

P 407 852 686

RECEIPT FOR CERTIFIED MAIL

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

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

PS Form 3800, June 1985

Sent to <i>Mark E. Bunnhall</i>	
Street and No. <i>E. I. DuPont</i>	
P.O., State and ZIP Code <i>Stark, IA</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date <i>5-9-91</i> <i>AC 10-180154</i>	

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

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

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

3. Article Addressed to:  
*Mark E. Bunnhall*  
*E. I. DuPont de Nemours*  
*P.O. Box 753*  
*Stark, IA 32091*

4. Article Number  
*P 407 852 686*

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

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee  
**X**

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

6. Signature — Agent  
*X Andrew Johnson*

7. Date of Delivery  
*5/12/91*

RECEIVED

MAY 15 1991

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

**SENDER INSTRUCTIONS**

Print your name, address and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

Division of Air  
Resources Management



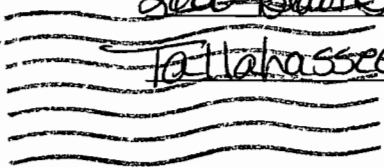
PENALTY FOR PRIVATE  
USE, \$300

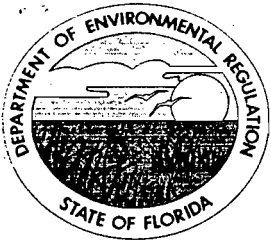
RETURN  
TO



Print Sender's name, address, and ZIP Code in the space below.

Patty Adamo-D.E.R. BAR  
 2000 Blair Stone Rd- Twin Towers  
 Tallahassee, FL 32399-2400





# Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF PERMIT

Mr. Mark E. Brimhall, Environmental Coordinator  
E. I. DuPont de Nemours & Company, Inc.  
Post Office Box 753  
Starke, Florida 32091

May 8, 1991

Enclosed is construction permit AC 10-180154 for E. I. DuPont de Nemours & Company, Inc. to construct (modify) the zircon kiln at the Trail Ridge Plant in Clay County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

Andy Kutyna, NED  
John Koogler, P.E.  
William Congdon, OGC

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of buisness on 5-9-91.

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

Kim Decker  
Clerk

5-9-91  
Date

Final Determination

E. I. DuPont de Nemours & Company, Inc.  
Clay County  
Trail Ridge Plant, Florida

Trail Ridge Zircon Kiln  
Permit No. AC 10-180154

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

May 3, 1991

## Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct (modify) the zircon kiln at the Trail Ridge plant that is located off State Road 230 in Clay County, Florida, was distributed on October 26, 1990. The Notice of Intent to Issue was published in the Bradford County Telegraph on November 8, 1990. Copies of the evaluation were available for public inspection at the Department's offices in Tallahassee and Jacksonville.

In response to the Notice of Intent, the Kingsley Lake Property Owners Association petitioned for an administrative hearing. After the applicant discussed the plant modification impact on the area with the Association, the petition was withdrawn.

The EPA was asked by the Department to review the rule applicability determination for this project. The EPA reviewed and agreed with the Department's determination that the project was not subject to the Prevention of Significant Deterioration regulations or New Source Performance Standards.

Comments were submitted by the applicant. The applicant objected to the Department imposing emission limits on other independent air pollution sources at this facility as a condition of the permit for the zircon kiln. After reconsideration, the Department agrees that emission standards for the other sources at this facility should not be in the permit for the zircon kiln. This condition has been deleted from the permit.

The final action of the Department will be to issue construction permit AC 10-180154 as proposed in the Technical Evaluation and Preliminary Determination, except for the change discussed above.



# Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

**PERMITTEE:**

**E. I. DuPont de Nemours  
and Company, Inc.  
Post Office Box 753  
Starke, Florida 32091**

**Permit Number: AC 10-180154**

**Expiration Date: Oct. 1, 1991**

**County: Clay**

**Latitude/Longitude: 29°54'42"N  
82°02'00"W**

**Project: Trail Ridge Zircon Kiln  
System**

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

Authorization to increase the production of the Trail Ridge zircon kiln system from 10 TPH to 18 TPH. The system consists of a rotary cooler, rotary kiln, fuel system, material handling system (piping, screw conveyors, enclosed bucket elevator, centrifugal classifier), dry cyclone, water spray system, and associated equipment. The kiln is located in Clay County off State Road 230, approximately 5 miles east of Starke, Florida. The UTM coordinates of this site are Zone 17, 400.2 km E and 3309.3 km N.

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

Attachments are listed below:

1. Application received May 7, 1990.
2. DER letter dated May 18, 1990.
3. Koogler & Associates letter dated May 29, 1990.
4. DER letter dated May 18, 1990.
5. Koogler & Associates letter dated August 6, 1990.
6. Koogler & Associates letter dated November 8, 1990.
7. Final Order, OGC Case No. 90-1783.
8. DER letter dated November 30, 1990.
9. EPA letter dated December 18, 1990.

**PERMITTEE:**  
E. I. DuPont de Nemours  
Company, Inc.

**Permit Number:** AC 10-180154  
**Expiration Date:** October 1, 1991

**GENERAL CONDITIONS:**

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

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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



**PERMITTEE:**  
E. I. DuPont de Nemours  
Company, Inc.

**Permit Number:** AC 10-180154  
**Expiration Date:** October 1, 1991

**GENERAL CONDITIONS:**

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

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: October 1, 1991

**GENERAL CONDITIONS:**

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

**PERMITTEE:**  
E. I. DuPont de Nemours  
Company, Inc.

**Permit Number:** AC 10-180154  
**Expiration Date:** October 1, 1991

**GENERAL CONDITIONS:**

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

**SPECIFIC CONDITIONS:**

1. Kiln production shall not exceed 18.0 TPH. The permittee shall have instruments or other means available to determine the production of this kiln.

2. Heat input by No. 6 fuel oil to the kiln shall not exceed 20.5 MMBtu/hr. Approximately 140 GPH is equivalent to this heat input. Sulfur content of the fuel oil shall not exceed 2.8%. A log of the fuel oil consumption of the kiln and invoices of the fuel oil purchases that give its sulfur content or analysis of the fuel oil for sulfur by ASTM Method D-129-64 shall be maintained to show compliance with this condition.

3. Particulate matter (PM) emissions from the kiln cyclone, as determined by Method 5 which is described in 40 CFR 60, Appendix A (July 1, 1988), shall not exceed the amount allowed by the process weight table (F.A.C. Rule 17-2.610(1)(b)) and 21.5 lbs/hr.

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: October 1, 1991

**SPECIFIC CONDITIONS:**

4. Visible emissions from any source at this facility, as determined by Method 9 which is described in 40 CFR 60, Appendix A (July 1, 1989), shall not exceed 20% opacity, 6 minute average.
5. Unconfined emissions shall be minimized by wetting the fines discharged from the cyclone and any other part of the plant that is dusty. The fugitive dust emissions from the material conveying equipment are controlled by water slurring, enclosed piping, screw conveying, enclosed bucket elevators, and water spraying, as necessary.
6. The plant may operate continuously, 8760 hours per year.
7. This permit requires PM, fuel sulfur content, and visible emissions tests for the zircon kiln. All compliance tests shall be conducted while the kiln is operating between 90-100% of its permitted capacity (16.2-18 TPH). Except during compliance tests, the kiln shall not be operated above its permitted rate. The particulate matter emissions and visible emissions shall be determined concurrently. Under circumstances when this is not feasible, the permittee shall obtain prior approval from the Northeast District to conduct the tests at separate times. In such circumstances, the tests shall be conducted as close to each other as is feasible. The Northeast District shall be notified in writing at least 15 days prior to any compliance test. A tests report that provides the information required by F.A.C. Rule 17-2.700(7), shall be submitted to the District within 45 days of the date of the testing.
8. The permittee shall not replace any process equipment in use with this kiln system with process equipment that has higher production potential without prior approval of the Department.
9. The permittee shall take reasonable precautions to prevent public access to the plant entrance road. These precautions shall include installing a sign on the plant entrance road that prohibits the use of the road by the public and routine patrols of the road adjacent to the plant by plant personnel.
10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

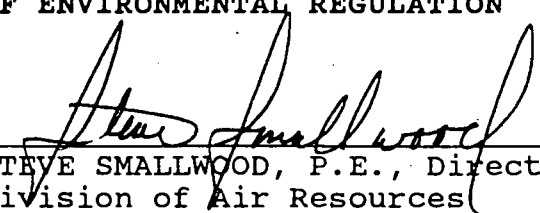
Permit Number: AC 10-180154  
Expiration Date: October 1, 1991

**SPECIFIC CONDITIONS:**

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

Issued this 7<sup>th</sup> day  
of May, 1991

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Steve Smallwood  
FROM: Clair Fancy  
DATE: May 3, 1991  
SUBJ: Approval of Construction Permit AC 10-180154  
E. I. DuPont de Nemours & Company, Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct (modify) the zircon kiln at the Trail Ridge Plant in Clay County, Florida.

The Final Order withdrawing the petition for administrative hearing from the residents near the plant who were concerned about the impact of the modification was issued on March 4, 1991.

I recommend your approval and signature.

CF/WH/plm

Attachments

OK  
*[Signature]*  
5-7-91

Check Sheet

Company Name: E.I. Dupont  
Permit Number: AC 10-180164  
PSD Number:  
County: Clay  
Permit Engineer:  
Others involved:

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Final Application (if applicable)
- Waiver of Department Action
- Department Response

Intent:

- Intent to Issue
- Notice to Public
- Technical Evaluation
- BACT Determination
- Unsigned Permit

Attachments:

- 
- 
- 
- Correspondence with:
  - EPA
  - Park Services
  - County
  - Other
- Proof of Publication
- Petitions - (Related to extensions, hearings, etc.)

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination

Post Permit Correspondence:

- Extensions
- Amendments/Modifications
- Response from EPA
- Response from County
- Response from Park Services

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

KINGSLEY LAKE PROPERTY  
OWNERS ASSOCIATION,

Petitioner,

vs.

DOAH CASE NO. 90-7844  
OGC CASE NO. 90-1783

E.I. DUPONT DE NEMOURS & CO., INC.,  
AND STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION,

Respondents.

---

FINAL ORDER

On November 21, 1990, the State of Florida Department of Environmental Regulation ("Department") received a petition requesting an administrative hearing from Petitioner, Kingsley Lake Property Owners Association. The petition challenged the Department's decision to issue Permit No. AC10-180154 to E.I. DuPont de Nemours & Co., Inc., to increase production of the Trail Ridge plant's zircon kiln in Clay County.

On March 4, 1991, after receiving a Notice of Withdrawal the assigned Hearing Officer issued an Order which closed the Division of Administrative Hearings file and relinquished jurisdiction back to the Department. (Exhibit 1) There being no further matters to consider,

IT IS ORDERED:

The petition is hereby dismissed and the Department's Northeast District Office is directed to issue Permit No. AC10-180154.



Department of Environmental Regulation  
**Routing and Transmittal Slip**

To: (Name, Office, Location)

- 1. *Steve Smallwood* *JAR 3/18*
- 2. *Air Resources*
- 3.
- 4. *Clair*

Remarks: *willard*

**RECEIVED**  
**MAR 18 1991**  
**DER - BAQM**

From: <i>Bill Congdon KR</i>	Date: <i>3-15-91</i>
	Phone: <i>488-9730</i>

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

DONE AND ORDERED this 14 day of March, 1991, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

*Kathy Carter* 3-15-91  
Clerk Date

*Carol M. Browner*  
CAROL M. BROWNER  
Secretary

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
Telephone: (904) 488-4805

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by U.S. Mail to:

Kingsley Lake Properties Assoc.  
c/o Henry H. Graham, Jr.,  
1725 Memorial Park Drive  
Jacksonville, FL 32204

Mr. Mark E. Brimhall  
Environmental Coordinator  
E. I. DuPont de Nemours & Co.  
P. O. Box 753  
Starke, FL 32091

by U.S. Mail on this 15<sup>th</sup> day of March, 1991.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
WILLIAM H. CONGDON  
Assistant General Counsel

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
Telephone: (904) 488-9730

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

KINGSLEY LAKE PROPERTY OWNERS ASSOCIATION,  
Petitioner,  
vs.  
E. I. DUPONT DE NEMOURS & CO., INC., AND DEPARTMENT OF ENVIRONMENTAL REGULATION,  
Respondents.

CASE NO. 90-7844

RECEIVED

MAR 5 1991

Dept. of Environmental Reg.  
Office of General Counsel

ORDER

Upon consideration of petitioner's notice of withdrawal of petition for hearing, it is

ORDERED:

The file opened in this matter by the Division of Administrative Hearings is hereby closed.

DONE and ENTERED this 4th day of March, 1991 in Tallahassee, Leon County, Florida.



ROBERT T. BENTON, II  
Hearing Officer  
Division of Administrative Hearings  
The DeSoto Building  
1230 Apalachee Parkway  
Tallahassee, Florida 32399-1550  
(904) 488-9675

Filed with the Clerk of the Division of Administrative Hearings this 4th day of March, 1991.



KOOGLER & ASSOCIATES  
ENVIRONMENTAL SERVICES  
4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
904/377-5822 • FAX 377-7158

KA 148-90-01

February 28, 1991

RECEIVED  
MAR 04 1991  
DER-BAQM

Mr. Clair H. Fancy  
Florida Department of  
Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Subject: E. I. DuPont de Nemours & Co., Inc.  
Trail Ridge Facility  
Zircon Kiln, Permit No. AC10-180154

Dear Mr. Fancy:

It is our understanding that the petition for a hearing filed by the Kingsley Lake area residents has been withdrawn. Consequently, it is likely that the Department will finalize the permit for issuance taking into consideration any comments submitted to the Department on its Intent to Issue the permit.

At this time, we would like to request that the draft permit be amended to reflect the comments submitted to you in our letter dated November 8, 1990. If FDER has any concerns about amending the draft permit, we would appreciate the opportunity to discuss the issue with you prior to the permit being finalized.

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES

Pradeep A. Raval

PAR:wa

cc: Mr. C. Mason, DuPont

*J. Nank*  
*C. Malladay*  
*CHF/BA*



1725 Memorial Park Drive • Jacksonville, Florida 32204 • Telephone 904/354-0869

HENRY H. GRAHAM, JR.  
President

FAX No.  
355-8046

January 7, 1991

**RECEIVED**  
JAN 9 1991

Mr. William Congdon  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road, Room 672  
Tallahassee, FL 32399-2400

**Dept. of Environmental Reg.  
Office of General Counsel**

Re: Kingsley Lake Property Owners Association vs.  
E. I. DuPont De Nemours and Company  
DOAH Case No.: 90-007844

Dear Mr. Congdon:

In order to prepare for further proceedings in the above case, we would appreciate your furnishing us with copies of all applications, studies and/or other materials pertaining to the E. I. DuPont permit at the Trail Ridge plant.

Thank you for your cooperation.

Sincerely,

A handwritten signature in dark ink, appearing to read "Henry H. Graham, Jr.", is written over the typed name.

Henry H. Graham, Jr.  
Kingsley Lake Property Owners's Assoc.

HHG:pw

c: Bruce Ivey



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

RECEIVED  
DEC 26 1990  
DER-BAQM

4APT-AEB

DEC 18 1990

Mr. Clair H. Fancy, P.E., Chief  
Bureau of Air Regulation  
Florida Department of Environmental  
Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: Applicability Determination for E.I. DuPont

Dear Mr. Fancy:

This is to acknowledge receipt of your letter dated November 30, 1990, containing a preliminary determination and technical evaluation for an increase in production at an existing zircon kiln for the above referenced facility. You requested that EPA provide comments regarding your determination that neither Prevention of Significant Deterioration (PSD) regulations nor any New Source Performance Standards would apply to this increase in production.

We have reviewed your technical evaluation and concur with your determination. Since the production rate was not limited in a federally enforceable permit issued after January 6, 1975, an increase in production rate would not constitute a "modification" for the purposes of PSD. Additionally, since no capital investment is being made on this unit, it does not trigger any New Source Performance Standard.

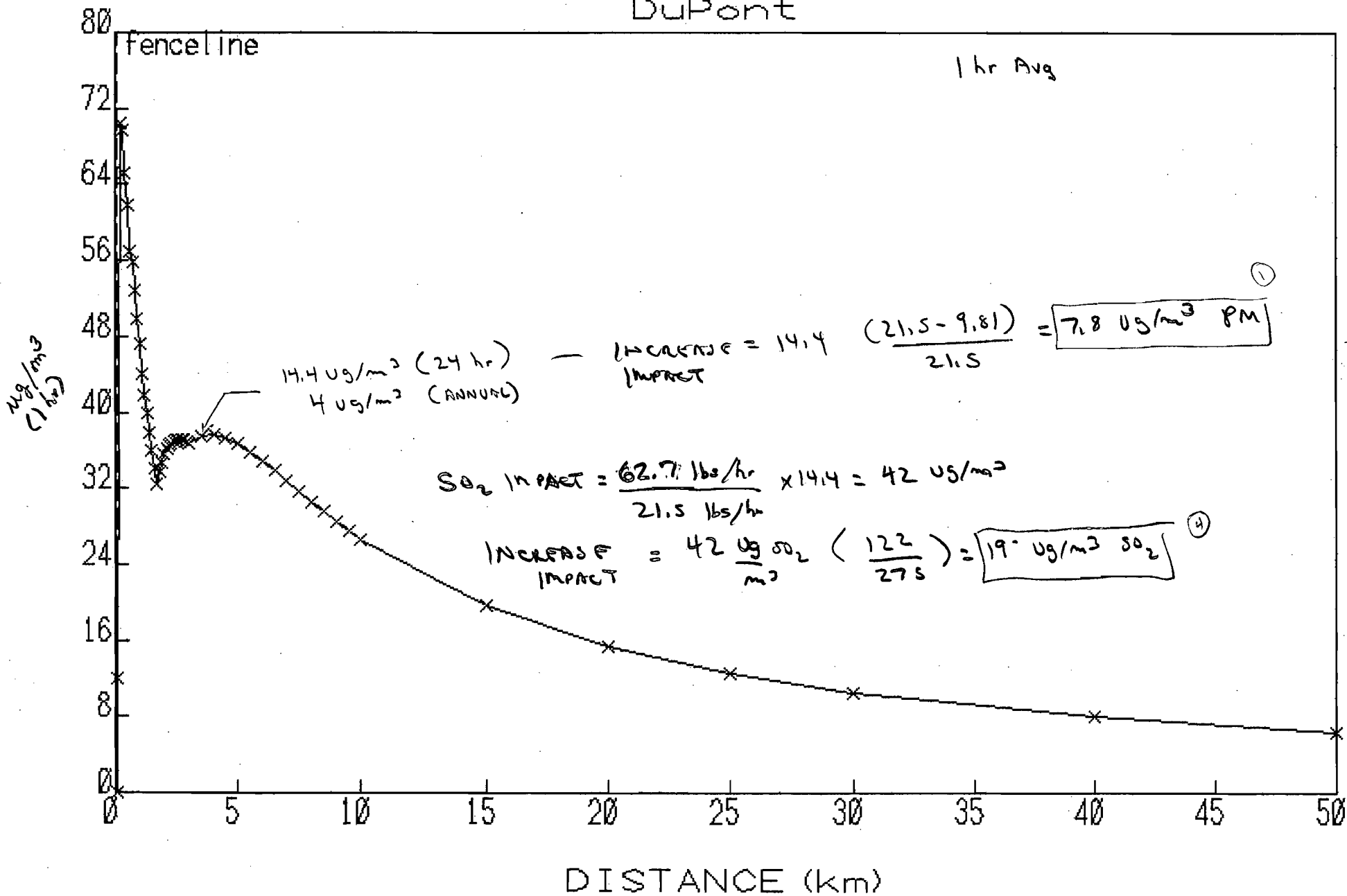
Thank you for the opportunity to review and comment on this package. If you have any further questions or comments, please do not hesitate to contact Mr. Gregg Worley of my staff at (404) 347-2904.

Sincerely yours

Jewell A. Harper, Chief  
Air Enforcement Branch  
Air Pesticides and Toxics  
Management Division

cc: W. Woods  
A. Kutyna  
CHF/ISA

# DuPont



Maximum concentration  $7.262\text{E}+001$  micrograms/cubic meter at 0.253 km



Department of Environmental Regulation  
**Routing and Transmittal Slip**

To: (Name, Office, Location)

1. Max Lynn
- 2.
- 3.
- 4.

Remarks:

Du Pont Stack Parameters  
height 40' (12.2m)  
Diameter 1.5' (0.46m)  
Temperature 270°F (406°C)  
Velocity 195.5 FPS (59.6 m/s)  
Emission PM = 21.5 lbs/hr (2.71 g/s)  
What is dispersion for out, say  
10 miles?

From:

WML

Date

12-10-90

Phone



**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED

FLORIDA PLANT  
P.O. BOX 753  
STARKE, FLORIDA 32091

November 14, 1990

CHEMICALS AND PIGMENTS DEPARTMENT

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

RECEIVED  
NOV 20 1990  
DER-BAQM

Re: Notice of Intent  
E. I. du Pont de Nemours & Company, (Inc.)  
DER File No. AC 10-180154

Dear Mr. Fancy:

Pursuant to the requirements of your letter dated October 26, 1990, and Florida Administrative (FAC) Section 17-103.150 and Florida Statute (FS) 403.815, enclosed are proofs of publication for NOTICE OF INTENT pertaining to the above referenced permit. The notice was published in two (2) newspapers of general circulation within the affected area, in accordance with the requirements of Section 50.011 and 50.031 F.S.

This proof of publication completes Du Pont's Notice of Intent requirements. Therefore, your prompt issuance of the subject permit is respectively requested immediately following the fourteen (14) day period from the date of this submittal.

Sincerely,

Chris C. Mason  
Senior Engineer

CCM  
Enclosures

cc: Mr. Pradeep A. Raval, Koogler & Associates  
Mr. Donald V. Luebke, Du Pont  
Mr. Richard F. Freas, Du Pont

# PUBLISHER'S AFFIDAVIT

## Clay County Crescent

Published Weekly  
Green Cove Springs, Florida

STATE OF FLORIDA  
COUNTY OF CLAY:

Before the undersigned authority personally appeared Bruce Causey, who on oath says that he is the Publisher of the "Clay County Crescent," a weekly newspaper published at Green Cove Springs in Clay County, Florida; that the attached copy of advertisement being a

NOTICE OF INTENTION TO ISSUE

in the matter of the Department of Environmental Regulation gives notice of its intent to issue a permit which will authorize E.I. DuPont de Nemours & Company, Inc. to increase production of the Trail Ridge plant's zircon kiln located off State Road 230 approximately 5 miles east of Starke, Clay County Florida

in the Department of Environmental Regulation was published in said newspaper in the issues of November 8, 1990

Affiant further says that said "Clay County Crescent" is a newspaper published at Green Cove Springs, in said Clay County, Florida and that the said newspaper has heretofore been continuously published in said Clay County, Florida, each Thursday and has been entered as second class mail matter at the post office in Green Cove Springs, in said Clay County, Florida for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed  
before me this 8th day of November A.D. 1990

Kathy A. Norris  
NOTARY PUBLIC, STATE OF FLORIDA

Notary Public, State of Florida at Large  
My Commission Expires April 29, 1991

*A Weekly Tradition Since 1891"*

## Clay County Crescent

P.O. Box 578, Green Cove Springs, Florida 32043  
Phone: (904) 284-3166; FAX: (904) 284-4070



### LEGAL NOTICE

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL  
REGULATION  
NOTICE OF INTENT  
TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit which will authorize E. I. DuPont de Nemours & Company, Inc. to increase production of the Trail Ridge plant's zircon kiln located off State Road 230 approximately 5 miles east of Starke, Clay County, Florida. Allowable emissions will increase to 21.5 lbs/hr (94.7 TPY) particulate matter, 62.2 lbs/hr (274.7 TPY) sulfur dioxide, and 7.7 lbs/hr (33.7 TPY) nitric oxides. The increase in emissions will not cause or contribute to a violation of the ambient air quality standard, a determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

Department of  
Environmental Regulation  
Northeast District  
3426 Bills Road  
Jacksonville, Florida 32207

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

# The Bradford County Telegraph

Published Weekly  
Starke, Bradford County, Florida

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
NOTICE OF  
INTENT TO ISSUE  
The Department of Environmental  
Regulation hereby gives notice of its in-  
tent to issue a permit which will  
authorize E.I. Dupont de Nemours &  
Company, Inc. to increase production of  
the Trail Ridge plant's zircon kiln located

STATE OF FLORIDA,  
COUNTY OF BRADFORD:

Before the undersigned authority personally appeared B.G. Ferguson,  
who on oath says that he is publisher of THE BRADFORD COUNTY  
TELEGRAPH, a weekly newspaper published at Starke in Bradford  
County, Florida; that the attached copy of advertisement, being a \_\_\_\_\_

Notice

in the matter of \_\_\_\_\_ State of Florida, Department of Environmental Regulation, Notice  
of Intent to Issue

in the \_\_\_\_\_ Court, was published in said newspaper in the issues of  
11/8/90

Affiant further says that the said BRADFORD COUNTY TELEGRAPH is a newspaper  
published at Starke, in said Bradford County, Florida, and that the said newspaper has  
heretofore been continuously published in said Bradford County, Florida, once each week  
and has been entered as second class mail matter at the post office in Starke, in said Brad-  
ford County, Florida, for a period of one year next preceding the first publication of the at-  
tached copy of advertisement; and affiant further says that he has neither paid nor promis-  
ed any person, firm or corporation any discount, rebate, commission or refund for the pur-  
pose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me

this 8 day of November

A.D. 19 90

Bob G. Ferguson  
Bob G. Ferguson

Jewel O'Neal  
Notary Public

(SEAL)

Notary Public, State of Florida  
My Commission Expires May 6, 1994  
Bonded Thru Troy Fain - Insurance Inc.



off State Road 230 approximately 5 miles east of Starke, Clay County, Florida. Allowable emissions will increase to 21.5 lbs/hr (94.4 TYP) particulate matter, 62.7 lbs/hr (274.7 TPY) sulfur dioxide, and 7.7 lbs/hr (33.7 TPY) nitric oxides. The increased emissions will not cause or contribute to a violation of the ambient air quality standard. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

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

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

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

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

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

Department of Environmental Regulation, Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; Department of Environmental Regulation, Northeast District, 3426 Bills Road, Jacksonville, Florida 32207.

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

11/81 tchg PO No. 695

# The Bradford County Telegraph

Published Weekly  
Starke, Bradford County, Florida

STATE OF FLORIDA,  
COUNTY OF BRADFORD:

Before the undersigned authority personally appeared B.G. Ferguson, who on oath says that he is publisher of THE BRADFORD COUNTY TELEGRAPH, a weekly newspaper published at Starke in Bradford County, Florida; that the attached copy of advertisement, being a \_\_\_\_\_

Notice

in the matter of State of Florida, Department of Environmental Regulation,  
Notice of Intent to Issue

in the \_\_\_\_\_ Court, was published in said newspaper in the issues of  
11/8/90

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

Sworn to and subscribed before me

this 8 day of November

A.D. 19 90

Bob G. Ferguson  
Bob G. Ferguson

Jewel Ordeal  
Notary Public

(SEAL)

Notary Public, State of Florida  
My Commission Expires May 6, 1994  
Bonded Thru Troy Fain - Insurance Inc.



cc: N. Wamba  
A. Rutger

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
NOTICE OF  
INTENT TO ISSUE

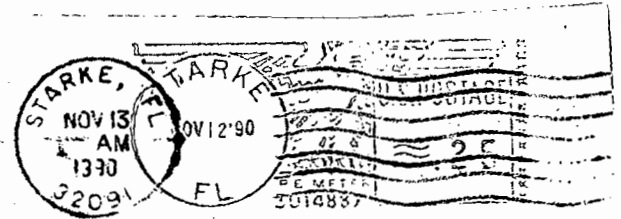
The Department of Environmental Regulation hereby gives notice of its intent to issue a permit which will authorize E.I. Dupont de Nemours & Company, Inc. to increase production of the Trail Ridge plant's zircon kiln located off State Road 230 approximately 5 miles east of Starke, Clay County, Florida. Allowable emissions will increase to 21.5 lbs/hr (94.4 TYP) particulate matter, 62.7 lbs/hr (274.7 TPY) sulfur dioxide, and 7.7 lbs/hr (33.7 TPY) nitric oxides. The increased emissions will not cause or contribute to a violation of the ambient air quality standard. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.



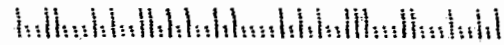
THE BRADFORD COUNTY  
— SINCE 1879 —  
**Telegraph**

P. O. Drawer A  
STARKE, FLORIDA 32091

Dept. of Environmental Regulation  
Bureau of Air REGulation  
2600 Blair Stone Raod  
Tallahassee, Florida 32399-2400



**RECEIVED**  
NOV 15 1990  
ULR-BAQM



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

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

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

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

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

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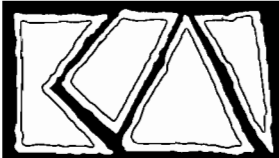
The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation, Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; Department of Environmental Regulation, Northeast District, 3426 Bills Road, Jacksonville, Florida 32207.

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

11/8 1tchg PO No. 695





KOGLER & ASSOCIATES

ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
904/377-5822 • FAX 377-7158

KA 148-90-01

November 8, 1990

RECEIVED

NOV 13 1990

DER-BAQM

Mr. Clair H. Fancy  
Florida Department of  
Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Subject: E.I. DuPont de Nemours & Co., Inc.  
Trail Ridge Facility  
Zircon Kiln, Permit No. AC10-180154

Dear Clair:

This is in response to the Department's Intent to Issue the above referenced permit for the Zircon kiln located at the Trail Ridge facility, Clay County, Florida.

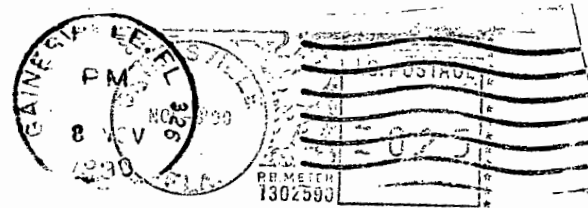
The only comment we have concerns Specific Condition No. 4. It does not seem appropriate to impose emission limitations on the Ilmenite dryers and the Zircore kiln through a specific condition in the Zircon kiln permit. These sources are independent in their operation and are permitted separately. Furthermore, the emissions limitations for the respective sources are presently already addressed in the following individual permits:

Ilmenite Dryer Nos. 1 and 2:	A010-123142
Zircore Kiln:	A010-160224
Zircon Kiln:	A010-177632

The same is true for the individual compliance testing requirements and FDER's authority to require testing when compliance status is suspect.

If the Department wishes to document the air emissions used in the permit review process, we recommend the following change to Specific Condition No. 4 to serve that purpose without inadvertently requiring source emission restrictions in multiple permits:

KOGLER & ASSOCIATES  
4014 NW 13 STREET  
GAINESVILLE, FL 32609



Mr. Clair H. Fancy  
Florida Department of  
Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Mr. Clair H. Fancy  
Florida Department  
of Environmental Regulation

November 8, 1990  
Page 2

From: Particulate matter and sulfur dioxide emissions from the other sources at this facility shall not exceed the quantities listed below.

(Table)

Emission tests may be required when the Department has reasons to suspect these standards are being exceeded.

To: Particulate matter and sulfur dioxide emissions from the other sources at this facility are stated below for inventory purposes.

(Table)

Emission tests may be required when the Department has reasons to suspect that the standard stated in Specific Condition No. 3 is being exceeded.

If necessary, we will gladly meet with the Department to resolve this issue.

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOGLER & ASSOCIATES



Pradeep A. Raval

PAR:wa

cc: Mr. Mark Brimhall

*A. Nanda*  
*C. Holladay*  
*A. Kutyma*





# 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 30, 1990

Ms. Jewell A. Harper  
Air Enforcement Branch  
U.S. Environmental Protection Agency  
Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

Dear Ms. Harper:

Re: File No. AC 10-180154, DuPont

Attached is a copy of a Technical Evaluation and Preliminary Determination for E.I. DuPont de Nemours & Company, Inc. to increase production and emissions from an existing zircon kiln. The review engineer concluded that the kiln was not subject to new source performance standards or PSD regulations because the kiln has never had a federally enforceable permit. We would like your comments on this matter.

Sincerely,

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

CHF/WH/plm

Attachment

c: Bill Congdon

P 280 742 399

**RECEIPT FOR CERTIFIED MAIL**

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

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

PS Form 3800, June 1985

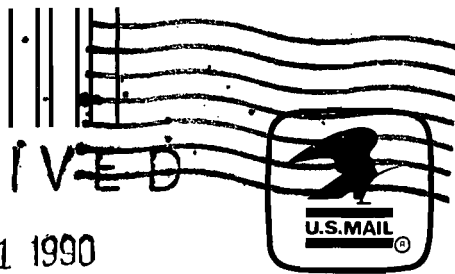
Sent to <i>Mark E Brimhall</i>	
Street and No. <i>E. I. DuPont de Nemours</i>	
P.O. State and ZIP Code <i>P.O. BOX 753</i>	
Postage <i>Starke, FL</i>	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date <i>10-26-90</i> <i>AC 10-180154</i>	

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

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

3. Article Addressed to: <i>Mark E. Brimhall, Env. Coord. E. I. DuPont de Nemours &amp; Co. P.O. BOX 753 Starke, FL 32091</i>	4. Article Number <i>P 280 742 399</i>
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <b>X</b>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent <i>X [Signature]</i>	
7. Date of Delivery <i>10-29-90</i>	

UNITED STATES POSTAL SERVICE  
OFFICIAL BUSINESS



**SENDER INSTRUCTIONS**

Print your name, address and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RECEIVED

NOV 1 1990

DER - BAQM

PENALTY FOR PRIVATE  
USE, \$300

RETURN  
TO



Print Sender's name, address, and ZIP Code in the space below.

Patty Adams-D.E.R. BAR  
2600 Blain Stone Rd - Twin Towers  
Tallahassee, FL 32399-2400



# 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 26, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Mark E. Brimhall, Environmental Coordinator  
E. I. DuPont de Nemours & Company, Inc.  
Post Office Box 753  
Starke, Florida 32091

Dear Mr. Brimhall:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to increase the production of the zircon kiln located at the Trail Ridge plant.

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

Sincerely,

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

CHF/WH/plm

Attachments

c: Andy Kutyna, NE District  
John Koogler, P.E.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

E. I. DuPont de Nemours & Company, Inc. DER File No. AC 10-180154  
Post Office Box 753  
Starke, Florida 32091

---

INTENT TO ISSUE

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

The applicant, E. I. DuPont de Nemours & Company, Inc., applied on May 7, 1990, to the Department of Environmental Regulation for a permit to increase the production of the zircon kiln located at the Trail Ridge plant that is on State Road 230 approximately 5 miles east of Starke in Clay County, Florida.

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

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

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



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

The Petition shall contain the following information;

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

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

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

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

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

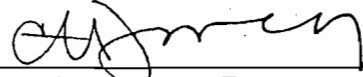
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION



---

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

Copies furnished to:

Andy Kutyna, NE District  
John Koogler, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 10-26-90.

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

Kyma Jober  
Clerk

10-26-90  
Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit which will authorize E. I. DuPont de Nemours & Company, Inc. to increase production of the Trail Ridge plant's zircon kiln located off State Road 230 approximately 5 miles east of Starke, Clay County, Florida. Allowable emissions will increase to 21.5 lbs/hr (94.4 TPY) particulate matter, 62.7 lbs/hr (274.7 TPY) sulfur dioxide, and 7.7 lbs/hr (33.7 TPY) nitric oxides. The increased emissions will not cause or contribute to a violation of the ambient air quality standard. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

Department of Environmental Regulation  
Northeast District  
3426 Bills Road  
Jacksonville, Florida 32207

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

Technical Evaluation  
and  
Preliminary Determination

E. I. DuPont de Nemours & Company, Inc.  
Clay County  
Trail Ridge Plant, Florida

Trail Ridge Zircon Kiln  
File No. AC 10-180154

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

October 26, 1990

I. General Information

A. Applicant

E. I. Dupont de Nemours and Company, Inc.  
Post Office Box 753  
Starke, Florida 32091

B. Request

An incomplete application was submitted to the Department on May 7, 1990, which requested permission to increase the production of the zircon kiln at the applicant's Trail Ridge metallic minerals mining and processing plant (SIC 1099). The application was considered complete on receipt of Koogler & Associates' August 6, 1990, letter.

C. Project

The applicant operates a zircon kiln (and other air pollution sources) at his Trail Ridge plant that is located off State Road 230, approximately 5 miles east of Starke, in Clay County, Florida. The UTM coordinates of this site are Zone 17, 400.2 km E and 3309.3 km N. The source consists of a rotary kiln, rotary cooler, dry cyclone, and material handling equipment.

The applicant is requesting permission to increase production of this kiln from 10 TPH to 18 TPH while burning up to 140 GPH (20.5 MMBtu/hr) of No. 6 fuel oil which contains a maximum of 2.8 percent sulfur. No physical modifications are needed to operate the plant at the higher production rate. The plant was originally permitted to operate with a production of 10 TPH.

D. Emissions

Moisture in the scrubbed wet mill concentrate feed to the dryer should minimize unconfined emissions of particulate matter (PM) from this material. A dry cyclone controls PM emissions from zircon kiln and cooler. Tests have measured PM emissions near the permitted production rate (10 TPH) at 9.81 lbs/hr. The applicant is requesting a PM emission standard of 21.5 lbs/hr as allowed by the process weight table in the Department's air pollution control regulation for 18 TPH production. Sulfur dioxide emissions are controlled by limiting the sulfur content of the fuel to 2.8 percent.

Fugitive emissions are controlled by water slurring, enclosed piping/screw conveying, enclosed bucket elevators and water spraying.

A summary of the proposed emissions is shown below:

<u>Pollutant</u>	<u>Emissions lbs/hr</u>	<u>Emissions TPY</u>
PM	21.5.	94.4
SO <sub>2</sub>	62.7	274.7
NO <sub>x</sub>	7.7	33.7

At 10 TPH production (original production rate), the allowable PM emissions were 15 lbs/hr (65.7 TPY). Thus, the project will increase allowable PM emissions by 28.7 TPY. The emissions of SO<sub>2</sub> and NO<sub>x</sub> are estimated to increase by 122 and 15 TPY, respectively.

## II. Rule Applicability

### A. State Regulations

The proposed project, increasing the production at a metallic mineral processing plant (SIC 1099), is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The facility is in an area designated attainment for all criteria pollutants (F.A.C. Rule 17-2.420).

The plant is at a major source of particulate matter, sulfur dioxide, and nitrogen oxides because emissions of each of these pollutants exceed 100 TPY. The higher production rate could cause a significant net emissions increase of particulate matter and sulfur dioxide.

This source has never had a federally enforceable permit. Therefore, the increased production proposed for this plant is not subject to the Prevention of Significant Deterioration (PSD) regulations (F.A.C. Rule 17-2.500) because it is not a modification by definition (F.A.C. 17-2.100(118)(b)).

Allowable emissions from this source shall be based on F.A.C. 17-2.610, General Particulate Emission Limiting Standards, F.A.C. 17-2.610(3), Unconfined Emissions of Particulate Matter, and the data, including the requested limits, submitted in the application.

### B. Federal Regulations

The project is not subject to review under PSD regulations because the proposed increases in production and emissions are not a modification by definition. The proposed changes are not prohibited under any federally enforceable permit condition that was established after January 8, 1975, (40 CFR 52.21(b), Definitions). No capital investment associated with this source has been made since August 24, 1982, that would subject it to a new source performance standard.



### III. Technical Evaluation

The plant is using the cyclone that was constructed under permit AC 10-2297 dated October 30, 1974, to control the particulate matter emissions from the zircon kiln. Tests show the kiln can comply with the particulate matter emission standards specified in the process weight table of the Department's regulations. This source will be required to comply with the process weight table and the emission standard they proposed. If the kiln is modified, the more restrictive new source performance standards for metallic mineral processing plants, 40 CFR 60, Subpart LL, may be applied to this source.

Sulfur content of the No. 6 fuel oil will be limited to 2.8% as requested by the applicant. Should a future plant modification cause a significant net emissions increase of SO<sub>2</sub>, the dryer may be required to burn lower sulfur fuel.

The factor used to estimate NO<sub>x</sub> emissions, 55 lbs/1,000 gallons of fuel, is for boilers. The Department has reservations on using this factor for dryers and believes actual NO<sub>x</sub> emissions could be higher. Even with a significantly higher NO<sub>x</sub> emission rate, we do not anticipate any deterioration of the air quality at any distance from the plant caused by this pollutant. The Department should be furnished with actual NO<sub>x</sub> emissions data with any future application to modify this source.

### IV. Air Quality Analysis

The applicant has calculated the impact of the emissions from all sources at this facility. This analysis shows that the 24-hr particulate matter and 24-hr sulfur dioxide ambient air quality standards may be exceeded on the limited access road to the plant and the plant property itself while this kiln is operating at the higher production rate. However, the Department does have reasonable assurance that these ambient air quality standards will not be exceeded on property accessible to the public.

### V. Conclusion

Based on the information provided by E. I. DuPont de Nemours & Company and Koogler & Associates, the Department has reasonable assurance that the operation of the Trail Ridge plant's zircon kiln system at an 18 TPH production rate, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any state or national ambient air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code, on property accessible to the public.



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**

E. I. DuPont de Nemours  
and Company, Inc.  
Post Office Box 753  
Starke, Florida 32091

Permit Number: AC 10-180154

Expiration Date: March 1, 1991

County: Clay

Latitude/Longitude: 29°54'42"N  
82°02'00"W

Project: Trail Ridge Zircon Kiln  
System

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

Authorization to increase the production of the Trail Ridge zircon kiln system from 10 TPH to 18 TPH. The system consists of a rotary cooler, rotary kiln, fuel system, material handling system (piping, screw conveyors, enclosed bucket elevator, centrifugal classifier), dry cyclone, water spray system, and associated equipment. The kiln is located in Clay County off State Road 230, approximately 5 miles east of Starke, Florida. The UTM coordinates of this site are Zone 17, 400.2 km E and 3309.3 km N.

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

Attachments are listed below:

1. Application received May 7, 1990.
2. DER letter dated May 18, 1990.
3. Koogler & Associates letter dated May 29, 1990.
4. DER letter dated May 18, 1990.
5. Koogler & Associates letter dated August 6, 1990.

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

**GENERAL CONDITIONS:**

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

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

GENERAL CONDITIONS:

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

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

GENERAL CONDITIONS:

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

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

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

**GENERAL CONDITIONS:**

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

**SPECIFIC CONDITIONS:**

1. Kiln production shall not exceed 18.0 TPH. The permittee shall have instruments or other means available to determine the production of this kiln.

2. Heat input by No. 6 fuel oil to the kiln shall not exceed 20.5 MMBtu/hr. Approximately 140 GPH is equivalent to this heat input. Sulfur content of the fuel oil shall not exceed 2.8%. A log of the fuel oil consumption of the kiln and invoices of the fuel oil purchases that give its sulfur content or analysis of the fuel oil for sulfur by ASTM Method D-129-64 shall be maintained to show compliance with this condition.

3. Particulate matter (PM) emissions from the kiln cyclone, as determined by Method 5 which is described in 40 CFR 60, Appendix A (July 1, 1988), shall not exceed the amount allowed by the process weight table (F.A.C. Rule 17-2.610(1)(b)) and 21.5 lbs/hr.

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

SPECIFIC CONDITIONS:

4. Particulate matter and sulfur dioxide emissions from the other sources at this facility shall not exceed the quantities listed below.

Source	Emissions (lbs/hr)	
	PM	SO <sub>2</sub>
Ilmenite dryer No. 1	31.3	35.8
Ilmenite dryer No. 2	31.3	35.8
Zircore kiln	9.1	33.9

Emission tests may be required when the Department has reasons to suspect these standards are being exceeded.

5. Visible emissions from any source at this facility, as determined by Method 9 which is described in 40 CFR 60, Appendix A (July 1, 1988), shall not exceed 20% opacity, 6 minute average.

6. Unconfined emissions shall be minimized by wetting the fines discharged from the cyclone and any other part of the plant that is dusty. Alternate precautions may be used on conveyors and other equipment.

7. The plant may operate continuously, 8760 hours per year.

8. This permit requires PM, fuel sulfur content, and visible emissions tests for only the zircon kiln. All compliance tests shall be conducted while the kiln is operating within 10% of its permitted capacity. Except during compliance tests, the kiln shall not be operated above its permitted rate. The particulate matter emissions and visible emissions shall be determined concurrently. Under circumstances when this is not feasible, the permittee shall obtain prior approval from the Northeast District to conduct the tests at separate times. In such circumstances, the tests shall be conducted as close to each other as is feasible. The Northeast District shall be notified in writing at least 15 days prior to any compliance test. A tests report that provides the information required by F.A.C. Rule 17-2.700(7), shall be submitted to the District within 45 days of the date of the testing.

9. The permittee shall not replace any process equipment in use with this kiln system with process equipment that has higher production potential without prior approval of the Department.

PERMITTEE:  
E. I. DuPont de Nemours  
Company, Inc.

Permit Number: AC 10-180154  
Expiration Date: March 1, 1991

**SPECIFIC CONDITIONS:**

10. The permittee shall take reasonable precautions to prevent public access to the plant entrance road. These precautions shall include installing a sign on the plant entrance road that prohibits the use of the road by the public and routine patrols of the road adjacent to the plant by plant personnel.

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

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

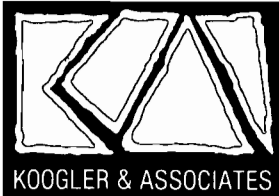
Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1990

**STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION**

---

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





**KOGLER & ASSOCIATES**

ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
904/377-5822 • FAX 377-7158

KA 148-90-01

August 6, 1990

RECEIVED

AUG 7 1990

DER - BAQM

Mr. Clair Fancy  
Florida Department of  
Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Subject: E.I. DuPont de Nemours & Co., Inc.  
Trail Ridge  
Zircon Kiln Permit Amendment  
File No AC10-180154

Dear Clair:

This is in response to your letter dated June 22, 1990, which discussed the modeling results of the ambient air impacts for particulate matter and sulfur dioxide emitted from DuPont's Trail Ridge plant.

As discussed with Cleve Holladay and Willard Hanks of your staff, we are submitting the modeling done for the DuPont Trail Ridge plant using updated information regarding air emission rates and receptor locations. The ISC-ST model results (see Attachment 4) provide reasonable assurance that the Zircon kiln as proposed will not cause a violation of any ambient air quality standard (see Table 2).

The modeling was done using the approved EPA ISC-ST model with 1986 Jacksonville meteorological data provided by FDER. The modeling inputs, shown in Table 1, reflects the current information from the permits and compliance test reports. The updated emission data used in modeling are more conservative than the data used in FDER's modeling.

A. Emission Rates

The emission rate inputs have been updated to reflect the currently permitted (maximum allowable) emissions for the Ilmenite Dryer Nos. 1 and 2, Zircon Kiln, and Zircore Kiln. The stack parameters are from test reports submitted to the Department. Table 1 summarizes the inputs used for the modeling.

B. Receptor Location

Receptors, using the polar receptor grid system, have been located to correspond to the DuPont facility boundary. Based on information obtained from DuPont and Camp Blanding (U.S. Government military training facility), the areas restricting public access are shown on Attachments 1, 2, and 3. DuPont's mining and processing operations are located on land which has been leased from Camp Blanding. DuPont has operated at this location for several decades under the lease and will continue to operate until the mineral ore being mined is exhausted.

The DuPont Trail Ridge facility is enveloped by the Camp Blanding boundary which is fenced, except across major roads. Entry into Camp Blanding property from the major roads is restricted by gates. Entry to the DuPont facility is by a private (DuPont) road from Highway 230 to the Trail Ridge plant. The private road is fenced on either side and a security gate is located within a kilometer of the offices. The nearest public road is approximately three kilometers from the sources modeled.

Since the distance from the sources to the nearest fenced boundary is 1.5 km, the receptors are located at a radius of 1.5 km and 1.75 km. The results obtained in FDER's modeling indicate a gradual and definite decrease in impacts beyond 500 meters of the sources. This trend is also reflected in the attached modeling results when comparing the impacts at a distance of 1500 meters and 1750 meters from the sources. Additional receptor rings were not necessary as confirmed by the modeling results.

The modeling results show that the ambient impacts for both particulate matter and sulfur dioxide are well below the ambient air quality standards. The PM annual and 24-hr maximum impacts are 5.6 and 68.8  $\mu\text{g}/\text{m}^3$ , respectively, compared with the AAQS of 50 and 150  $\mu\text{g}/\text{m}^3$ , respectively. The  $\text{SO}_2$  annual, 24-hr, and 3-hr maximum impacts are 9.3, 110.4, and 335.2  $\mu\text{g}/\text{m}^3$ , respectively, compared with the AAQS of 60, 260, and 1300  $\mu\text{g}/\text{m}^3$ , respectively. Even with appropriate background levels added, the PM and  $\text{SO}_2$  impacts will be well below AAQS.

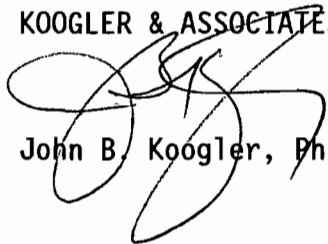
Mr. Clair Fancy  
Florida Department  
of Environmental Regulation

August 6, 1990  
Page 3

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOGLER & ASSOCIATES



John B. Koogler, Ph.D., P.E.

JBK:wa  
Enc.

cc: Mr. Mark Brimhall

*M. Hanks*  
*C. Holladay (w/attachment 4)*  
*A. Kutyna, NE Dist.*  
*CHF/BA*



TABLE 1

MODELING INPUT

E.I. DUPONT DE NEMOURS & COMPANY, INC.  
 TRAIL RIDGE PLANT  
 STARKE, CLAY COUNTY, FLORIDA

Source	Emissions		Stack Diameter (m)	Stack Height (m)	Gas Temp (°K)	Gas Velocity (m/s)
	PM (g/s)	SO <sub>2</sub> (g/s)				
1. Ilmenite Dryer No. 1	3.95	4.51	0.61	10.06	366	18.1
2. Ilmenite Dryer No. 2	3.95	4.51	0.61	10.06	366	19.9
3. Zircon Kiln	2.71	7.91	0.46	12.19	405	59.6
4. Zircore Kiln	1.15	4.28	0.39	12.19	466	31.4



TABLE 2

MODELING RESULTS

E.I. DUPONT DE NEMOURS & COMPANY, INC.  
TRAIL RIDGE PLANT  
STARKE, CLAY COUNTY, FLORIDA

Pollutant	Ambient Impact ug/m3	Ambient Air Quality Standard ug/m3
PM/PM10		
Annual	5.6	50
24-hr	68.8	150
SO <sub>2</sub>		
Annual	9.3	60
24-hr	110.4	260
3-hr	335.2	1300

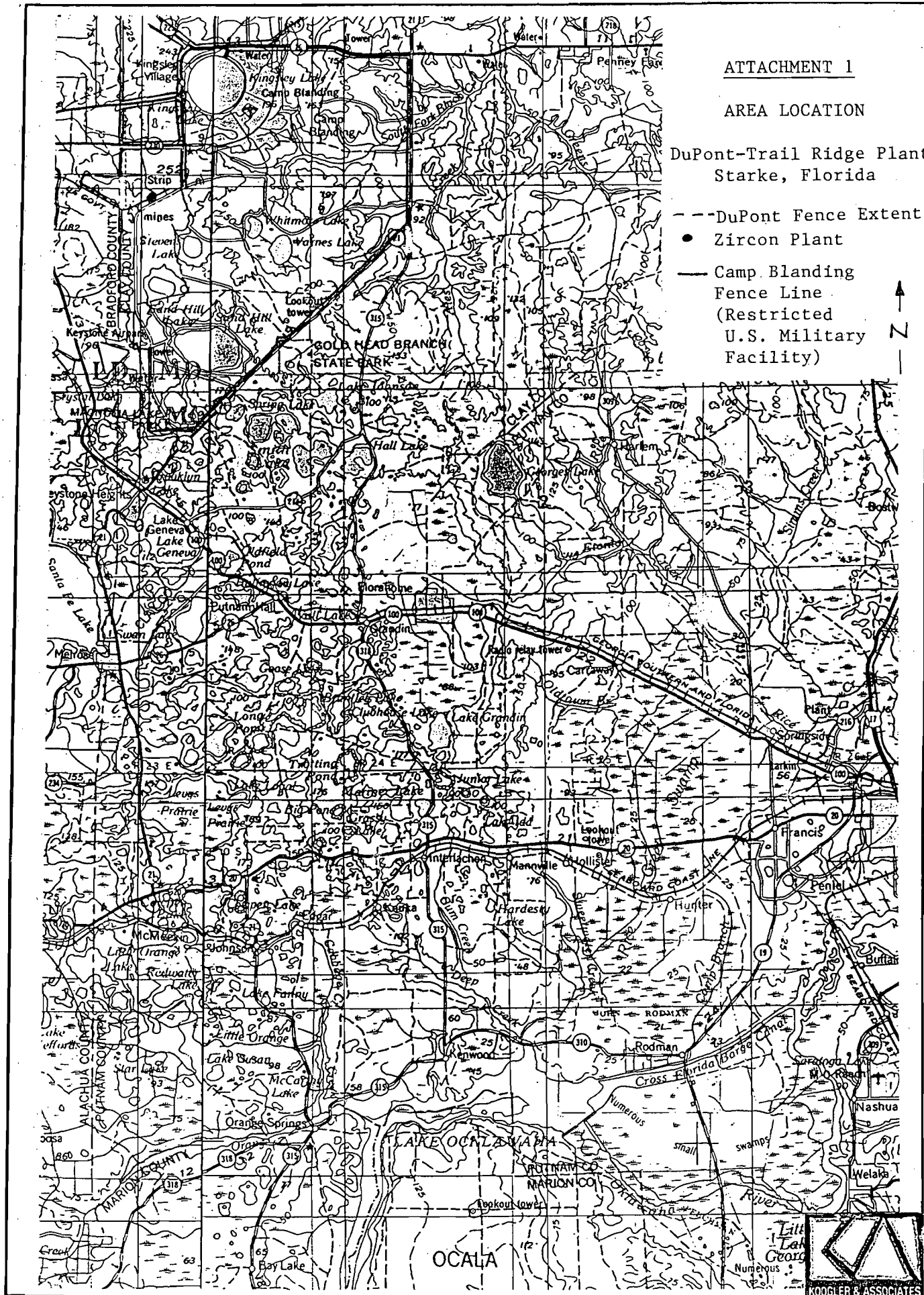


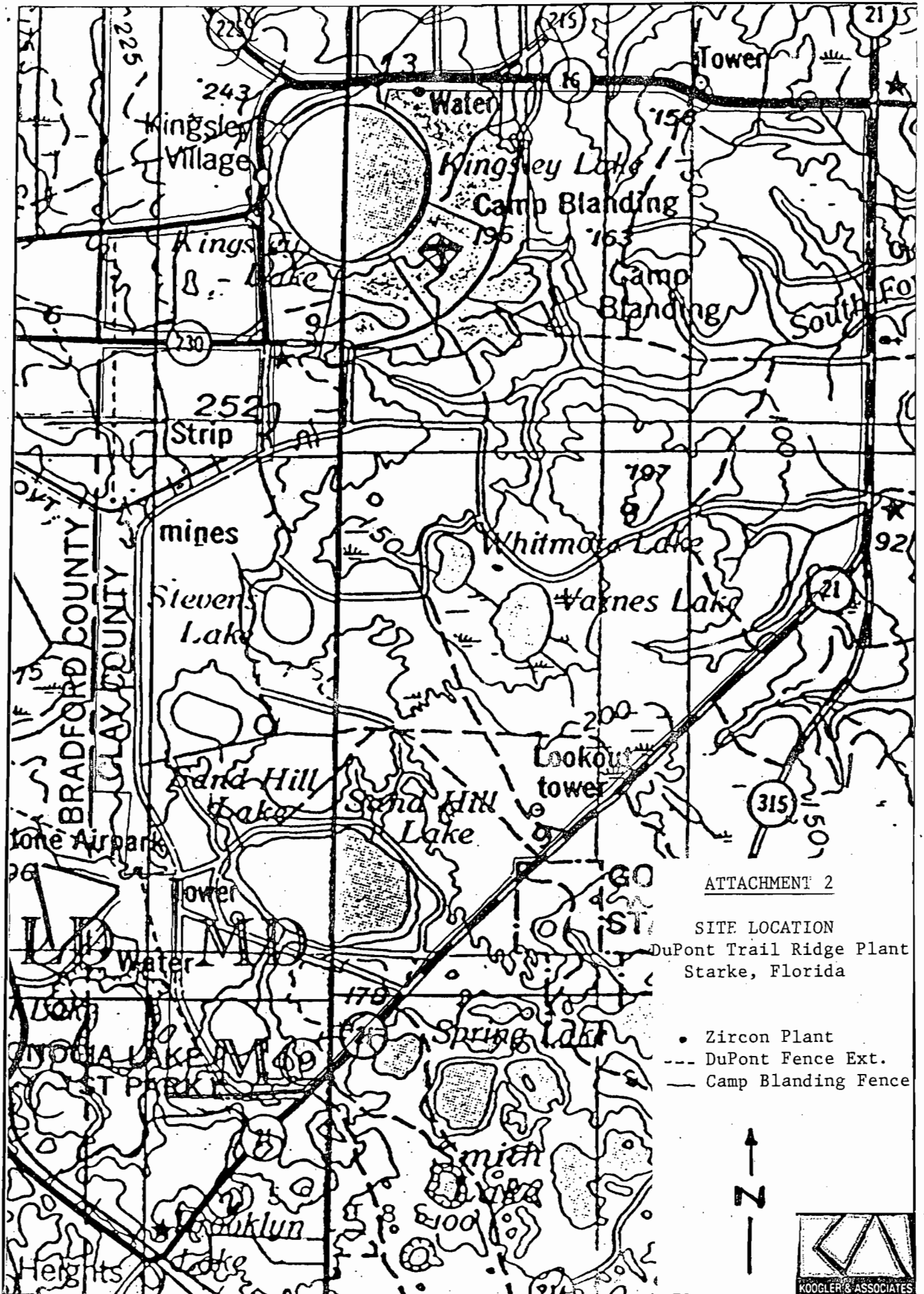
ATTACHMENT 1

AREA LOCATION

DuPont-Trail Ridge Plant  
Starke, Florida

- - - DuPont Fence Extent
- Zircon Plant
- Camp Blanding  
Fence Line  
(Restricted  
U.S. Military  
Facility)





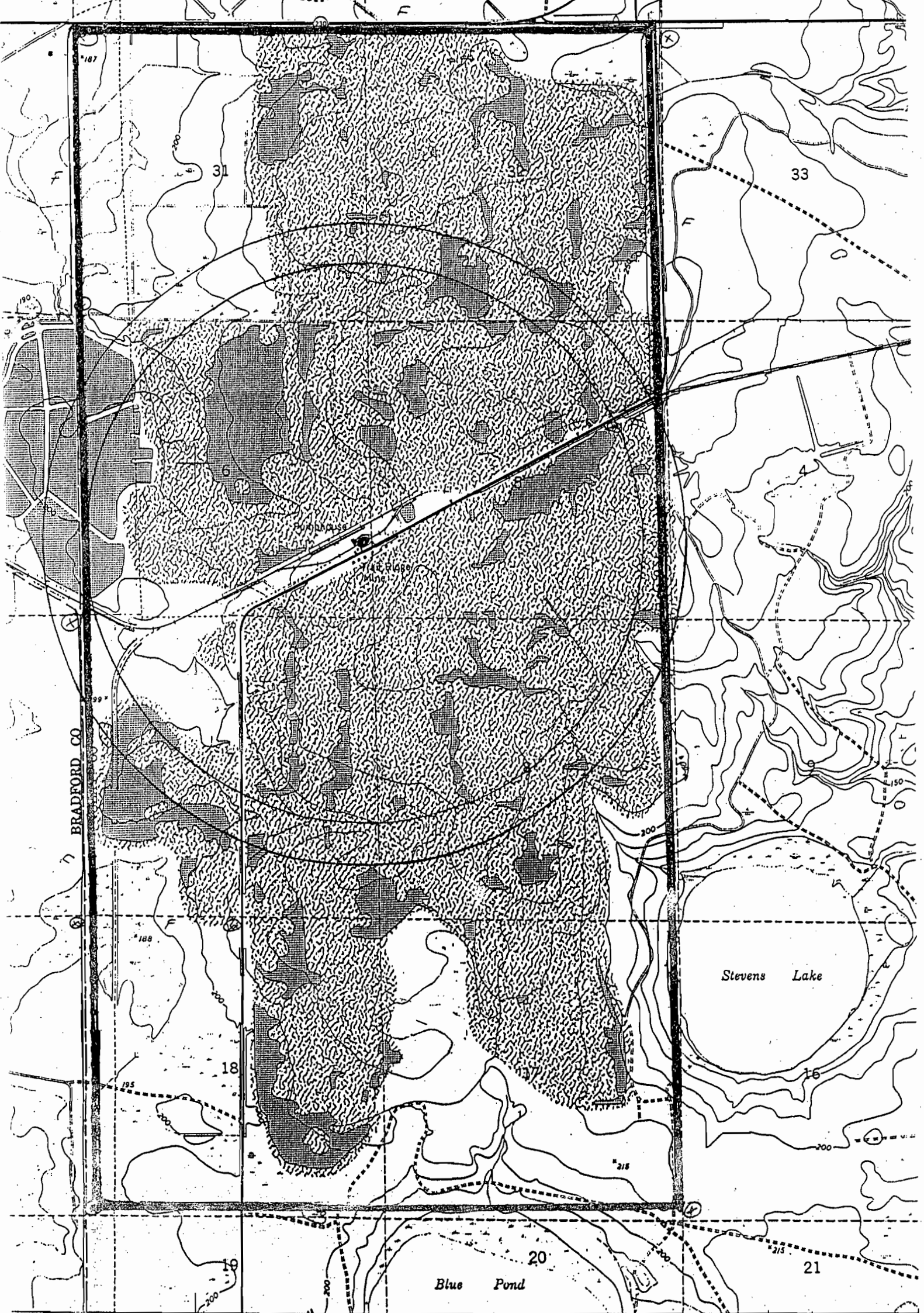
ATTACHMENT 2

SITE LOCATION  
 DuPont Trail Ridge Plant  
 Starke, Florida

- Zircon Plant
- DuPont Fence Ext.
- Camp Blanding Fence







R. 22 E. R. 23 E. 2'30" 5.4 MI. TO FLORIDA 21 KEYSTONE HEIGHTS 7.9 MI. 401 INTERIOR—GEOLOGICAL SURVEY, WASHINGTON D C—1972 180 000 FEET (EAST) 403 000m. E.

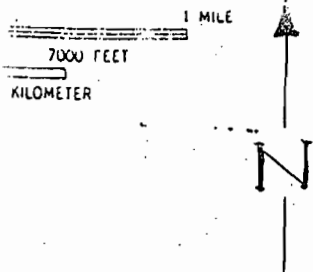
**ATTACHMENT 3**  
**RECEPTOR LOCATION**  
 DuPont Trail Ridge Plant  
 Starke, Florida



QUADRANGLE LOCATION

- Receptor Ring
- Camp Blanding Fence
- - - DuPont Fence Extension
- ▨ Area Leased From Camp Blanding

- Zircon Plant
- ROAD CLASSIFICATION
- Heavy-duty ——— 4 LANE 6 LANE Light-duty ———
- Medium-duty ——— 4 LANE 6 LANE Unimproved dirt ———
- ⊠ U. S. Route
- State Route



**STARKE, FLA**  
 NE/4 STARKE 15' QUADRAN  
 180000 E 403000 N



P 256 396 106

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

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

PS Form 3800, June 1985

To Mark E. Brinkhall	
Street and No. E. I. duPont de Nemours	
P.O., State and ZIP Code P.O. Box 753	
Postage Starke, FL	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date 6-22-90 AC 10-18D154	

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

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

3. Article Addressed to: Mark E. Brinkhall Environmental Coordinator E-I. duPont de Nemours & Co. P.O. Box 753 Starke, FL 32091	4. Article Number P 256 396 106
5. Signature - Address X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature of Agent X Andrew Simon	Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b>
7. Date of Delivery 6-25-90	8. Addressee's Address (ONLY if requested and fee paid)

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

**SENDER INSTRUCTIONS**

Print your name, address and ZIP Code in the space below.

- Complete Items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN  
TO



Print Sender's name, address, and ZIP Code in the space below.

Patty Adams - DER-BAR  
2600 Blair Stone Rd. Twin Towers  
Tallahassee, FL 32399-2400

RECEIVED

JUN 26 1990

DER-BAR



PENALTY FOR PRIVATE  
USE, \$300



## *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

June 22, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark E. Brimhall  
Environmental Coordinator  
E.I. DuPont de Nemours & Co. Inc.  
P. O. Box 753  
Starke, Florida 32091

Dear Mr. Brimhal:

Re: File No. AC 10-180154, DuPont Zircon Kiln

The Department has resumed processing your application for a permit to increase the production of the zircon kiln near Starke, Clay County, Florida. We have modeled the ambient impacts of the emissions from this plant using one year of meteorological data and the emission rates and stack parameters we have available for the other sources that were listed in Dr. Koogler's May 29, 1990 letter.

The results do not give the Department reasonable assurance that ambient air quality standards will be met for SO<sub>2</sub> and particulate matter. Without reasonable assurance, the regulations prevent us from approving your request.

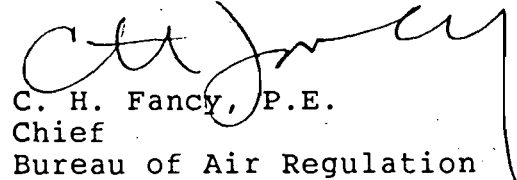
Please review the emission rates and stack parameters we used in the modeling results (attached) and investigate and propose any options available to you, including additional modeling that will provide us reasonable assurance that the ambient air quality standards will be met with this increase in production rate for the zircon kiln.

We request you reply to this letter within 45 days of its receipt.

Mr. Mark E. Brimhall  
Page 2  
June 22, 1990

If you have any questions, please write to me or call Cleve Holladay (modeling issues) or Willard Hanks (application status).

Sincerely,

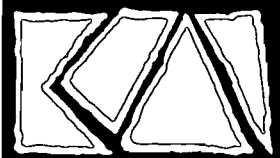


C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

CHF/CH/plm

Enclosure: Model Results

c: Andy Kutyna, NE District  
John Koogler, P.E.



**KOOGLER & ASSOCIATES**  
**ENVIRONMENTAL SERVICES**

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
904/377-5822 • FAX 377-7158

**RECEIVED**  
**JUN 04 1990**  
**DER-BAQM**

KA 148-90-01

May 29, 1990

Mr. Clair Fancy  
Florida Department of  
Environmental Regulation  
Bureau of Air Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Subject: E. I. DuPont de Nemours & Co., Inc.  
Trail Ridge - Zircon Kiln Permit Amendment  
File No. AC10-180154

Dear Clair:

The following are specific responses to your letter of May 18, 1990.

1. Since August 24, 1982 (effective date of the new source performance standard (NSPS) for metallic mineral processing plants), has any capital investment in equipment (dryer or other process units at this plant) been made that could increase production at this facility?

Since August 24, 1982, no capital investments associated with the permitted air source have been made which would make NSPS for metallic mineral processing plants applicable. As necessary, DuPont has kept up with routine maintenance of the plant. The plant was originally permitted prior to the NSPS promulgation as part of the Department's program to have all air pollution sources in the state of Florida permitted.

- 2. As the increase in actual particulate matter emissions at the higher production rate requested will subject the plant to NSPS (40 CFR 60.14), please propose air pollution control equipment to comply with the NSPS for metallic mineral processing plants (40 CFR 60, Subpart LL).**

An increase in the emission rate to the atmosphere from an existing source as a result of a physical or operational change is not considered a modification in accordance with 40 CFR 60.14(e) when such an increase in the emission rate is due to an increase in the production rate of an existing source if the increased production is accomplished without a capital expenditure. Since no capital expenditure is being made to accomplish the proposed increase in the production rate of the kiln, the project cannot be considered a modification and, thus, the NSPS do not apply.

- 3. What is the product from this plant and where is it shipped to?**

The dry zircon product is a zirconium containing sand which is shipped to many different industrial customers in the U.S. The major uses for this zircon sand are in foundry molds and ceramic work.

- 4. Please describe the material handling and storage system for the dried product and what measures are used to minimize fugitive emissions.**

The main component of the zircon sand processing operating is the zircon kiln. The tailings from the ilmenite plant (also located at the Trail

Ridge facility) are the materials fed to the zircon plant. Material from a wet mill is conveyed in the form of a wet slurry through a pipeline to a screw conveyor system. The slurry is dewatered by a screw classifier and fed directly to the zircon kiln via a screw conveyor. The rotary kiln dries the sand and a rotary cooler utilizing counter-current air cools the sand. The air heated in the cooling process is combined with the combustion air for the kiln and exhausted to the atmosphere. The zircon sand from the rotary drier is conveyed via an enclosed bucket elevator to centrifugal classifiers for sizing. The final zircon sand product is shipped to various customers in the U.S. via railcar and trucks.

Particulate matter emissions from the kiln and cooler in the zircon plant are controlled by a cyclone. The fugitive dust emissions from the material conveying equipment are controlled by water slurring, enclosed piping, screw conveying, enclosed bucket elevators and water spraying, as necessary. Fugitive dust emissions are minimal due to the naturally heavy sand consistency, and the size of the sand particles.

**5. Are there any other sources of air pollution at this facility?**

Other sources of air pollution at the Trail Ridge facility consist of the ilmenite and the zircore plants. These plants were also permitted prior to 1982 by the Department.



Mr. Clair Fancy  
Florida Department of  
Environmental Regulation

May 29, 1990  
Page 4

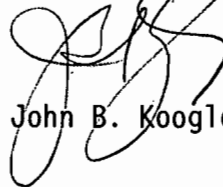
6. What has been the actual particulate matter emissions from this facility?

The actual particulate matter emissions from the cyclone serving the zircon kiln depend upon the production rate, which in turn is dictated by market trends. From past records, one test result is available which reflects operation under optimum conditions. During an annual compliance test on September 26, 1988, at an operation rate of 19,583 lbs/hr (permitted at 20,000 lbs/hr), the measured (actual) emission rate of particulate matter using EPA Method 5 was 9.81 lbs/hr (average). Of the three runs conducted, one run reflected a particulate matter emission rate of 12.41 lbs/hr. The permitted allowable particulate matter emission rate corresponding to the process rate was 14.78 lbs/hr.

If you have any further questions, please do not hesitate to call me.

Very truly yours,

KOGLER & ASSOCIATES



John B. Koogler, Ph.D., P.E.

JBK:wa

cc: Mr. M. Brimhall





P 052 482 261

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

Sent to <i>Mark Brimhall</i>	
Street and No. <i>E.I. DuPont de Nemours</i>	
P.O., State and ZIP Code <i>Stauke, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date <i>5-18-90</i> <i>AC 10-180154</i>	

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

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

3. Article Addressed to: <i>Mark E. Brimhall</i> <i>Env. Coordinator</i> <i>E.I. duPont de Nemours + Co</i> <i>P.O. Box 753</i> <i>Stauke, FL 32091</i>	4. Article Number <i>P 052 482 261</i>
5. Signature - Address <b>X</b>	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent <i>Andrew Johnson</i>	Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b>
7. Date of Delivery <i>5-21-90</i>	8. Addressee's Address (ONLY if requested and fee paid)



# 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

May 18, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark E. Brimhall  
Environmental Coordinator  
E. I. DuPont de Nemours & Co., Inc.  
P. O. Box 753  
Starke, Florida 32091

Dear Mr. Brimhall:

Re: File No. AC 10-180154, DuPont Zircon Kiln

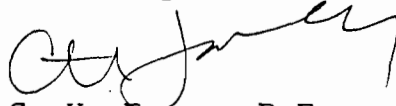
The Department has made a preliminary review of your application for permit to increase the production of the zircon kiln near Starke, Clay County, Florida. Before this application can be processed, we need the following information.

1. Since August 24, 1982 (effective date of the new source performance standard (NSPS) for metallic mineral processing plants), has any capital investment in equipment (dryer or other process units at this plant) been made that could increase production at this facility?
2. As the increase in actual particulate matter emissions at the higher production rate requested will subject the plant to NSPS (40 CFR 60.14), please propose air pollution control equipment to comply with the NSPS for metallic mineral processing plants (40 CFR 60, Subpart LL).
3. What is the product from this plant and where is it shipped to?
4. Please describe the material handling and storage system for the dried product and what measures are used to minimize fugitive emissions.
5. Are there any other sources of air pollution at this facility?
6. What has been the actual particulate matter emissions from this facility?

Mr. Mark E. Brimhall  
Page 2  
May 18, 1990

We will resume processing the application after we receive the requested information. If you have any questions on this matter, please write to me or call Willard Hanks at (904)488-1344.

Sincerely,



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

CHF/plm

c: Andy Kutyna, NE District  
John Koogler, P.E.

\*\*\* SCREEN-1.1 MODEL RUN \*\*\*  
\*\*\* DRAFT VERSION XXXXX \*\*\*

PM

dupoint zircon kiln

$$\begin{aligned} \text{Proposed E} &= 21.5 \text{ lbs/hr} \\ \text{Current E} &= \frac{12.4 \text{ lbs/hr}}{9.1 \text{ lbs/hr}} \end{aligned}$$

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT  
EMISSION RATE (G/S) = 1.000  
STACK HEIGHT (M) = 12.20  
STK INSIDE DIAM (M) = 1.50  
STK EXIT VELOCITY (M/S) = 59.60  
STK GAS EXIT TEMP (K) = 406.00  
AMBIENT AIR TEMP (K) = 293.00  
RECEPTOR HEIGHT (M) = .00  
IOPT (1=URB,2=RUR) = 2  
BUILDING HEIGHT (M) = .00  
MIN HORIZ BLDG DIM (M) = .00  
MAX HORIZ BLDG DIM (M) = .00

$$\begin{aligned} \text{Increment } 24\text{hr} &= (9.1 \frac{\text{lbs}}{\text{hr}}) (0.126 \frac{\text{g}}{\text{s}}) (0.4) (3.5) \\ &= 1.6 \text{ ug/m}^3 \text{ (24hr impact)} \end{aligned}$$

$$\text{AAQ} = (21.5) (0.126) (3.5) (0.4) = 3.8 \frac{\text{ug}}{\text{m}^3} \text{ 24hr std}$$

BUOY. FLUX = 91.50 M\*\*4/S\*\*3; MOM. FLUX = 1441.97 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
\*\*\* SCREEN AUTOMATED DISTANCES \*\*\*  
\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	.9559E-06	6	1.0	1.1	5000.0	119.4	18.6	18.6	NO
100.	.1574	6	1.0	1.1	5000.0	119.4	30.9	30.7	NO
200.	.1674	6	1.0	1.1	5000.0	119.4	31.6	30.9	NO
300.	.3817	4	20.0	20.6	5000.0	40.4	23.1	12.9	NO
400.	1.417	4	20.0	20.6	5000.0	40.4	30.0	16.2	NO
500.	2.453	4	20.0	20.6	5000.0	40.4	36.7	19.4	NO
600.	3.115	4	20.0	20.6	5000.0	40.4	43.3	22.4	NO
700.	3.418	4	20.0	20.6	5000.0	40.4	49.8	25.3	NO
800.	3.460	4	20.0	20.6	5000.0	40.4	56.2	28.0	NO
900.	3.375	4	20.0	20.6	5000.0	40.4	62.4	30.5	NO
1000.	3.226	4	20.0	20.6	5000.0	40.4	68.6	33.1	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:

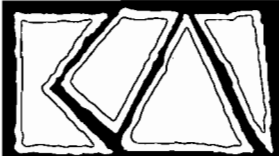
771. 3.466 4 20.0 20.6 5000.0 40.4 54.4 27.2 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED  
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3\*LB

$$\text{SO}_2 = (7.9) (3.5) (0.4) = 11.1 \text{ ug/m}^3$$

AAQ

\*\*\*\*\*  
\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
\*\*\*\*\*



**KOGLER & ASSOCIATES**  
**ENVIRONMENTAL SERVICES**  
4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
904/377-5822 ■ FAX 377-7158

KA 148-90-01

April 30, 1990

RECEIVED  
DER - MAIL ROOM  
1990 MAY -7 PM 12:30

Mr. Clair Fancy  
Florida Department  
of Environmental Regulation  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RECEIVED

MAY 07 1990

DER-BAQM

Subject: Clay County - AP  
E.I. DuPont de Nemours & Co., Inc.  
Trail Ridge Plant - Zircon Kiln  
Amendment to Permit A010-103109

Dear Clair:

At the Trail Ridge plant, DuPont operates a Zircon kiln, presently permitted under Air Operation Permit A010-103109. This permit was issued in 1985 and expires on June 20, 1990. An operation permit renewal application was submitted to DER's Northeast District office in Jacksonville on March 15, 1990.

Originally, the Zircon kiln was permitted on May 14, 1974, under A010-2220. This was the initial permit issued to a facility which had been operating for several years at DuPont's Mining Operations and was part of the Department's program to have all potential air pollution sources in the state of Florida permitted. An air construction permit, AC10-2297 issued on October 30, 1974, and expiring on September 1, 1975, was issued for the Zircon kiln to add a cyclone to control emissions of particulate matter. However, since this permitting action occurred prior to January 6, 1975, there are no federally enforceable operating conditions on the Zircon kiln established after January 6, 1975.

The Zircon kiln is presently permitted for a production rate of 20,000 pounds per hour. DuPont is presently requesting that the permit conditions be amended to allow a production rate of 36,000 pounds per hour (18 tons per hour). Since the previous operating conditions are not federally enforceable and since no physical modifications will be necessary for the kiln to operate at the requested rate, this application is submitted for a permit amendment; not a modification. The amendment is being made in the form of an Air Construction Permit Application so as to formalize the request and also to make the subsequently issued construction permit federally enforceable.

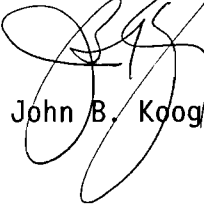
Mr. Clair Fancy  
Florida Department of  
Environmental Regulation

April 30, 1990  
Page 2

DuPont would appreciate receiving an amended application at the earliest possible time, as production requirements could be met with the kiln operating at the higher throughput rate. Your consideration of this request is very much appreciated.

Very truly yours,

KOGLER & ASSOCIATES



John B. Koogler, Ph.D., P.E.

JBK:cw  
Enc.

cc: Mr. Bill Stewart, FDER-Northeast District  
Mr. Johnny Cole, FDER-Northeast District  
Mr. Mark Brimhall, DuPont

*A. Kutyna*

RECEIVED  
DER-MAIL ROOM  
1990 MAY -7 PM 12:30





TRI-2

# E. I. Du Pont de Nemours & Company

INCORPORATED

No. 295-36853

8-26  
430

STARKE, FL

May 3, 1990

(DATE)

Pay **\*\*1,500\*\*** DOLLARS NO. CENTS

To the order of **\*\*STATE OF FLORIDA\*\***  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
BUREAU OF AIR REGULATION  
2600 BLAIR STONE RD.  
TALLAHASSEE, FL 32399-2400

NOT GOOD FOR MORE THAN \$1500.00

E. I. DU PONT DE NEMOURS & COMPANY  
CASHIER, ACCOUNT NO. 295

TO  
MELLON BANK N.A.  
PITTSBURGH, PENNSYLVANIA

*J. A. Browning*

Better Things for Better Living... from Du Pont



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

No. 295-36853

CHEMICALS AND PIGMENTS DEPT. P.O. DRAWER A LAWTEY, FLA. 32056

ALWAYS REFER TO OUR CHECK NUMBER IN YOUR CORRESPONDENCE

VENDOR'S NO. OR DATE

OUR NO.

AMOUNT

DISCOUNT

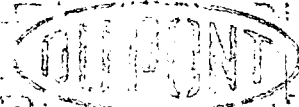
FREIGHT

NET AMOUNT

AMENDMENT TO PERMIT A010-103109

1,500.00

PART 2



**E. I. Du Pont de Nemours & Company** No. 295-36852  
 INCORPORATED  
 8-26  
 430  
 STARKE, FL May 3, 1990 (DATE)  
 Pay **\*\*1,000\*\*** DOLLARS NO CENTS  
**\*\*STATE OF FLORIDA\*\***  
 DEPARTMENT OF ENVIRONMENTAL REGULATION  
 BUREAU OF AIR REGULATION  
 2600 BLAIR STONE RD.  
 TALLAHASSEE, FL 32399-2400  
 NOT GOOD FOR MORE THAN \$1500.00  
 E. I. DU PONT DE NEMOURS & COMPANY—  
 CASHIER ACCOUNT NO: 295  
 TO  
 MELLON BANK N.A.  
 PITTSBURGH, PENNSYLVANIA  
 J.A. Browning  
 Better Things for Better Living from Du Pont



**E. I. DU PONT DE NEMOURS & COMPANY** No. 295-36852  
 INCORPORATED  
 CHEMICALS AND PIGMENTS DEPT. P.O. DRAWER A, LAWTEY, FLA. 32056

ALWAYS REFER TO OUR CHECK NUMBER IN YOUR CORRESPONDENCE

VENDOR'S NO. OR DATE	OUR NO.	AMOUNT	DISCOUNT	FREIGHT	NET AMOUNT
AMENDMENT TO PERMIT A010-10319					1,000.00

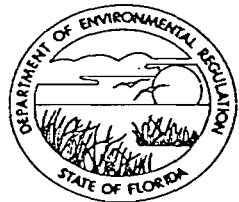




#2,500 pd.  
5-7-90  
RECEIVED  
Receipt #151121  
MAY 07 1990

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

DER-BAQM



AC 10-180154

APPLICATION TO ~~MODIFY~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Rotary Kiln [ ] New<sup>1</sup> [X] Existing<sup>1</sup>  
APPLICATION TYPE: [X] Construction [ ] Operation [X] Modification  
COMPANY NAME: E.I. DuPont de Nemours & Co., Inc. COUNTY: Clay  
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) Zircon Kiln (Trail Ridge)  
SOURCE LOCATION: Street 5 Miles East of Starke, off SR 230 City Starke  
UTM: East (17) 400.2 km North 3309.3 km  
Latitude 29 ° 54 ' 42 "N Longitude 82 ° 02 ' 00 "W  
APPLICANT NAME AND TITLE: Mark E. Brimhall, Environmental Coordinator  
APPLICANT ADDRESS: P.O. Box 753, Starke, Florida 32091

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

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

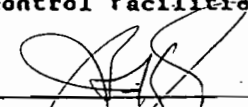
\*Attach letter of authorization  
Signed: Mark E. Brimhall  
Mark E. Brimhall, Environmental Coordinator  
Name and Title (Please Type)  
Date: 4/30/90 Telephone No. (904) 964-6980

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 ~~inspected~~/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)

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



Signed 

John B. Koogler, Ph.D., P.E.  
Name (Please Type)

Koogler & Associates, Environmental Services  
Company Name (Please Type)

4014 NW 13TH Street, Gainesville, Florida 32609  
Mailing Address (Please Type)

Florida Registration No. 12925 Date: 4/27/90 Telephone No. (904) 377-5822

**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.

See Page 2a of 12.

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

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. - Existing control equipment, consisting of a dry cyclonic collector, is adequate to control particulate matter emissions at the proposed production rate.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.  
Original permit A010-2220; issued 5/14/74, expired 9/1/75; AC10-2297; issued 10/30/74, expired 9/1/75; A010-2481, issued 10/3/75, expired 9/30/80; A010-32280; issued 9/10/80, expired 6/30/85, A010-103109; issued 6/20/85, expires 6/20/90

SECTION II.A.

Production rate increase for No. 6 fuel oil fired zircon kiln with no physical modifications. The kiln was originally permitted at 18,700 lb/hr under A010-2481 (presently permitted at 20,000 lb/hr by A010-103109). Requested production rate is 36,000 lb/hr.

The proposed production increase of the zircon kiln will result in an increase in the heat input to the kiln from the previously permitted rate of 11 MMBTU/hr to 20.5 MMBTU/hr.

The proposed production rate increase, and the associated fuel use increase, will not be a modification of the existing source since a modification does not include:

an increase in the hours of operation or in the production rate of a source, unless such a change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 [FAC Rule 17-2.100(126)(b)].

The zircon kiln has not been permitted under any federally enforceable permit condition (a construction permit condition) established after January 6, 1975.

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) (Amendment to permit conditions for existing Kiln; not a modification.)

1. Is this source in a non-attainment area for a particular pollutant? N/A  
a. If yes, has "offset" been applied? \_\_\_\_\_  
b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_  
c. If yes, list non-attainment pollutants. \_\_\_\_\_

2. Does best available control technology (BACT) apply to this source? N/A  
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. N/A

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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

a. If yes, for what pollutants? \_\_\_\_\_  
b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Zircon	Part. Matter	1-2	36,000	(1)

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

1. Total Process Input Rate (lbs/hr): 36,000 (dry weight)

2. Product Weight (lbs/hr): 36,000 (dry weight)

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

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Part. Matter	21.5	94.4	17-2.610(1)	21.5	354.6	1553.1	(2)
SO <sub>2</sub>	62.7	274.7	-	62.7	62.7	274.7	(2)
NO <sub>x</sub>	7.7	33.7	-	7.7	7.7	33.7	(2)

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

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

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

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Dry Cyclone	Part. Matter	94%		Estimate

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 fuel oil	120 gal/hr	140 gal/hr	20.5

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

Fuel Analysis:

Percent Sulfur: 2.8 max Percent Ash: 0.1  
 Density: 8.0 lbs/gal Typical Percent Nitrogen: 0.2  
 Heat Capacity: 18,300 BTU/lb 146,400 BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): NONE

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.

The particulate matter collected in the cyclone is combined with the wet mill  
system's process material

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

Stack Height: 40 ft. Stack Diameter: 1.5 ft.  
 Gas Flow Rate: 20,738 ACFM 13,000 DSCFM Gas Exit Temperature: 270 °F.  
 Water Vapor Content: 12 % Velocity: 195.5 FPS

SECTION IV: INCINERATOR INFORMATION  
 (NOT APPLICABLE)

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

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

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

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

Manufacturer: \_\_\_\_\_

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

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

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

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

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

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

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

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

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

(SEE PAGE 7a-c of 12)

Please provide the following supplements where required for this application.

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



## SECTION V: SUPPLEMENTAL REQUIREMENTS

### 1. Production and Input Rates:

The maximum zircon kiln throughput rate will be 36,000 lb/hr (18 tons per hour), dry basis. The kiln feed typically has about 10% moisture. The difference between the kiln input rate and output rate is essentially the moisture content.

### 2/3. Controlled and Uncontrolled Emissions:

#### Particulate Matter

Uncontrolled (AP-42, Section 8.23; 19.7 lb/ton for all minerals but titanium/zirconium sands. No other appropriate factor is available for uncontrolled emissions.)

$$\begin{aligned} \text{P.M.} &= (36,000/2000) \text{ ton/hr} \times 19.7 \text{ lb/ton} \\ &= 354.6 \text{ lb/hr} \\ &\quad \times 8760/2000 \\ &= 1553.1 \text{ tpy} \end{aligned}$$

Controlled (Allowable per Rule 17-2.610(1), FAC)

$$\begin{aligned} \text{P.M.} &= 3.59 \times [(36000/2000)\text{exp } 0.62] \\ &= 21.5 \text{ lb/hr} \\ &\quad \times 8760/2000 \\ &= 94.4 \text{ tpy} \end{aligned}$$

Sulfur Dioxide

Controlled and Uncontrolled (140 gal/hr No. 6 fuel oil at  
2.8% sulfur)

$$\begin{aligned} \text{SO}_2 &= 140 \text{ gal/hr} \times 8 \text{ lb/gal} \times (0.028 \times 2) \text{ lbSO}_2/\text{lb} \\ &= 62.7 \text{ lb/hr} \\ &\quad \times 8760/2000 \\ &= 274.7 \text{ tpy} \end{aligned}$$

Nitrogen Oxide

Controlled and Uncontrolled (AP-42, Section 1.3; 55 lb/1000  
gal)

$$\begin{aligned} \text{NO}_x &= 140 \text{ gal/hr} \times (55/1000) \text{ lb/gal} \\ &= 7.7 \text{ lb/hr} \\ &\quad \times 8760/2000 \\ &= 33.7 \text{ tpy} \end{aligned}$$

4. Control Equipment:

Not applicable since both the kiln and the control equipment are existing. Emission measurements (9/29/89) have demonstrated that the zircon kiln operates well in compliance at the current production levels. The proposed increase in production will not require any additional controls for the kiln to stay in compliance.

5. Control Efficiency

$$\begin{aligned} \text{P.M.} &= (354.6 - 21.5)/354.6 \times 100 \\ &= 93.9\% \end{aligned}$$

$$\text{SO}_2/\text{NO}_x = \text{No Control}$$

6. Process Flow Diagram - Attachment 1

7. Location Map - Attachment 2

8. Site Plan - Attachment 3

9. Application Fee - \$2,500

10. Certificate of Completion of Construction - N/A

- 7. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
- 8. 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)

- 1. 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

- 1. 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

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

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

1. Control Device/System:

2. Operating Principles:

3. Efficiency:\*

4. Capital Costs:

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

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

1.

a. Control Device:

b. Operating Principles:

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

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

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

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

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

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

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

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

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

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

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

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

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

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

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

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

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

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

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

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

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

(5) Environmental Manager:

(6) Telephone No.:

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

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

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

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

(NOT APPLICABLE)

A. Company Monitored Data

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

Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

3. 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) \_\_\_\_\_

4. 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.

5. Applicants Maximum Allowable Emission Data

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

6. 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.

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

8. 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.

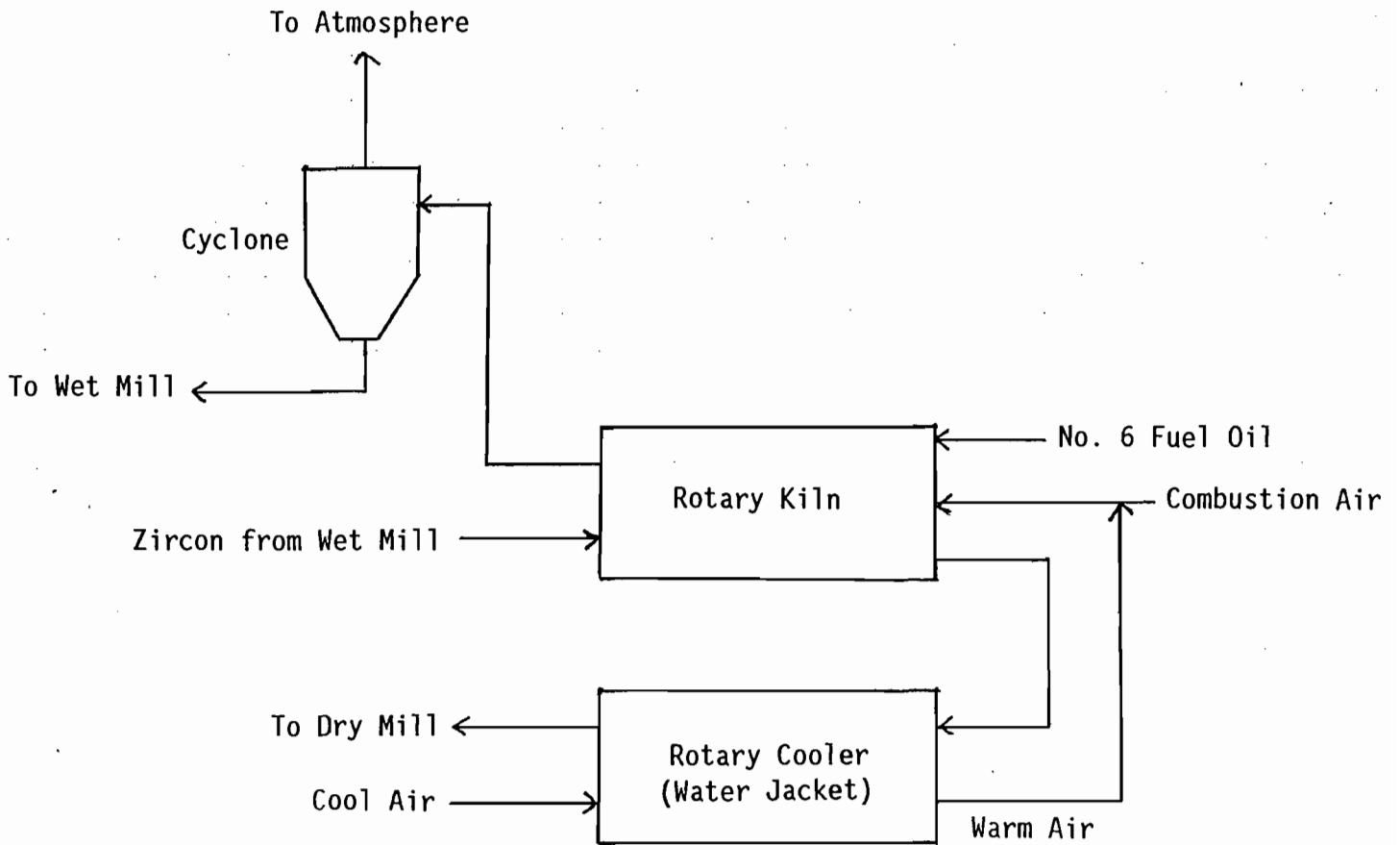
9. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.



ATTACHMENT 1

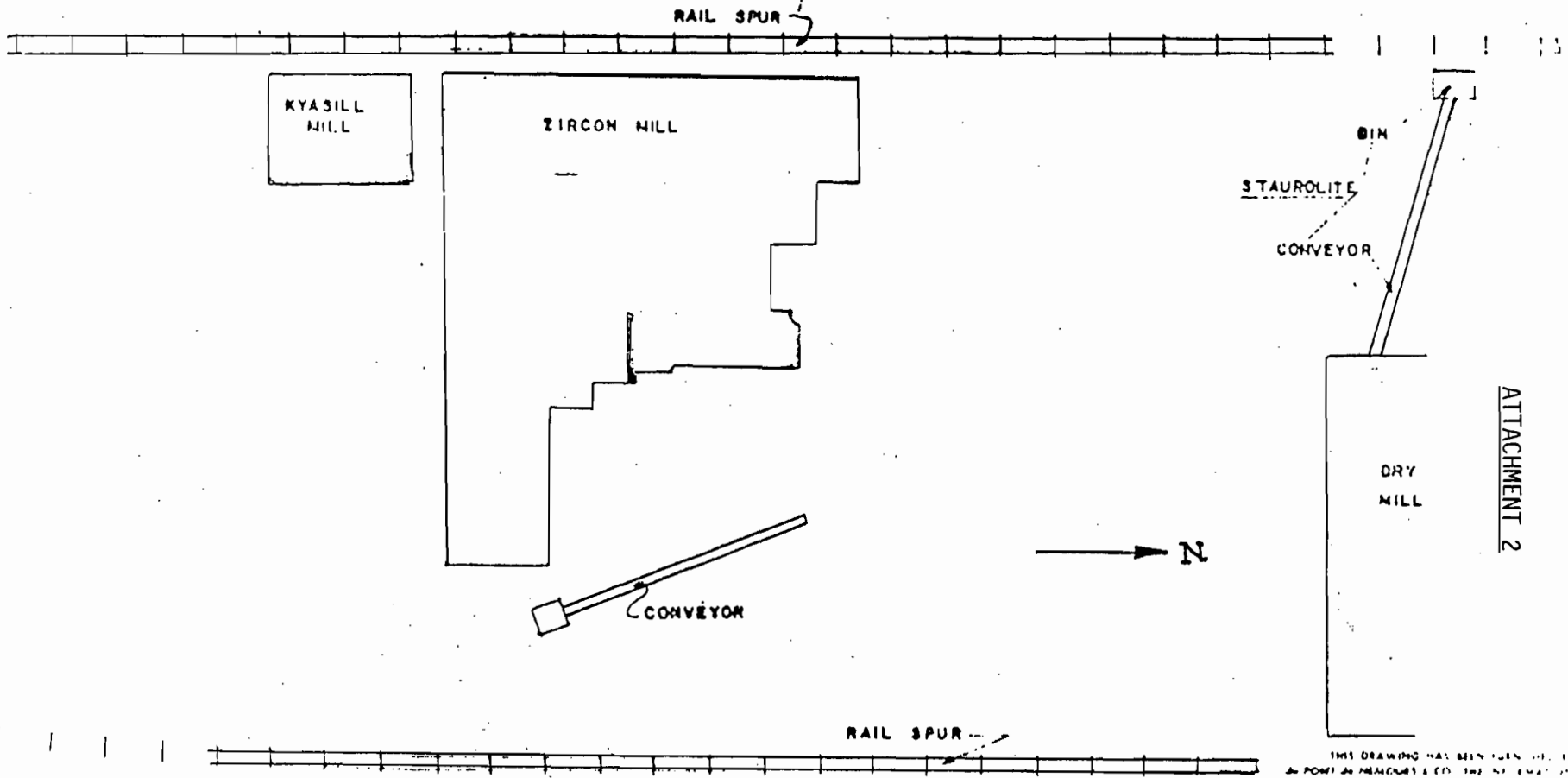
Process Flow Diagram  
Zircon Kiln

E.I. DuPont de Nemours & Company, Inc.  
Trail Ridge Plant  
Starke, Clay County, Florida



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ALL SAFETY CONSIDERATIONS IN DESIGN OR CONSTRUCTION



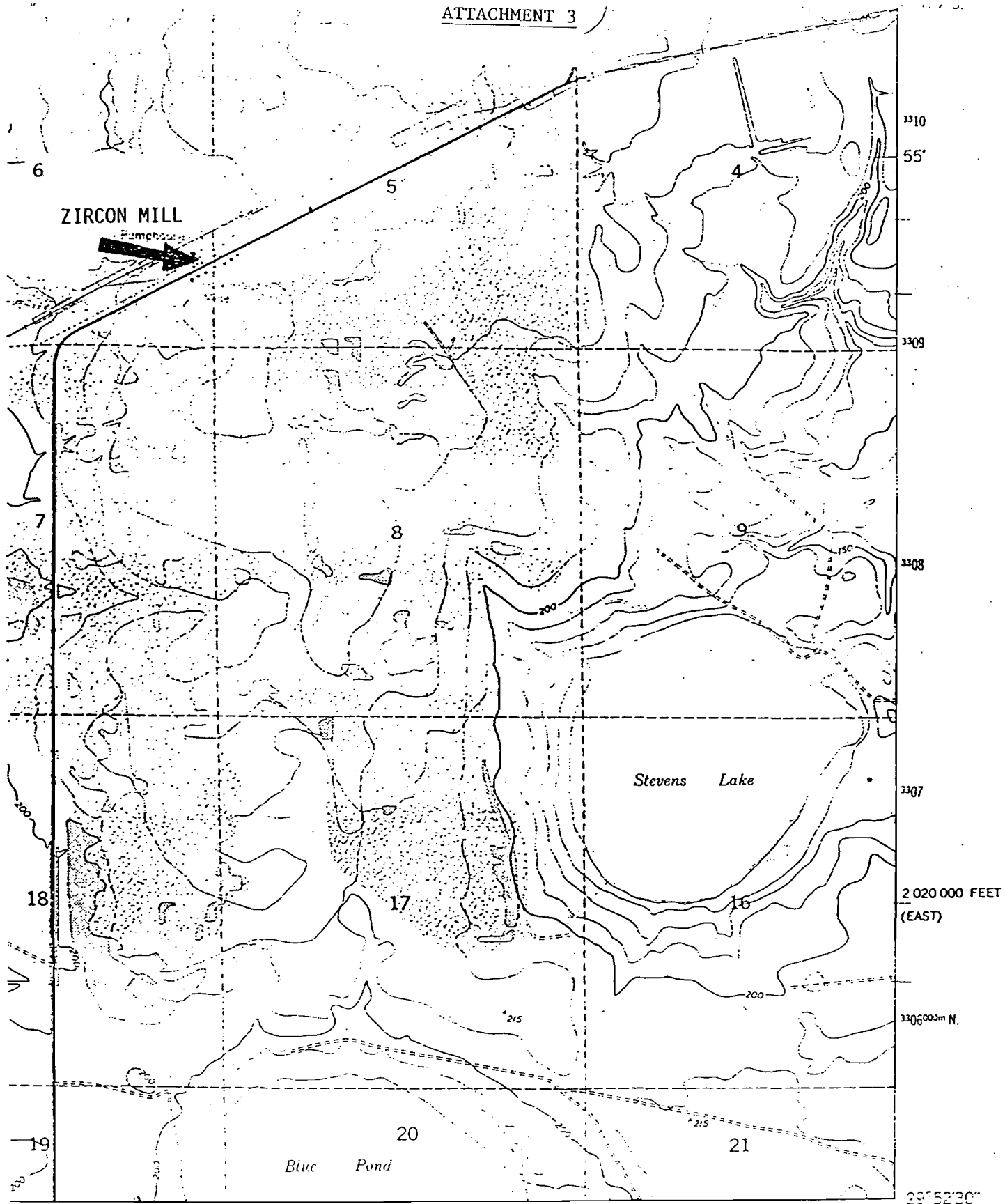
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APP	B-9042-18
REV	

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ATTACHMENT 3



5 441 TO 5 442  
KEYSTONE REVERTS TO G.M.

STEREOPHOTO-GEODESIC SURVEY WASHINGTON DISTRICT 195009 FEET MEANT  
30'00"

ROAD CLASSIFICATION

Heavy-duty

Medium-duty

U. S. Route State Route

NO. 2110  
HEAD E.P. 111



STARKE, FLA.