl methacrylate	0.463 pounds	23.15 pounds

Note: The production of U.V. Oligemers and Toner Resins will never occur at the same time.



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:

Reichhold Chemicals, Inc.
P. O. Drawer 1433
Pensacola, FL 32596

Permit Number: AC 17-142284

Expiration Date: July 31, 1989

County: Escambia

Latitude/Longitude: 30° 24' 30"N
87° 14' 40"W

Project: Chemical Reactor (R-5)

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

For the establishment of a permit for a Chemical Reactor (R-5) to be used at the applicant's existing chemical complex located at Pensacola, Escambia County, Florida to produce U.V. Oligomers and Toner Resins.

Construction shall be in accordance with the permit application and plans, documents, and reference material submitted unless otherwise stated in the Preliminary Determination and Technical Evaluation or the General and Specific Conditions herein.

Attachments:

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1) dated October 6, 1988.

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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 noncompliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

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

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

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

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

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. Expected total allowable VOC emissions from this operation shall not exceed the emissions listed in the following table:

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

SPECIFIC CONDITIONS:

U.V. Oligemers (100 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
Acrylic Acid	2.731 pounds	273.1 pounds
Ethyl Alcohol	1.484 pounds	148.4 pounds
Isopropyl Alcohol	4.756 pounds	475.6 pounds

TONER RESINS (50 Batches per year)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
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Ethyl Acrylate	1.168 pounds	58.40 pounds
Methacrylic Acid	0.043 pounds	2.15 pounds
Styrene	0.603 pounds	23.15 pounds
Xylene	1.561 pounds	78.05 pounds
Methyl Methacrylate	0.463	23.15 pounds

2. If any spills, leaks, etc. occur, the DER's Northwest District office shall be promptly notified.

3. The applicant must prevent pollutant odors from reaching off-plant property.

4. This source is allowed to operate continuously (8760 hours per year). Batch mode type operations shall not exceed 100 batches/year for U.V. oligemers production and 50 batches/year for Toner Resins Production.

5. Compliance with the VOC emission standard shall be determined by performance tests conducted in accordance with the provisions of reference Method 25, Determination of Volatile Organic Compound Emissions, or any other method approved by the Department. Compliance tests shall be conducted during that part of the process expected to produce the highest emissions. Test results will be the average of 3 valid runs. The Northwest District office shall be notified at least 15 days prior to testing.

PERMITTEE:
Reichhold Chemicals, Inc.

Permit Number: AC 17-142284
Expiration Date: July 31, 1989

SPECIFIC CONDITIONS:

6. Sampling procedures used to determine compliance shall be as specified in Rule 17-2.700, Stationary Point Sources Emissions Test Procedures.

7. A pressure meter shall be installed on the scrubber system for this reactor operation to measure the scrubbing liquid supply pressure. The pressure sensor or tap shall be located close to the scrubber liquid discharge point. The monitoring device is to be certified by the manufacturer to be accurate within \pm 15 percent of design scrubbing liquid supply pressure.

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

9. An application for an operation permit must be submitted the Northwest District office in Pensacola at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit an application, the appropriate fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

10. Upon obtaining a permit to operate the permittee will be required to submit annual reports on the actual operating rates and emissions from this source. Annual reports shall be sent to the Department's Northwest District office.

Issued this _____ day of _____,
1988

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary



BASKERVILLE-DONOVAN ENGINEERS, INC.

A PROFESSIONAL SERVICE ORGANIZATION

• PENSACOLA • TALLAHASSEE • FORT WALTON BEACH
MILTON • PORT ST. JOE • PANAMA CITY • APALACHICOLA • DAYTONA BEACH

RECEIVED

DER - MAIL ROOM

1988 OCT -6 AM 11:13

October 5, 1988

Mr. C.H. Fancy, P.E.
State of Florida
Department of Environment Regulation
Twin Tower Office Building
2600 Blair Stone Road
Room 306-7
Tallahassee, Florida 32399

Re: Reichhold Chemicals, Inc.
Reactor R-5
Application to Construct
Our Project Number 077301

1031

Dear Mr. Fancy:

Enclosed are three copies of DER's "Application to Construct an Air Pollution Source" for the above referenced project. This project represents a new production process at Reichhold Chemicals, Inc., where the vessel, Reactor R-5, will be used to produce two new lines of product. The products, U.V. Oligemers and Toner Resins are both made via a batch process.

Each batch requires 24 hours to blend. U. V. Oligemers and Toner Resins will both be produced in R-5, but never at the same time. The raw materials and the air emissions for the process are listed in the Appendix of the application. The present expectation is to produce approximately 50 batches of Toner Resins and 100 batches of U.V. Oligemers per year.

The reactor system schematic is shown in the Appendix. Essentially this is a closed system. The condensor will assist in recovering most of the vapors lost during the reaction process. The remaining vapors will be fed to a scrubber system to eliminate the great majority of the emissions.

While most of the process is closed, there will be two periods where air emissions will occur. The first is an air sparging operation where air is introduced into the reactor at a rate of 20 to 40 standard cubic feet per hour (SCFH) During this time the reactor/condensor/scrubber system shall be operating at atmospheric pressure. This portion of the process will last 8 hours.

The second emission producing operation is a vacuum withdrawal during the batch's final phase. In this phase, a vacuum pump will be used to remove approximately 1500 SCFH. This flow will also be treated by the scrubber to remove the vast majority of undesirable constituents. Other than these two operations, the operation, loading and unloading of the reactor will be

Mr. C.H. Fancy
October 5, 1988
Page two

BASKERVILLE-DONOVAN ENGINEERS, INC.

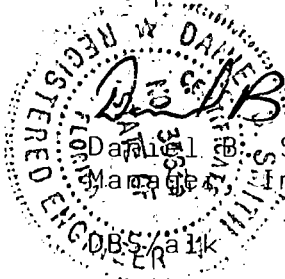
accomplished in a closed-loop manner to eliminate the loss of any vapors.

We have calculated emissions based on saturation of the air used for sparging and reasonable activity factors for the vacuum removal phase. I believe the methods shown employ the best available control technology and produce emission types and levels consistent with the Florida Administrative Code. Specifically, I find that the proposed system complies with F.A.C. Section 17-2.620 (i.e. the system utilizes known and existing vapor emission control devices.)

Enclosed with the applications is the fee for your review. Please feel free to have you staff contact me if they have any questions, or need additional information.

Very, truly yours,

BASKERVILLE-DONOVAN ENGINEERS, INC.



Daniel B. Smith
Daniel B. Smith, P.E.
Manager, Industrial Department

Enclosure

c - WFB
David Bright, Reichhold Chemicals

00019388

REICHHOLD

NEWPORT

62-26
311

11-10-09

PENSACOLA, FL 32596

CHECK DATE

09 13 88

MO. DAY YR.

PAY

*****200.00

****200 Dollars and 00 Cents****

REICHHOLD CHEMICALS, INC.

TO THE ORDER OF Department of Environmental Regulation
State of Florida
Northwest District
160 Governmental Center Pensacola, FL 32501
MANUFACTURERS HANOVER, BANK (DELAWARE)



THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - HOLD AT AN ANGLE TO VIEW.

Application to Construct
Our Project Number 077301

1031

REICHHOLD CHEMICALS, INC.

VENDOR NO.	INVOICE DATE	POST MED.	PLT.	INVOICE AMOUNT	DISCOUNT	NET AMOUNT
2449201	09 13 88			Application for operation fee (pilot plant)		\$200.00

DETACH BEFORE DEPOSITING

While most of the process is closed, there will be two periods where air emissions will occur. The first is an air sparging operation where air is introduced into the reactor at a rate of 20 to 40 standard cubic feet per hour (SCFH) During this time the reactor/condensor/scrubber system shall be operating at atmospheric pressure. This portion of the process will last 8 hours.

The second emission producing operation is a vacuum withdrawal during the batch's final phase. In this phase, a vacuum pump will be used to remove approximately 1500 SCFH. This flow will also be treated by the scrubber to remove the vast majority of undesirable constituents. Other than these two operations, the operation, loading and unloading of the reactor will be

FEDERAL EXPRESS

AIRBILL

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
QUESTIONS? CALL 800-238-5355 TOLL-FREE.

PACKAGE TRACKING NUMBER

9390747332

8195M

9390747332

Date: 10/5/88

RECIPIENT'S COPY

From (Your Name) Please Print: **Daneil B. Smith** Your Phone Number (Very Important): **904 438-9661**
To (Recipient's Name) Please Print: **Mr. C.H. Fancy** Recipient's Phone Number (Very Important):

Company: **BASKERVILLE-DONOVAN ENG INC** Department/Floor No.:
Company: **Department of Environmental Regulation** Department/Floor No.:

Street Address: **316 S. BAYLEN STE 300**
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): **2600 Blair Stone Road**

City State ZIP Required: **PENSACOLA FL 32501**
City State ZIP Required: **Tallahassee, Florida 32399**

YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE): **77301**
IF HOLD FOR PICK-UP, Print FEDEX Address Here: Street Address: City State ZIP Required:

PAYMENT: Bill Sender Bill Recipient's FedEx Acct. No. Bill 3rd Party FedEx Acct. No. Bill Credit Card
 Cash

SERVICES		DELIVERY AND SPECIAL HANDLING		PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE	Emp. No.	Date	Federal Express Use	
1 <input type="checkbox"/> PRIORITY 1 Overnight Delivery	6 <input checked="" type="checkbox"/> OVERNIGHT LETTER*	1 <input type="checkbox"/> HOLD FOR PICK-UP (Fill in Box #)			LBS					<input type="checkbox"/> Cash Received	Base Charges
2 <input checked="" type="checkbox"/> COURIER-PAK OVERNIGHT ENVELOPE*		2 <input checked="" type="checkbox"/> DELIVER WEEKDAY			LBS					<input type="checkbox"/> Return Shipment <input type="checkbox"/> Third Party <input type="checkbox"/> Chg. To Del <input type="checkbox"/> Chg. To Hold	Declared Value Charge
3 <input type="checkbox"/> OVERNIGHT BOX		3 <input type="checkbox"/> DELIVER SATURDAY (Extra charge)			LBS					Street Address	Other 1
4 <input type="checkbox"/> OVERNIGHT TUBE		4 <input type="checkbox"/> DANGEROUS GOODS (Extra charge)			LBS					City State Zip	Other 2
5 <input type="checkbox"/> STANDARD AIR Delivery not later than second business day		5 <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Release Signature Not Applicable)		Total	Total	Total				Received By:	Other 3
		6 <input type="checkbox"/> DRY ICE Lbs								<input checked="" type="checkbox"/> Regular Stop <input type="checkbox"/> On-Call Stop <input type="checkbox"/> Drop Box <input type="checkbox"/> B.S.C. <input type="checkbox"/> Station	Total Charges
		7 <input type="checkbox"/> OTHER SPECIAL SERVICE								FEDEX Corp. Employee No. 31066	PART#11800 REVISION DATE 1/88 PRINTED IN U.S.A. GBFE
		8 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge)								Date/Time Received Date/Time for FEDEX Use 10-5-88	009
		9 <input type="checkbox"/> HOLIDAY DELIVERY (if offered) (Extra charge)								Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.	© 1988 F.E.C.
										Release Signature:	

AC 17-142284

\$ 300 pd.
10-6-88

RECEIVED

OCT 6 1988

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

DER-BAQM

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ROBERT V. KRIEGLER
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Chemical Reactor [] New¹ [] Existing¹

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

COMPANY NAME: Reichhold Chemicals, Inc. COUNTY: Escambia

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) Reactor R-5

SOURCE LOCATION: Street 407 South Pace Boulevard City Pensacola

UTM: East _____ North _____

Latitude 30 ° 24 ' 30 "N Longitude 87 ° 14 ' 40 "W

APPLICANT NAME AND TITLE: Phillip P. Ulichney, Plant Manager

APPLICANT ADDRESS: Post Office Box 1433 Pensacola, Florida 32596

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Reichhold Chemicals

I certify that the statements made in this application for a Reactor 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: *Phillip Ulichney*

Phillip P. Ulichney, Plant Manager
Name and Title (Please Type)

Date: 10/5/88 Telephone No. _____

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

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

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed D B S H

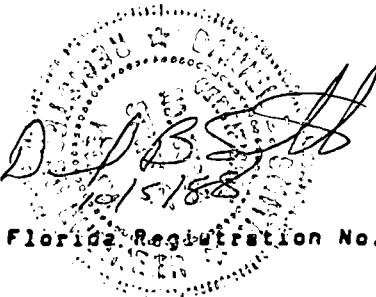
Daniel B. Smith, P.E.
Name (Please Type)

Baskerville-Donovan Engineers, Inc.

316 S. Baylen Street
Company Name (Please Type)
Pensacola, FL 32501

Mailing Address (Please Type)

Florida Registration No. 35633 Date: _____ Telephone No. (904)438-9661



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.

Construction of a production type, chemical reactor to blend and
make U.V. Oligomers and Toner Resins.

(See attached cover letter and Appendix Material.)

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

Start of Construction January 1, 1988 Completion of Construction January 31, 1989

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.)

Approximately \$ 10,000.00

Scrubber (based on American Air filter)

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

New Source - not applicable

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;
if power plant, hrs/yr _____ ; if seasonal, describe: Batch mode type
operation. Plans call for 150 days/year operation.

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? no

a. If yes, has "offset" been applied? _____

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

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

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

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? _____

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		
See raw material list (Appendix)				

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

1. Total Process Input Rate ~~(lbs/hr)~~ 12,000 lb/batch, 24 hr/batch
2. Product Weight (lbs/hr): n/a

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

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
See flow diagram and estimated emissions (Appendix)							
			-				

¹See Section V, Item 2.

²Reference 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)

³Calculated from operating rate and applicable standard.

⁴Emission, 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)
American Air Filter	Alcohols & V.O.C.	98%	na	BACT
Scrubber System				

E. Fuels n/a

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

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

Solvents are reclaimed after the condensor.

(See Flow Diagram) Solvents reused in process.

Scrubber water treated at Reichhold's waste water treatment plant.

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

Stack Height: 12.0 ft. Stack Diameter: 1.0 ft.
 Gas Flow Rate: ACFM 35.0 DSCFM Gas Exit Temperature: 85.0 °F.
 Water Vapor Content: 90 % Velocity: 2.0 FPS

SECTION IV: INCINERATOR INFORMATION

Not Applicable

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

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

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

Stack Height: _____ ft. Stack 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) _____

Brief description of operating characteristics of control devices: _____

See Appendix

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

Scrubber water to be treated

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Yes No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

Yes No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

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

Contaminant	Rate or Concentration
See Appendix	_____
_____	_____
_____	_____

D. Describe the existing control and treatment technology (if any). See Appendix

- | | |
|---------------------------|--------------------------|
| 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:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Costs:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mail Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? [] Yes [] No
- b. Was instrumentation calibrated in accordance with Department procedures?
[] Yes [] No [] Unknown

B. Meteorological Data Used for Air Quality Modeling

- 1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year
- 2. Surface data obtained from (location) _____
- 3. Upper air (mixing height) data obtained from (location) _____
- 4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

- 1. _____ Modified? If yes, attach description.
- 2. _____ Modified? If yes, attach description.
- 3. _____ Modified? If yes, attach description.
- 4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO ²	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

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

Not Applicable SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir _____

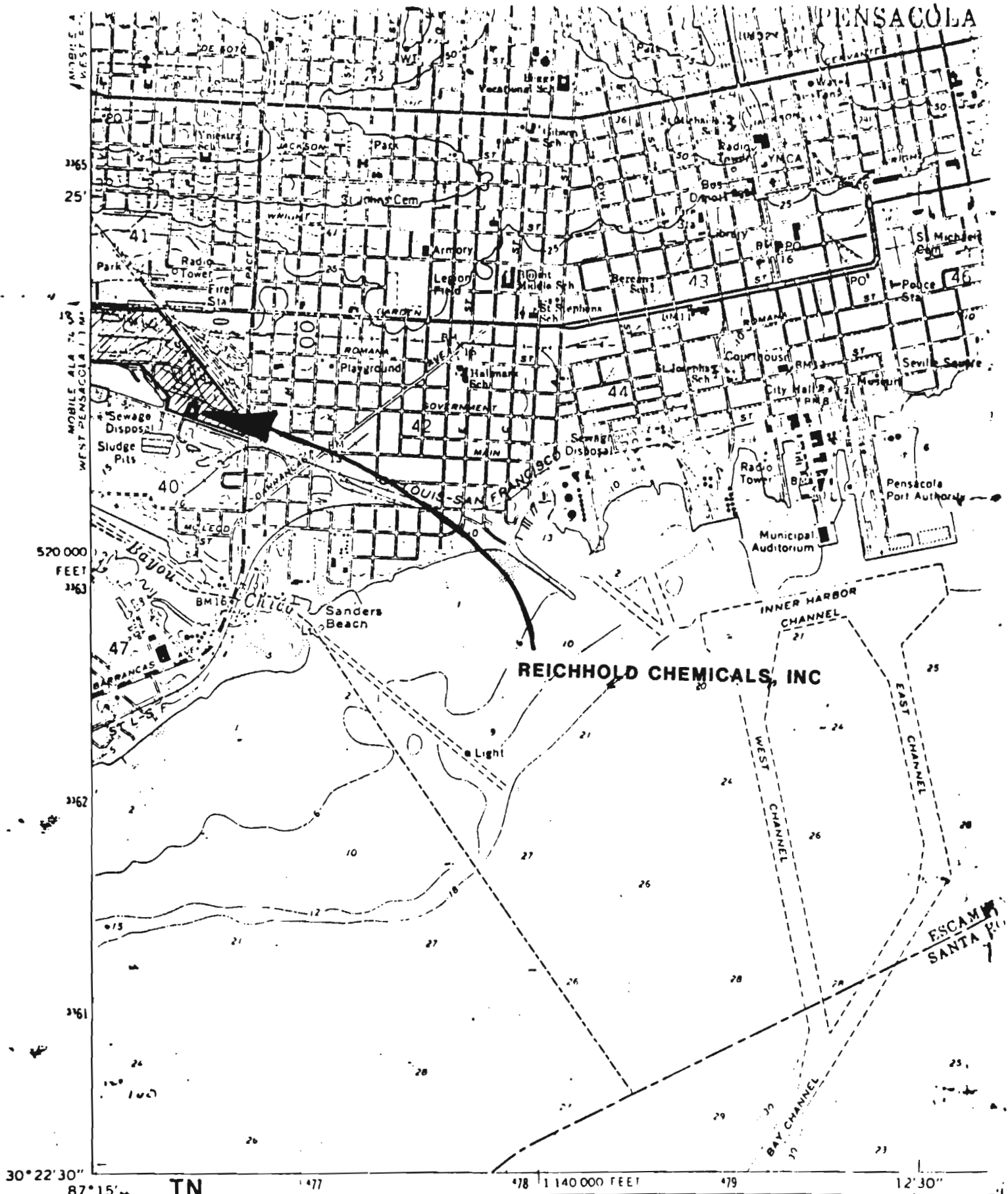
Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

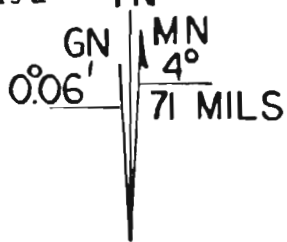
Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

BACKGROUND INFORMATION



30° 22' 30" 87° 15' 477 478 1 140 000 FEET 479 12' 30"



Scale 1: 24,000

— LOCATION MAP —
 FROM U.S. GEOL. SURVEY MAP, 1970
 AMS354INW — SERIES V847
 REICHOLD CHEMICALS, INC.
 PENSACOLA, ESCAMBIA, FLORIDA
 DEC. 21. 1972

RAW MATERIALSU.V. OLIGEMERS

EPOXY RESINS
 ACRYLIC ACID
 LAURIC ACID
 SUCCINIC ANHYDRIDE
 ZIRCONIUM TENCHEM (12%)
 TPGDA - TRIPROPYLENE GLYCOL DIACRYLATE
 BTDA - BENZOPHENONE
 TETRACARBOXYLIC DIARHYDRIDE
 AIE - M HEPTANE - 326 -
 ALUMINUM CHELATE
 PARTERTIARY BUTYL PHENOL
 BENZO PHENONE
 ACRYLIC RESIN
 VINYL ESTER RESIN
 BENZO GUANANINE FORMALDEHYDE RESIN

TONER RESINS

BUTYL ACRYLATE
 STYRENE
 METHYL METHACRYLATE
 ETHYL ACRYLATE
 METHACRYLIC ACID
 XYLENE

EMISSIONSU.V. OLIGEMERS

ACRYLIC ACID
 ISOPROPYL ALCOHOL
 ETHYL ALCOHOL

TONER RESINS

BUTYL ACRYLATE
 STYRENE
 METHYL METHOCRYLATE
 ETHYL ACRYLATE
 METHACRYLIC ACID
 XYLENE

PRODUCTION RATEU.V. OLIGEMERS

1,200,000 LB/YEAR
~~12,000 LB/BATCH~~
 24 HOUR/BATCH

TONER RESINS

600,000 LB/YEAR (IN
 40% XYLENE)
~~12,000 LB/BATCH~~
 24HOUR/BATCH

VENT RATE

(SAME FOR BOTH PROCESSES)

SPARGING (AT 1 ATM) 20-40 SCFH, 8 HOURS
 VACUUM (APPROXIMATELY 100 POUNDS PER HOUR) 1,500 SCFH, 2 HOURS



Project

Job No.

Date

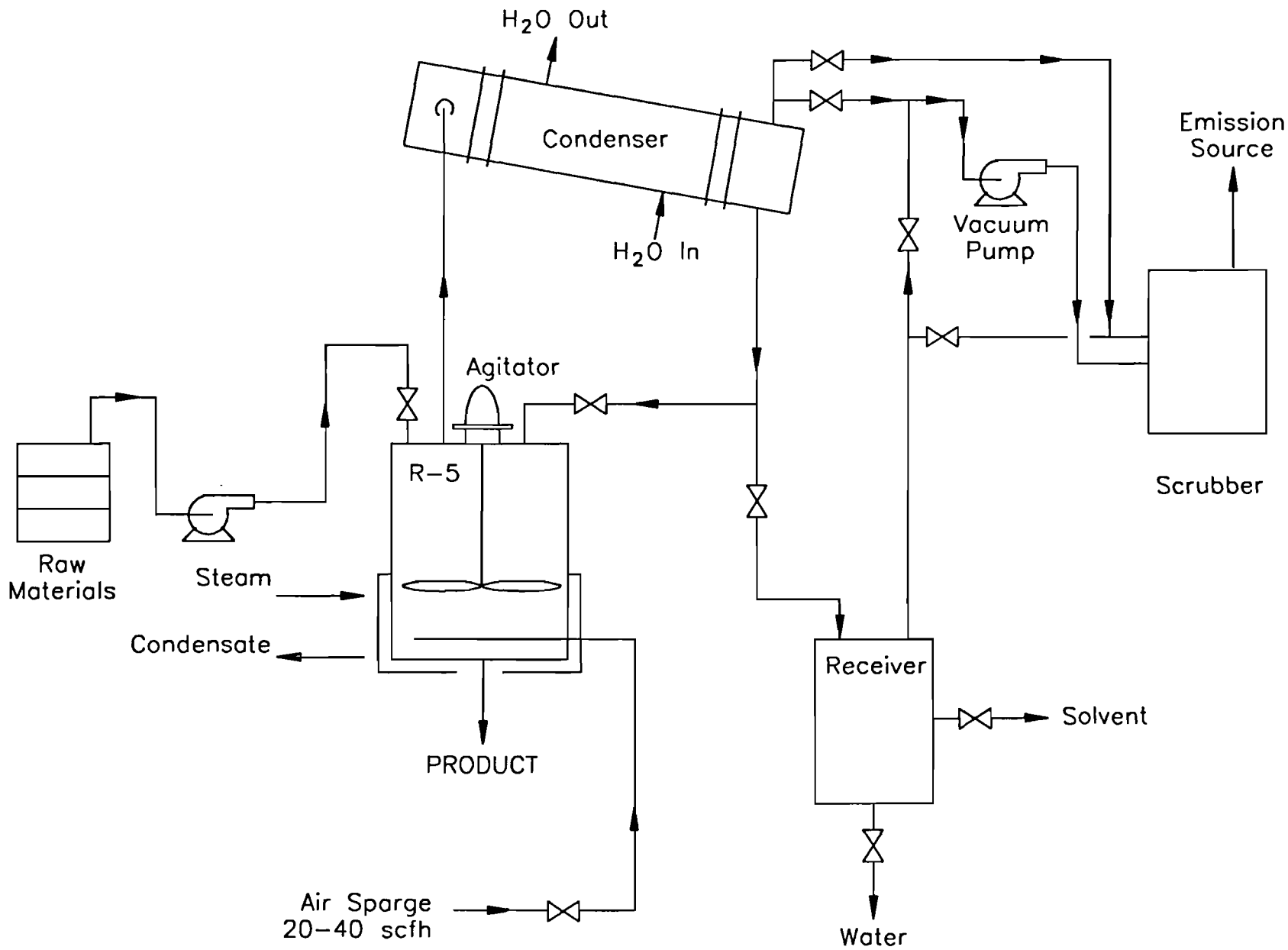
Index

By

Sheet

of

FLOW SCHEMATIC



Reactor System

COVER LETTER



BASKERVILLE-DONOVAN ENGINEERS, INC.

A PROFESSIONAL SERVICE ORGANIZATION

• PENSACOLA • TALLAHASSEE • FORT WALTON BEACH •
MILTON • PORT ST. JOE • PANAMA CITY • APALACHICOLA • DAYTONA BEACH

October 5, 1988

Mr. C.H. Fancy, P.E.
State of Florida
Department of Environment Regulation
Twin Tower Office Building
2600 Blair Stone Road
Room 306-7
Tallahassee, Florida 32399

Re: Reichhold Chemicals, Inc.
Reactor R-5
Application to Construct
Our Project Number 077301

Dear Mr. Fancy:

Enclosed are three copies of DER's "Application to Construct an Air Pollution Source" for the above referenced project. This project represents a new production process at Reichhold Chemicals, Inc., where the vessel, Reactor R-5, will be used to produce two new lines of product. The products, U.V. Oligemers and Toner Resins are both made via a batch process.

Each batch requires 24 hours to blend. U. V. Oligemers and Toner Resins will both be produced in R-5, but never at the same time. The raw materials and the air emissions for the process are listed in the Appendix of the application. The present expectation is to produce approximately 50 batches of Toner Resins and 100 batches of U.V. Oligemers per year.

The reactor system schematic is shown in the Appendix. Essentially this is a closed system. The condensor will assist in recovering most of the vapors lost during the reaction process. The remaining vapors will be fed to a scrubber system to eliminate the great majority of the emissions.

While most of the process is closed, there will be two periods where air emissions will occur. The first is an air sparging operation where air is introduced into the reactor at a rate of 20 to 40 standard cubic feet per hour (SCFH) During this time the reactor/condensor/scrubber system shall be operating at atmospheric pressure. This portion of the process will last 8 hours.

The second emission producing operation is a vacuum withdrawal during the batch's final phase. In this phase, a vacuum pump will be used to remove approximately 1500 SCFH. This flow will also be treated by the scrubber to remove the vast majority of undesirable constituents. Other than these two operations, the operation, loading and unloading of the reactor will be

Mr. C.H. Fancy
October 5, 1988
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accomplished in a closed-loop manner to eliminate the loss of any vapors.

We have calculated emissions based on saturation of the air used for sparging and reasonable activity factors for the vacuum removal phase. I believe the methods shown employ the best available control technology and produce emission types and levels consistent with the Florida Administrative Code. Specifically, I find that the proposed system complies with F.A.C. Section 17-2.620 (i.e. the system utilizes known and existing vapor emission control devices.)

Enclosed with the applications is the fee for your review. Please feel free to have you staff contact me if they have any questions, or need additional information.

Very truly yours,

BASKERVILLE-DONOVAN ENGINEERS, INC.



Daniel B. Smith, P.E.
Manager, Industrial Department

DBS/alk

Enclosure

c - WFB
David Bright, Reichhold Chemicals

EMISSIONS CALCULATIONS

EMISSIONS DATA

<u>CHEMICAL</u>	<u>MOLECULAR WEIGHT</u>	<u>VAPOR PRESSURE @ 100 F</u>
ACRYLIC ACID	72.06	0.70 PSIA
BUTYL ACRYLATE	128.17	0.57 PSIA
ETHYL ALCOHOL	46.07	1.90 PSIA
ETHYL ACRYLATE	100.13	1.39 PSIA
ISOPROPYL ALCOHOL	152.20	1.80 PSIA
METHYL METHACRYLATE	100.14	1.40 PSIA
STYRENE	104.16	0.69 PSIA
XYLENE	106.16	0.68 PSIA

CONDENSOR DATA

SURFACE AREA	750 SQUARE FEET
INLET WATER TEMPERATURE	85 DEGREES F
INLET VAPOR TEMPERATURE	203 DEGREES F
OUTLET VAPOR TEMPERATURE	90 DEGREES F

AIR SPARGING

FOR A PERIOD OF 8 HOURS, AIR SHALL BE INTRODUCED INTO THE LOWER PORTION OF REACTOR R-5. DURING THIS TIME THE REACTOR SHALL BE AT ATMOSPHERIC PRESSURE. THE AIR WILL SATURATE WITH THE EMISSION VAPORS FOR THE PRODUCT AND WILL THEN ENTER THE CONDENSOR. FROM THERE THE SATURATED AIR WILL BE FORCED INTO THE SCRUBBER WHERE MOST OF THE CHEMICALS WILL BE EXTRACTED.

TO CALCULATE A WORST CASE SCENARIO, EACH CONSTITUENT IS ALLOWED TO SATURATE THE MAXIMUM AMOUNT OF AIR, 320 CUBIC FEET, INTRODUCED INTO THE REACTOR. THIS RESULTS IN A LEVEL OF SAFETY SO THAT CALCULATED EMISSIONS WILL EXCEED THOSE EXPERIENCED DURING OPERATION OF REACTOR R-5.



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VOLUME OF AIR = 320 CUBIC FEET
 TEMPERATURE = 85 DEGREES F (545 DEGREES R)

FOR THE ETHYL ALCOHOL EMISSION TO THE SCRUBBER:

$$\begin{aligned}
 & (\text{VOLUME}) \left(\frac{T_1}{T_2} \right)^{P_1} \left(\frac{P_1}{P_2} \right) \left(\frac{1 \text{ LB MOLE}}{359 \text{ CUBIC FEET}} \right) \left(\frac{\text{LB}}{\text{LB MOLE}} \right) = \\
 & (320 \text{ CU FT}) (545^\circ\text{R}/520^\circ\text{R}) (1.9 \text{ PSIA}/14.7 \text{ PSIA}) \left(\frac{1 \text{ LB}}{359 \text{ CU FT}} \right) \\
 & (46.07 \text{ LB/LB MOLE}) = \underline{5.56 \text{ LB PER BATCH}}
 \end{aligned}$$

SCRUBBER EMISSIONS TO THE ATMOSPHERE:

SCRUBBER EFFICIENCY = 98%

SCRUBBER OUTLET EMISSION FOR ETHYL ALCOHOL EXAMPLE ABOVE =

EMISSION = (5.6 LB/BATCH)(0.02) = 0.11 LB/BATCH

SIMILARLY, THE VALUES FOR THE OTHER EMISSIONS DURING AIR SPARGING ARE AS FOLLOWS:

<u>CHEMICAL</u>	<u>WEIGHT/BATCH INTO SCRUBBER</u>	<u>EMISSION WEIGHT FROM SCRUBBER</u>
ACRYLIC ACID	8.24 POUND	0.165 POUND/BATCH
BUTYL ACRYLATE	4.64 POUND	0.093 POUND/BATCH
ETHYL ALCOHOL	5.56 POUND	0.111 POUND/BATCH
ETHYL ACRYLATE	8.84 POUND	0.177 POUND/BATCH
ISOPROPYL ALCOHOL	17.40 POUND	0.348 POUND/BATCH
METHACRYLIC ACID	0.32 POUND	0.006 POUND/BATCH
METHYL METHACRYLATE	8.91 POUND	0.178 POUND/BATCH
STYRENE	4.56 POUND	0.091 POUND/BATCH
XYLENE	4.58 POUND	0.092 POUND/BATCH



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VACUUM EVACUATION

THE FINAL STAGE OF PRODUCTION WHICH WILL HAVE AIR EMISSIONS IS VACUUM EVACUATION. THE VACUUM PUMP, SHOWN IN THE PROCESS SCHEMATIC, WILL BE USED TO EVACUATE THE REACTOR. THE PUMP IS RATED AT 100 POUNDS PER HOUR AND WILL PRODUCE A 29.0 IN Hg. VACUUM IN THE REACTOR. THIS PORTION OF THE PROCESS WILL LAST APPROXIMATELY TWO HOURS.

DURING THESE TWO HOURS, THE LIQUID-VAPOR EQUILIBRIUM RELATIONSHIP FOR THE U.V. OLIGEMERS AND THE TONER RESINS IS DESCRIBED BY RAULT'S LAW AND OTHER RELATED EQUATIONS OF STATE. IN ITS SIMPLEST FORM $Y_i P = X_i P^{SAT}$ (RAULT'S LAW) PROVIDES FOR SOLUTION OF LIQUID-VAPOR EQUILIBRIUM FOR COMPOSITIONS Y AND BASED ON THE RELATIONSHIPS BETWEEN THE COMPOSITIONS FOR $i = 1$ TO M, WHERE M = NUMBER COMPLEX RELATIONSHIPS, AND TEMPERATURE AND PRESSURE.

IN REALITY, FOR A COMPLEX ORGANIC MIXTURE SUCH AS THE U.V. OLIGEMERS AND THE TONER RESINS, EMPIRICAL DATA IS REQUIRED TO PROVIDE A BASELINE FOR RAULT'S LAW. THIS WILL BE ACCOMPLISHED DURING START-UP TESTING OF THE R-5 SYSTEM.

BASED ON SIMILAR PRODUCTION REACTIONS, THE BASELINE FOR THESE EMISSIONS CAN BE PREDICTED. FROM MAXIMUM VALUES OF FLOW THROUGH THE VACUUM EVACUATION, THE ESTIMATES ARE AS FOLLOWS:

CONDITIONS FOR BOTH PRODUCTS DURING EVACUATION

VACUUM PUMP FLOW (MAXIMUM) = 1307 SCFH
MAXIMUM VOLUME EVACUATED = 2614 CUBIC FEET (BASED ON 2 HOURS)
PRESSURE = 29.0 IN Hg (VACUUM)
TEMPERATURE = 203 DEGREES F (95 DEGREES C)
CONDENSOR TEMPERATURE = 85 DEGREES F (30 DEGREES C)



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ESTIMATED VACUUM EMISSIONS FOR U.V. OLIGEMERS

<u>CHEMICAL</u>	<u>FLOW INTO SCRUBBER</u>	<u>EMISSION FROM SCRUBBER</u>
ACRYLIC ACID	128.31 LB/BATCH	2.566 LB/BATCH
ETHYL ALCOHOL	74.22 LB/BATCH	1.484 LB/BATCH
ISOPROPYL ALCOHOL	232.27 LB/BATCH	4.645 LB/BATCH

ESTIMATED VACUUM EMISSIONS FOR TONER RESINS

<u>CHEMICAL</u>	<u>FLOW INTO SCRUBBER</u>	<u>EMISSION FROM SCRUBBER</u>
BUTYL ACRYLATE	26.02 LB/BATCH	0.520 LB/BATCH
ETHYL ACRYLATE	49.56 LB/BATCH	0.991 LB/BATCH
METHACRYLIC ACID	1.84 LB/BATCH	0.037 LB/BATCH
METHYL METHACRYLATE	14.26 LB/BATCH	0.285 LB/BATCH
STYRENE	25.59 LB/BATCH	0.512 LB/BATCH
XYLENE	73.45 LB/BATCH	1.469 LB/BATCH



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TOTAL EMISSIONS SUMMARY

BASED UPON THE SCRUBBER SYSTEM'S EFFICIENCY AND THE GROSS ESTIMATED EMISSIONS LEAVING THE CONDENSOR, THE TOTAL AIR EMISSIONS FOR THE REACTOR CAN BE SUMMARIZED AS FOLLOWS:

U.V. OLIGEMERS (100 BATCHES PER YEAR)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
ACRYLIC ACID	2.731 POUND	273.1 POUND
ETHYL ALCOHOL	1.484 POUND	148.4 POUND
ISOPROPYL ALCOHOL	4.756 POUND	475.6 POUND

TONER RESINS (50 BATCHES PER YEAR)

<u>CHEMICAL</u>	<u>TOTAL PER BATCH</u>	<u>ANNUAL TOTAL</u>
BUTYL ACRYLATE	0.613 POUND	30.65 POUND
ETHYL ACRYLATE	1.168 POUND	58.40 POUND
METHACRYLIC ACID	0.043 POUND	2.15 POUND
METHYL METHACRYLATE	0.463 POUND	23.15 POUND
STYRENE	0.603 POUND	30.15 POUND
XYLENE	1.561 POUND	78.05 POUND



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SCRUBBER DATA

HS SCRUBBER

HS Scrubbers consist of a corrosion resistant casing with inlet and outlet transition pieces. The unit is fully self-contained for easy installation. All major parts are readily accessible for servicing. For example, the liquid spraying zone can be easily reached through the top cover. The droplet eliminator can be accessed through a removable side cover for inspection and cleaning. Transparent covers allow for on line inspection of the spraying zones. The pump(s) and liquid piping are factory assembled on most sizes.

The system control box includes automatic water make-up. Other types of controls are available as required. It can be prewired for easy installation.

SPECIFICATIONS TO SUIT MANY NEEDS

- Extremely high efficiency cleaning of water soluble gases, typically over 98%
- Very low water consumption, as low as 0.1 gal. per 1000 ft³

of gas cleaned on many applications

- Standard 4 foot deep contact zone
- Compact design
- Full corrosion resistant construction using fiberglass reinforced plastic (FRP) with resin rich linings and fire retardant additives.
- Many standard designs and options to suit a broad spectrum of needs
- Designed-in low maintenance

STANDARD FEATURES

Every HS Scrubber comes complete with these features:

- Transparent windows at the spraying zone for operational monitoring
- Overflow connection (Positive bleed from scrubbing liquid.)
- High efficiency mist eliminator with slide-in construction for ease of maintenance

- Liquid tubing is exterior for easy access
- Non-clogging, PVC square-pattern spray nozzles
- Removable top for easy inspection of spray pattern and packing
- Built-in strainer
- Connection for make-up water
- Level controlled by float valve
- Connection for future extension with chemical feed
- Fitting for optional ph probe
- High efficiency vertical polypropylene pump(s)
- Control panel with pump(s) main switch fully pre-wired and housed in a protective enclosure (optional)
- Drain connection with ball valve
- Optional FRP fan with system unitary base
- 6 foot deep contact zone (optional)
- Multiple stage options

