



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 21, 1988

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Dr. John L. Deming
Site Manager
CIBA-GEIGY Corporation
3550 N. W. 49th Street
Miami, Florida 33142-3981

Dear Dr. Deming:

Re: Amendments to a Construction Permit - No. AC 13-109080

The Department received Mr. Anthony Mazpule's letter with attachments dated November 23, 1988, requesting amendments to the above referenced construction permit to allow the use of three (3) curing ovens for curing Honeycomb slices and blocks and to operate only one oven at any given time. Since there are no increases in actual pollutant emissions projected for this proposal, the Department agrees with the request and the following will be changed and added:

Specific Conditions:

D. 15. (new)

The exhaust ducts from the Nos. 1 and 2 curing ovens shall be connected to the control system (No. 3 Dust Collector) associated with the No. 3 curing oven.

D. 16. (new)

The curing ovens (Nos. 1-3) shall be equipped with electrical interlock systems such that only one curing oven can be operated at any one time.

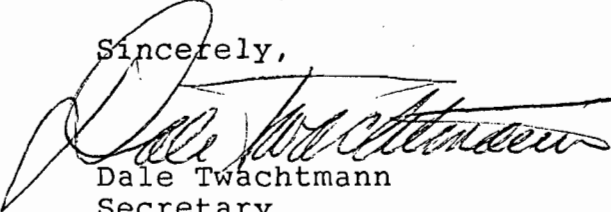
Attachment to be Incorporated:

13. Mr. Anthony Mazpule's letter with attachments dated November 23, 1988, and received November 28, 1988.

Dr. John L. Deming
Page Two
December 21, 1988

This letter must be attached to your construction permit, No. AC 13-109080, and shall become a part of the permit.

Sincerely,



Dale Twachtmann
Secretary

DT/ks

attachments

cc: S. Brooks, SE District
P. Wong, DERM
B. Hewitt, Esq., DER

ATTACHMENT 13

Composite Materials Department
Miami Plant

CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142
Telephone 305 633 9066

VON
11-21-88
Miami, FL

CIBA-GEIGY

November 23, 1988

RECEIVED

NOV 28 1988

DER-BAQM

Bruce Mitchell
Bureau of Air Quality Management
Dept. of Environmental Regulations
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Reference: Permit No. - AC 13 109080 & AO 110439

Dear Mr. Mitchell:

This letter follows the meeting of 11/3/88 in DER's offices in Tallahassee.

We requested a modification of the permit to allow us to cure Honeycomb slices and blocks in the pre-cure ovens. We propose to connect both ovens to the curing oven no. 3's duct to the dust collector no. 3. The proposed duct system, connecting the ovens, consists in shutter valves mutually-exclusive interlocked which permits curing in only one oven at anytime, (see attachments).

The reasons for this request is to cure flimsy Honeycomb slices and certain blocks in a horizontal position in the precure ovens to prevent warping and distortions that otherwise would occur in the curing ovens, resulting in poor quality and wastes. The proposed modification does not add any VOC to the permitted amount and utilizes an existing emission point. Vertically fed curing ovens have a capacity of 4 blocks per cycle, while the horizontally fed pre-cure ovens handle only one block. In no case would VOC emission or emission points be increased.

ATTACHMENTS: Three only possible operation modes.

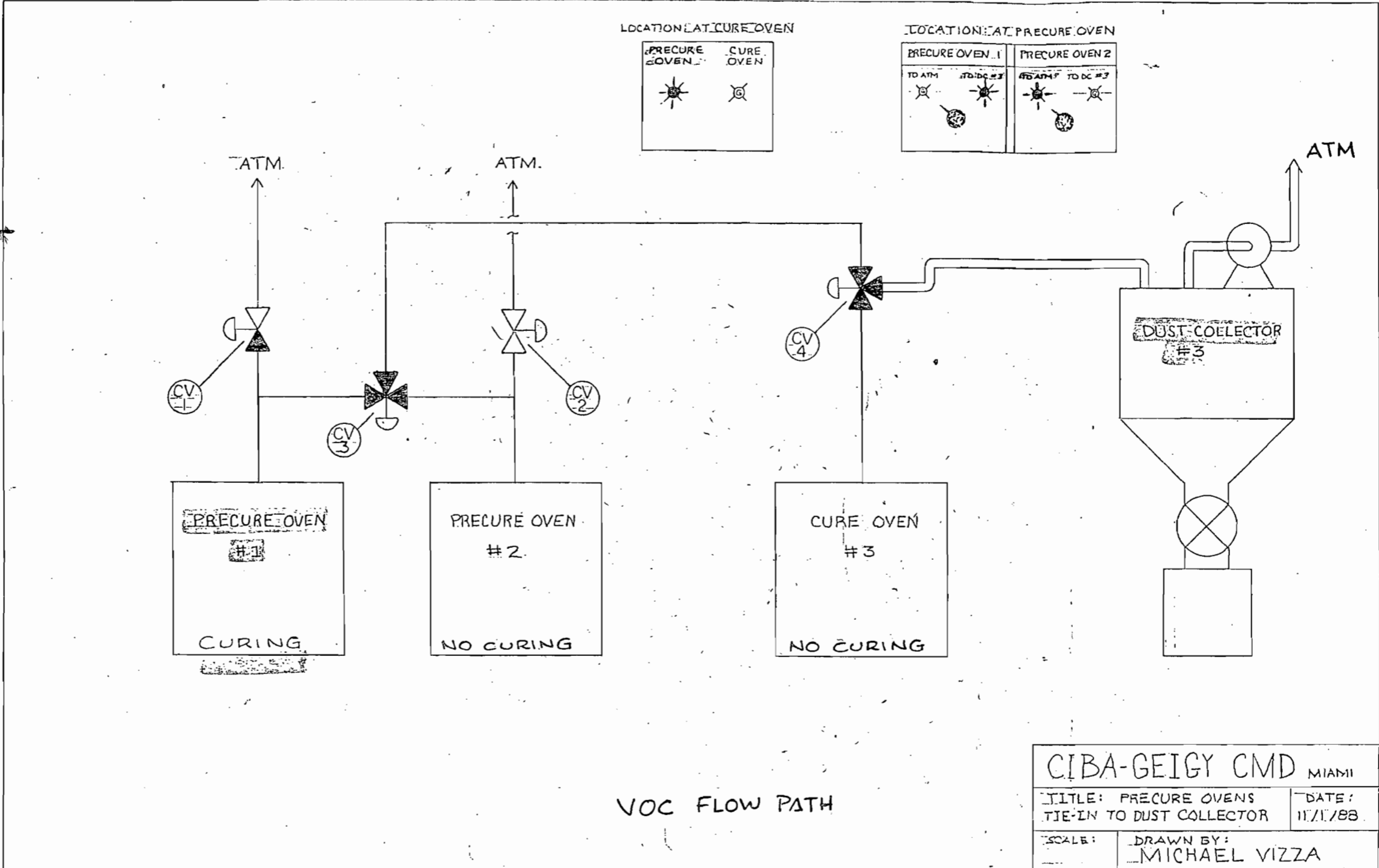


Anthony Mazpule
Safety Project Engineer

John Deming - Plant Eng

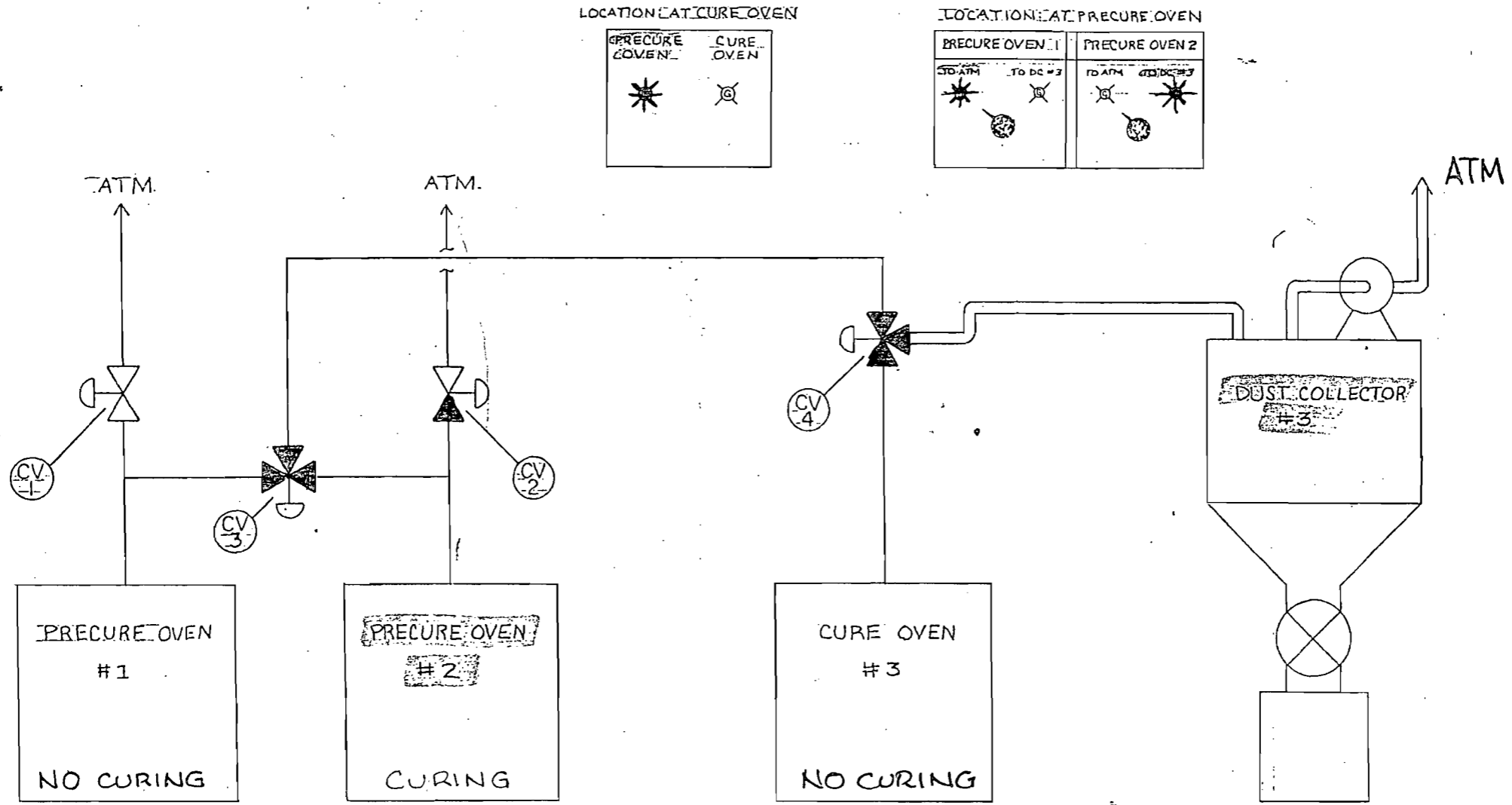
AM/lc
E5/MITCHELL.LTR

CHEMIST
Plant Eng - Plant Eng



VOC FLOW PATH

CIBA-GEIGY CMD MIAMI	
TITLE: PRECURE OVENS TIE-IN TO DUST COLLECTOR	DATE: 11/1/88
SCALE:	DRAWN BY: MICHAEL VIZZA



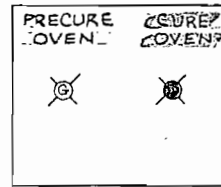
LOCATION	AT	CURE OVEN
PRE-CURE OVEN #1	*	○

LOCATION	AT	PRE-CURE OVEN
PRE-CURE OVEN #1	TO ATM	*
PRE-CURE OVEN #2	TO DC #3	○

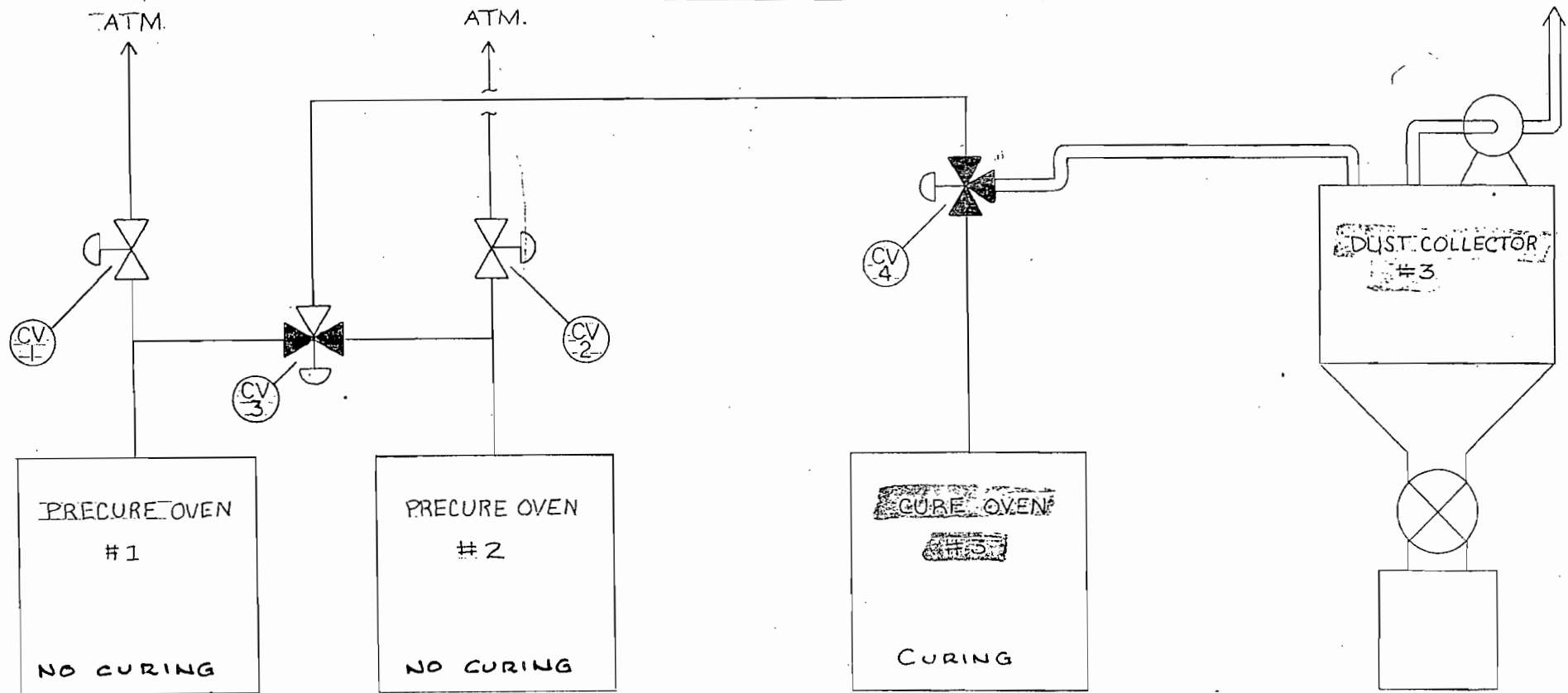
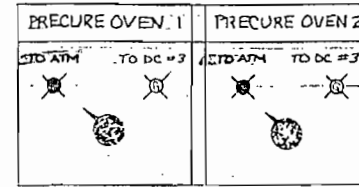
VOC FLOW PATH

CIBA-GEIGY CMD MIAMI	
TITLE: PRE-CURE OVENS TIE-IN TO DUST COLLECTOR	DATE: 11/1/88
SCALE:	DRAWN BY: MICHAEL VIZZA

LOCATION AT CURE OVEN

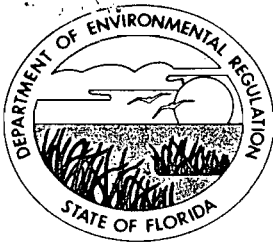


LOCATION AT PRECURE OVEN



VOC FLOW PATH

CIBA-GEIGY CMD MIAMI	
TITLE: PRECURE OVENS TIE-IN TO DUST COLLECTOR	DATE: 11/1/83
SCALE:	DRAWN BY: MICHAEL VIZZA



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

October 1, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dean Bidle
Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Mr. Bidle:

Re: Request for Withdrawal of an Application for a Modification
of Existing Sources and Refund of the Associated Processing
Fee: AC 13-186729

The Department has reviewed your letter received on June 10, 1991, that requested the withdrawal of the application package for a modification of existing sources, which has been done, and a refund of the processing fee associated with the project. Pursuant to Florida Administrative Code Rule 17-4.050(5)(a), "the fee is non-refundable except as provided in Section 120.60, Florida Statutes (F.S.)." Pursuant to Section 120.60, F.S., "the agency shall notify the applicant if the activity for which a license is exempt from the licensing requirement and refund any tendered application fee." Since the request for a modification that was submitted and being processed by the Department's Bureau of Air Regulation was not exempt from licensing, then the request for a refund is denied.

If there are any questions, please call Mr. Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,

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

CHF/BM/rbm

Enclosures

cc: I. Goldman, SE District
P. Wong, DERM
G. Smallridge, Esq., DER
D. Buff, P.E., KBN

CIBA-GEIGY
COMPOSITE MATERIALS

Composite Materials
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981
305 633 9066
FAX 305 635 6079

RECEIVED

JUN 10 1991

Division of Air
Resources Management

June 5, 1991

Mr. C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

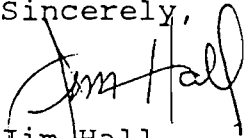
Re: CIBA-GEIGY Corporation
Miami, FL
AC13-186729

Dear Mr. Fancy:

This letter is in response to the Department's completeness letter dated April 24, 1991. Based on the Department's position regarding the requirement of new source review for nonattainment areas for the subject permit application, it is CIBA-GEIGY's desire to withdraw the permit application. Please withdraw the application and refund the application fee.

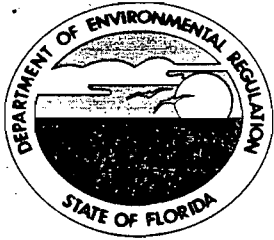
In regard to your question on the cost of retrofitting the three cure ovens with a VOC control system, this question is not considered relevant to the subject permit application. In any event, since CIBA-GEIGY is now withdrawing the application, this information is no longer necessary.

Thank you for your cooperation in this matter.

Sincerely,

Jim Hall
Plant Engineer

JH:on

cc: Stephanie Brooks
Patrick Wong
Eric Finkelman
BAICHP } 6-10-91 an.
Donna Mitchell }



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 24, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dean Bidle, Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Mr. Bidle:

Re: Completeness Review for an Application Package to Modify
AC 13-186729

The Department has reviewed Mr. David Buff's letter received on March 26, 1991, regarding the above referenced application package to modify the facility. Based on a technical review of the response, the application package is deemed incomplete. Therefore, please submit the following information to the Department's Bureau of Air Regulation, including all calculations, reference material and assumptions, and the status will, again, be ascertained:

1. As was requested in the letter, the basis for establishing the previous VOC emission increases associated with the three curing ovens are:

- a. The application package received on September 27, 1985, and the letter with enclosure received on November 15, 1985 (attached), both established a total baseline level of 37.36 lbs/hr of VOC emissions dedicated to the operation of the three curing ovens;
- b. The letter with enclosure received on November 25, 1985 (attached), amended the application package and established the proposed total level of 46.70 lbs/hr of VOC emissions dedicated to the operation of the three curing ovens;
- c. Therefore, the difference/increase of 9.34 lbs/hr at 8000 hrs/yr operation calculates to +37.4 TPY of VOC emissions; and,
- d. At a significance level of 40 TPY (Table 500-2, F.A.C. Chapter 17-2), the margin is only 2.6 TPY of VOC emissions (40 - 37.4 = 2.6 TPY).

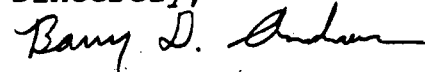
Mr. Dean Bidle
April 24, 1991
Page 2

Consequently, the current request that the Department is evaluating is subject to New Source Review pursuant to F.A.C. Rule 17-2.510(4), Nonattainment Area, and includes the application of LAER. If this is what is desired, then please submit the required information and the appropriate processing fee. If this is not what you desire, then please advise.

2. Pursuant to F.A.C. Rules 17-2.620(2) and 17-4.080(1), what would be the cost of retrofitting the three curing ovens with a VOC control system(s) (i.e., incinerator system, etc.). The evaluation(s) are to be sealed by a licensed P.E. of the State of Florida.

If there are any questions, please call Mr. Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,



fr C. H. Fancy, P.E.
Chief

Bureau of Air Regulation

CHF/BM/bm

Attachments

c: S. Brooks, SE District
P. Wong, DERM
D. Buff, P.E., KBN
J. Hall, C-GC

BEST AVAILABLE COPY

CIBA-GEIGY

Composite Materials Department
Miami Plant

CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142
Telephone 305 633 9066

November 14, 1985

Dept. of Environmental Regulations
Bureau of Air Quality Management
Bruce Mitchell
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Dear Mr. Mitchell:

Please find enclosed the VOC Material Balance after
the installation of the Emission Control.

Sincerely,



A. Mazpule
Sr. Project Engineer

AM/cln

Enclosure

cc: Pat Wong

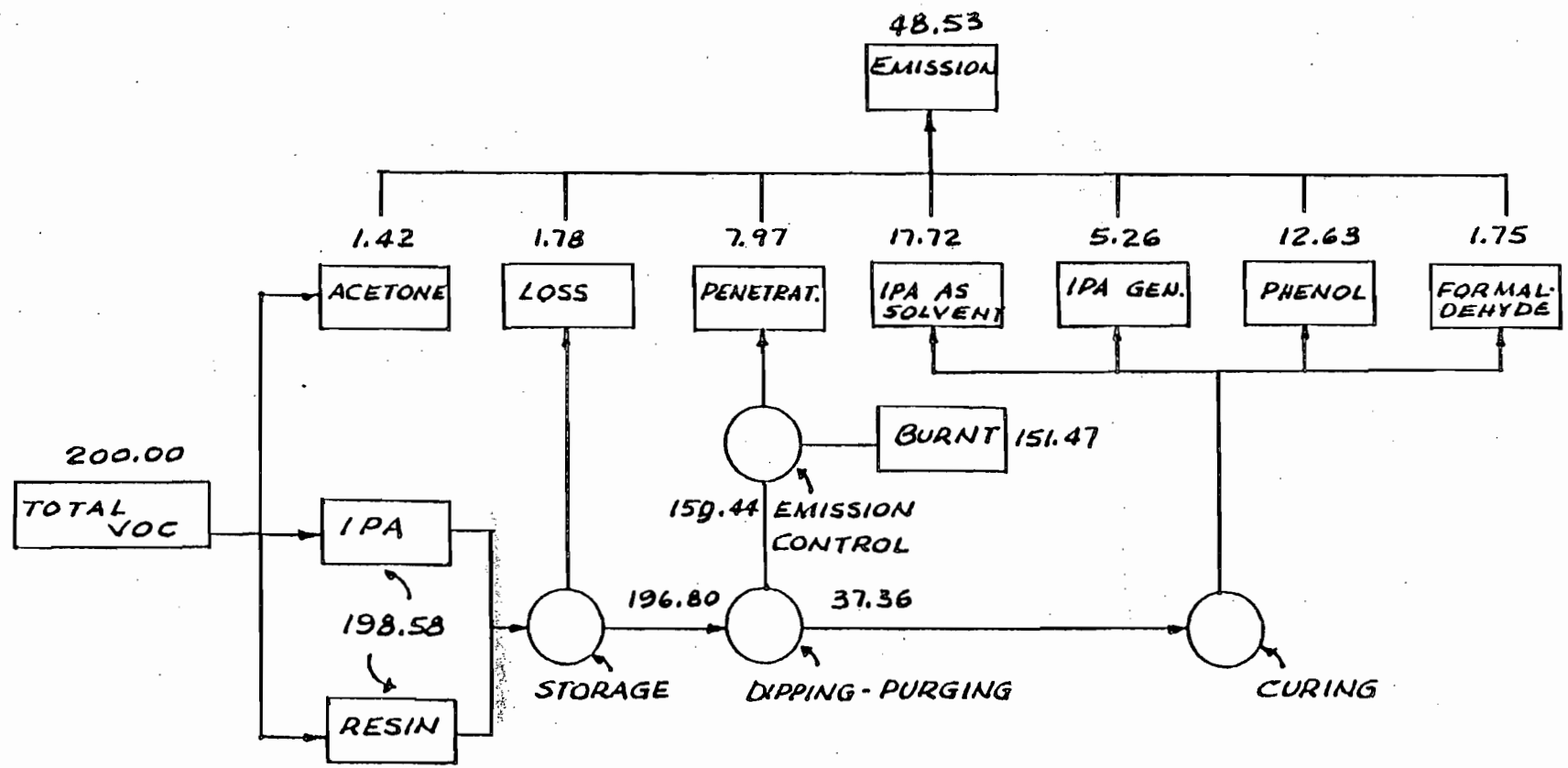
Stagnant Brooks 3/11/85

DER

NOV 15 1985

BAQM

VOC MATERIAL BALANCE [Lbs/HR.]



Composite Materials Department
Miami Plant

CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142
Telephone 305 633 9066

CIBA-GEIGY

November 20, 1985

Mr. Bruce Mitchell
Dept. of Environmental Regulations
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301-8241

RE: OPERATING CRITERIA

Dear Mr. Mitchell:

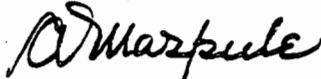
The proposed project consists of two dipping-purging machines operating 8000 hours a year each one; and a common incinerator designed to operate with one or both machines.

The average total VOC consumption will be 250 lbs. per hour.

Please find enclosed the revised "VOC Material Balance".

If you have any further questions please feel free to call me.

Sincerely,



Antonio Mazpule
Sr. Project Engineer

AM/on

enclosure

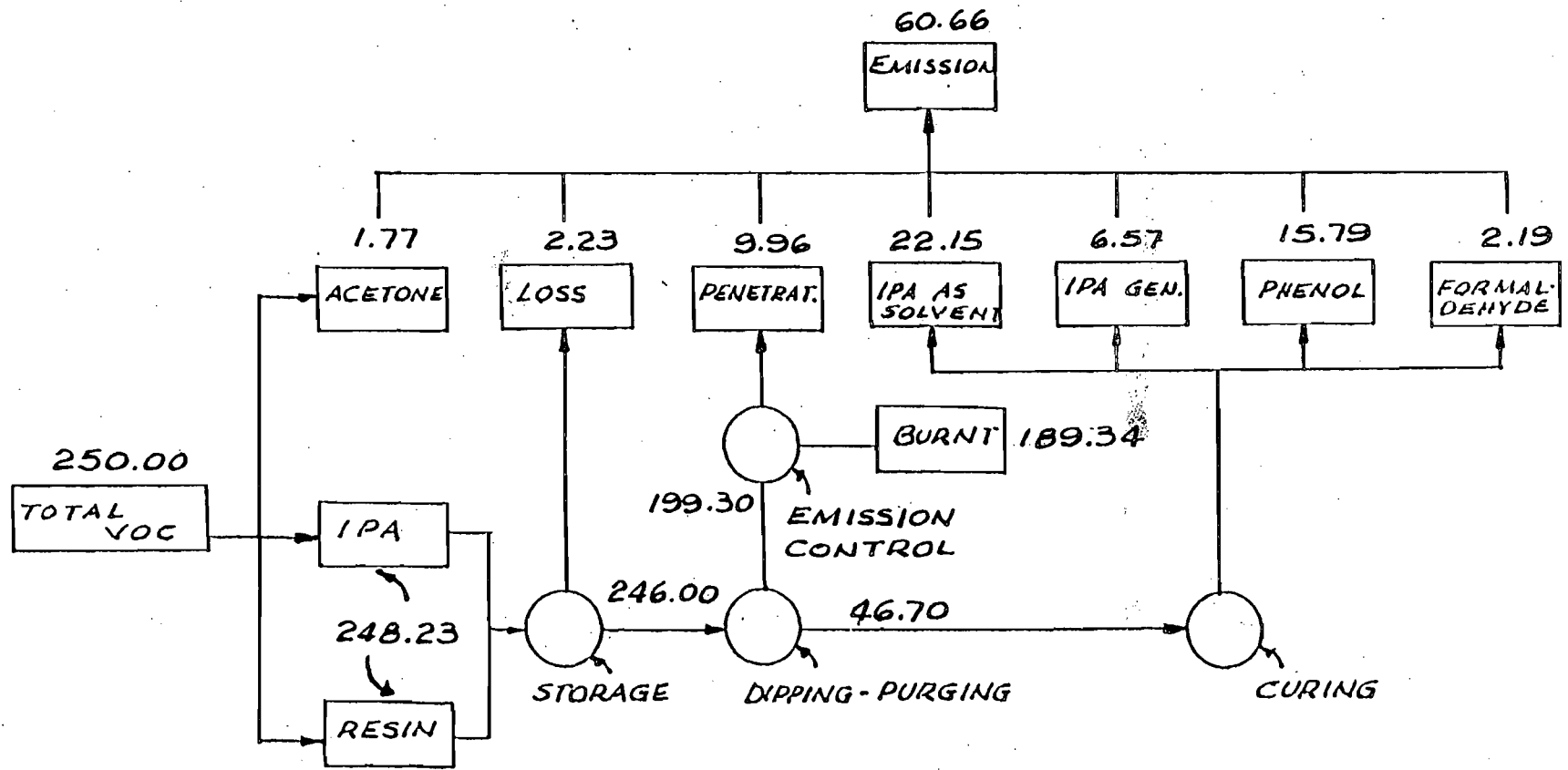
cc: Stephanie Buehler
Pat Wong

11/25/85

DER
NOV 21 1985
BAQM

VOC MATERIAL BALANCE (Lbs/HR.)

REVISION No 1
11-20-85

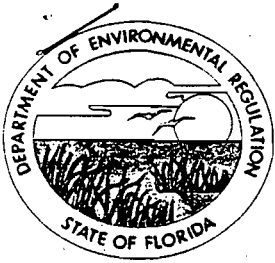


DER
NOV 21 1985
BAQM

$$\frac{37.4}{TBY} \div 4 = 9.35 \text{ lbs/hr} / 3 \text{ runs} \approx$$
$$= 3.12 \text{ lb/hr} / \text{run} \approx$$

$$\frac{46.90 \text{ lbs/hr}}{37.36} \rightarrow \text{cu} \approx 9.34 \text{ lbs/hr}$$

Sept. 27, 1985 AOC + var request



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

*Thanks
Bar*

April 24,
~~February 8,~~ 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dean Bidle, Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

*Day 30
ASAP
Today
Lawton
Bar*

Dear Mr. Bidle:

Re: Completeness Review for an Application Package to Modify
AC 13-186729

March 26 The Department has reviewed Mr. David Buff's letter received on ~~January 11,~~ 1991, regarding the above referenced application package to modify the existing facility. Based on a technical review of the response, the application package is deemed incomplete. Therefore, please submit the following information to the Bureau of Air Regulation (BAR), including all calculations, reference material and assumptions, and the status will, again, be ascertained:

1. As requested in the letter, the basis for establishing the ^{emission} previous VOC increases associated with the curby owners ~~are~~ are the application package ^{received} submitted on September 27, 1985 ~~and~~ ^(attached), both of the letter with enclosure received on November 15, 1985, ^{baseline} which established a total level of VOC emissions dedicated to ^{curby owners'} the existing operations, and the letter with enclosure received on November 25, 1985 (attached), which established ^{the proposed} an increased total level ~~that was permitted~~ at 46.70 lbs/hr of VOC emissions for the curby owners' operations. Therefore, the ~~difference~~ increase of 9.34 lbs/hr at 8000 hrs/yr calculates to 37.4 TTY. At a significance level of 40 TTY of VOC emissions, the margin is only 2.6 TTY of VOC emissions. Consequently,

The current request that the Department is evaluating is subject to new source review pursuant to F.A.C. Rule 17-2.510(4), Nonattainment Area, and includes the application of LAER. Is this is what is desired, then please submit the required information and appropriate processing fee. Is this is not what you desire, then please advise.

2. What would be the cost of retrofitting the curing ovens (3) with a VOC control system ~~that the owner~~ ~~contracted for~~ such as an incinerator? This request is in accordance with F.A.C. Rule 17-4.040(1) and F.A.C. Rule 17-2.620(2). The evaluation shall be sealed by a licensed P.E. of the State of Florida.

If there are any questions, please call Mr. Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,

for Barry D. Arthur
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/bm

Attachments

c: S. Brooks, SE District
P. Wong, DERM
D. Buff, P.E., KBN
J. Hall, C-GC

~~Attachment~~

Composite Materials Department
Miami Plant

CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142
Telephone 305 633 9066

November 14, 1985

Dept. of Environmental Regulations
Bureau of Air Quality Management
Bruce Mitchell
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Dear Mr. Mitchell:

Please find enclosed the VOC Material Balance after
the installation of the Emission Control.

Sincerely,



A. Mazpule
Sr. Project Engineer

AM/cln

Enclosure

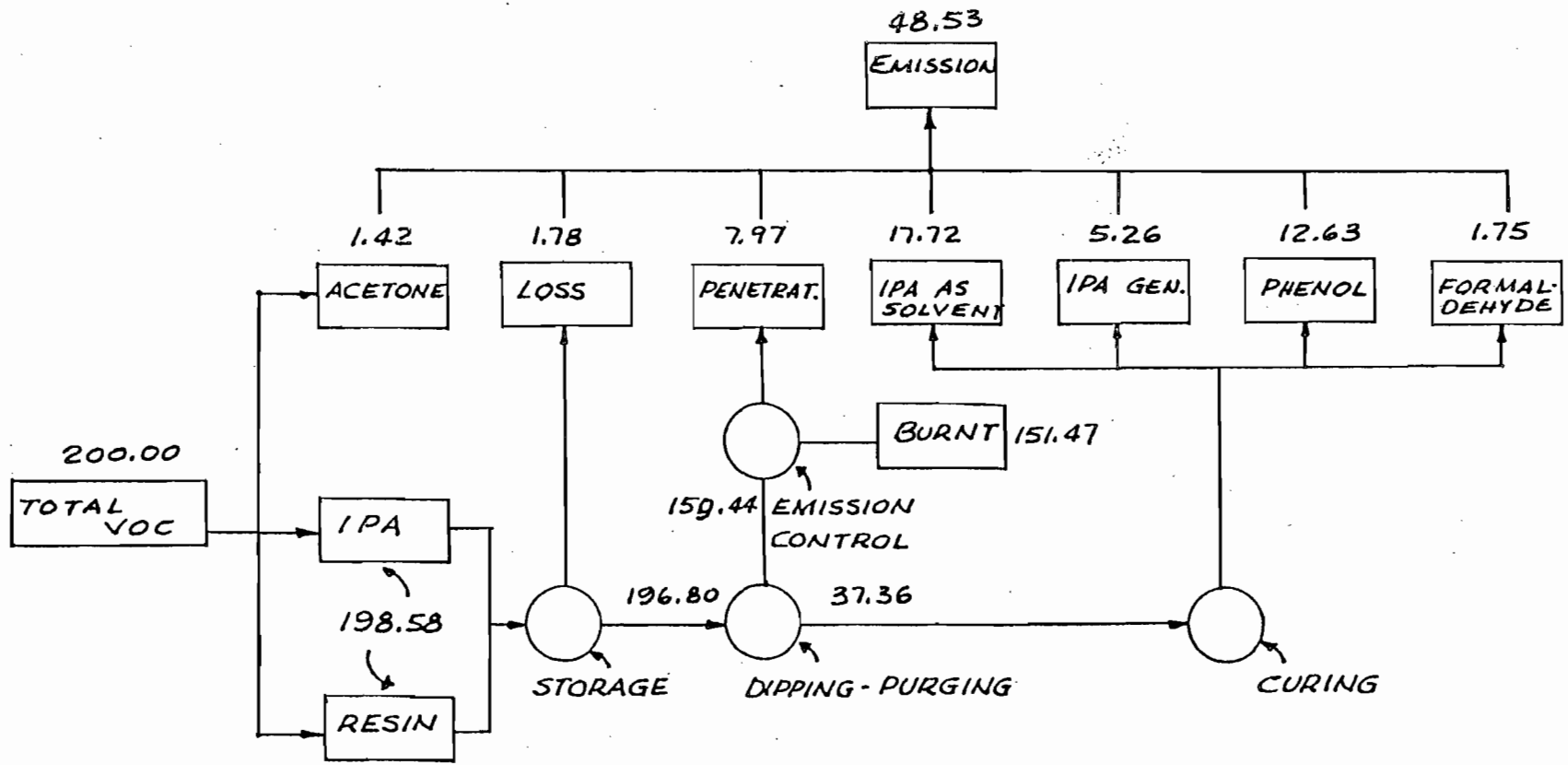
cc: Pat Wong
Stephanie Brooks 3/11/1985

DER

NOV 17 1985

BAQM

VOC MATERIAL BALANCE [Lbs/HR.]



Composite Materials Department
Miami Plant

CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142
Telephone 305 633 9066

CIBA-GEIGY

November 20, 1985

Mr. Bruce Mitchell
Dept. of Environmental Regulations
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301-8241

RE: OPERATING CRITERIA

Dear Mr. Mitchell:

The proposed project consists of two dipping-purging machines operating 8000 hours a year each one; and a common incinerator designed to operate with one or both machines.

The average total VOC consumption will be 250 lbs. per hour.

Please find enclosed the revised "VOC Material Balance".

If you have any further questions please feel free to call me.

Sincerely,



Antonio Mazpule
Sr. Project Engineer

AM/on

enclosure

cc: Stephanie Brooks
Pat Wong

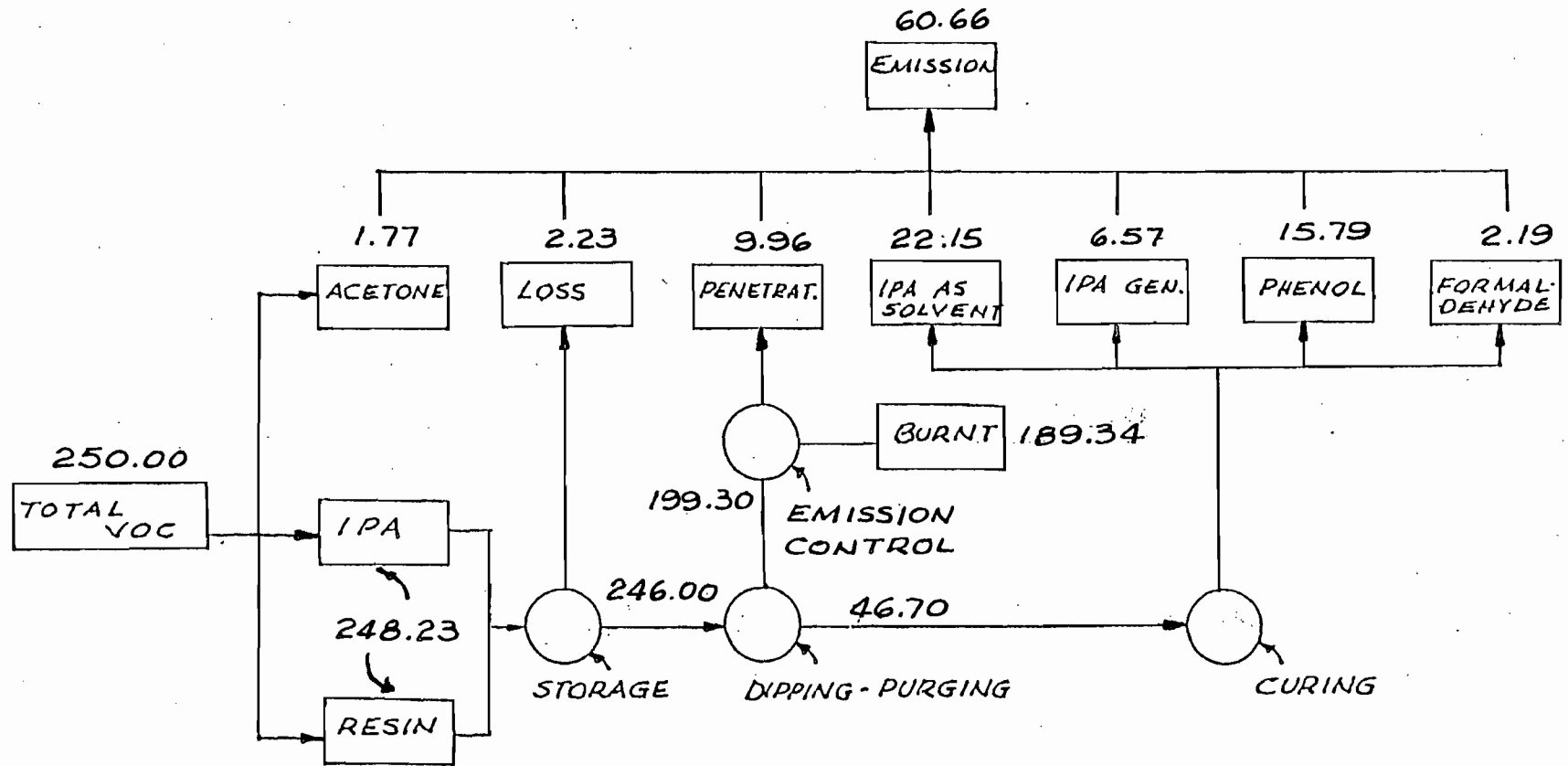
11/25/85 [initials]

DER
NOV 21 1985
BAQM

REVISION No 1

11-20-85

VOC MATERIAL BALANCE [Lbs/HR.]



DER
NOV 21 1985
BAQM



March 22, 1990
91008

Mr. C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Ciba-Geigy Corporation
Miami, Florida
AC13-186729

RECEIVED

MAR 26 1991

DER-BAQM

Dear Mr. Fancy:

This letter is in response to the Department's completeness letter dated February 8, 1991.

As stated previously, the incinerator at Ciba-Geigy is already operating at or close to its maximum gas flow rate capacity. The incinerator design data is attached. The data show that the design waste gas flow rate is 9,000 scfm. In the recent stack test conducted on December 13, 1990, the measured waste gas flow rate to the incinerator was 7,862 dscfm. Therefore, the incinerator could accept at most, an additional gas flow rate of approximately 1,200 dscfm.

The gas flow rate from the cure ovens have been measured at approximately 4,000 dscfm each in the latest stack tests. As a result, the incinerator cannot accommodate even one of the cure ovens.

Please provide your basis for the 37.4 TPY VOC increase for the curing ovens. Construction Permit No. AC13-109080 documented a prior emission level of 399.4 TPY, and VOC usage in the DPU's of 125 lb/hr each. The DPU's were permitted for 8,000 hr/yr operation. After installation of the new DPU's and the incinerator, maximum VOC emissions were permitted to be 242.64 TPY. Maximum VOC usage in the DPU's remained at 125 lb/hr each, with each DPU permitted for 8,000 hr/yr. Therefore, how could there be an increase in VOC emissions from the cure ovens? It is likely that the new DPU's provided better purging and capture of the VOC, which would result in less VOC emissions from the cure ovens.

Please provide your response to these comments at your earliest convenience.

Sincerely,

David A. Buff, M.E., P.E.
Principal Engineer

cc: Jim Hall
Stephanie Brooks
Patrick Wong

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

IV. DESIGN DATA

Operating Temperature	1400°F
Fuel Gas Pressure	25 psig
Pilot Gas	.1 MMBtu/Hr
Main Fuel Gas	5 MMBtu/Hr Max. < 1MMBtu/Hr normal
Waste Gas Flow Rate	9000 scfm
Waste Gas Temperature	100°F
Heat Exchanger Duty	9.82 MMBtu/Hr design 6.56 MMBtu/Hr bypass

Fume Side

Temp. In 100°F
Temp. Out 710°F

Flue Gas Side

1400°F
530°F
H.H. 1550°
H. 1500°
L 1200°

WASTE GAS COMPOSITION

<u>Component</u>	<u>Flow Lb/Hr</u>
Air	688.65
IPA (150 propyl alcohol)	280 average - 600 max.

Note: The IPA concentration decays from the maximum rate of ~600 ^{lb}/hr to ~50 ^{lb} over a 4-minute cycle for each run.



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 8, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dean Bidle, Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Mr. Bidle:

Re: Completeness Review for an Application Package to Modify
AC 13-186729

The Department has reviewed Mr. David Buff's letter received on January 11, 1991, regarding the above referenced application package to modify the existing facility. Based on a technical review of the response, the application package is deemed incomplete. Therefore, please submit the following information to the Bureau of Air Regulation (BAR), including all calculations, reference material and assumptions, and the status will, again, be ascertained:

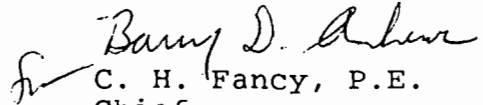
1. Since request #2, that was contained in the BAR's letter of November 28, 1990, was not adequately answered, it will be restated: "Can the existing incinerator system associated with the DPU system accommodate any or all of the three curing ovens? Please demonstrate the response by calculations, assumptions, etc."

2. Since construction permit AC 13-109080 allowed an emission increase of VOC for the curing ovens of 37.4 TPY, then any increase of VOC emissions of 2.6 TPY or more will subject the curing oven system to NSR pursuant to F.A.C. Rule 17-2.510(4) in accordance with F.A.C. Rule 17-2.510(2)5. Consequently, the current emissions increase that has been requested will subject the curing oven system to NSR pursuant to F.A.C. Rule 17-2.510(4), which includes a determination of LAER. If this is what is desired, then please submit the required information. If this is not what you desire, please advise.

Mr. Dean Bidle
February 8, 1991
Page two

If there are any questions, please call Mr. Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,


C. H. Fancy, P.E.

Chief
Bureau of Air Regulation

CHF/BM/bm

c: S. Brooks, SE District
P. Wong, DERM
D. Buff, P.E., KBN
J. Hall, C-GC



January 9, 1990

Mr. C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Ciba-Geigy Corporation
Miami, Florida
AC13-186729

Dear Mr. Fancy:

This letter is in response to the Department's completeness letter dated November 28, 1990. The responses are numbered according to the item numbers in the letter.

1. This question is somewhat confusing since the second paragraph of the letter discusses the VOC emissions from the entire facility, while this question refers to the increase in emissions from the cure ovens only. If limiting the cure ovens to a 39 TPY increase in VOC emissions will avoid new source review, Ciba-Geigy would be agreeable to this. This would reduce the requested maximum emissions from the cure ovens from 230 TPY to 226 TPY. If this is not the case, Ciba-Geigy requests that the permit application be withdrawn, and the full permit application fee be refunded.
2. The incinerator is already operating at or near its maximum design flow rate and cannot accommodate any of the three cure ovens.
3. As stated above, the existing incinerator cannot be used to control the cure ovens.
4. As indicated above, if new source review would be required by the current request, Ciba-Geigy desires to withdraw the permit application.

Please call if there are any questions concerning this response.

Sincerely,

David A. Buff
David A. Buff, M.E., P.E.
Principal Engineer

RECEIVED
JAN 11 1991
DER-BAQM

cc: Jim Hall
Stephanie Brooks
Patrick Wong

E. Mitchell

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189



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 28, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Dean Bidle, Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Mr. Bidle:

Re: Completeness Review for an Application Package to Modify
AC 13-186729

The Department has reviewed Mr. David Buff's response to an incompleteness letter regarding the above referenced application package to modify the existing facility. Based on a technical review of the response, the application package is, again, deemed incomplete.

In the most recent letter, received November 15, 1990, an attempt was made to establish an annual actual VOC emissions rate using the data from the years 1988 and 1989. The use of the actual VOC emissions established for the year 1988 is not acceptable since it was the year that the facility phased out the uncontrolled VOC emissions from the dip/purge units Nos. 1 and 2 and was to be completed by November 30, 1988 (see Mr. Dale Twachtmann's letter dated May 27, 1988, amending AC 13-109080-attached). Consequently, the annual VOC emissions of 202 tons from the facility in 1989 will be considered as the facility's actual level of VOC emissions and the proposed level of potential VOC emissions is still greater than significant (i.e., 40 TPY). Therefore, please submit to the Department's Bureau of Air Regulation the following information, including all reference material, assumptions and calculations, and the status will, again, be ascertained:

1. Because the curing ovens (3) have an increase in VOC potential emissions greater than 40 TPY, which is considered a significant increase, the operation is subject to new source review requirements pursuant to F.A.C. Rule 17-2.510(4). Therefore, please submit the information as required by this section, which includes the requirement of LAER.

Mr. Dean Bidle
Page 2 of 2

2. Can the existing incinerator system associated with the DPU system accommodate any or all of the three curing ovens? Please demonstrate the response by calculations, assumptions, etc.
3. Referencing #2 above, what would be the expenses involved with connecting one, two, or all curing ovens to the existing incinerator system?
4. Also, an additional fee of \$2500 will be required in order to process the application package, since it is subject to new source review in a nonattainment area ($\$5000 - \$2500 = \$2500$).

If there are any questions, please call Bruce Mitchell at 904-488-1344 or write to me at the above address.

Sincerely,



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

CHF/BM/plm

Attachment

c: S. Brooks, SE Dist.
P. Wong, DERM
D. Buff, P.E., KBN
J. Hall, C-GC



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

May 27, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Douglas B. Buchanan
Plant Manager
CIBA-GEIGY Corporation
3550 N. W. 49th Street
Miami, Florida 33142

Dear Mr. Buchanan:

Re: Amendments to a Construction Permit
AC 13-109080: Dip/Purge Units Nos. 1 & 2

The Department received your letter dated April 1, 1988, requesting an extension of the expiration date to the above referenced construction permit in order to upgrade the Dip/Purge Unit No. 1.

A. Since there will not be any increases in pollutant emissions or in the raw material and chemical input rates associated with the request, the following will be changed and added:

(1) Expiration Date:

From: May 31, 1988
To: April 14, 1989

B. The April 14, 1989 expiration date includes the following intermediate milestones:

- o By November 30, 1988, upgrade the Dip/Purge Unit No. 1 and perform compliance tests on both units, if not already performed.
- o By January 14, 1989 (45 days from November 30, 1988, pursuant to FAC Rule 17-2.700(7)), submit compliance test results for both units to the DER's Southeast Florida District office and Dade County's Environmental Resources Management (DERM) office.
- o By April 14, 1989 (90 days from January 14, 1989), submit for and obtain an operating permit for both units from the DER's Southeast District and DERM.

Mr. Doug Buchanan
Page Two
May 27, 1988

- o The above dates supercede all of the previously established phased construction dates for being in and demonstrating final compliance except for the existing uncontrolled Dip/Purge Tank No. 2, which is to be phased out by May 31, 1988, and all associated permits surrendered to the Department by that date.

Therefore, the following will be added:

Specific Condition

- (1) D.15.: (New)

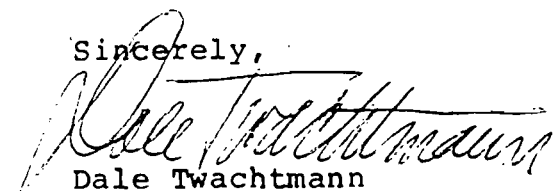
The Dip/Purge Units Nos. 1 & 2 shall be in compliance with all terms of the permit by November 30, 1988, and the permittee shall provide proof of final compliance to the DER's Southeast District office and the DERM office by January 14, 1989.

C. Attachments to be Incorporated:

11. Mr. Douglas B. Buchanan's letter dated April 1, 1988, and received April 4, 1988
12. Mr. H. Patrick Wong's letter dated April 26, 1988, and received May 2, 1988.

This letter must be attached to your construction permit, No. AC 13-109080, and shall become a part of the permit.

Sincerely,


Dale Twachtman
Secretary

DT/bm

attachments

cc: S. Brooks, SE Dist.
P. Wong, DERM
B. Pittman, Esq., DER

JLL

Best Available Copy



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

May 27, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Douglas B. Buchanan
Plant Manager
CIBA-GEIGY Corporation
3550 N. W. 49th Street
Miami, Florida 33142

Dear Mr. Buchanan:

Re: Amendments to a Construction Permit
AC 13-109080: Dip/Purge Units Nos. 1 & 2

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From: May 31, 1988
To: April 14, 1989

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- o By November 30, 1988, upgrade the Dip/Purge Unit No. 1 and perform compliance tests on both units, if not already performed.
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- o By April 14, 1989 (90 days from January 14, 1989), submit for and obtain an operating permit for both units from the DER's Southeast District and DERM.

UNITED STA

5. Enter fees for the services requested in the appropriate spaces on the form. If a receipt is requested, check the applicable blocks in item 1 of Form 3811.

Mr. Doug Buchanan
Page Two
May 27, 1988

- o The above dates supercede all of the previously established phased construction dates for being in and demonstrating final compliance except for the existing uncontrolled Dip/Purge Tank No. 2, which is to be phased out by May 31, 1988, and all associated permits surrendered to the Department by that date.

Therefore, the following will be added:

Specific Condition

(1) D.15.: (New)

The Dip/Purge Units Nos. 1 & 2 shall be in compliance with all terms of the permit by November 30, 1988, and the permittee shall provide proof of final compliance to the DER's Southeast District office and the DERM office by January 14, 1989.

C. Attachments to be Incorporated:

- 11. Mr. Douglas B. Buchanan's letter dated April 1, 1988, and received April 4, 1988
- 12. Mr. H. Patrick Wong's letter dated April 26, 1988, and received May 2, 1988.

This letter must be attached to your construction permit, No. AC 13-109080, and shall become a part of the permit.

Sincerely,



Dale Twachtmann
Secretary

DT/bm

attachments

cc: S. Brooks, SE Dist.
P. Wong, DERM
B. Pittman, Esq., DER



RECEIVED
NOV 15 1990
DER-BAQM

November 12, 1990
90018

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

Re: Ciba-Geigy Corporation
Completeness Review for AC13-186729

Dear Bruce:

In follow-up to our recent telephone conversation concerning the above referenced air construction permit application, I am providing the following clarification. In the permit application, I have assumed that the current allowable VOC emissions from the facility are equal to the current permitted VOC emissions, and therefore, used the allowable 242.64 TPY for the entire facility or the baseline for determining if new source review is required. The basis for this is Florida Administrative Code Rule 17-2.100 (3), which defines actual emissions as the average rate, in tons per year, which the source actually emitted the pollutant during a two year period which precedes the permit application date.

In the case of Ciba-Geigy, VOC emissions during the last two years (1988-1989), as reported on the Annual Operating Report for each year, were 342 TPY and 202 TPY, respectively. This is an average of 272 TPY. Since this average emission rate is higher than the current allowable VOC emissions, the current allowable was used as the basis for current actual emissions.

As discussed in the application, the proposed allowable VOC emissions for the entire Ciba-Geigy facility is 281.2 TPY, thus resulting in a 38.6 TPY increase. Rules 17-2.510 (d) 4. and 17-2.510 (e) 1. provides that new source review applies if the modification would result in a significant net emissions increase from the facility. Since the significant emissions rate for VOC is 40 TPY, and the increase due to the modification is only 38.6 TPY, new source review should not apply.

Please call if you have any questions concerning this information.

Sincerely,

David A. Buff, M.E., P.E.
Principal Engineer

cc: Jim Hall
B. Mitchell
S. Crooks
P. Hong

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189



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

October 19, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Dean Bidle, Plant Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

677

Dear Mr. Bidle:

Re: Completeness Review for an Application to Construct/Modify
AC 13-186729

The Department has reviewed the above referenced application package received September 21, 1990, which requested a modification to an existing facility. Based on a technical review of the information, the application is deemed incomplete. Please submit to the Department's Bureau of Air Regulation the following information, including all reference material, assumptions and calculations, and the status will, again, be ascertained:

1. Because the curing ovens (3) have an increase in VOC potential emissions of 43.25 TPY, which is considered a significant increase, the operation is subject to new source review requirements pursuant to F.A.C. Rule 17-2.510(4). Therefore, please submit the information as required by this section, which includes the requirement of LAER.
2. Can the existing incinerator system associated with the DPU system accommodate any or all of the three curing ovens? Please demonstrate the response by calculations, assumptions, etc.
3. Referencing #2 above, what would be the expenses involved with connecting one, two, or all curing ovens to the existing incinerator system?
4. Also, an additional fee of \$2500 will be required in order to process the application package, since it is subject to new source review in a nonattainment area ($\$5000 - \$2500 = \$2500$).

Mr. Dean Bidle
Page 2

If there are any questions, please call Bruce Mitchell at 904-488-1344 or write to me at the above address.

Sincerely,



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

CHF/BM/plm

c: S. Brooks, SE Dist.
P. Wong, DERM
D. Buff, P.E., KBN
J. Hall, C-GC



RECEIVED
DER - MAIL ROOM

1990 SEP 21 AM 11: 19

September 20, 1990

Mr. C.H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Ciba-Geigy Corporation
Miami, Florida

Dear Mr. Fancy:

Please find enclosed air construction permit applications for Ciba-Geigy Corporation located in Miami, Florida. Also included is the required permit application fee of \$2,500. This request is for a minor modification (39 TPY VOC increase) of Ciba-Geigy's existing plant. Copies of this information have also been sent to Stephanie Brooks in the FDER West Palm Beach office and Patrick Wong at Dade County Environmental Resources Management. Please call if you have any questions.

Sincerely,

David A. Buff, M.E., P.E.
Principal Engineer

DAB/jlm

cc: Jim Hall
Stephanie Brooks
Patrick Wong

001031

90018A1/8

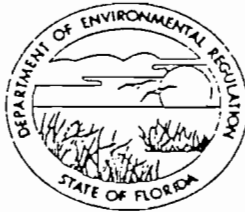
KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

\$1,500 pd.
9-21-90
Receipt # 151174



AC 13-146724

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Nomex Honeycomb Manufacturer [] New¹ [xx] Existing¹

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

COMPANY NAME: Ciba-Geigy Corporation COUNTY: Dade

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Dip/Purge Units and Cure

SOURCE LOCATION: Street 3550 N.W. 49th Street City Miami

UTM: East 17:575.5 km North 2856.4 km

Latitude 25° 49' 25" N Longitude 80° 15' 16" W

APPLICANT NAME AND TITLE: Jim Hall, Plant Engineer

APPLICANT ADDRESS: 3550 N.W. 49th Street, Miami, Florida 33142

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Ciba-Geigy Corporation

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

*Attach letter of authorization

Signed: [Signature]

Jim Hall, Plant Engineer
Name and Title (Please Type)

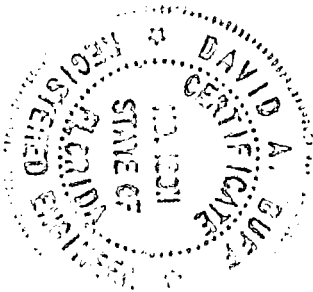
Date: 09/18/90 Telephone No. (305) 633-9066

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 David A. Buff
David A. Buff

Name (Please Type)

KBN Engineering and Applied Sciences, Inc.
Company Name (Please Type)

1034 N.W. 57th Street, Gainesville, FL 32605
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 9/18/90 Telephone No. (904) 331-9000

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.

Refer to Attachment A

B. Schedule of project covered in this application (Construction Permit Application Only).
Start of Construction upon permit issuance Completion of Construction 12 months after permit issued

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

N/A: Control equipment already in place

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

AC13-109080 Issued 12/30/85 Expired 1989

A013-160871 Issued 5/12/89 Expires 4/14/94

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52;
If power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions.
(Yes or No) Not Applicable

1. Is this source in a non-attainment area for a particular pollutant? _____
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. _____
3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. _____
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? _____
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? _____

- H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? _____
No
- a. If yes, for what pollutants? _____
 - b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

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

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

See Attachment A

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

1. Total Process Input Rate (lbs/hr): N/A

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)

See Attachment A

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

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)
Incinerator (existing)	VOC	+95%	N/A	Design
3 Baghouses (existing)	Particulate	+98%	>10 μ m	Test Data

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas-Cure Oven 1	0.0012	0.0012	1.2
Natural Gas-Cure Oven 2	0.0012	0.0012	1.2
Natural Gas-Cure Oven 3	0.0012	0.0012	1.2

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

Fuel Analysis:

Percent Sulfur: Neg. Percent Ash: Neg.
 Density: _____ lbs/gal Typical Percent Nitrogen: Neg.
 Heat Capacity: 1,000 Btu/scf BTU/lb _____ BTU/gal
 Other Fuel Contaminants (which may cause air pollution): _____

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

Annual Average N/A Maximum _____

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

All solid and liquid wastes are disposed properly offsite.

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

Stack Height: See Attachment A. ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Note: Incinerator is existing

Type of Waste	Type 0 (Plastics)	Type II (Rubbish)	Type III (Refuse)	Type IV (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 devices: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

Not Applicable

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

Yes No

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

Yes No

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency: | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

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 Devices:

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 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:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency:¹
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:²
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
 - a. (1) Company:
 - (2) Mailing Address:
 - (3) City:
 - (4) State:

¹Explain method of determining efficiency.

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

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

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.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

Not Applicable

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO^{2*} _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [] Yes [] No

b. Was instrumentation calibrated in accordance with Department procedures?

[] Yes [] No [] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

Best Available Copy

CIBA-GEIGY

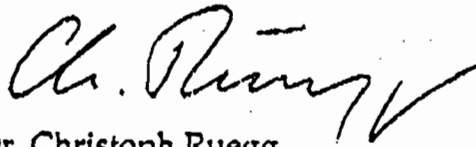
Composite Materials
CIBA-GEIGY Corporation
5115 East La Palma Avenue
Anaheim, CA 92807-2018
714 779 8000
FAX 714 777 0628

COMPOSITE MATERIALS

June 11, 1990

TO WHOM IT MAY CONCERN:

By way of this memo, I am assigning Jim Hall, Engineering Manager of CIBA-GEIGY, Composite Materials Department, Miami, Florida as authorized signee for the purpose of applying for and obtaining permits as required by regulatory agencies, in the areas of air, water, fire and solid waste concerns.



Dr. Christoph Ruegg
Vice-President of Operations

cc: D. Bidle, Plant Manager

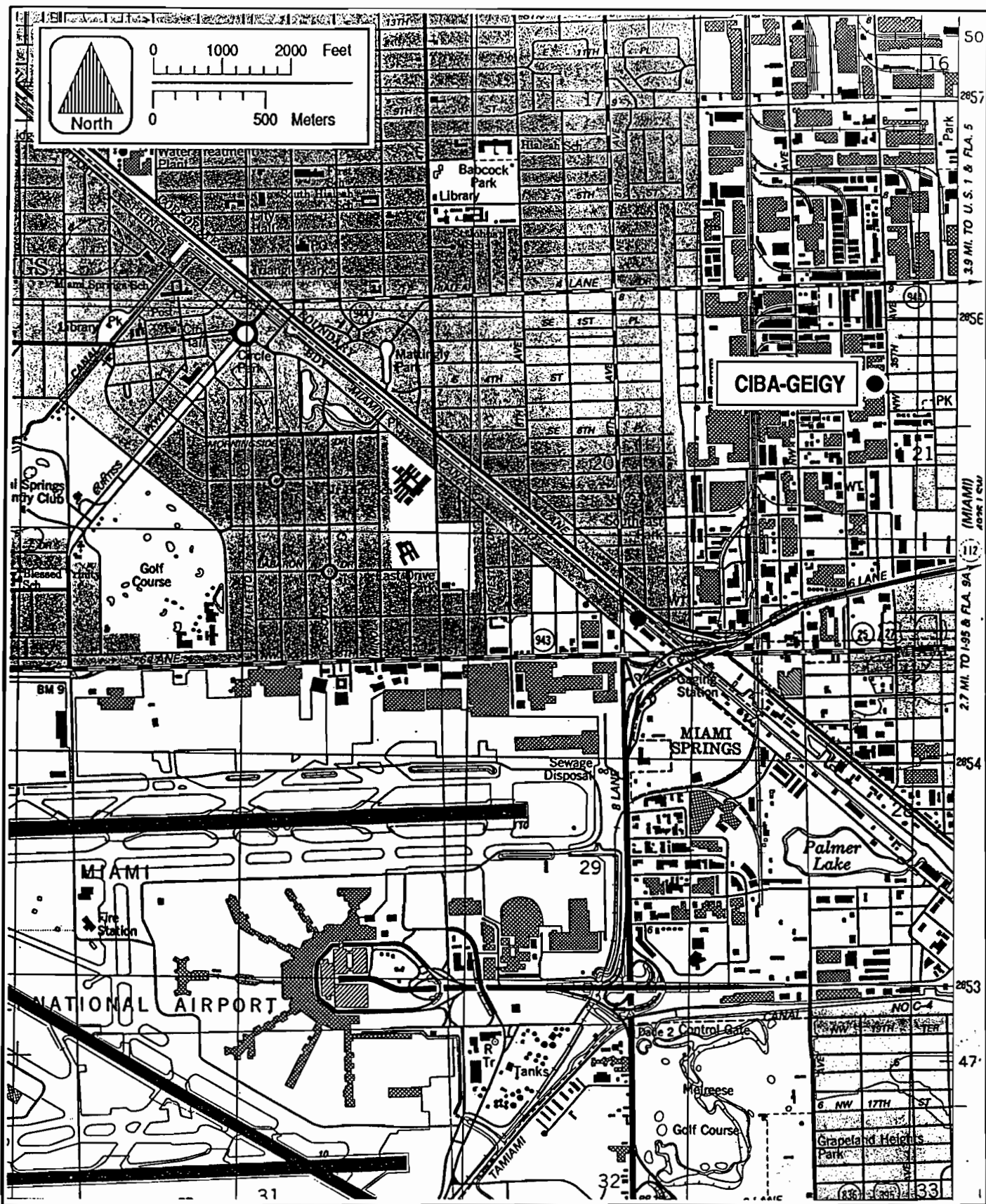
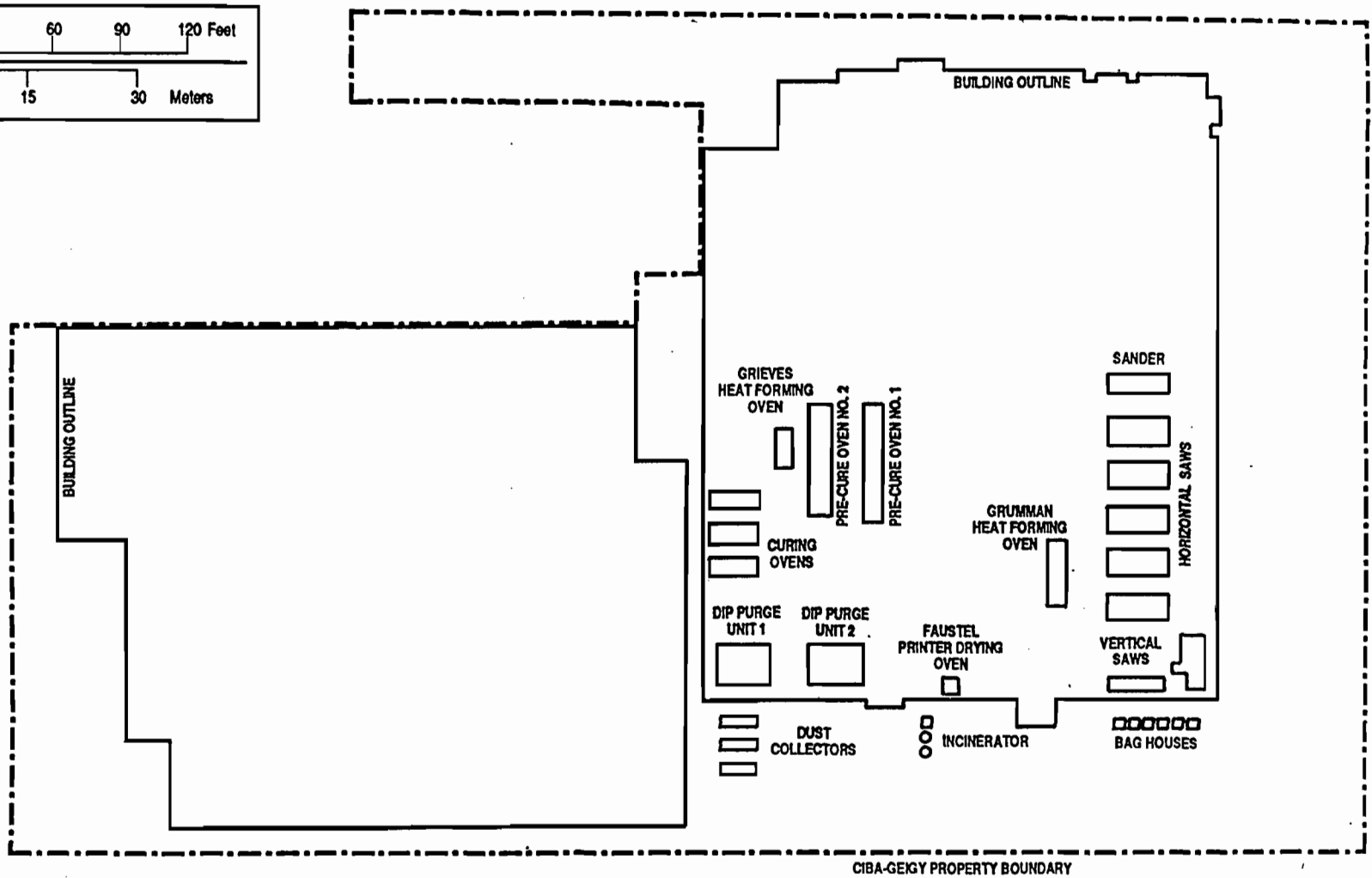
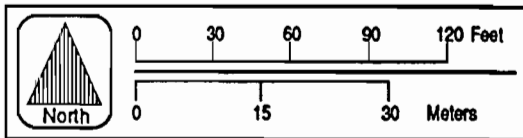


Figure A SITE LOCATION OF CIBA-GEIGY CORPORATION





PLOT PLAN OF CIBA-GEIGY FACILITY



ATTACHMENT A

1.0 CURRENT PROCESS DESCRIPTION

Ciba-Geigy Corporation operates a nomex honeycomb manufacturing facility located in Miami, Florida. The facility produces nomex honeycomb boards of various sizes, which are used as structural insulation in airplanes, helicopters, and other aviation equipment. A simplified flow diagram of the operation is presented in Figure 1. In this process, nomex is first coated with an adhesive ink. Lines are printed onto the nomex, which is then sent to a drying oven (Faustel printer dryer oven). The ink (R600) contains 43.5 percent volatile organic compounds (VOCs) by weight. The VOC in the ink is released as fugitive emissions during the printing/drying process.

Next, several layers of nomex are overlaid and heated to form a honeycomb structure (i.e., block). The blocks are sent through one of two pre-cure ovens to remove moisture from the blocks. The blocks are then sent through the two dip/purge units (DPUs) wherein each block is dipped in a mixture of resin and isopropyl alcohol (IPA). The amount of resin and IPA used is dependent upon the type of block being produced (i.e., structural characteristics) and ambient conditions (temperature, humidity, etc.). Historically, on an annual basis, the resin has accounted for 53 percent to 60 percent of the total resin/IPA usage on a weight basis. However, the resin can account for as little as 43.5 percent of the total mixture.

The resin and IPA are currently stored in drums on-site. There are some fugitive VOC emissions from this storage and handling.

Each DPU is enclosed and is exhausted to the VOC incinerator. The most recent VOC mass balance conducted on the DPUs (in 1989) indicates that, on the average, 65 percent of the total VOC contained in the resin/IPA mixture which is used in the DPUs is exhausted to the incinerator. The mass balance calculations are presented in Figure 2. The incinerator has a minimum VOC destruction efficiency of 95 percent. The remaining VOC in the

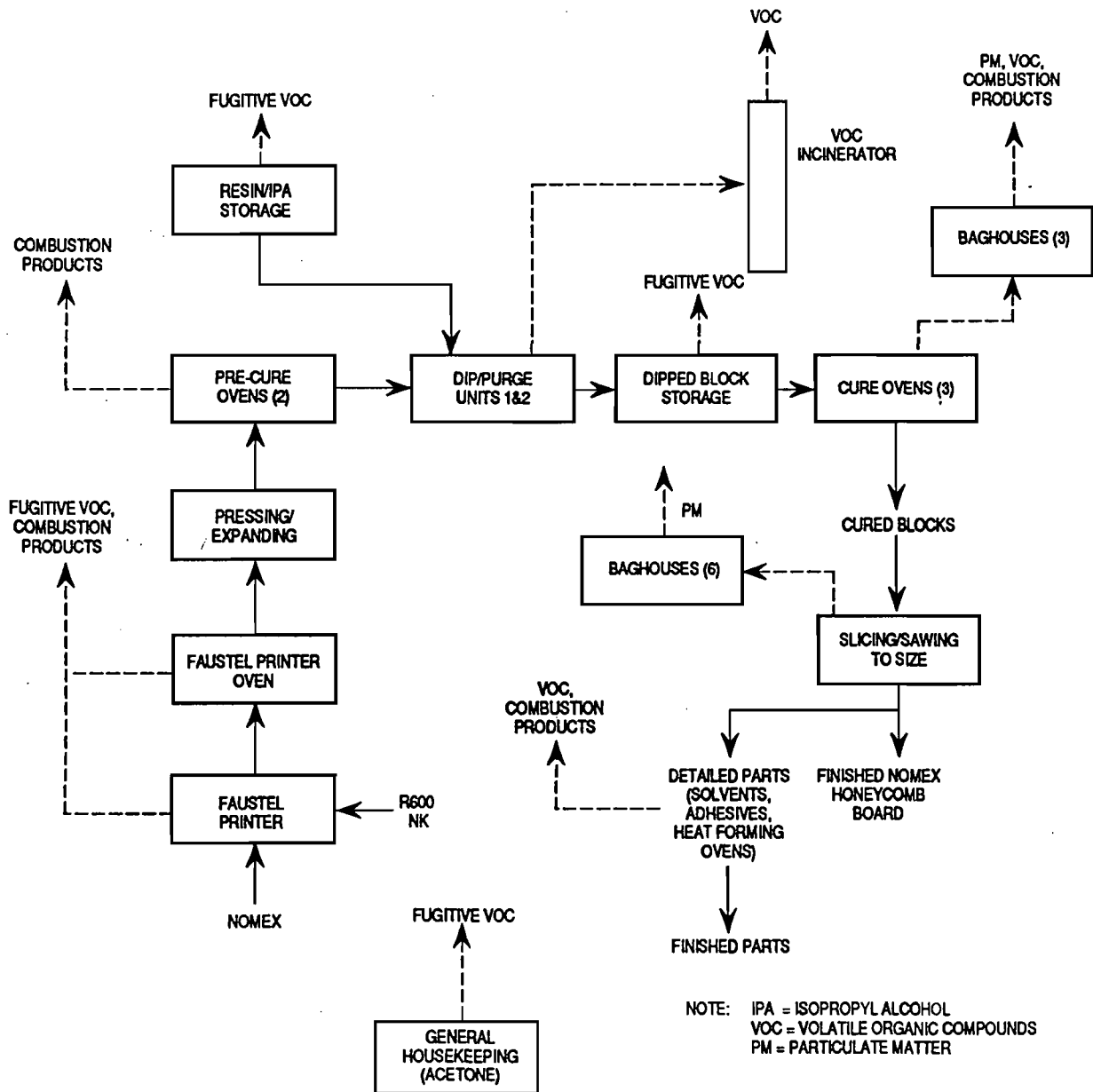
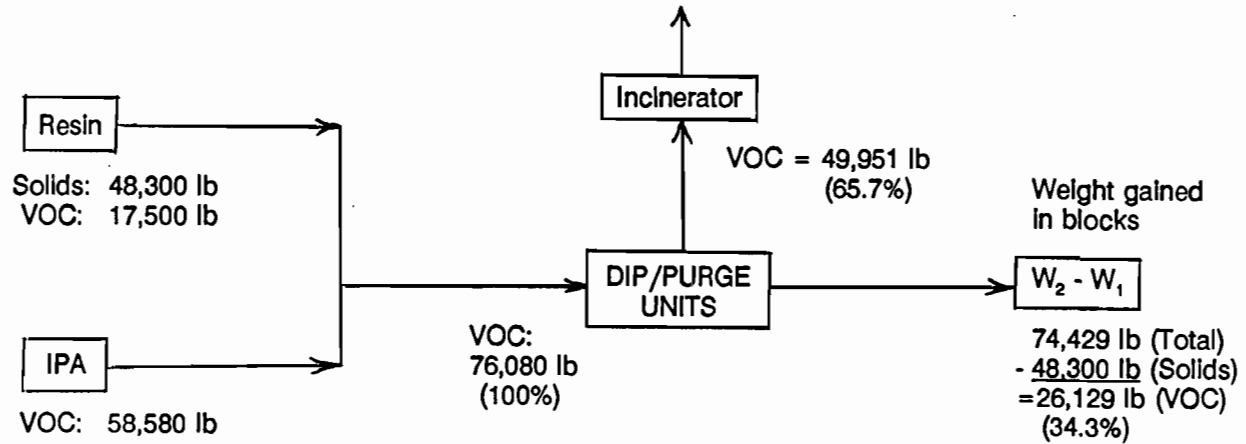


Figure 1 SIMPLIFIED FLOW DIAGRAM
CIBA-GEIGY CORPORATION
MIAMI, FLORIDA



Based on T. Mazpule data of 7/20/90
 Total Resin = 140 drums x 500 lb/drum = 70,000 lb

VOC = 25% = 17,500 lb
 Solids = 69% = 48,300 lb
 Water = $\frac{6\%}{100\%}$



A-3

Figure 2 REVISED MATERIAL BALANCE FOR DIP/PURGE PROCESS



mixture is released as fugitive VOC emissions. These fugitive emissions occur during storage of the dipped blocks at ambient temperature, and during the curing operation.

The curing operation involves placing the blocks into the natural-gas-fired cure ovens and curing at elevated temperature for a short time period. The temperature and time are determined again by the desired characteristics of the block. Particulate emissions from each of the three curing ovens are controlled by a baghouse. The baghouses may also reduce VOC emissions, but this has not been documented.

Following the curing operation, the cured blocks are cut to size. The slicing, sawing, and sanding operations are controlled by a total of six baghouses. The blocks may also be sent through one of two heat-forming ovens, wherein they are heated to allow bending, forming, etc. The only emissions from these ovens are the products of natural gas combustion.

General housekeeping and cleanup is performed using acetone. It is assumed all acetone used is eventually released to the atmosphere as fugitive VOC.

The Ciba-Geigy facility is currently permitted under air operating permit No. A013-160871, issued by the Florida Department of Environmental Regulation (FDER) on May 12, 1989. Construction Permit No. AC13-109080, issued December 30, 1985, is the federally recognized, enforceable permit for the facility. The construction permit limits total VOC emissions from the facility to 242.64 tons per year (TPY), and total particulate matter (PM) emissions from the three curing ovens to 3.96 TPY. The six baghouses controlling the slicing, sawing, and sanding operations are permitted under a separate operating permit (A013-123720), issued November 21, 1986.

2.0 PROJECT DESCRIPTION

Ciba-Geigy desires to increase the allowable VOC emissions from the facility by 39 TPY. This increase is needed because the former construction permit and current operating permit do not account for certain

miscellaneous VOC sources at the facility, such as the Faustel printer ink, adhesives, etc. Since there is a maximum allowable VOC emission for the entire facility, these additional VOC emissions reduce the potential VOC emissions allowed from the DPUs and cure ovens. Also, an increase in the allowable VOC emissions for the facility will allow Ciba-Geigy ultimately to increase production, if market conditions are favorable for such an increase.

In this project, Ciba-Geigy is only requesting an increase in the allowable VOC emissions from the facility (from 242.64 TPY to 281.23 TPY, or a 38.59 TPY increase). There will be no physical modifications or changes in the method of operation of any of the sources at the facility. All equipment will continue to operate as it does currently.

3.0 EMISSION ESTIMATES

Maximum chemical and solvent usages associated with the Ciba-Geigy operation are presented in Table 1. Resin and IPA are used in the DPUs. The maximum VOC usage in the DPUs will remain at the current permitted level of 125 lb/hr for each DPU. The level of resin and IPA usage associated with this maximum VOC usage can vary depending upon the product requirements and weather conditions.

In order to estimate worst case annual VOC emissions, historic resin/IPA usage data from Ciba-Geigy was reviewed. These data showed that the resin/IPA usage ratio on an annual basis has varied from 53.4 percent up to 59.7 percent. Maximum VOC usage would occur at the lower resin percentage (i.e., greater percentage of IPA). Therefore, a resin/IPA ratio of 53 percent was used to be conservative in the calculations. Based on this assumption, the total resin/IPA usage is estimated at 2,200,000 lb/yr, of which 1,166,000 lb/yr is resin, and 1,034,000 lb/yr is IPA. However, it should be noted that lower IPA usage would allow a disproportionately greater level of resin usage, since IPA contains more VOC than does resin on a pound-for-pound basis.

Maximum usage of acetone for housekeeping is estimated at 3 gal/hr and 1,700 gal/yr. The Faustel printer ink, not previously quantified, is used at a maximum rate of 4 gal/hr and 3,000 gal/yr. Usages of miscellaneous solvents are quantified in Table 1.

Maximum hourly and annual VOC emissions for Ciba-Geigy based on the current permit limits, as well as maximum requested VOC emissions, are summarized in Table 2. As shown, maximum annual VOC emissions will increase by 38.59 TPY based on the requested emissions. VOC emission calculations are presented in Attachment B.

The current permitted particulate matter emissions from the three cure ovens are 0.99 lb/hr and 3.96 TPY (total all three ovens). Ciba-Geigy is not requesting any increase in the maximum allowable emissions for the cure ovens. Stack emission parameters for the VOC incineration and cure oven baghouses will not change as a result of this VOC increase request.

Table 1. Maximum Chemical/Solvent Usage Rates, Ciba-Geigy

Chemical/Solvent	Density (lb/gal)	VOC Content (percent by weight)	Maximum Hourly			Maximum Annual			
			Total Usage		VOC Usage	Total Usage		VOC Usage	
			(gal/hr)	(lb/hr)	(lb/hr)	(gal/yr)	(lb/yr)	(lb/yr)	(tons/yr)
DIP/PURGE UNITS									
Resin	9.55	25.0	a	a	250.0 ^a	-	1,166,000 ^b	291,500	145.75
Isopropyl alcohol	6.56	99.0	a	a	250.0 ^a	-	1,034,000 ^b	1,023,660	511.83
HOUSEKEEPING									
Acetone	6.56	100.0	3	19.7	19.7	1,700	11,152	11,152	5.58
FAUSTEL PRINTER									
R600 printer ink	10.00	43.5	4	40.0	17.4	3,000	30,000	13,050	6.53
MISCELLANEOUS SOLVENTS									
R-1078-T Adhesive	6.42	75.0	2	12.8	9.6	2,300	14,766	11,075	5.54
Methyl ethyl ketone	6.72	100.0	0.5	3.4	3.4	160	1,075	1,075	0.54
Penacolite Adhesive	9.17	27.0	2	18.3	5.0	1,400	12,838	3,466	1.73

^aMaximum VOC usage rate is 125 lb/hr per dip/purge unit. Maximum resin and isopropyl alcohol usage rates vary depending upon product produced and weather conditions.

^bBased on maximum isopropyl alcohol usage on annual basis. This assumption results in maximum VOC usage.

Table 2. Maximum Current and Future VOC Emissions, Ciba-Geigy

Source	Current Maximum Emissions ^a		Requested Maximum Emissions	
	lb/hr	TPY	lb/hr ^b	TPY
Dip/Purge Units w/Incinerator (Resin/IPA)	9.96	39.84	12.50	20.86
Housekeeping (Acetone)	1.77	7.08	6.56	5.58
Storage	2.23	8.92	2.36	10.30
Curing Ovens (3)	46.70	186.80	87.50	230.15
Faustel Printer Ink (R600)	--	--	17.40	6.53
R-1078-T Adhesive	--	--	9.60	5.54
Methyl ethyl ketone	--	--	3.40	0.54
Penacolite Adhesive	--	--	5.00	1.73
Facility	<u>60.66</u>	<u>242.64</u>		<u>281.23</u>

Note: lb/hr = pounds per hour.
TPY = tons per year.

^aBased on AC13-109080 and A013-160871.

^bMaximum lb/hr does not occur simultaneously from all sources.

ATTACHMENT B
EMISSION ESTIMATES

A. ANNUAL VOC EMISSIONS

1. Housecleaning (acetone)

Maximum annual usage = 1,700 gal

Acetone = 6.56 lb/gal

$1,700 \text{ gal} \times 6.56 \text{ lb/gal} = 11,152 \text{ lb/yr} = 5.58 \text{ TPY}$

2. Faustel Printer Ink (R600)

Maximum annual usage = 3,000 gal/yr

R600 = 10.0 lb/gal, 43.5% VOC by weight

$3,000 \text{ gal/yr} \times 10.0 \text{ lb/gal} \times 0.435 = 13,050 \text{ lb/yr} = 6.53 \text{ TPY}$

3. Storage

Current Permit = 8.92 TPY

Prorate to desired level = $8.92 \times \frac{281.6}{242.6} = 10.30 \text{ TPY}$

4. Incinerator and Cure Ovens

Assumptions:

53% of total resin + IPA usage is resin

(Based on minimum percent during years 1984 to 1989)

Average of 65 percent of VOC used is routed to incinerator,
based on mass balance of 1989. This 65 percent must also
include storage losses.

Maximum usage, resin plus IPA = 2,200,000 lb/yr

For worst-case emission situation:

Resin usage = $2,200,000 \times 0.53 = 1,166,000 \text{ lb}$

IPA usage = $2,200,000 \times 0.47 = 1,034,000 \text{ lb}$

25% of resin is VOC = $1,166,000 \times 0.25 = 291,500$ lb
99% of IPA is VOC = $1,034,000 \times 0.99 = \underline{1,023,660}$ lb
Total VOC = 1,315,160 lb

65 percent of this goes to incinerator or is lost in storage:
 $1,315,160 \times 0.65 = 854,854$ lb

Storage emissions = 10.30 TPY = 20,600 lb

VOC to incinerator = $854,854 - 20,600 = 834,254$ lb

Incinerator has 95 percent minimum destruction efficiency

Incinerator VOC emissions = $834,254 \times (1 - 0.95) = 41,713$ lb
= 20.86 TPY

VOC to cure ovens (or fugitive):

$1,315,160$ lb $\times 0.35\% = 460,306$ lb = 230.15 TPY

5. Miscellaneous Solvents

R-1078-T Adhesive:

Maximum annual usage = $2,300$ gal/yr $\times 6.42$ lb/gal = 14,766 lb/yr

VOC content = 75 percent

VOC emissions = $14,766$ lb/yr $\times 0.75 / 2,000$ lb/ton = 5.54 tons/yr

Methyl ethyl ketone

Maximum annual usage = 160 gal/yr $\times 6.72$ lb/gal = 1,075 lb/yr

VOC content = 100 percent

VOC emissions = $1,075$ lb/yr $/ 2,000$ lb/ton = 0.54 tons/yr

Penacolite adhesive

Maximum annual usage = $1,400$ gal/yr $\times 9.17$ lb/gal = 12,838 lb/yr

VOC content = 27 percent

VOC emissions = $12,838$ lb/yr $\times 0.27 / 2,000$ lb/ton = 1.73 tons/yr

B. MAXIMUM HOURLY VOC EMISSIONS

1. Housecleaning (acetone)

Estimate maximum usage at 1 gal/hr

$$1 \text{ gal/hr} \times 6.56 \text{ lb/gal} = 6.56 \text{ lb/hr}$$

2. Faustel Printer Ink (R600)

From recent submittal to FDER

$$\text{Maximum usage} = 4 \text{ gal/hr} \times 10.00 \text{ lb/gal} = 40.00 \text{ lb/hr}$$

VOC content = 43.5 percent

$$\text{Maximum VOC} = 40 \text{ lb/hr} \times 0.435 = 17.40 \text{ lb/hr}$$

3. Storage

$$\text{Average emissions} = 10.35 \text{ TPY} \times \frac{2,000}{8,760} = 2.36 \text{ lb/hr}$$

4. VOC Incinerator

Maximum VOC usage in DPUs (each) = 125.0 lb/hr

As worst case, assume all VOC is released in DPUs and that there is 100 percent capture. These assumptions will maximize potential VOC emissions from the incinerator. Incinerator has minimum 95 percent destruction efficiency.

$$\text{Incinerator VOC} = 125.0 \times 2 \times 0.05 = 12.5 \text{ lb/hr}$$

$$= 6.25 \text{ lb/hr per DPU}$$

5. Curing ovens

Maximum VOC usage in DPUs (each) = 125.0 lb/hr

As worst case, assume 65 percent of VOC used in DPUs is released in DPUs and exhausted to incinerator (based on the mass balance); remainder is released as fugitives during curing operation.

$$\text{Cure ovens/fugitive VOC} = 125.0 \times 2 \times (1-0.65) = 87.5 \text{ lb/hr}$$

$$= 43.75 \text{ lb/hr per DPU}$$

It is noted that maximum VOC emissions from the curing ovens would not occur at the same time as maximum VOC emissions from the VOC incinerator, based on the above assumptions.

6. Miscellaneous Solvents

Refer to Table 1 for maximum VOC usage rates. It is assumed all VOC is released to the atmosphere.



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

October 10, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. John L. Deming, Site Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Dr. Deming:

Re: Amendment to Construction Permit No. AC 13-109080

The Department has reviewed Mr. David Buff's letter received August 16, 1990, requesting an amendment to the above referenced construction permit. Specifically, the company requests a VE limit of 5% on the baghouse control systems associated with minor particulate sources (cure ovens Nos. 1, 2 and 3) in lieu of performing mass emissions tests, pursuant to F.A.C. Rule 17-2.700(3)(d). The Department finds the request acceptable and the following will be changed:

Specific Condition No. D.9:

FROM:

Compliance test(s) for PM and VE shall be EPA Method 5 and DER Method 9, respectively. Compliance testing shall be in accordance with FAC Rule 17-2.700 and 40 CFR 60, Appendix A.

TO:

Compliance test(s) for PM and VE shall be EPA Method 5 and DER Method 9, respectively. Compliance testing shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A. However and in accordance with F.A.C. Rule 17-2.700(3)(d), a visible emission (VE) standard of 5% opacity (no visible emissions), not to be exceeded, will be imposed in lieu of requiring a PM mass emissions compliance test. A PM mass emissions test will be imposed if the Department has reason to believe that the particulate weight emission standard is not being met.

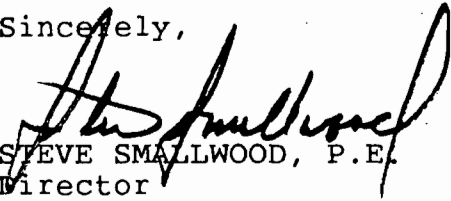
Dr. John L. Deming
Page 2

Attachment to be Incorporated:

o Mr. David A. Buff's letter with attachments received
August 16, 1990.

This letter must be attached to your construction permit,
No. AC 13-109080, and shall become a part of the permit.

Sincerely,



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

SS/BM/plm

Attachment

c: S. Brooks, SE District
P. Wong, DERM
D. Buff, P.E., KBN



August 2, 1990

Ms. Stephanie Brooks
Air Permit Engineer
Florida Department of Environmental Regulation
1900 South Congress Avenue, Suite A
West Palm Beach, FL 33406

RECEIVED
AUG 16 1990
DER-BAQ/M

RE: Ciba-Geigy Corporation

Dear Stephanie:

The purpose of this letter is to follow-up our meeting on Ciba-Geigy, held in your office on July 31, 1990. The following summarizes the agreement reached during the meeting. Also, additional information requested by you and Tom Tittle is referenced and attached where appropriate.

~~_____~~

This application was submitted recently to FDER by Ciba-Geigy. Based upon information from FDER Tallahassee and our meeting, operating permit A013-110439 is not necessary, since it has been superceded by A013-160871. Ciba-Geigy will continue to operate under the conditions of A013-160871, which expires April 14, 1994.

2. Annual PM emission testing on the cure oven baghouses (1, 2 and 3) will no longer be required. Ciba-Geigy will accept a ~~_____~~ as 5% VE limit ~~_____~~ be operating permit as required to reflect this change. *The alternate emission standard for these sources. FDER will amend*
3. FDER ~~_____~~ from the current operating permit A013-160871. *15/16/90* These conditions refer to the tie-in of the two pre-cure ovens with the three cure ovens. This tie in was never implemented; therefore, these specific conditions are not necessary.
4. Miscellaneous process ovens at Ciba-Geigy do not require permit applications. The current operating permit will be amended to include the ovens as air pollution sources. Information on the ovens is provided in Attachment A.
5. Regarding the excess emissions/incinerator malfunction of March 1990, FDER has determined no enforcement action or other action is required at this time. FDER believes Ciba-Geigy has responded appropriately to the incident.



6. Regarding the planned building enclosure around the three cure oven baghouses, this will constitute a particulate matter ~~emission reduction~~ which will only require a ~~permit amendment. Appropriate information on~~ ~~Ciba building and new baghouse will be provided to FDER.~~
7. Regarding the planned new tank farm, Ciba-Geigy must provide information concerning emissions from the new tanks. The new tanks are replacements for the old underground tanks which have been removed. As such, the new tanks can be incorporated into the current operating permit. The current permit allows 8.92 tons per year VOC due to storage.

I appreciate your time in meeting with me and Ciba-Geigy. Please call if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "David A. Buff".

David. A. Buff, M.E., P.E.
Principal Engineer

cc: Jim Hall, Ciba-Geigy
Tome Tittle, FDER
Patrick Wong, DERM

ATTACHMENT A
DESCRIPTION OF MISCELLANEOUS PROCESS OVENS
AT CIBA-GEIGY
MIAMI, FLORIDA

ATTACHMENT A

Ciba-Geigy Corporation (C-G) operates a nomex and fiberglass honeycomb manufacturing facility in Miami, Florida. As part of the manufacturing process, several natural-gas-fired ovens are used. These are all small ovens which assist the manufacturing process by drying or heating.

The two pre-cure ovens are used to dry moisture from the raw honeycomb paper or fiberglass blocks prior to the dip-purge-cure process. Each of these ovens have a rated heat input capacity of 1.2 million British thermal units per hour (MM Btu/hr) capacity. The only air pollutants emitted from the pre-cure ovens are due to the natural gas combustion.

The Greives and Grumman heat forming ovens are used to heat the cured honeycomb material to assist in forming it into a finished product. The heating makes the material pliable and able to be bent and formed. Each of these ovens has a rated heat input of 0.8 MM Btu/hr. The only air pollutants emitted are due to natural gas combustion in the ovens.

The Faustel printer drying oven is used to dry the print applied to the raw paper which is used in the making of the honeycomb blocks. This oven has a rated heat input capacity of 0.8 MM Btu/hr. Air pollutants emitted from this oven consist of the products of natural gas combustion as well as volatile organic compounds (VOCs) contained in the ink. The ink contains a maximum of 522 g/l (4.35 lb/gal) VOC, which is released when dried. An MSDS for the ink is attached.

Maximum estimated air emissions from the ovens due to natural gas combustion are presented in Table 1. Emissions are based upon AP-42 emission factors (excerpt attached). Stack parameters for the oven exhausts are presented in Table 2.

Current maximum usage rates for the printer ink are 4 gallons per hour and 3,000 gal/yr. This will result in maximum VOC emissions from the printer ink of:

Maximum hourly--4 gal/hr x 4.35 lb/gal = 17.4 lb/hr

Annual--3,000 gal/yr x 4.35 lb/gal

+ 2,000 lb/ton = 6.53 tons/yr

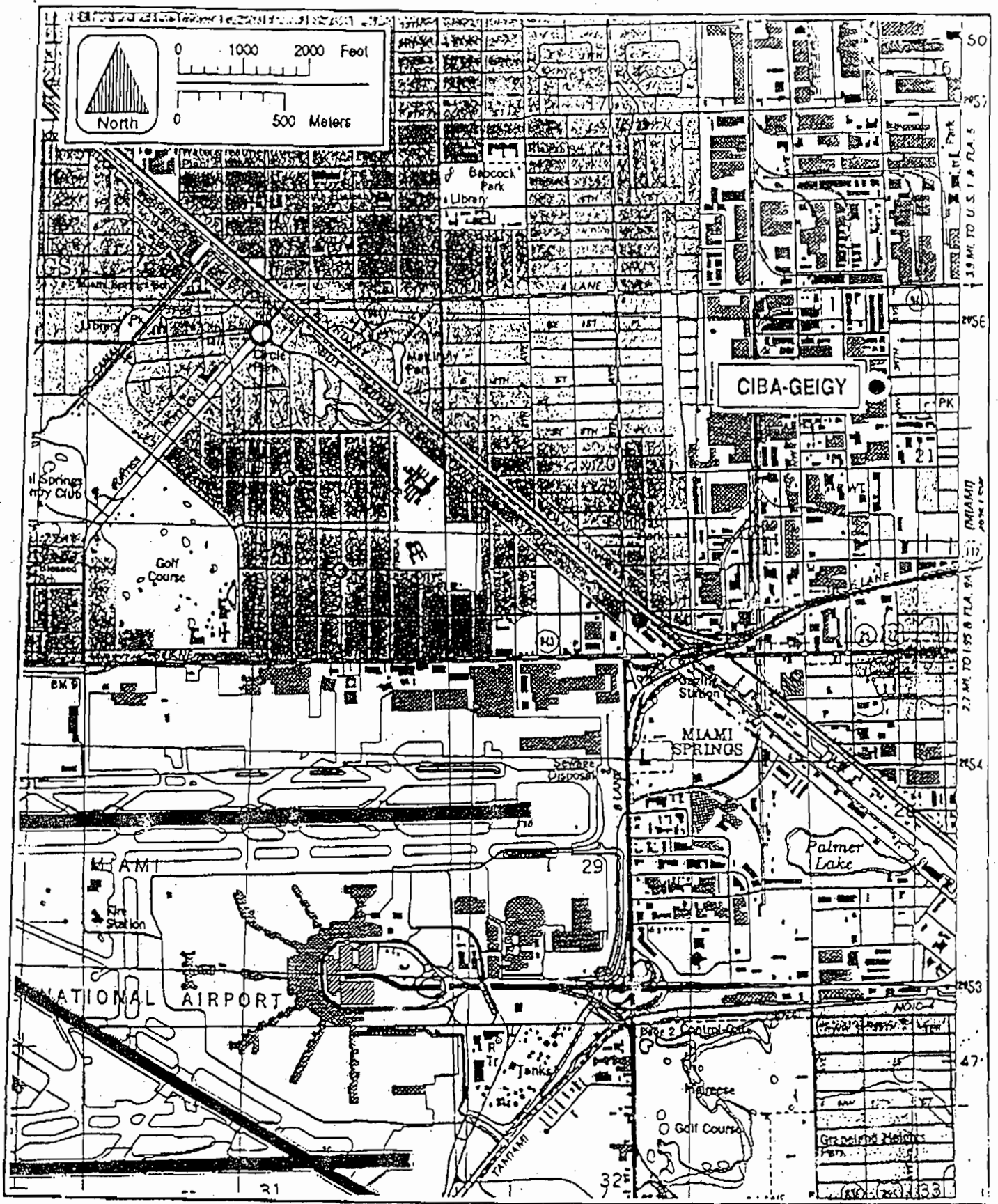
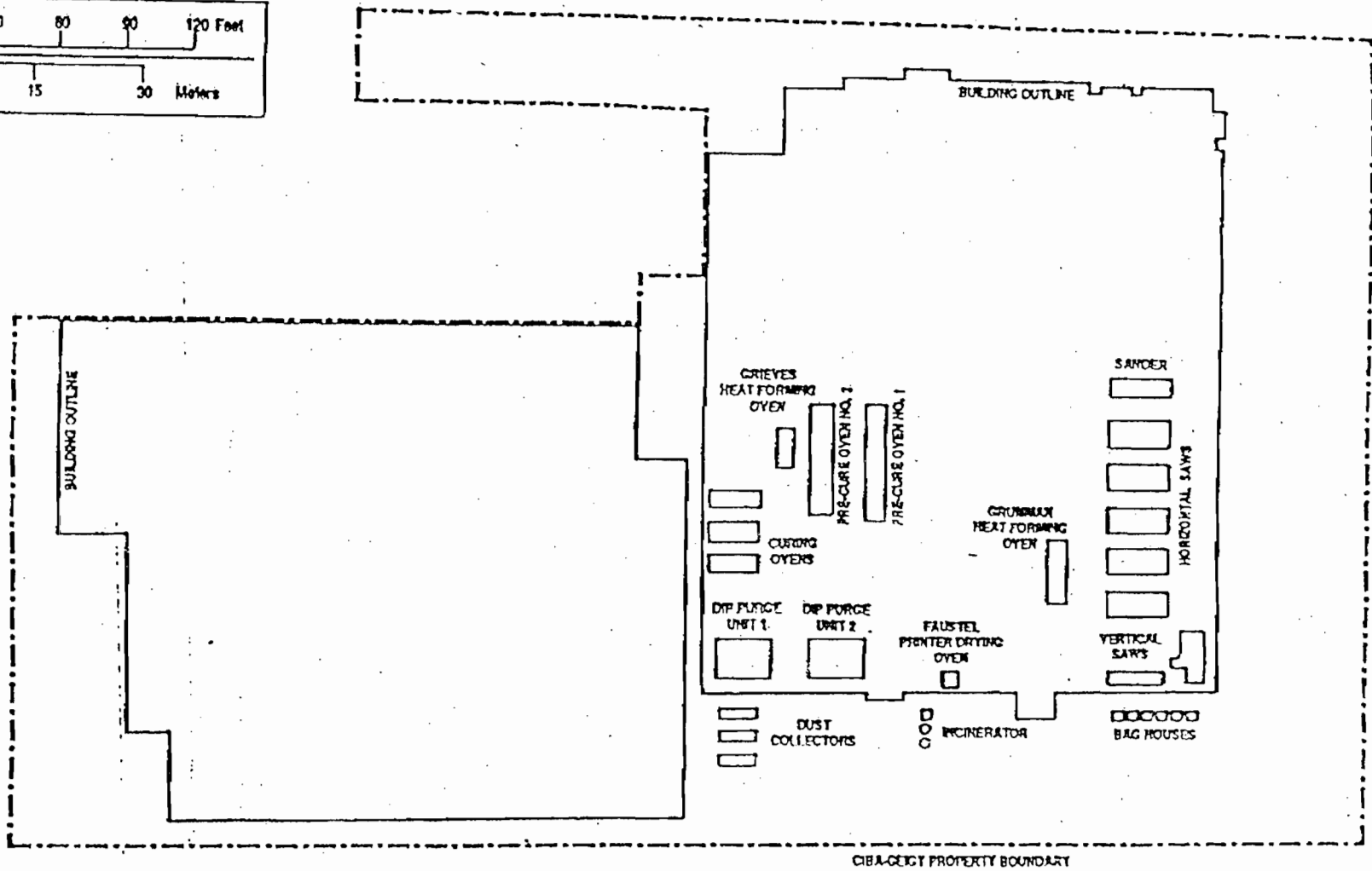
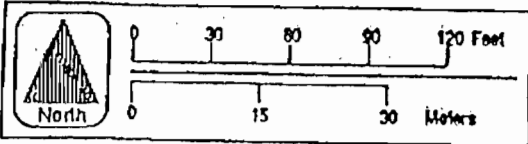


Figure A SITE LOCATION OF CIBA-GEIGY CORPORATION





PLOT PLAN OF CIBA-GEIGY FACILITY.

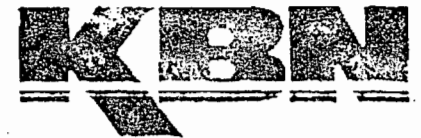


Table 1. Maximum Emissions from Process Ovens at Ciba-Gelgy Corporation.

Source	DESIGN DATA		EMISSION ESTIMATES									
	Maximum Heat Input (MMBtu/hr)	Fuel Usage Rate (ft ³ /hr)	Particulates (lb/hr) (TPY)		Sulfur Dioxides (lb/hr) (TPY)		Nitrogen oxides (lb/hr) (TPY)		Carbon Monoxide (lb/hr) (TPY)		VOC (lb/hr) (TPY)	
Pre-cure Oven 1*	1.2	1,200	0.006	0.024	0.0007	0.003	0.120	0.480	0.024	0.096	0.0096	0.038
Pre-cure Oven 2	1.2	1,200	0.006	0.024	0.0007	0.003	0.120	0.480	0.024	0.096	0.0096	0.038
Grievies Heat Forming Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Grumman Heat Forming Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Faustel Printer's Dryer-Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Total			0.024	0.096	0.0029	0.012	0.480	1.920	0.096	0.384	0.0384	0.154

* Sample Calculations for Pre-cure Oven 1

Fuel Usage Rate = $(1.2 \text{ MMBtu/hr}) / (1,000 \text{ Btu/ft}^3) = 1,200 \text{ ft}^3/\text{hr}$

Emission estimates are based on emission factors for natural gas combustion contained in U.S. EPA document AP-42 (see reference attached). All calculations are computed for a continuous 8,000 annual hours of operation.

Particulates: $(5 \text{ lb/MM ft}^3 \times 1,200 \text{ ft}^3/\text{hr}) = 0.006 \text{ lb/hr}$
 $(0.006 \text{ lb/hr} \times 8,000 \text{ hr/yr}) + (2,000 \text{ lb/ton}) = 0.024 \text{ TPY}$

Sulfur dioxides: $(0.6 \text{ lb/MM ft}^3 \times 1,200 \text{ ft}^3/\text{hr}) = 0.0007 \text{ lb/hr}$
 $(0.0007 \text{ lb/hr} \times 8,000 \text{ hr/yr}) + (2,000 \text{ lb/ton}) = 0.003 \text{ TPY}$

Nitrogen oxides: $(100 \text{ lb/MM ft}^3 \times 1,200 \text{ ft}^3/\text{hr}) = 0.120 \text{ lb/hr}$
 $(0.120 \text{ lb/hr} \times 8,000 \text{ hr/yr}) + (2,000 \text{ lb/ton}) = 0.480 \text{ TPY}$

Carbon monoxide: $(20 \text{ lb/MM ft}^3 \times 1,200 \text{ ft}^3/\text{hr}) = 0.024 \text{ lb/hr}$
 $(0.024 \text{ lb/hr} \times 8,000 \text{ hr/yr}) + (2,000 \text{ lb/ton}) = 0.096 \text{ TPY}$

VOC: $(8 \text{ lb/MM ft}^3 \times 1,200 \text{ ft}^3/\text{hr}) = 0.0096 \text{ lb/hr}$
 $(0.0096 \text{ lb/hr} \times 8,000 \text{ hr/yr}) + (2,000 \text{ lb/ton}) = 0.038 \text{ TPY}$

Table 2. Stack Parameters for Process Ovens at Ciba-Geigy

Source	Stack Height (ft)	Stack Diameter (ft)	Gas Flow Rate		Gas Exit Temperature (°F)	Water Vapor Content (l)	Velocity (ft/s)
			acfm	dsacfms			
Pre-Cure Oven 1	30	1.0	520	270	400	15	11.0
Pre-Cure Oven 2	30	1.0	520	270	400	15	11.0
Grieses Heat Forming Oven	30	0.75	285	180	250	15	10.8
Grumman Heat Forming Oven	30	0.75	285	180	250	15	10.8
Faustel Printer's Dryer Oven	30	1.0	325	180	350	15	8.9

Bruice Copy



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

September 21, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. John L. Deming, Site Manager
CIBA-GEIGY Corporation
3550 N.W. 49th Street
Miami, Florida 33142-3981

Dear Dr. Deming:

Re: Amendment to Construction Permit No. AC 13-109080

The Department has reviewed Mr. David Buff's letter received August 16, 1990, requesting an amendment to the above referenced construction permit. The proposed new process ovens and VOC storage tanks will require air construction permits. The request is acceptable to the Department and, therefore, the following will be changed and added:

Specific Condition No. D. 15:

FROM:

The exhaust ducts from Nos. 3B and 3C curing ovens shall be connected to the control system (No. 3 Dust Collector) associated with the No. 3A curing oven.

TO: Deleted

Specific Condition No. D. 16:

FROM:

The curing ovens (Nos. 3A, 3B and 3C) shall be equipped with electrical interlock systems such that only one curing oven can be operated at any one time.

TO: Deleted

Specific Condition No. D. 17:

FROM:

The facility is permitted to operate a maximum of three (3) curing ovens at any one time, which are curing ovens Nos. 1, 2 and 3A or 3B or 3C.

TO: Deleted

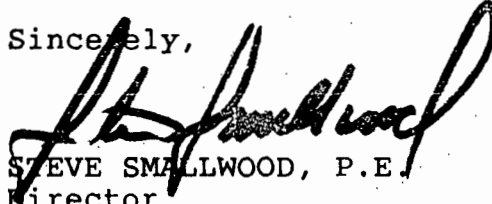
Dr. John L. Deming
September 21, 1990
Page 2

Attachment to be Incorporated:

16. Mr. David A. Buff's letter with attachments received August 16, 1990.

This letter must be attached to your construction permit, No. AC 13-109080, and shall become a part of the permit.

Sincerely,



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

SS/BM/plm

Attachment

c: S. Brooks, SE District
P. Wong, DERM

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP	ACTION NO
	ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial
<i>Bruce Mitchell, BAR, Tallahassee</i>	Date
2.	Initial
	Date
3.	Initial
	Date
4.	Initial
	Date

RECEIVED

AUG 16 1990

REMARKS: DER - BAQM

Ceba Geigg's engineer Dave Buff asked us to modify the op permit. Unfortunately, I can't because the conditions are in your construction permit. There appears to be no problem with a 5%VE in lieu of stack test every year except renewal.

INFORMATION	
<input type="checkbox"/>	Review & Return
<input type="checkbox"/>	Review & File
<input type="checkbox"/>	Initial & Forward
DISPOSITION	
<input type="checkbox"/>	Review & Respond
<input type="checkbox"/>	Prepare Response
<input type="checkbox"/>	For My Signature
<input type="checkbox"/>	For Your Signature
<input type="checkbox"/>	Let's Discuss
<input type="checkbox"/>	Set Up Meeting
<input type="checkbox"/>	Investigate & Report
<input type="checkbox"/>	Initial & Forward
<input type="checkbox"/>	Distribute
<input type="checkbox"/>	Concurrence
<input type="checkbox"/>	For Processing
<input type="checkbox"/>	Initial & Return

FROM: *J. Brooks*

DATE *8-13-90*
PHONE *233-2650*



August 2, 1990

Ms. Stephanie Brooks
Air Permit Engineer
Florida Department of Environmental Regulation
1900 South Congress Avenue, Suite A
West Palm Beach, FL 33406

RECEIVED
AUG 16 1990
DER-BAQW

RE: Ciba-Geigy Corporation

Dear Stephanie:

The purpose of this letter is to follow-up our meeting on Ciba-Geigy, held in your office on July 31, 1990. The following summarizes the agreement reached during the meeting. Also, additional information requested by you and Tom Tittle is referenced and attached where appropriate.

[REDACTED]

This application was submitted recently to FDER by Ciba-Geigy. Based upon information from FDER Tallahassee and our meeting, operating permit A013-110439 is not necessary, since it has been superceded by A013-160871. Ciba-Geigy will continue to operate under the conditions of A013-160871, which expires April 14, 1994.

2. Annual PM emission testing on the cure oven baghouses (1, 2 and 3) will no longer be required. Ciba-Geigy will accept a ~~5% VE limit as~~ *5% VE limit as* ~~operating permit as required to reflect this change.~~ *the alternate emission standard for these sources. FDER will*
3. FDER ~~will delete~~ *will delete* ~~from the current~~ *from the current* operating permit A013-160871. ~~These conditions refer to the tie-in of~~ *These conditions refer to the tie-in of* the two pre-cure ovens with the three cure ovens. This tie in was never implemented; therefore, these specific conditions are not necessary. *5/16/97*
4. Miscellaneous process ovens at Ciba-Geigy do not require permit applications. The current operating permit will be amended to include the ovens as air pollution sources. Information on the ovens is provided in Attachment A.
5. Regarding the excess emissions/incinerator malfunction of March 1990, FDER has determined no enforcement action or other action is required at this time. FDER believes Ciba-Geigy has responded appropriately to the incident. *cement*

90018A1/5

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189



6. Regarding the planned building enclosure around the three cure oven baghouses, this will constitute a particulate matter emission reduction which will only require a ~~permit amendment. Appropriate information on this building and new baghouse will be provided to FDER.~~
7. Regarding the planned new tank farm, Ciba-Geigy must provide information concerning emissions from the new tanks. The new tanks are replacements for the old underground tanks which have been removed. As such, the new tanks can be incorporated into the current operating permit. The current permit allows 8.92 tons per year VOC due to storage.

I appreciate your time in meeting with me and Ciba-Geigy. Please call if you have any questions or comments.

Sincerely,

David A. Buff

David. A. Buff, M.E., P.E.
Principal Engineer

cc: Jim Hall, Ciba-Geigy
Tome Tittle, FDER
Patrick Wong, DERM

ATTACHMENT A
DESCRIPTION OF MISCELLANEOUS PROCESS OVENS
AT CIBA-GEIGY
MIAMI, FLORIDA

ATTACHMENT A

Ciba-Geigy Corporation (C-G) operates a nomex and fiberglass honeycomb manufacturing facility in Miami, Florida. As part of the manufacturing process, several natural-gas-fired ovens are used. These are all small ovens which assist the manufacturing process by drying or heating.

The two pre-cure ovens are used to dry moisture from the raw honeycomb paper or fiberglass blocks prior to the dip-purge-cure process. Each of these ovens have a rated heat input capacity of 1.2 million British thermal units per hour (MM Btu/hr) capacity. The only air pollutants emitted from the pre-cure ovens are due to the natural gas combustion.

The Greives and Grumman heat forming ovens are used to heat the cured honeycomb material to assist in forming it into a finished product. The heating makes the material pliable and able to be bent and formed. Each of these ovens has a rated heat input of 0.8 MM Btu/hr. The only air pollutants emitted are due to natural gas combustion in the ovens.

The Faustel printer drying oven is used to dry the print applied to the raw paper which is used in the making of the honeycomb blocks. This oven has a rated heat input capacity of 0.8 MM Btu/hr. Air pollutants emitted from this oven consist of the products of natural gas combustion as well as volatile organic compounds (VOCs) contained in the ink. The ink contains a maximum of 522 g/l (4.35 lb/gal) VOC, which is released when dried. An MSDS for the ink is attached.

Maximum estimated air emissions from the ovens due to natural gas combustion are presented in Table 1. Emissions are based upon AP-42 emission factors (excerpt attached). Stack parameters for the oven exhausts are presented in Table 2.

Current maximum usage rates for the printer ink are 4 gallons per hour and 3,000 gal/yr. This will result in maximum VOC emissions from the printer ink of:

Maximum hourly--4 gal/hr x 4.35 lb/gal = 17.4 lb/hr

Annual--3,000 gal/yr x 4.35 lb/gal

+ 2,000 lb/ton = 6.53 tons/yr

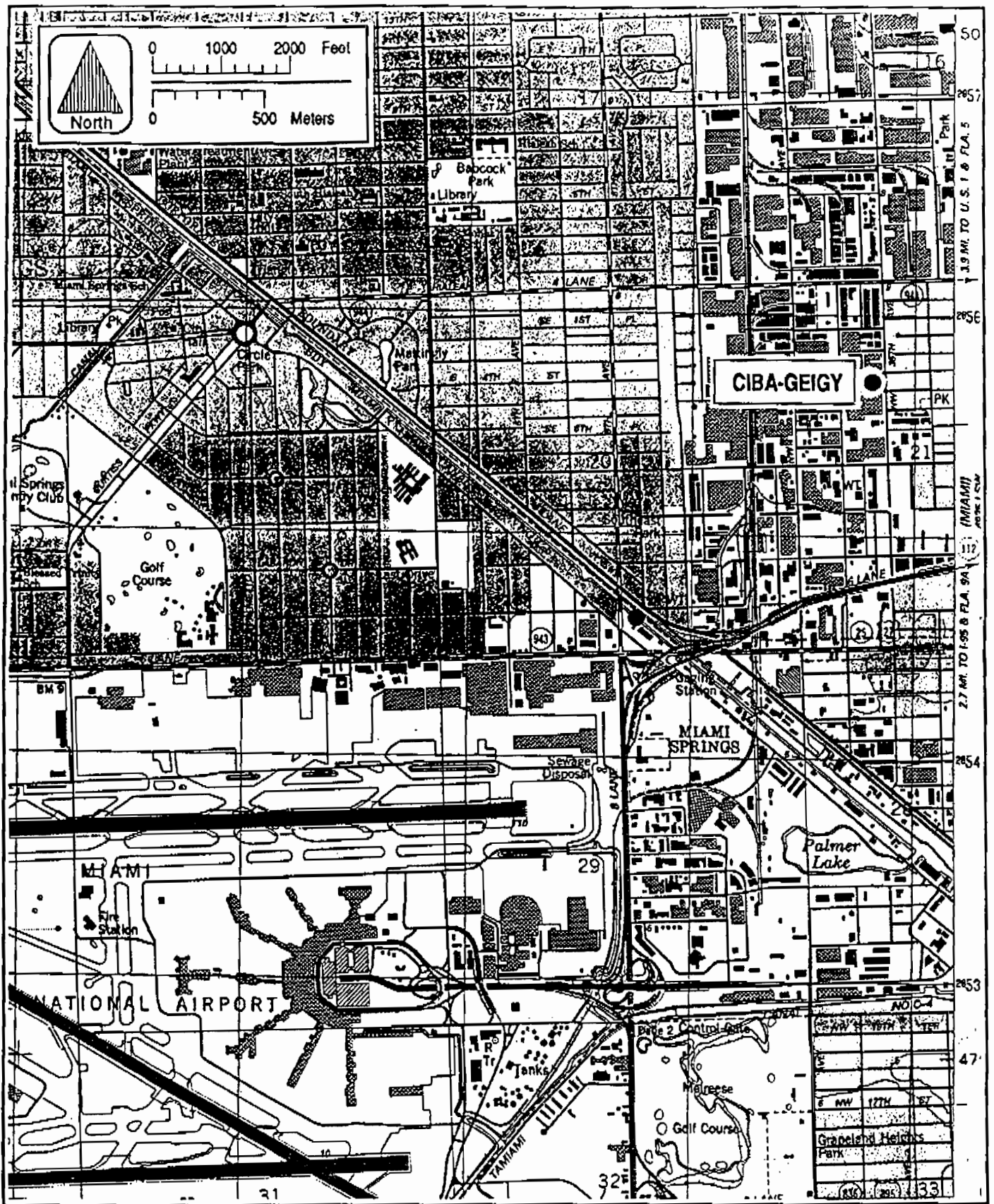
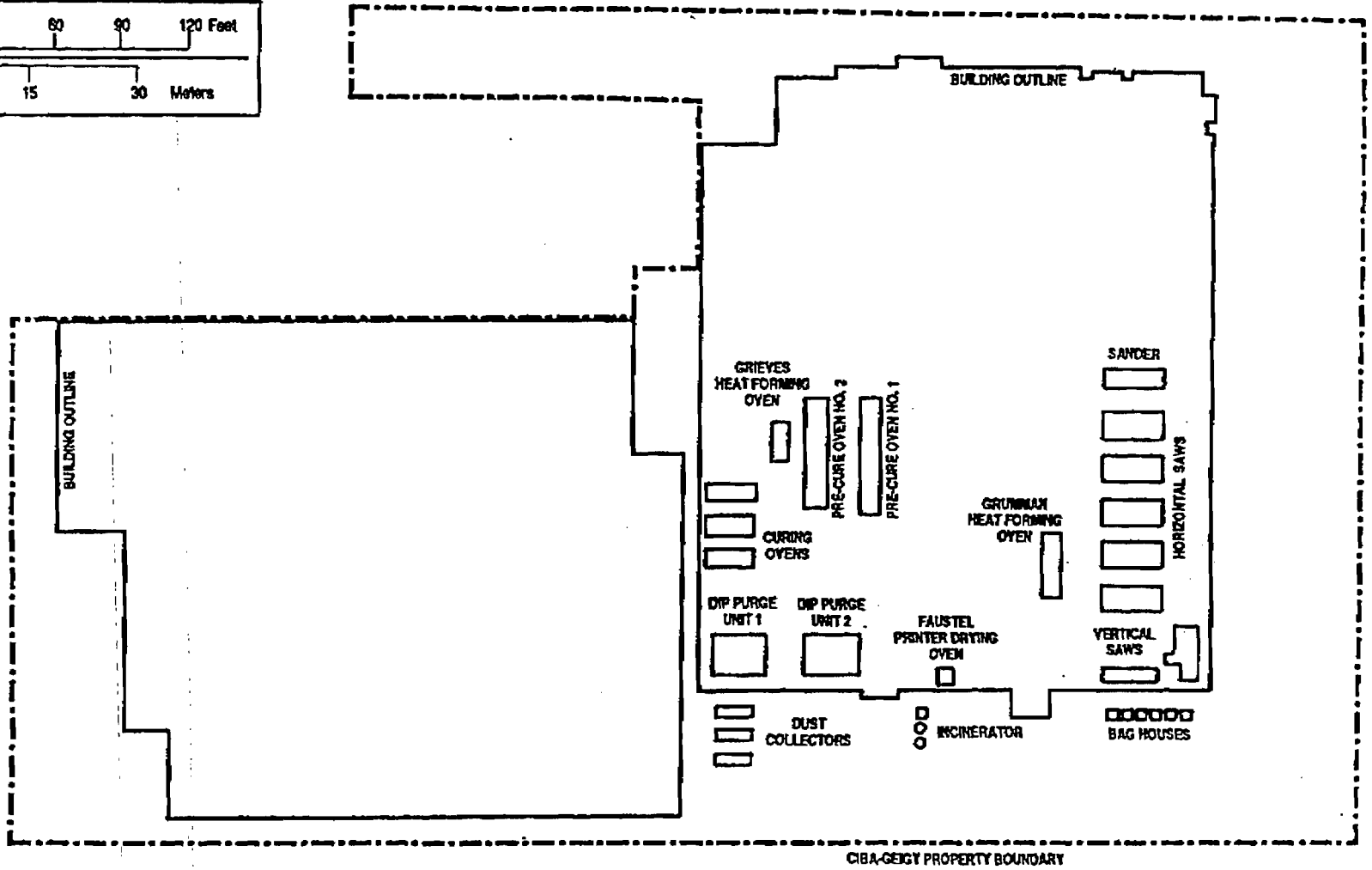
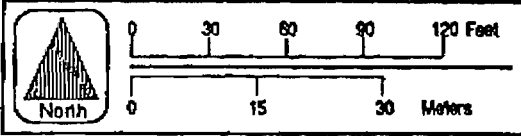


Figure A SITE LOCATION OF CIBA-GEIGY CORPORATION





PLOT PLAN OF CIBA-GEIGY FACILITY



Table 1. Maximum Emissions from Process Ovens at Ciba-Geigy Corporation.

Source	DESIGN DATA		EMISSION ESTIMATES									
	Maximum Heat Input (MMBtu/hr)	Fuel Usage Rate (ft ³ /hr)	Particulates (lb/hr)	Particulates (TPY)	Sulfur Dioxides (lb/hr)	Sulfur Dioxides (TPY)	Nitrogen oxides (lb/hr)	Nitrogen oxides (TPY)	Carbon Monoxide (lb/hr)	Carbon Monoxide (TPY)	VOC (lb/hr)	VOC (TPY)
Pre-cure Oven 1*	1.2	1,200	0.006	0.024	0.0007	0.003	0.120	0.480	0.024	0.096	0.0096	0.038
Pre-cure Oven 2	1.2	1,200	0.006	0.024	0.0007	0.003	0.120	0.480	0.024	0.096	0.0096	0.038
Grieves Heat Forming Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Grumman Heat Forming Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Faustel Printer's Dryer-Oven	0.8	800	0.004	0.016	0.0005	0.002	0.080	0.320	0.016	0.064	0.0064	0.026
Total			0.024	0.096	0.0029	0.012	0.480	1.920	0.096	0.384	0.0384	0.154

* Sample Calculations for Pre-cure Oven 1

Fuel Usage Rate = $(1.2 \text{ MMBtu/hr}) / (1,000 \text{ Btu/ft}^3) = 1,200 \text{ ft}^3/\text{hr}$

Emission estimates are based on emission factors for natural gas combustion contained in U.S. EPA document AP-42 (see reference attached).

All calculations are computed for a continuous 8,000 annual hours of operation.

Particulates: $(5 \text{ lb/MM ft}^3)(1,200 \text{ ft}^3/\text{hr}) = 0.006 \text{ lb/hr}$
 $(0.006 \text{ lb/hr})(8,000 \text{ hr/yr}) \div (2,000 \text{ lb/ton}) = 0.024 \text{ TPY}$

Sulfur dioxides: $(0.6 \text{ lb/MM ft}^3)(1,200 \text{ ft}^3/\text{hr}) = 0.0007 \text{ lb/hr}$
 $(0.0007 \text{ lb/hr})(8,000 \text{ hr/yr}) \div (2,000 \text{ lb/ton}) = 0.003 \text{ TPY}$

Nitrogen oxides: $(100 \text{ lb/MM ft}^3)(1,200 \text{ ft}^3/\text{hr}) = 0.120 \text{ lb/hr}$
 $(0.120 \text{ lb/hr})(8,000 \text{ hr/yr}) \div (2,000 \text{ lb/ton}) = 0.480 \text{ TPY}$

Carbon monoxide: $(20 \text{ lb/MM ft}^3)(1,200 \text{ ft}^3/\text{hr}) = 0.024 \text{ lb/hr}$
 $(0.024 \text{ lb/hr})(8,000 \text{ hr/yr}) \div (2,000 \text{ lb/ton}) = 0.096 \text{ TPY}$

VOC: $(8 \text{ lb/MM ft}^3)(1,200 \text{ ft}^3/\text{hr}) = 0.0096 \text{ lb/hr}$
 $(0.0096 \text{ lb/hr})(8,000 \text{ hr/yr}) \div (2,000 \text{ lb/ton}) = 0.038 \text{ TPY}$

Table 2. Stack Parameters for Process Ovens at Ciba-Geigy

Source	Stack Height (ft)	Stack Diameter (ft)	Gas Flow Rate		Gas Exit Temperature (°F)	Water Vapor Content (%)	Velocity (ft/s)
			acfm	dscfm			
Pre-Cure Oven 1	30	1.0	520	270	400	15	11.0
Pre-Cure Oven 2	30	1.0	520	270	400	15	11.0
Grievess Heat Forming Oven	30	0.75	285	160	250	15	10.8
Grumman Heat Forming Oven	30	0.75	285	180	250	15	10.8
Faustel Printer's Dryer Oven	30	1.0	325	180	350	15	6.9



Florida Department of Environmental Regulation

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Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

July 16, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David A. Buff, P.E.
Principal Engineer
KBN Engineering and Applied Sciences, Inc.
1034 Northwest 57th Street
Gainesville, Florida 32605

Dear Mr. Buff:

Re: Ciba-Geigy Corporation

The Bureau has reviewed your letter to me dated June 22, 1990, which raised questions concerning the applicable construction permit and contemporaneous emissions. Our comments are as follows:

- Application construction permit

The current facility is regulated by construction permit No. AC 13-109080, which was issued on December 30, 1985.

- Contemporaneous emissions

Had the facility obtained construction permits from the Department as it progressed over the course of time, the sources would have had controls installed, whether voluntary or by rule-based requirements (i.e., LAER). Therefore, the referenced "156.8" TPY VOC emissions, which is the net amount reduced due to the phased construction, are considered in excess of any allowable emissions that the Department would have permitted had the facility obtained the proper permits in sequence with the modifications that have occurred. Consequently, with the installation of the control systems that the facility now has, which was considered LAER equivalent, the Bureau has determined that the current VOC allowable emission level of 242.6 TPY is in compliance with the regulations and the 156.8 VOC emissions reduction achieved through the phased construction under construction permit No. AC 13-109080 is not creditable.

Bruce,

your letter went out
Mon., 16th of July w/ attachments
I made a copy of the attachment
to be on ^{the} safe side - Patty
is suppose to be in Wed. the
18th of July -

I will be out on July 23rd ^{Kiro}

Mr. David A. Buff
Page Two
July 16, 1990

If there are any questions, please call Bruce Mitchell at
(904)488-1344 or write to me at the above address.

Sincerely,



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

CHF/BM/t

attachment

cc: S. Brooks, SE District
P. Wong, DERM



RECEIVED

JUN 25 1990

DER-BAQM

June 22, 1990

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Ciba-Geigy Corporation, Miami, Florida
Permit A013-110439
Permit A013-160871

Dear Mr. Fancy:

On behalf of Ciba-Geigy Corporation (C-G), located in Dade County, Florida, KBN is requesting a clarification regarding allowable volatile organic compound (VOC) emissions for C-G as they relate to new source review requirements. For background information, a listing of permits granted to C-G by the Florida Department of Environmental Regulation (FDER) is presented in Table 1, along with descriptive information. A brief discussion of the permit history follows.

C-G applied for and was issued an initial construction permit for the facility in 1984 (AC13-65839). This was an after-the-fact construction permit for the existing facility, as well as permission to install curing oven No. 3 and install baghouses on all three curing ovens. This construction permit allowed 312.0 tons per year (TPY) total VOC emissions.

Subsequently, an operating permit was issued in July 1985 (A013-103057), based upon the AC13-65839 construction permit, that reflected the 312.0 TPY VOC level. Around this same time, C-G applied for a 39.9 TPY VOC increase (in order not to trigger new source review), which was granted in mid-1985 (AC13-104266). Shortly thereafter (October 31, 1985), a new operating permit (A013-110439) was issued, reflecting the increased VOC emissions (351.9 TPY). This operating permit, which replaced the previous operating permit (A013-103057), is still valid, but expires June 30, 1990.

Subsequent to the issuance of this operating permit, a new construction permit (AC13-109080) was applied for and issued on December 30, 1985, which approved the construction of two new totally enclosed dip-purge units (DPU), as well as an incinerator for destruction of VOC emissions from the DPUs. This permit specified an existing allowable VOC emission level of 399.4 TPY, decreasing to 242.64 TPY after the construction was complete. The Technical Evaluation and Preliminary Determination issued by FDER for this permit on November 27, 1985, described the rule applicability of the project (see attached copy). The net decrease in VOC emissions was documented as 156.8 TPY (399.4 - 242.6).

90018A1/2

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189



Subsequent to this construction permit, an operating permit was issued on May 12, 1989, after installation of the new DPUs and incinerator (A013-160871). The allowable VOC level of 242.64 TPY was consistent with the construction permit. However, this permit did not indicate that it replaced or superseded A013-110439 (which allowed up to 351.9 TPY of VOC).

In effect, C-G is currently operating under two different operating permits that cover the same sources at the facility. Therefore, an important question is, according to which one of these permits must C-G operate? This obviously is important in regards to the maximum VOC emissions C-G is permitted.

A second important question is whether the decrease of 156.8 in VOC emissions reflected in AC13-109080 is a creditable emission decrease under the nonattainment rules, which can be used as an offset in the contemporaneous period (5 years after the actual decrease took place)? This question is important in determining future new source review requirements. It is C-G's position that, since the decrease was due to the installation of control equipment as part of a production rate increase, the emission decreases should be creditable.

Prior to installation of the new DPUs and VOC incinerator in 1987, C-G was a major source of VOCs, as evidenced by their VOC emissions (refer to Table 2). As provided by F.A.C. Rule 17-2.510:

- a. An increase or decrease in the actual emissions, or in the quantifiable fugitive emissions, of a facility is creditable if the Department has not relied on it in demonstrating attainment, or in defining RFP, or in issuing a permit under the provisions of this section, which permit is in effect when the increase in emissions of the modification occurs.
- b. A decrease in the actual emission, or in the quantifiable fugitive emissions, of a facility is creditable only if:
 - (i) The old level of actual emissions, the old level of federally enforceable allowable emissions, or the old level of allowable emissions under Rule 17-2.650, whichever is lower, exceeds the new level of actual emissions; and
 - (ii) It is federally enforceable on and after the date that the owner or operator obtains from the Department a permit to construct the new or modified facility; and
 - (iii) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase in emissions from the modification.



Further, "contemporaneous" emission changes under Rule 17-2.510 are defined as follows:

An increase or decrease in the actual emissions, or in the quantifiable fugitive emissions, of a facility is contemporaneous with a particular modification if it occurs within the period beginning five years prior to the date on which the owner or operator of the facility submits a complete application for a permit to modify the facility, and ending on the date on which the owner or operator of the modified facility projects the new or modified facility to begin operation. The date on which any increase in the actual emissions, or in the quantifiable fugitive emissions, of the facility occurs is the date on which the owner or operator of the facility begins, or projects to begin, operation of the source(s) resulting in the increase. The date on which any decrease in the actual emissions, or in the quantifiable fugitive emissions, of the facility occurs is the date on which the owner or operator of the facility completes, or is committed to complete through a federally enforceable permit condition, a physical change in or change in the method of operation of the facility resulting in the decrease.

Based upon the above cited provisions, it appears that the creditable VOC reduction for C-G would be the old level of allowable emissions (either 399.4 TPY or 351.9 TPY, depending upon which permit governs) minus the new level of allowable emissions (242.64 TPY).

Thank you for consideration of this matter, and I look forward to your timely response.

Sincerely,

A handwritten signature in cursive script that reads "David A. Buff".

David A. Buff, M.E., P.E.
Principal Engineer

DAB/dpy

cc: Jim Hall, C-G
Stephanie Brooks, FDER
Patrick Wong, DERM

Table 1. FDER Permit History for Dip/Purge/Cure Operations at Ciba-Geigy

Permit Number	Issued	Expired	Description	Hours of Operation	DPU VOC usage (lb/hr)	Permit Limits											
						Facility VOC (TPY)				Total	Curing Ovens				Incinerator VOC		
						Alcohol	Acetone	Phenol	Formaldehyde		PM lb/hr	TPY	VOC lb/hr	TPY	lb/hr	TPY	
AC13-65839	01/06/84	05/31/85	Permit for existing facility; install No. 3 Cure Oven; install baghouses on curing ovens	4,000	--	292.0	4.4	13.9	1.7	312.0	0.3 ea	0.60 ea	--	--	--	--	
AC13-104266	?	?	39.9 TPY VOC increase	4,512 ^a	--	330.2	4.4	15.6	1.7	351.9	0.3 ea	0.60 ea	--	--	--	--	
AO13-103057	07/08/85	06/30/90	Initial operating permit based on AC13-65839	4,000	--	292.0	4.4	13.9	1.7	312.0	0.3 ea	0.60 ea	--	--	--	--	
AO13-110439	10/31/85	06/30/90	Supercedes AO13-103057--39.9 TPY VOC increase based on AC13-104266	4,512 ^a	--	330.2	4.4	15.6	1.7	351.9	0.3 ea	0.60 ea	--	--	--	--	
AC13-109080	12/30/85	05/31/87	Construct two new DPUs; install incinerator (Based on AC13-65839, AC13-104266)	Current: --	--	--	--	--	--	399.4	--	2.03	--	--	--	--	
	07/07/86	--	Amended	DPU No. 1 8,000	125	--	--	--	--	--	--	--	--	--	4.98	19.9	
	04/09/87	05/31/88	Amended--Expiration date extended	DPU No. 2 8,000	125	--	--	--	--	--	--	--	--	--	4.98	19.9	
	09/28/87	--	Amended	Facility: after 05/31/87 8,000	125	--	--	--	--	242.64	0.99	3.96	46.7	186.8	4.98	19.92	
	05/27/88	04/14/89	Amended--Expiration date extended	(each DPU) Storage	House Cleaning = 7.08 TPY = 8.92 TPY	--	--	--	--	(60.66 lb/hr)	(total)	(total)	(total)	(total)	(each)	(each)	
	03/08/89	--	Amended--Use of five cure ovens														
	10/27/89	--	Amended--VOC test method														
AO13-160871	05/12/89	04/14/94	Operating permit for AC13-109080	8,000	125 (each DPU)	--	--	--	--	242.64 (60.66 lb/hr)	0.99 (total)	3.96 (total)	46.7 (total)	186.8 (total)	4.98 (each)	19.92 (each)	

^aBasis of permit, but not permit limit.

Table 2. VOC Emissions at Ciba-Geigy Prior to New Dip/Purge Tanks and Incinerator

Year/Quarter	Isopropyl Alcohol ^a (lb)	Resin (lb)				Acetone (lb)	Uncontrolled VOC Emissions					
		Total	Isopropyl Alcohol	Phenol	Formaldehyde		Isopropyl Alcohol	Phenol	Formaldehyde	Acetone	Total (lb)	Total (tons)
1984												
1st Quarter	80,758	91,500	29,415	4,729	626	1,440	110,173	4,729	626	1,440	116,968	58.48
2nd Quarter	94,117	150,000	48,222	7,752	1,026	1,434	142,339	7,752	1,026	1,434	152,551	76.28
3rd Quarter	104,690	119,000	38,256	6,150	814	2,060	142,946	6,150	814	2,060	151,970	75.98
4th Quarter	119,439	143,000	45,972	7,390	978	2,255	165,410	7,390	978	2,255	176,034	88.02
Total	399,003	503,500	161,865	26,021	3,444	7,189	560,868	26,021	3,444	7,189	597,522	298.76
1985												
1st Quarter	143,234	154,000	49,508	7,959	1,053	1,454	192,742	7,959	1,053	1,454	203,208	101.60
2nd Quarter	144,598	155,500	49,990	8,036	1,064	1,431	194,588	8,036	1,064	1,431	205,119	102.56
3rd Quarter	122,231	150,000	48,222	7,752	1,026	1,260	170,453	7,752	1,026	1,260	180,491	90.25
4th Quarter	125,504	155,019	49,836	8,011	1,060	900	175,340	8,011	1,060	900	185,311	92.66
Total	535,567	614,519	197,556	31,758	4,203	5,045	733,123	31,758	4,203	5,045	774,129	387.06
1986												
1st Quarter	143,292	166,000	53,366	8,579	1,135	1,260	196,658	8,579	1,135	1,260	207,632	103.82
2nd Quarter	162,185	178,000	57,223	9,199	1,218	1,620	219,408	9,199	1,218	1,620	231,445	115.72
3rd Quarter	133,083	143,000	45,972	7,390	978	720	179,055	7,390	978	720	188,143	94.07
4th Quarter	109,041	153,500	49,347	7,933	1,050	360	158,388	7,933	1,050	360	167,731	83.87
Total	547,601	640,500	205,908	33,101	4,381	3,960	753,509	33,101	4,381	3,960	794,951	397.48

^aIsopropyl alcohol has 99-percent purity.

Source: Quarterly Emissions reports submitted by Ciba-Geigy to FDER, 1984-1986.

Technical Evaluation
and
Preliminary Determination

CIBA-GEIGY Corporation
Dade County
Miami, Florida

Permit Number:
AC 13-109080

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting
November 27, 1985

I. PROJECT DESCRIPTION

A. Applicant

CIBA-GEIGY Corporation
3550 Northwest 49th Street
Miami, Florida 33142

B. Project and Location

At its existing facility, the applicant is requesting an increase in the usage of volatile organic compounds (VOC) and to construct/install two totally enclosed dip/purge processing units (DPU) with an associated incinerator system. Currently, it is assumed that all of the VOC emissions are exhausted into the atmosphere because there is no VOC control system(s) associated with the existing dip and purge operations and the curing ovens.

This increase in VOC usage will also increase the annual production throughput in the curing ovens. Consequently, there will be an increase in VOC emissions and particulate matter (PM) emissions. The PM emissions are controlled with a baghouse system.

The two new DPU will be installed in phases, meaning that the first DPU along with the associated incinerator system will be installed, debugged and compliance tested. At this time, one of the existing uncontrolled dip and purge operations will be removed from service and dismantled. Then, the second DPU will be installed, connected to the associated incinerator system, debugged and compliance tested. At this time, the last existing uncontrolled dip and purge operation will be removed from service and dismantled.

The existing facility is located at the above address in Dade County. The UTM coordinates are Zone 17, 575.307 km East and 2856.387 km North.

The source classification code for the processes involved is 4-02-007-06.

C. Process and Controls

At this facility, a Nomex or fiberglass material is bonded, dipped in a resin coating bath, purged with air, dried in a curing oven, and then cut and shaped according to specifications. Approximately 80% of the facility's total VOC emissions are attributed to the dip and purge operations, 19% to the curing ovens, and 1% to house cleaning.

Until the phased construction is completed, in-house preventive maintenance procedures and crew efficiency will be utilized to minimize the emissions of VOC. The emissions of

VOC will be accounted for by a material balance, which is an inventory balance. Since this facility has no VOC reclamation or control devices at this time, the amount of VOC emitted into the atmosphere will be the difference between the beginning inventory, plus what has been delivered, and the ending inventory. Therefore, monthly logs shall be maintained and a quarterly report shall be compiled and submitted to the Dade County Environmental Resources Management (DERM) office and the DER's Southeast Florida District office.

II. RULE APPLICABILITY

The proposed modification is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4.

The application was complete November 21, 1985.

The existing facility is located in Dade County, which is an area designated nonattainment for the pollutant ozone in accordance with FAC Rule 17-2.410(1)(d). Volatile organic compounds are precursors to ozone.

The existing facility is a major emitting facility for VOC in accordance with FAC Rule 17-2.100(98). The permitted allowable VOC emissions are 351.4 tons per year (TPY).

consistent with
013-110439
Issued 10/31/85

The applicant is requesting an increase of 48.0 TPY of VOC, which is greater than the significant emission rate of 40 TPY VOC pursuant to Table 500-2. Initially, the emissions are subject to preconstruction review requirements of FAC Rule 17-2.510(4) in accordance with FAC Rule 17-2.510(2)(d)4.a. However, with the phased construction and existing source retirement, sufficient VOC emission reductions will occur such that the net overall result will be a decrease in VOC emissions. Also, the installation of the two totally enclosed DPU with an associated incinerator system (projected overall VOC control efficiency of 95%) is considered to be LAER equivalent. Consequently, the emissions will be subject to review in accordance with FAC Rule 17-2.520.

No requirement
to reduce
VOC based
on emission
limiting
standards

Since there are no NSPS, NESHAP, nor any applicable emission limiting standard in FAC Rules 17-2.600 and 17-2.650(1), the proposed modification shall be permitted in accordance with FAC Rules 17-2.610, General Particulate Emission Limiting Standards, and 17-2.620, General Pollutant Emission Limiting Standards.

Using the process weight equation and the current total phenolic resin input rate of 195 pounds per hour (lb/hr), equivalent to 0.10 tons per hour, the total allowable emission rate for particulate matter (PM) calculates to be 0.9 lb/hr and

2.03 TPY (at 4512 hr/yr operation) in accordance with 17-2.610(1) ^{process out}
Per curing oven, the maximum allowable emission rates for PM are 0.30 lb/hr and 0.68 TPY. After the phased construction, the phenolic resin input will increase to 250 lb/hr, thus increasing the allowable PM emissions to 0.99 lb/hr and 3.96 TPY (at 8000 hr/yr operation), totals for 3 curing ovens.

According to 17-2.610(2)(a), no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere any air pollutants from new, or existing sources, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart the opacity of which is equal to or greater than 20 percent.

According to 17-2.620(1)(a), no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. At present, only in-house preventive maintenance procedures and crew efficiency will be utilized and deemed necessary to keep VOC emissions minimized.

Proposed and acceptable in-house preventive maintenance procedures shall include, but not be limited to: 1) seal the resin-dip tanks with floating-tank covers when the process is not being used; 2) keep lids and caps on all VOC containers when not being used; 3) maintain a monthly accounting of the volatile organic compounds per type such that the beginning inventory and deliveries are accounted for; and, 4) a quarterly report, compiled from (#4) is to be submitted to the DER's Southeast Florida District office and Dade County's Department of Environmental Resources Management office no later than 15 days after the closing date of each quarter.

According to 17-2.620(2), no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance according to 17- 2.100(108). Therefore, objectionable odors shall not be allowed off plant property.

Compliance testing shall be conducted on the baghouse system associated with the curing ovens in accordance with FAC Rule 17-2.700. For PM mass emissions compliance testing, the compliance test method shall be DER Method 5. For visible emissions compliance testing, the compliance test method shall be DER Method 9.

Compliance testing shall be conducted on the new incinerator system to establish the VOC destruction efficiency. The compliance test method shall be EPA Method 25 in accordance with Appendix A, 40 CFR 60. Confirmation of the negative pressure within each DPU will also be required.

III. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS

A. Emission Limitations

The regulated pollutant emissions from the facility are VOC, PM and VE. The following table will reflect the maximum allowable pollutant emissions in tons per year (TPY):

Source	Pollutant	Maximum Allowable Emissions (TPY)
Facility	VOC	399.4
Curing Ovens	PM	2.03
	VE	less than 20% opacity

NOTE: °VOC emissions are based on 200 lb/hr total VOC usage and approximately 4,000 hr/yr operation
 °PM emissions are based on the process weight table and 4,512 hr/yr operation

The following table reflects the maximum allowable pollutant emissions from the facility after completion of the phased construction:

Source	Pollutant	Maximum Allowable Emissions (TPY)
Facility	VOC	242.6
Curing Ovens	PM	3.96
	VE	less than 20% opacity

NOTE: °VOC emissions are based on 250 lb/hr total VOC usage, 95% overall destruction of VOC from the two new DPU, and 8,000 hr/yr operation per DPU
 °PM emissions are based on the process weight table and 8,000 hr/yr operation

The permitted emissions are in compliance with all applicable requirements of FAC Rules 17-2 and 17-4.

B. Air Quality Analysis

From a technical review of the application, an air quality analysis was not required for the proposed phased construction and the proposed changes will not interfere with reasonable further progress toward attaining the ambient air quality standards.

IV. CONCLUSIONS

The emission limits proposed by the applicant are acceptable by the department. The phased construction of the two new controlled DPU and the phased retirement of the two existing uncontrolled dip and purge operations will have an overall net reduction effect of VOC emissions. The baghouse control system associated with the curing ovens should be capable of continued compliance with the particulate matter and visible emissions limits.

The permitted emissions from the proposed changes should not cause any violation of Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all applicable requirements of FAC Rules 17-2 and 17-4.



Best Available Copy

METRO-DADE CENTER

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(305) 375-3376

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July 9, 1990

C.H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Ciba-Geigy Corporation (AP-0140)
AO13-110439, AO13-160871

Dear Mr. Fancy:

Reference the recent letter from KBN Engineering and Applied Sciences, Inc., to DER on behalf of the subject source regarding clarification on allowable volatile organic compound (VOC) emissions and their relation to new source review requirements. In his letter Mr. David Buff, P.E., consultant to Ciba-Geigy, offered that his clients position is that the decrease in emissions realized after the installation of new dip purge units and an incinerator should be creditable to future emission limits.

Please be advised that DERM's position is that this decrease is not creditable; since the new dip purge units and incinerator were installed pursuant to a consent order entered into by Ciba-Geigy, DER and DERM due to code violations and nuisance conditions caused by the plant's operation. In other words the decrease did not result from a voluntary act by the source due to concern for an improved environment.

If you should need any additional information on this matter please contact us at (305) 858-0601.

Sincerely,

Ewart L. Anderson, P.E.
Air Permitting Engineer
Environmental Monitoring Division

ELA/aas

cc: I. Goldman, DER

C. Fancy
B. Andrews
B. Mitchell