→ P 4/12

Check Sheet

Company Name: Conversion System
Permit Number: AC 48-216925
PSD Number:
County: Orange
Permit Engineer:
Others involved:

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

Intent:
- [x] Intent to Issue
- [x] Notice to Public
- [x] Technical Evaluation
- [ ] BACT Determination
- [x] Unsigned Permit

  Attachments:
  - [ ]
  - [ ]
  - [ ]

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

Final Determination:
- [x] Final Determination
- [x] Signed Permit
- [ ] BACT Determination

Post Permit Correspondence:
- [ ] Extensions
- [ ] Amendments/Modifications
- [ ] Response from EPA
- [ ] Response from County
- [ ] Response from Park Services

P 062 921 883

Receipt for Certified Mail

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

Sent to John Juzwiak	
Street and No. Conversion Sys.	
P.O., State and ZIP Code Horsham, PA	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 9-2-92	

AC 40-216925

PS Form **3800**, June 1991

PS Form **3811**, July 1983 447-845

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

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

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

3. Article Addressed to:
John Juzwiak, UP
Conversion Systems
200 Welsh Rd
Horsham PA 19044

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

Article Number
P062 921 883

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X M. T. Hemps

7. Date of Delivery
SEP 04 1992

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

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 48-216925
Orange County

Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

/

Enclosed is Permit Number AC 48-216925 to construct a stabilized FGD by-product plant to be located at 5100 South Alafaya Trail near Orlando, Orange County, Florida, issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (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 Notice 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
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 9-2-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 9-2-92 (Date)

Copies furnished to:
Greg DeMuth, OUC
Charles Collins, CD
Buck Oven, DER

Final Determination

Conversion Systems, Inc.
Orlando, Orange County, Florida

Stabilized FGD By-Product Plant
Permit No.: AC 48-216925

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

August 28, 1992

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 100 TPH nonhazardous stabilized FGD by-product plant at 5100 South Alafaya Trail near Orlando, Orange County, Florida, was distributed on August 7, 1992. The Notice of Intent to Issue was published in The Orlando Sentinel on August 11, 1992. Copies of the evaluation were available for public inspection at the Department's Orlando and Tallahassee offices.

No comments were submitted on the Department's Intent to Issue the permit. The final action of the Department will be to issue construction permit AC 48-216925 as proposed in the Technical Evaluation and Preliminary Determination.

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:
Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

Permit Number: AC 48-216925
Expiration Date: January 1, 1993
County: Orange
Latitude/Longitude: 28°29'01"N
81°10'07"W
Project: Stabilized FGD By-Product Plant

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 construct a 100 TPH nonhazardous stabilized FGD (flue gas desulfuration) by-product plant at the Orlando Utilities Commission's Stanton Energy Center located at 5100 S. Alafaya Trail near Orlando, Orange County, Florida. The UTM coordinates of this site are Zone 17, 483.5 km E and 3150.6 km N.

The major components of the stabilized FGD by-product plant are a loader access ramp, a 39 ft. long crusher, a conveyor, a 25 ft. long shaker screen, three 100 ft. long radial stackers, two diesel engines, and associated equipment.

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 July 24, 1992.
2. DER memo dated June 4, 1992.
3. CSI letter dated June 15, 1992.
4. OUC letter dated July 16, 1992.

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.

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

GENERAL CONDITIONS:

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.

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 prescribed by Sections 403.73 and 403.111,

GENERAL CONDITIONS:

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 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;

GENERAL CONDITIONS:

- 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. The plant shall not process more than 100 TPH stabilized FGD (flue gas desulfurization) sludge.

2. The plant shall not operate more than 12 hours per day, 7 days per week, and 52 weeks per year.

3. The plant shall be equipped with the air pollution control equipment listed in the following table. Visible emissions, 6 minute average percent opacity as determined by EPA Reference Method 9 described in 40 CFR 60, Appendix A (July 1, 1992), for each operation shall not exceed the limits listed.

Operation	Air Pollution Control	% Opacity
Evacuation and transporting to trucks or feed bin	Water spray as necessary	10
Crusher	Cover and water sprays	15
Crusher to screen conveyor transfer points	Water sprays and enclosed chutes	10
Shaker screen	Cover	15
Radial stacker-fines	Water sprays, enclosed chutes, and adjustable drop chute	15
Radial stacker-products	Water sprays	15
Storage piles	Water spray system	5
Loading/shipping product	Water sprays and covered trucks leaving plant	15

SPECIFIC CONDITIONS:

4. If the plant is unable to comply with the visible emission standard for any operation listed in the above table, the permittee shall install additional air pollution control equipment needed to meet the standard.

5. The electrical power generator shall not use more than 7 GPH diesel fuel. The power motor for the crusher shall not use more than 6 GPH diesel fuel. The diesel fuel used by these units shall not contain more than 0.3% sulfur.

6. This plant shall be tested at a production rate of 90 to 100 TPH by-product within 30 days of commercial operation by EPA Method 9 as described in 40 CFR 60, Appendix A (July 1, 1992) to determine compliance with the emission standards listed in Specific Condition No. 3.

7. The Department's Central District office shall be notified in writing a minimum of 15 days in advance of any compliance test conducted on this source.

8. 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).

9. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit. 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. Rules 17-4.055 and 17-4.220).

Issued this 1 day
of September, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Howard L. Rhodes

Howard L. Rhodes, 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: Howard L. Rhodes

FROM: Clair Fancy

DATE: August 28, 1992

SUBJ: Approval of Construction Permit AC 48-216925
Conversion Systems, Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a plant that will excavate, crush, screen, store, and ship up to 100 TPH of aggregate produced from a wet mixture of fly ash and flue gas desulfuration sludge from the Orlando Utility Commission's Stanton plant near Orlando, Orange County, Florida. The aggregate will be used in the construction industry for road beds, ready-mixed concrete, etc.

No comments were received during the public notice period.

I recommend your approval and signature.

CF/WH

Attachments

CONVERSION SYSTEMS, INC.
200 Welsh Road, Horsham, PA 19044
(215) 784-0990 Fax: (215) 784-0970

August 24, 1992

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

Dear Mr. Fancy:

Attached is a copy of the Orlando Sentinel's Certification, that the Public Notice required to be published by CSI regarding our requested air permit has, in fact, been published. The notice was published on August 11, 1992.

If you have any comments or questions regarding the publication, please feel free to give me a call.

Sincerely,

Howard A. Wasserman

HAW/lem
E1-012

cc: Greg DeMuth, Orlando Utilities Commission
H. Hanks
C. Collins, C Dist.

The Orlando Sentinel

Published Daily
$203.25

State of Florida } S.S.
COUNTY OF ORANGE

Before the undersigned authority personally appeared Tuesday C. Leavitt, who on oath says that he/she is the Legal Advertising Representative of The Orlando Sentinel, a daily newspaper published at ORLANDO in ORANGE County, Florida; that the attached copy of advertisement, being a STATE OF FLORIDADE in the matter of Conversion Systems, Inc.

in the ORANGE Court, was published in said newspaper in the issue; of 08/11/92

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

The foregoing instrument was acknowledged before me this 12th day of August, 19 92, by Tuesday C. Leavitt, who is personally known to me and who did take an oath.

NOEMI R. LUCERO

(SEAL)

Noemi R. Lucero
Notary Public, State of Florida
My commission expires August 28, 1994
Commission # CC018071

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

The Department of Environmental Regulation gives notice of its intent to issue a construction permit (AC 48-216925) to Conversion Systems, Inc., 200 Welsh Road, Horsham, PA 19044, that will authorize the installation of a plant to handle the nonhazardous stabilized FGD (flue gas desulfurization) by-product at Orlando Utilities Commission's Curtis H. Stanton Energy Center. This facility is located at 5100 S. Alafaya Trail, Orlando, Orange County, Florida. The proposed plant will be an unconfined source of particulate matter emissions and will be required to provide reasonable precautions to minimize these emissions. Particulate matter emissions are estimated to be 10 lbs/hr (22 TPY). A Best Available Control Technology determination was not required for this plant. The emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration increment. 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 (F.S.). 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) pursuant to Section 120.57, F.S.

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 Florida Administrative Code.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

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

P 062 921 872

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

Sent to	John Juzwiak
Street and No.	Conversion Sys
P.O., State and ZIP Code	Horsham, PA
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	8-7-92 AC 48-216925

PS Form 3800, June 1991

PS Form 3811, July 1983 447-845

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

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

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

3. Article Addressed to:
John H Juzwiak
V.P. of Operations Tech.
Conversion Systems, Inc
200 Welsh Rd
Horsham, PA 19044

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

Article Number: P 062 921 872

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery: AUG 10 1992

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

DOMESTIC RETURN RECEIPT

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 31, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John H. Juzwiak
Vice President of Operations & Technology
Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

Dear Mr. Juzwiak:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for the plant that will process nonhazardous stabilized FGD by-product at the Orlando Utility Commission's Stanton Energy Center. This facility is located at 5100 South Alafaya Trail near Orlando, Orange County, Florida.

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

Sincerely,

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

CHF/WH/plm

Attachments

cc: Greg DeMuth, OUC
Charles Collins, CD
Buck Oven, PPC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DER File No. AC 48-216925
Orange County

Mr. John H. Juzwiak
Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

_____/

INTENT TO ISSUE

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

The applicant, Conversion Systems, Inc., applied on July 24, 1992, to the Department of Environmental Regulation for a permit to construct a nonhazardous stabilized FGD by-product processing plant at Orlando Utilities Commission's Curtis H. Stanton Energy Center that is located at 5100 South Alafaya Trail, Orlando, Orange County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and 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's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, 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 their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 8-7-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

8-7-92
Date

Copies furnished to:

Greg DeMuth, OUC
Charles Collins, CD
Buck Oven, PPC

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

The Department of Environmental Regulation gives notice of its intent to issue a construction permit (AC 48-216925) to Conversion Systems, Inc., 200 Welsh Road, Horsham, PA 19044, that will authorize the installation of a plant to handle the nonhazardous stabilized FGD (flue gas desulfuration) by-product at Orlando Utilities Commission's Curtis H. Stanton Energy Center. This facility is located at 5100 S. Alafaya Trail, Orlando, Orange County, Florida. The proposed plant will be an unconfined source of particulate matter emissions and will be required to provide reasonable precautions to minimize these emissions. Particulate matter emissions are estimated to be 10 lbs/hr (22 TPY). A Best Available Control Technology determination was not required for this plant. The emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration increment. 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 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 normal 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
Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767

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

Technical Evaluation
and
Preliminary Determination

Conversion Systems, Inc.
Orlando, Orange County, Florida

Stabilized FGD By-Product Plant
File No.: AC 48-216925

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

July 31, 1992

I. General Information

A. Applicant

Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

B. Request

Conversion Systems, Inc. submitted an application for a permit to construct a nonhazardous stabilized FGD (flue gas desulfuration) by-product plant (SIC 1400) at Orlando Utilities Commission's Curtis H. Stanton Energy center on July 24, 1992. This utility is located at 5100 South Alafaya Trail near Orlando, Orange County, Florida. The application was considered complete on receipt.

C. Project

The proposed plant will excavate, crush, screen, store, and ship up to 100 TPH of stabilized by-product which is a nonhazardous wet mixture of fly ash and FGD sludge from the scrubber of a coal fired electrical power plant. Equipment covers, enclosed chutes, and water sprays will be used to control the fugitive dust from this operation.

D. Emissions

The applicant has estimated the fugitive particulate matter emissions from the proposed plant to be 10 lbs/hr. For a 12-hour per day operation, this is equivalent to 22 TPY emissions. Approximately half of these emissions will be PM_{10}.

II. Rule Applicability

The proposed project, construction of a nonhazardous stabilized FGD by-product plant, is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code (F.A.C.).

The source is in Orange County, which is a maintenance area for ozone (F.A.C. Rule 17-2.460) and an attainment area for the other criteria air pollutants (F.A.C. Rule 17-2.420).

The plant will be a minor source of air pollution because allowable emissions will be less than 100 TPY. The plant will not be subject to the Prevention of Significant Deterioration regulations (F.A.C. Rule 17-2.500), because it is a minor source.

The plant will be subject to F.A.C. Rule 17-2.610(3), Unconfined Emissions of Particulate Matter, and will be required to use reasonable precautions to control these emissions.

III. Technical Evaluation

The proposed plant is a potential source of unconfined particulate matter emissions. Equipment covers, enclosed chutes, and water sprays will be used as reasonable precautions to minimize particulate matter emissions. The Department believes the visible emissions standards for nonmetallic mineral processing plants, a similar operation, are an indication that reasonable precautions are being employed and are appropriate for this plant. It will also emit trace amounts of the products of combustion of diesel fuel from two engines at the plant. The Department will limit the amount of fuel that can be burned in the diesel engines. The following table summarizes the reasonable precautions and visible emission standards recommended by the Department.

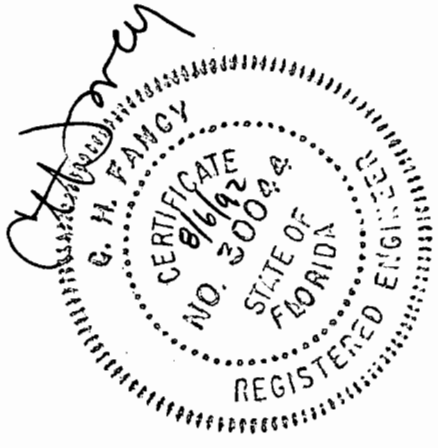
Operation	Air Pollution Control	% Opacity
Evacuation and transporting to trucks or feed bin	Water spray as necessary	10
Crusher	Cover and water sprays	15
Crusher to screen conveyor transfer points	Water sprays and enclosed chutes	10
Shaker screen	Cover	15
Radial stacker-fines	Water sprays, enclosed chutes, and adjustable drop chute	15
Radial stacker-products	Water sprays	15
Storage piles	Water spray system	5
Loading/shipping product	Water sprays and covered trucks leaving plant	15

IV. Ambient Air Impact

The fugitive particulate matter emissions for the proposed plant will not violate any ambient air quality standards.

V. Conclusion

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



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:
Conversion Systems, Inc.
200 Welsh Road
Horsham, PA 19044

Permit Number: AC 48-216925
Expiration Date: January 1, 1993
County: Orange
Latitude/Longitude: 28°29'01"N
81°10'07"W
Project: Stabilized FGD By-Product Plant

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 construct a 100 TPH nonhazardous stabilized FGD (flue gas desulfuration) by-product plant at the Orlando Utilities Commission's Stanton Energy Center located at 5100 S. Alafaya Trail near Orlando, Orange County, Florida. The UTM coordinates of this site are Zone 17, 483.5 km E and 3150.6 km N.

The major components of the stabilized FGD by-product plant are a loader access ramp, a 39 ft. long crusher, a conveyor, a 25 ft. long shaker screen, three 100 ft. long radial stackers, two diesel engines, and associated equipment.

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 July 24, 1992.
2. DER memo dated June 4, 1992.
3. CSI letter dated June 15, 1992.
4. OUC letter dated July 16, 1992.

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.

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

GENERAL CONDITIONS:

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.

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 prescribed by Sections 403.73 and 403.111,

GENERAL CONDITIONS:

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 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;

GENERAL CONDITIONS:

- 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. The plant shall not process more than 100 TPH stabilized FGD (flue gas desulfurization) sludge.

2. The plant shall not operate more than 12 hours per day, 7 days per week, and 52 weeks per year.

3. The plant shall be equipped with the air pollution control equipment listed in the following table. Visible emissions, 6 minute average percent opacity as determined by EPA Reference Method 9 described in 40 CFR 60, Appendix A (July 1, 1992), for each operation shall not exceed the limits listed.

Operation	Air Pollution Control	% Opacity
Evacuation and transporting to trucks or feed bin	Water spray as necessary	10
Crusher	Cover and water sprays	15
Crusher to screen conveyor transfer points	Water sprays and enclosed chutes	10
Shaker screen	Cover	15
Radial stacker-fines	Water sprays, enclosed chutes, and adjustable drop chute	15
Radial stacker-products	Water sprays	15
Storage piles	Water spray system	5
Loading/shipping product	Water sprays and covered trucks leaving plant	15

SPECIFIC CONDITIONS:

4. If the plant is unable to comply with the visible emission standard for any operation listed in the above table, the permittee shall install additional air pollution control equipment needed to meet the standard.

5. The electrical power generator shall not use more than 7 GPH diesel fuel. The power motor for the crusher shall not use more than 6 GPH diesel fuel. The diesel fuel used by these units shall not contain more than 0.3% sulfur.

6. This plant shall be tested at a production rate of 90 to 100 TPH by-product within 30 days of commercial operation by EPA Method 9 as described in 40 CFR 60, Appendix A (July 1, 1992) to determine compliance with the emission standards listed in Specific Condition No. 3.

7. The Department's Central District office shall be notified in writing a minimum of 15 days in advance of any compliance test conducted on this source.

8. 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).

9. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit. 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. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1992

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____

Howard L. Rhodes, Interim Director
Division of Air Resources
Management

Incomplete Copy

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
To: _____	Loctn: _____
To: _____	Loctn: _____
To: _____	Loctn: _____
From: _____	Date: _____

TO: Revenue Section
Bureau of Finance and Accounting

FROM: Cost Center Air REgulation

SUBJECT: Cash Listing Number # 0004 Dated 07-27-92

The cash listing received from your office has been checked and confirmed to be correct in all areas.

_____ _____
Date Signature of Verifying Party

The cash listing received from your office has been checked and found to contain one or more discrepancies. A corrected cash listing is attached. Please adjust your records accordingly.

_____ _____
Date Signature of Verifying Party

Number of remittances in this cash listing 2.

Department of Environmental Regulation

Daily Cash Listing # 0004

Date Received 07-27-92

DEP# 0244

Bureau of Accounting & Budgeting (Revenue Section)

Date Bureau of Air Regulation Received

Lister's Signature Lil Sweeney

Signature of Receiver

REMITTED BY	CHECK NUMBER	AMOUNT	RECEIPT NUMBER	REVENUE CODE	FILE NUMBER
Pradeep A. Raval	# 203	$ 250.00		001031	
Conversion Systems Inc. General Account	# 008789	1,000.00		001031	

[redacted]

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: Cost Center Air Regulation

[redacted]

FROM: Revenue Section
Bureau of Finance and Accounting

DATE: 07-27-92

SUBJECT: Cash Listing # 0004, Deposit # 0244

Please respond to the items marked below and return to the Revenue Section of the Bureau of Finance and Accounting.

O The monies on the attached cash listing have been deposited for your area by the Bureau of Finance and Accounting. A transaction needs to be recorded in PATS for:

Applicant	Amount	Date Received
Pradeep A. Raval	$ 250.00	
Conversion Systems Inc.	1000.00	

Please enter the transaction(s) and attach a copy of this memo to the PATS cash listing reflecting the payment(s).

O Receipt number _____ on your cash listing number _____ is out of balance by $ _____. Please correct and forward a corrected cash listing to the Bureau of Finance and Accounting.

O Other:

O/dg

Attachment(s)

203

PRADEEP A. RAVAL
LIC. R140-661-60-130
6517 NW 39TH AVE.
GAINESVILLE, FL 32606-5735

7-24 19 92

Pay to the order of Florida Dept. of Environmental Regulation $ 250=00

Two hundred fifty and XX/100 Dollars

FIRST UNION NATIONAL BANK OF FLORIDA
GAINESVILLE, FLORIDA 32601

For Air Permit Amendment for Seminole Fertilizer Corp.

Raval

Mr. C. H. Fancy
Division of Air Resources Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Seminole Fertilizer Corporation
Polk County, Florida
Molten Sulfur System
Permit AC53-174175 and A053-188627

Dear Mr. Fancy:

This is to request an amendment of the construction permit issued to Seminole Fertilizer Corporation for its molten sulfur storage and handling system to include a 300 ton molten sulfur pit as described below. Enclosed is a check in the amount of $250 for the processing of the amendment.

The Seminole Fertilizer Corporation (formerly W. R. Grace) operates a phosphate fertilizer complex in Polk County, Florida. The complex includes a molten sulfur storage and handling system which was issued the referenced after-the-fact air construction permit in 1990 and the referenced air operating permit in January 1991.

The system, as it currently exists, consists of a 1,000 ton and a 3,000 ton molten sulfur storage surge tank and a 200 ton sulfur pit. The pit functions both as a receiving pit for molten sulfur delivered by truck and railcar and as a sump from which molten sulfur is delivered to the three operating sulfuric acid plants. Seminole proposes to modify this system by adding an additional 300 ton molten sulfur pit that will expand the company's capability to received molten sulfur by rail. The attached diagram shows the components of the existing and proposed molten sulfur system.

The existing 200 ton sulfur pit has three unloading stations for truck delivered Frasch sulfur from Tampa and one station for railcar delivered sulfur. As shown in the attached diagram, each truck delivers 25 tons of sulfur and the truck unloading time is six minutes. Assuming two trucks per station per hour (allowing for truck connection time), the molten

CONVERSION SYSTEMS, INC.
200 Welsh Road, Horsham, PA 19044
(215) 784-0990 Fax: (215) 784-0970

July 23, 1992

Mr. C. H. Fancy, P. E.
Chief Bureau of Air Regulation
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center
PA 81-14

Dear Mr. Fancy:

Enclosed please find a new application for Conversion Systems, Inc. (CSI) to operate a facility which will process stabilized FGD by-product into aggregate.

I hope the enclosed information is sufficient for the Department to issue the necessary Air Permit for the proposed source.

If you have any questions please feel free to call me at (800) 832-9191.

Sincerely,

Howard A. Wasserman
Director of Government and Environmental Affairs

HAW:cwt
Enc.
cc: Greg DeMuth-OUC
Buck Oven-PPC

001031
~~001032~~

CONVERSION SYSTEMS, INC.
200 WELSH ROAD • HORSHAM, PA 19044

BEST AVAILABLE COPY

No. 000705

GENERAL ACCOUNT

Manufacturers Hanover Bank (Delaware)
1201 Market Street
Wilmington, DE 19801

[redacted]

CHECK NO.	VENDOR NO.	DATE	AMOUNT OF CHECK	1998—09
008789	00-FLDER	07/23/92	*****1,000.00*	

PAY *ONE THOUSAND DOLLARS AND NO CENTS

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL
REGULATION
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399-2400

Michael S. Gafford.

COUNTER SIGNATURES REQUIRED WHEN DRAWN IN EXCESS OF $1,000.00

[redacted]

Mr. C. H. Fancy, P. E.
Chief Bureau of Air Regulation
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center
PA 81-14

Dear Mr. Fancy:

Enclosed please find a new application for Conversion Systems, Inc. (CSI) to operate a facility which will process stabilized FGD by-product into aggregate.

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If you have any questions please feel free to call me at (800) 832-9191.

Sincerely,

Howard Wasser.

HAW:cwt
Enc.
cc: Greg DeMuth-OUC
Buck Oven-PPC

Howard A. Wasserman
Director of Government and Environmental Affairs

001031
001032

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

July 24, 1992

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Material Handling [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Conversion Systems, Inc. COUNTY: Orange

Identify the specific emission ~~XXXXXX~~ source(X) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Crusher-sizer

SOURCE LOCATION: Street 5100 S. Alafaya Trail City Orlando

UTM: East 446825 North 1507528

Latitude 29 ° 29 ' ___ "N Longitude 81 ° 10 ' ___ "W

APPLICANT NAME AND TITLE: Conversion Systems, Inc.

APPLICANT ADDRESS: 200 Welsh Road, Horsham, PA 19044

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Conversion Systems, Inc.

I certify that the statements made in this application for a New 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: _____

John R. Juzwiak, Vice President Operations & Technology
Name and Title (Please Type)

Date: July 23, 1992 Telephone No. 215-784-0990

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

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

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

E. Requested permitted equipment operating time: hrs/day 12 ; 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)

1. Is this source in a non-attainment area for a particular pollutant? No

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

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

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

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants? _____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

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)
Water Spray	Particulate	85-95	N/A	
Covers	Particulate	90	N/A	

E. Fuels

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

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

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

_____

_____

_____

_____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

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: Water Sprays

b. Operating Principles: Spraying Contact w/dust

c. Efficiency:[1] 85-95 (estimate)

d. Capital Cost: $9,000

e. Useful Life:

f. Operating Cost:

g. Energy[2]

h. Maintenance Cost:

i. Availaoility 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: Covers

b. Operating Principles:

c. Efficiency:[1] 90% (estimate)

d. Capital Cost: $3,000

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]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

A. Company Monitored Data

1. _____no. sites _____ TSP _____ ( ) SO_2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

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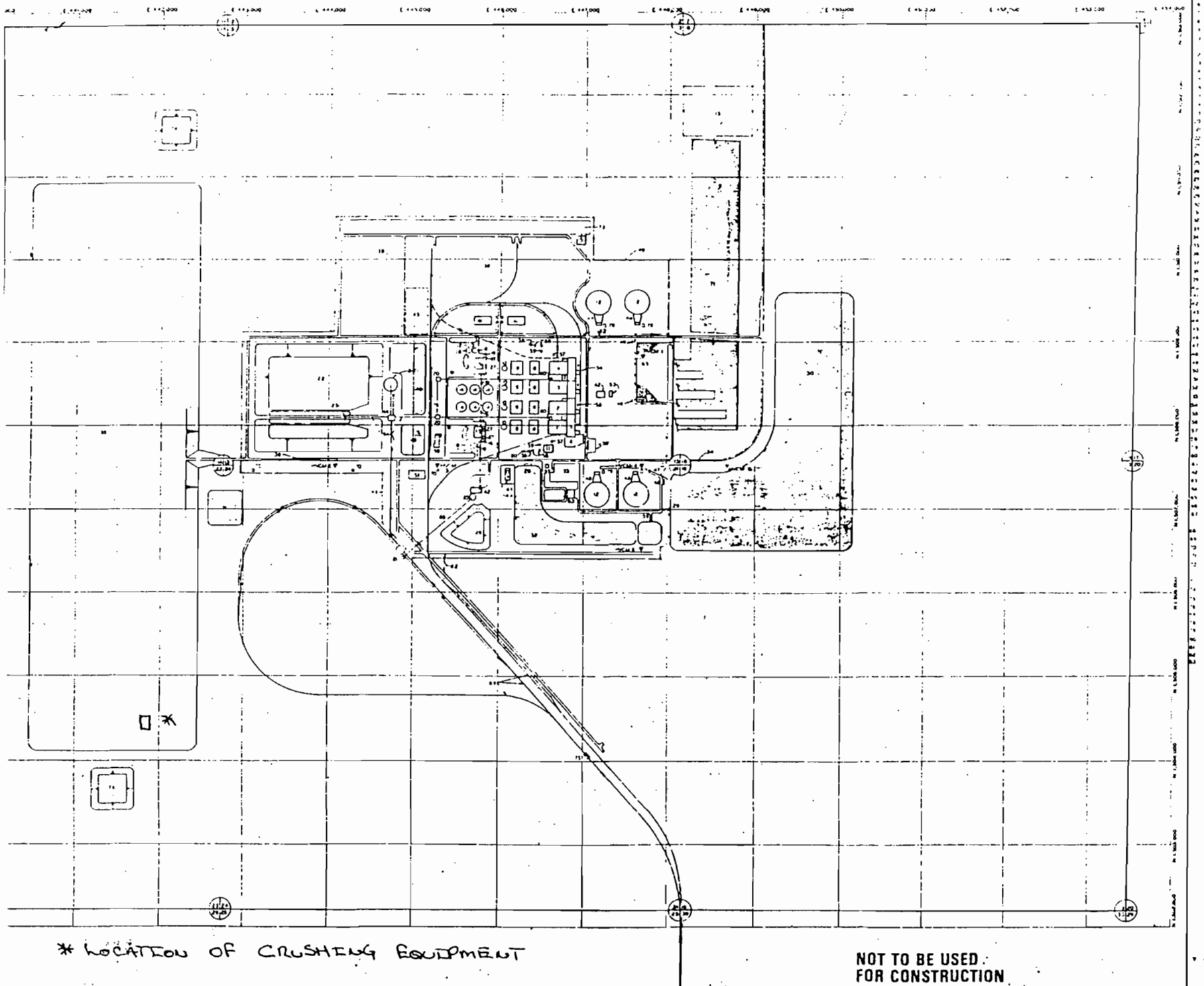


* LOCATION OF CRUSHING EQUIPMENT

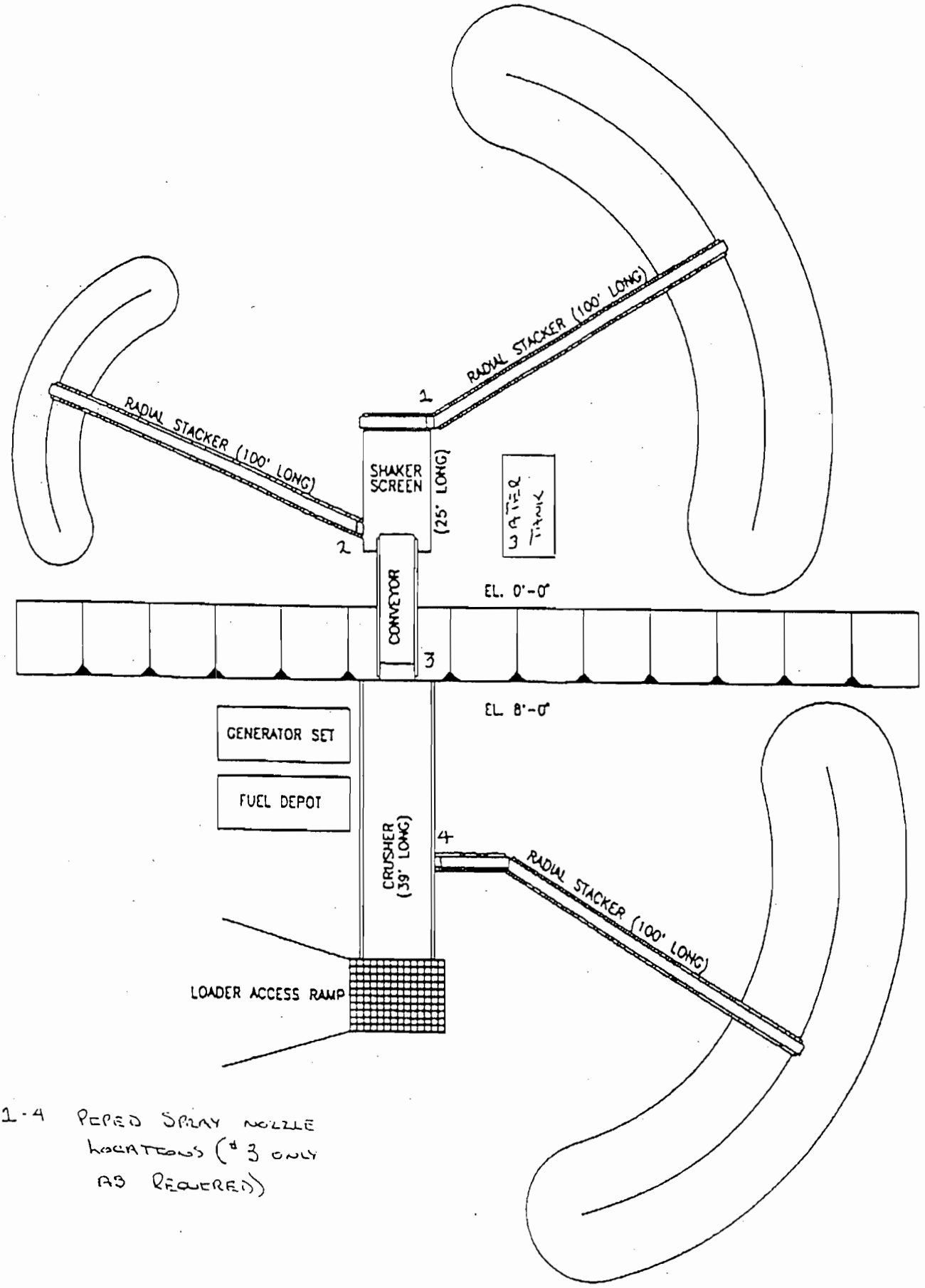
NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH CONSULTING ENGINEERS

ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER - UNIT 1

8927 - GSTU - SIC01

WATER SUPPLY FROM A PUMP AT THE WATER TANK. PIPED WITH PVC TO SPRAY NOZZLE LOCATIONS NOTED.



1-4 PIPED SPRAY NOZZLE LOCATIONS (# 3 ONLY AS REQUIRED)

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

KA 203-92-01

July 24, 1992

Mr. C. H. Fancy
Division of Air Resources Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Seminole Fertilizer Corporation
Polk County, Florida
Molten Sulfur System
Permit AC53-174175 and AO53-188627

Dear Mr. Fancy:

This is to request an amendment of the construction permit issued to Seminole Fertilizer Corporation for its molten sulfur storage and handling system to include a 300 ton molten sulfur pit as described below. Enclosed is a check in the amount of $250 for the processing of the amendment.

The Seminole Fertilizer Corporation (formerly W. R. Grace) operates a phosphate fertilizer complex in Polk County, Florida. The complex includes a molten sulfur storage and handling system which was issued the referenced after-the-fact air construction permit in 1990 and the referenced air operating permit in January 1991.

The system, as it currently exists, consists of a 1,000 ton and a 3,000 ton molten sulfur storage surge tank and a 200 ton sulfur pit. The pit functions both as a receiving pit for molten sulfur delivered by truck and railcar and as a sump from which molten sulfur is delivered to the three operating sulfuric acid plants. Seminole proposes to modify this system by adding an additional 300 ton molten sulfur pit that will expand the company's capability to received molten sulfur by rail. The attached diagram shows the components of the existing and proposed molten sulfur system.

The existing 200 ton sulfur pit has three unloading stations for truck delivered Frasch sulfur from Tampa and one station for railcar delivered sulfur. As shown in the attached diagram, each truck delivers 25 tons of sulfur and the truck unloading time is six minutes. Assuming two trucks per station per hour (allowing for truck connection time), the molten

sulfur delivery rate by truck is approximately 150 tons per hour. The sulfur delivery rate by railcar is approximately 100 tons per hour (allowing 45 minutes for off loading and 15 minutes for connecting the car). Thus, with the existing 200 ton molten sulfur pit, a sulfur delivery rate of 250 tons per hour can be achieved.

Molten sulfur is pumped directly from the existing 200 ton sulfur pit to the No. 4, 5, and 6 sulfuric acid plants at a combined rate of 2,350 tons (of sulfur) per day. Sulfur in excess of that required to supply the sulfuric acid plants is pumped to either the 1,000 ton or the 3,000 ton molten sulfur storage surge tank.

The existing 200 ton molten sulfur storage pit is force ventilated at the rate of 2,700 cubic feet per minute with the vented gases being discharged through a 40 foot tall stack (Stack No. 45).

The proposed 300 ton molten sulfur storage pit will be constructed to provide additional rail receiving capacity. The pit is designed to receive molten sulfur simultaneously from two 100 ton railcars with two additional cars standing by and being readied for off loading. Thus, the maximum sulfur receiving rate to the proposed 300 ton pit will be 200 tons per hour (45 minutes for off loading each of the two cars plus 15 minutes for connecting the two cars).

When the proposed 300 ton pit is being used to receive molten sulfur, the existing 200 ton pit will be used only as a supply source for the sulfuric acid plants. No molten sulfur will be received at the 200 ton pit simultaneous with sulfur receipt in the proposed 300 ton pit. Thus, with the proposed 300 ton pit in operation, the hourly off loading rate of sulfur will be reduced from a maximum of 250 tons per hour to approximately 200 tons per hour. It should be noted that the 200 ton pit will be used as necessary for sulfur receiving but it will not be used simultaneously with the proposed 300 ton pit.

As designed, the proposed 300 ton molten sulfur pit will be vented through the same vent system as the existing 200 ton pit. Thus, the total pit ventilation rate of 2,700 cubic feet per minute will remain unchanged. As the concentration of sulfur vapors in the head space over each of the two pits will be identical and as there is no change in the total sulfur pit ventilation rate, the actual emissions from the two pits will be identical to the actual emissions from the existing 200 ton pit. It should also be pointed out that there will still be only a single emission point for the sulfur pit venting; the existing 40 foot tall No. 45 stack.

In summary, the proposed 300 ton molten sulfur storage pit will be constructed only to increase Seminole's capacity to receive recovered sulfur by rail. The total annual sulfur throughput rate at Seminole will remain unchanged at 860,000 tons per year. Furthermore, the ventilation

rate of sulfur storage pits will remain unchanged at 2,700 cubic feet per minute; the number of emission points will remain unchanged at one (Stack No. 45) and the actual emissions from the sulfur pits will remain unchanged.

In view of the fact that the construction of the 300 ton sulfur pit will not affect actual emissions of any air pollutant nor will it increase the number of emission points, Seminole is requesting that approval for the construction of the proposed pit be granted by a letter amendment to the existing air construction permit and/or air operating permit.

Your prompt attention to this matter would very much be appreciated. Thank you for your cooperation.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, wa

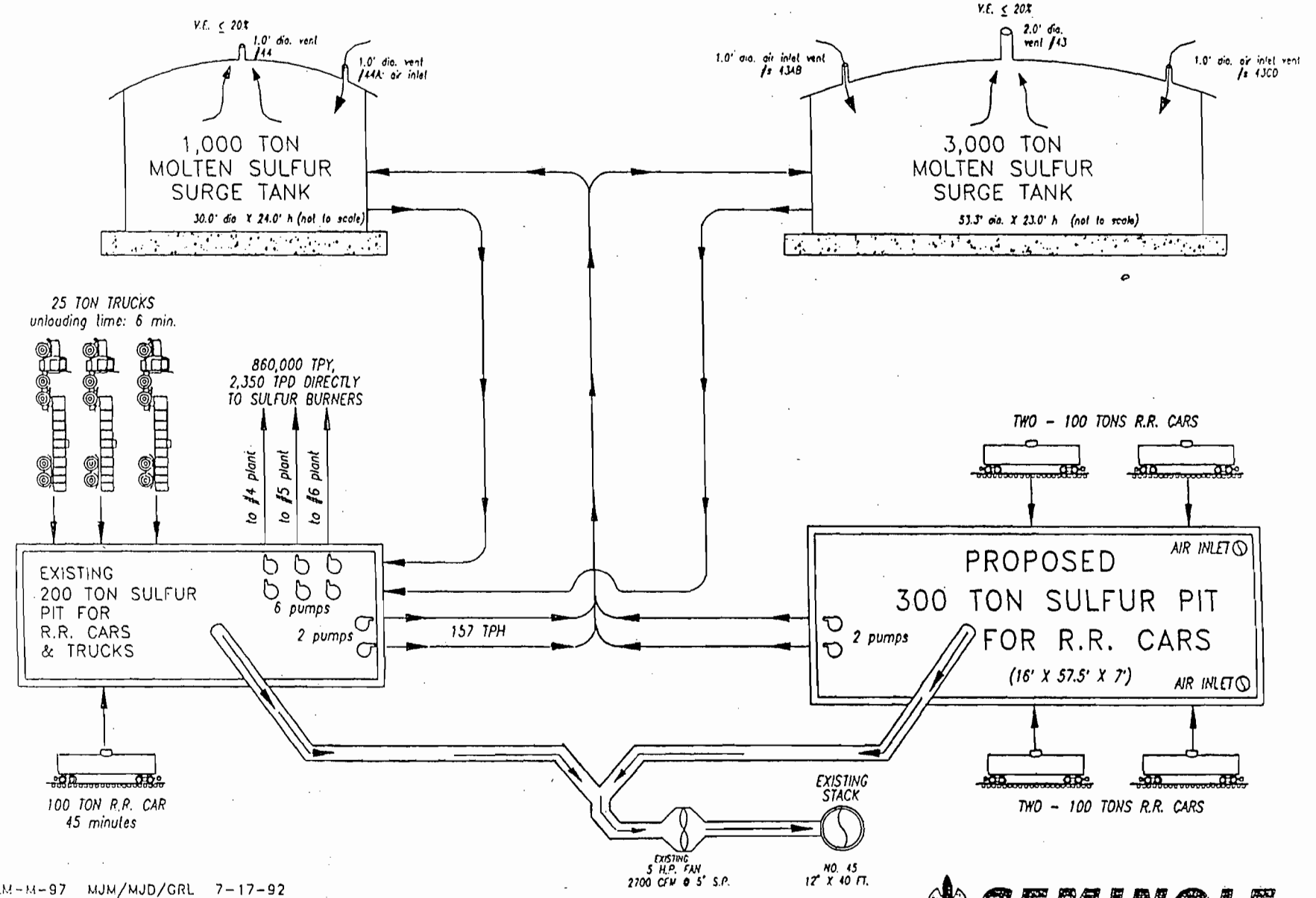
John B. Koogler, Ph.D., P.E.

JBK:wa
Enc.

c: Mr. Ken Ford, Seminole
Mr. M. Martinasek, Seminole
Mr. Bill Thomas, FDER

SULFUR UNLOADING AND HANDLING

BARTOW CHEMICAL PLANT



EAM-M-97 MJM/MJD/GRL 7-17-92

SEMINOLE

CONVERSION SYSTEMS, INC.
200 Welsh Road, Horsham, PA 19044
(215) 784-0990 Fax: (215) 784-0970

PA 5

July 23, 1992

Mr. C. H. Fancy, P. E.
Chief Bureau of Air Regulation
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center
PA 81-14

Dear Mr. Fancy:

Enclosed please find a new application for Conversion Systems, Inc. (CSI) to operate a facility which will process stabilized FGD by-product into aggregate.

I hope the enclosed information is sufficient for the Department to issue the necessary Air Permit for the proposed source.

If you have any questions please feel free to call me at (800) 832-9191.

Sincerely,

Howard A. Wasserman
Director of Government and Environmental Affairs

HAW:cwt
Enc.
cc: Greg DeMuth-OUC
Buck Oven-PPC
C. Collins, C Dist.
D. Nester, OCEPD

001031
~~001032~~

$1,000 pd.
7-24-92

RECEIVED Recpt #180783
DER - MAIL ROOM
1992 JUL 23 AM 8:03

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

AC48-216925

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Material Handling [X] New[1] [ ] Existing

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

COMPANY NAME: Conversion Systems, Inc. COUNTY: Orange

Identify the specific emission ~~source~~ source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Crusher-sizer

SOURCE LOCATION: Street 5100 S. Alafaya Trail City Orlando

UTM: East 446825 North 1507528

Latitude 29 ° 29 ' ___ "N Longitude 81 ° 10 ' ___ "W

APPLICANT NAME AND TITLE: Conversion Systems, Inc.

APPLICANT ADDRESS: 200 Welsh Road, Horsham, PA 19044

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Conversion Systems, Inc.

I certify that the statements made in this application for a New 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: _____

John H. Juzwiak, Vice President Operations & Technology
Name and Title (Please Type)

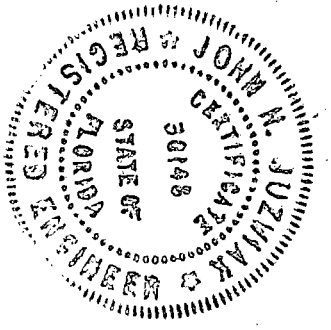
Date: July 23, 1992 Telephone No. 215-784-0990

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

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

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 H. Juzwiak
Name (Please Type)

Conversion Systems, Inc.
Company Name (Please Type)

200 Welsh Road, Horsham, PA 19044
Mailing Address (Please Type)

Florida Registration No. 30148 Date: July 23, 1992 Telephone No. 215-784-0990

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.

Conversion Systems, Inc. intends to operate a crushing unit at the Stanton Energy Center to convert stabilized FGD sludge to a saleable product. Unconfined emissions will be controlled with a water spray system. Any runoff will be collected in the lined active combustion waste storage area runoff pond.

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

Start of Construction July, 1992 Completion of Construction July, 1992

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.)

Approximate $12,000.00 capital

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

N/A

E. Requested permitted equipment operating time: hrs/day 12 ; 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)

1. Is this source in a non-attainment area for a particular pollutant? No

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

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

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

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants?_____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any 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		
Stabilized FGD Sludge	Particulate	100	200,000	

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

1. Total Process Input Rate (lbs/hr): 200,000

2. Product Weight (lbs/hr): 200,000

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	10.00		36.17	10.00			

[1]See Section V, Item 2.

[2]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)

[3]Calculated from operating rate and applicable standard.

[4]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)
Water Spray	Particulate	85-95	N/A	
Covers	Particulate	90	N/A	

E. Fuels

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

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

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

Stack Height: N/A ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diamter: _____ 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: _____

_____

_____

_____

_____

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

_____

_____

_____

_____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

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

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device: Water Sprays

b. Operating Principles: Spraying Contact w/dust

c. Efficiency:[1] 85-95 (estimate)

d. Capital Cost: $9,000

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device: Covers

b. Operating Principles:

c. Efficiency:[1] 90% (estimate)

d. Capital Cost: $3,000

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]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:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]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

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)_____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

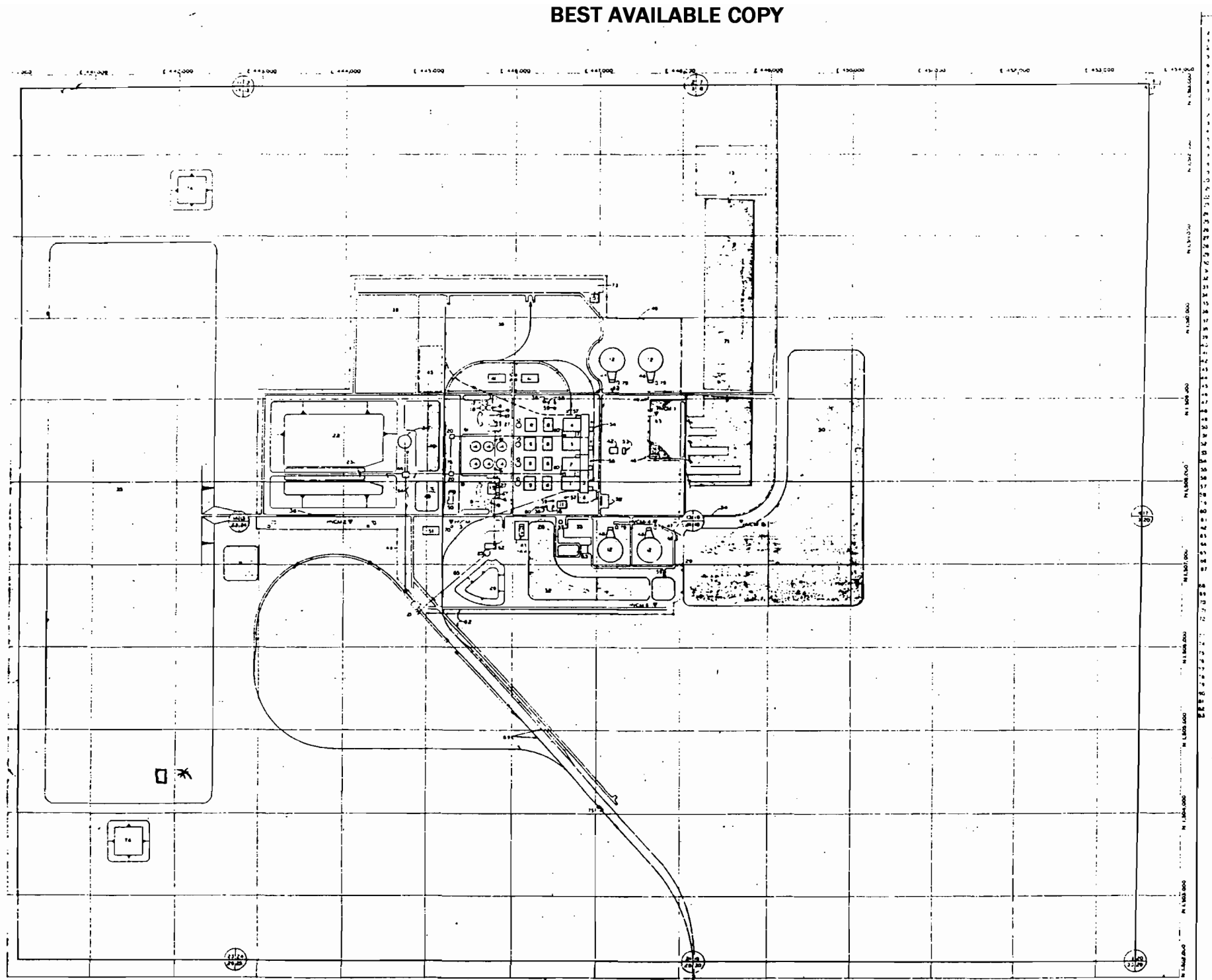
Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

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

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

BEST AVAILABLE COPY



* LOCATION OF CRUSHING EQUIPMENT

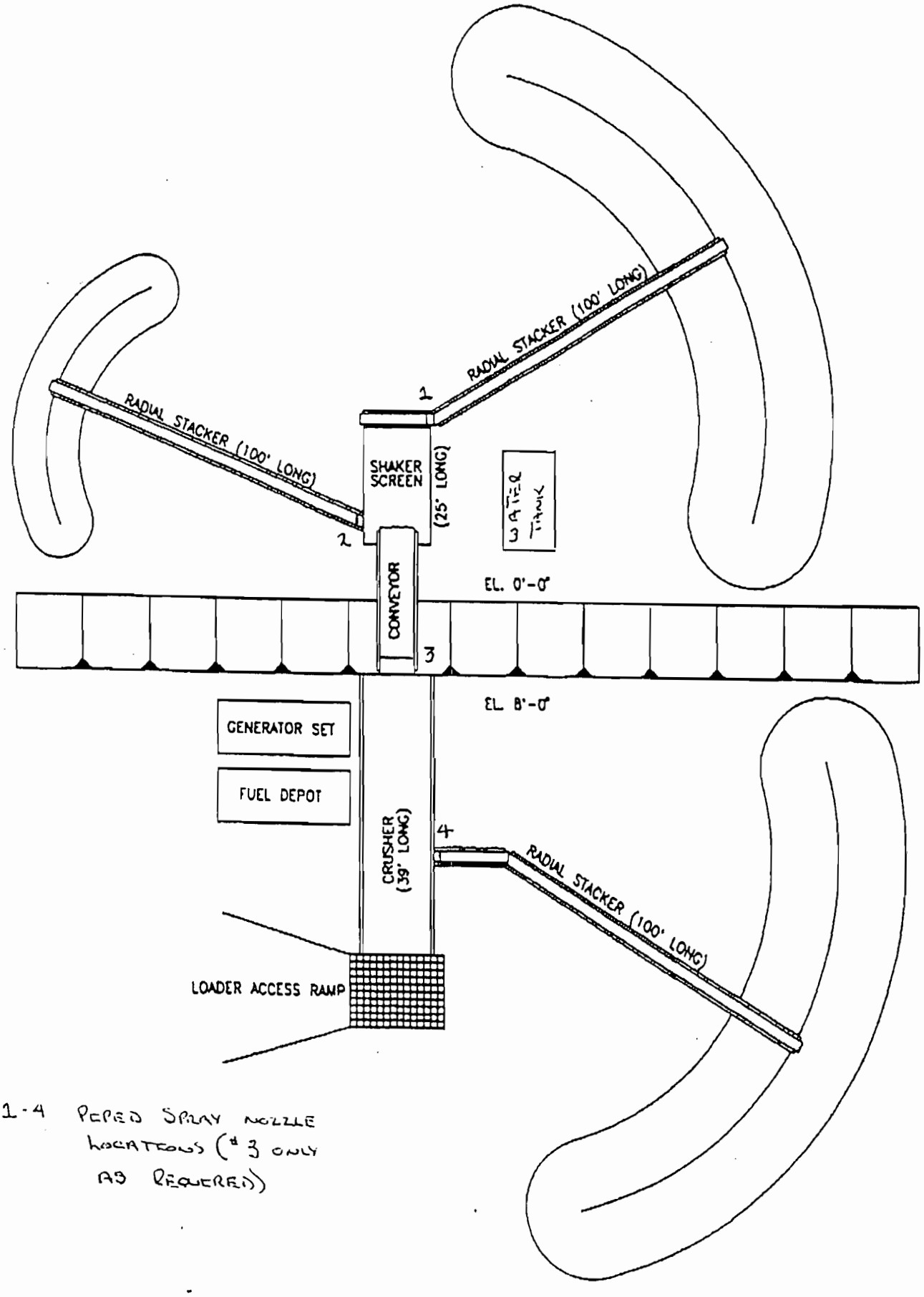
NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH CONSULTING ENGINEERS

ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER - UNIT 1

8927 - CSTU - S1001

WATER SUPPLY FROM A PUMP AT THE WATER TANK. PIPED WITH PVC TO SPRAY NOZZLE LOCATIONS NOTED.



1-4 PIPED SPRAY NOZZLE LOCATIONS (# 3 ONLY AS REQUIRED)

ORLANDO AGGREGATE EQUIPMENT LAYOUT

CONVERSION SYSTEMS, INC.
200 WELSH ROAD • HORSHAM, PA 19044

BEST AVAILABLE COPY

No. 008789

GENERAL ACCOUNT

Manufacturers Hanover Bank (Delaware)
1201 Market Street
Wilmington, DE 19801

[redacted]

CHECK NO.	VENDOR NO.	DATE	AMOUNT OF CHECK
008789	00-FLDER	07/23/92	*****1,000.00*

1998—09

PAY *ONE THOUSAND DOLLARS AND NO CENTS

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399-2400

Michael S. Gafford.

COUNTER SIGNATURES REQUIRED WHEN DRAWN IN EXCESS OF $1,000.00

[redacted]

Mr. C. H. Fancy, P. E.
Chief Bureau of Air Regulation
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center
PA 81-14

Dear Mr. Fancy:

Enclosed please find a new application for Conversion Systems, Inc. (CSI) to operate a facility which will process stabilized FGD by-product into aggregate.

I hope the enclosed information is sufficient for the Department to issue the necessary Air Permit for the proposed source.

If you have any questions please feel free to call me at (800) 832-9191.

Sincerely,

Howard Wasserman

Howard A. Wasserman
Director of Government and Environmental Affairs

HAW:cwt
Enc.
cc: Greg DeMuth-OUC
Buck Oven-PPC

001031
001032

P 710 058 515

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

UNITED STATES POSTAL SERVICE

Sent to: Howard Wasserman	
Street & No. Conversion Systems	
P.O., State & ZIP Code Horsham, PA	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date 7-23-92 PA 81-14	

PS Form **3800**, June 1990

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

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Howard A. Wasserman, Director
Environmental & Gov't Affairs
Conversion Systems, Inc
200 Welsh Rd
Horsham, PA 19044

4a. Article Number P 710 058 515

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

7. Date of Delivery

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form **3811**, October 1990 ☆U.S. GPO: 1990—273-861 **DOMESTIC RETURN RECEIPT**

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 23, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Howard A. Wasserman
Director, Environmental & Government Affairs
Conversion System, Inc.
200 Welsh Road
Horsham, PA 19044

Dear Mr. Wasserman:

Re: Stanton Energy Center PA 81-14

The Department is reviewing the request to allow Conversion Systems, Inc. to process the stabilized FGD by-product at the referenced facility. We have concluded that the Department will need to issue a separate air permit for the proposed source.

Please submit a new application for the proposed facility and a processing fee of $1,000 to the Department. We are continuing to process the original application but will have to receive the new application and fee before the Technical Evaluation and Preliminary Determination can be distributed.

Sincerely,

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

CHF/WH/plm

cc: Greg DeMuth, OUC
Charles Collins, CD
Buck Oven, PPC
Gregg Worley, EPA

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE • P. O. BOX 3193 • ORLANDO, FLORIDA 32802 • 407/423-9100

July 16, 1992

Mr. Greg Worley
United States Environmental
Protection Agency, Region IV
Source Evaluation Unit
345 Courtland Street
Atlanta, GA 30365

Dear Mr. Worley:

Attached is a letter from Howard A. Wasserman, Conversion Systems, Inc. (CSI) detailing the emission estimates for CSI's proposed fixated sludge to aggregate operation to be located at the Orlando Utilities Commission Stanton Energy Center. Based on the emissions, we believe no PSD permitting is required.

To further expand on this process in relation to ownership and operation, we provide the following:

a) CSI has total ownership of all equipment in this proposed process.

b) Only CSI employees will operate this process.

c) CSI retains all marketing and sales rights to the product aggregate.

d) CSI retains all revenues until a baseline cost is met then revenues are split 60/40 with 40% going to Orlando Utilities Commission.

Based on the above information, we believe that this process should be permitted by the Florida Department of Environmental Regulation under the Power Plant Siting Act.

Thank you for your cooperation and should you have any questions, please contact me at 407/423-9141.

Very truly yours,

G. A. DeMuth, Director
Environmental Division

GAD:rc

xc: W. H. Herrington
G. M. Standridge
F. F. Haddad
H. A. Wasserman
H. S. Oven (DER, Tallahasse)
W. Hanks (DER, Tallahassee)

ORLANDO UTILITIES
COMMISSION

P. O. BOX 3193
ORLANDO, FLORIDA 32802

ORLANDO
JUL 17'92
FLA.
PB METER
6784902
U.S.POSTAGE
0.29

Mr. Willard Hanks
Air Resource Management
Permitting Section
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

CONVERSION SYSTEMS, INC.
200 Welsh Road, Horsham, PA 19044
(215) 784-0990 Fax: (215) 784-0970

July 14, 1992

Mr. Greg DeMuth
ORLANDO UTILITIES COMMISSION
500 South Orange Avenue
P. O. Box 3193
Orlando, FL 32802

Subject: OUC Stanton Station
Sludge to Aggregate Operation

Dear Mr. DeMuth:

Confirming our conversation of July 14, 1992, Conversion Systems, Inc. (CSI) estimates the emissions from our sludge to aggregate manufacturing operation as follows:

Total Particulate Matter - 10 lbs. per hour - 21.9 tons per year

PM_{10} - 5 lbs. per hour - 10.95 tons per year or less

This emission estimate is based on our knowledge of the process, the controls that have been placed on the process (covers, water sprays, etc.) and our knowledge of the fly ash particle size generated at the station (5 microns average). As a result of a combination of factors, including cementitous bonding generated by the aggregate manufacturing process, and residual moisture retained by the sludge during crushing and screening operation, a small percentage of particulate emissions under 10 microns will be generated.

This information needs to be forwarded to Mr. Greg Worley, USEPA, Source Evaluation Unit, 345 Courtland Street, Atlanta, GA 30365 so that EPA can completely evaluate the source emissions. If you have any more questions, please feel free to call me at (800) 832-9191.

Sincerely,

Howard A. Wasserman

HAW:cwt

Howard A. Wasserman
Director, Environmental & Government Affairs

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

mailed 7-2
Patty, PA
send copy of letter
+ memo to cc: listed -
- don't include file
- it goes to EPA only
mk

June 30, 1992

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

Dear Ms. Harper:

Re: Orlando Utilities Commission Center, PSD-FL-084

The Department has received a request from Orlando Utilities Commission to allow Conversion System, Inc. to install a stabilized FGD sludge material handling system at the referenced plant. A copy of the file for this request is attached. The Department plans to process this request as an amendment to the Power Plant Certification PA 81-14 for this plant.

Your agency issued federal construction permit PSD-FL-084 for this plant. This permit may also need to be amended to authorize the operation of the proposed material handling facility. Please coordinate any amendments to this permit with Willard Hanks, the review engineer assigned this project. He can be reached at (904) 488-1344.

Sincerely,

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

CHF/wh

Enclosure: File

cc: Greg DeMuth, OUC
Howard Wasserman, Conversion Systems, Inc.
Chuck Collins, CFD
Buck Oven, PPC

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

DRAFT

To: Buck Oven

Thru: Preston Lewis

From: Willard Hanks

Date: June 29, 1992

Subject: OUC Stanton Energy Center PA 81-14
Module 8024

The Bureau of Air Regulation has determined that the proposed stabilized FGD sludge handling system is a potential source of unconfined particulate matter emissions. The F.A.C. Rule 17-2, Air Pollution, requires reasonable precautions be used to minimize unconfined emissions. The applicant has agreed to meet the visible emission limits in the new source performance standards for nonmetallic mineral processing plants by the use of water sprays, enclosed chutes, and equipment covers. The Bureau finds these limits acceptable and recommends that the following conditions be incorporated in the amendment to the Power Plant Certification for this facility.

1. The plant shall not process more than 100 TPH stabilized FGD (flue gas desulfurization) sludge.

2. The plant may operate 12 hours per day for 7 days per week and 52 weeks per year.

3. The plant shall be equipped with the air pollution control equipment listed in the following table. Visible emissions, 6 minute average percent opacity as determined by EPA Reference Method 9 described in 40 CFR 60, Appendix A (July 1, 1992), for each operation shall not exceed the limits listed.

OPERATION	AIR POLLUTION CONTROL	% OPACITY
Evacuation and transporting to trucks or feed bin	Water spray as necessary	10
Crusher	Cover and water sprays	15

DRAFT

OPERATION	AIR POLLUTION CONTROL	% OPACITY
Crusher to screen conveyer transfer points	Water sprays and enclosed chutes.	10
Shaker screen	Cover	15
Radial Stacker-fines	Water sprays, enclosed chutes, and adjustable drop chute	15
Radial stackers-products	Water Sprays	15
Storage piles	Water spray system	5
Loading/shipping product	Water sprays and covered trucks leaving plant	15

4. If the plant is unable to comply with the visible emission standard for any operation listed in the above table, the permittee shall install additional air pollution control equipment needed to meet the standard.

5. The visible emissions tests shall be conducted within 30 days of commercial operation of the facility and the results submitted to the Department's Central Florida District office.

6. The electrical power generator shall not use more than 7 GPH diesel fuel. The power motor for the crusher shall not use more than 6 GPH diesel fuel. The diesel fuel used by these units shall not contain more than 0.3% sulfur.

WH/kt

$$E_{SO_2} = 13\frac{gal}{hr} \times 8\frac{lbs}{gal} \times .003 \times 2\frac{lbs\ SO_2}{lbs\ fuel} \times \frac{1}{2000\ lbs} \times \frac{8760}{2}\frac{hrs}{yr}$$

$$= 1.4\ TPY\ SO_2$$

CONVERSION SYSTEMS, INC.
200 Welsh Road, Horsham, PA 19044
(215) 784-0990 Fax: (215) 784-0970

336 406 7512

6-29-92
David McNeal, EPA, said
NSPS nonmetallic mineral plants
does not apply to this facility.
lmh

June 15, 1992

Mr. Willard Hanks
Florida Dept. of Environmental Regulations
Twin Towers of Office Building
2600 Blair Stone Road
Tallahassee, FL 32339-2400

Dear Mr. Hanks:

In response to your letter of June 4, it should be noted that the aggregate material produced at the OUC site will be made from stabilized FGD wastes and cured in the combustion waste storage area at the site. After it has hardened in place, it will be quarried, crushed and screened to saleable aggregate sizes with minimal fines generation. Fines generated are contained within the system and recycled.

Answer to questions in letter:

1. FGD stabilized materials produce leachate, which when analyzed for EPA TCLP parameters for metals, is classified as non-hazardous. The general chemical composition of FGD by-product material is as follows:

   Calcium Sulfate, Calcium Sulfites.....50%
   Fly Ash (Alumina, Silica, Trace Metals).....30%
   Lime (Calcium Oxide).....5%
   Water.....15%

   TCLP data on the material is attached.

2. The material will be excavated with a rubber-tired loader, or other heavy equipment, transported to the crusher unit either in the loader itself, or by dump trailers. Due to the 15% moisture in this material, there should be little or no fugitive emissions from this activity. A water spray will be available to eliminate any emissions caused by the equipment movement (loader and trucks) and during the transfer of the material from the loader to the truck or to the crusher feed hopper. Opacity shall never exceed 20% during the course of this operation.

3. See the enclosed drawing of the feed bin, crusher, conveyor and shaker screen system with the shroud covers and water spray head location identified.

4. As mentioned above in the response to questions #2, a water spray system has been installed at the site with water disbursement nozzles at all the transfer chutes of the crusher, screen, and belt conveyor transfer points. Enclosed chutes have been installed at points where the fines material is transferred and emissions will be contained. Covers will be placed over screen areas. Normal opacity should range from 10 - 15% during the course of operation, and peak opacity levels should never exceed 20%.

5. Due to the large particle size of the aggregate product manufactured, the product does not lend itself toward generating fugitive emissions while stockpiled. However, all product stacking conveyors will have water spray heads emitting a water spray at the discharge of each conveyor to control fugitive emissions as required as material is deposited on the pile. A water spray system is also available for wetting the pile as required. Opacity from the piles will be less than 5%.

   A drop chute is attached to one conveyor to contain the discharge for ease of wetting before stockpiling. This conveyor can be height adjusted to maintain the drop chute's effectiveness.

6. The material in the stockpiles will be removed with a rubber-tired loader and transferred to covered dump trailers for shipment. Again, water sprays will be utilized to prevent fugitive emissions. Opacity will never exceed 20% during truck loading operations.

7. As mentioned above, a water spray system has been installed to reduce emissions. A drop chute was also installed at one of the stockpile conveyor discharge points. Due to the installation of these control systems, which are consistent with the State of Florida's Air Pollution Rules for this type of application, we expect to properly control any emissions from this System. As this is a system comprised of portable equipment, the installation of baghouses to control emissions was investigated and determined to be not practical.

Sincerely,

Howard A. Wasserman
Director of Government and
Environmental Affairs

HAW:kaw

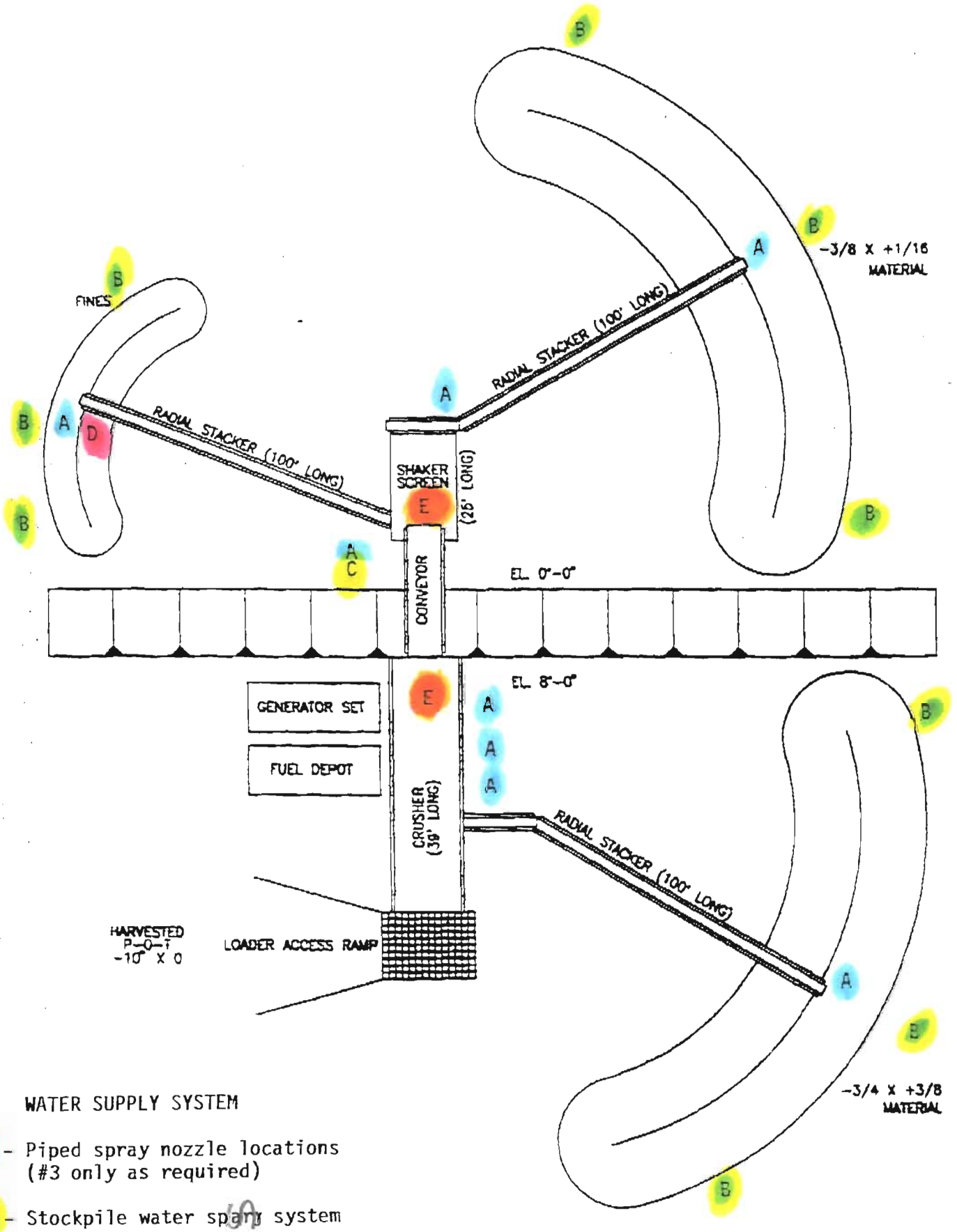
cc: R. Hanks
B. Green

CHEMICAL ANALYSIS SUMMARY REPORT

POZ-O-LITE™ COMPOSITION

EPA SW-846 METHOD 1311 (TCLP)

ANALYTE	RANGE (mg/l)
Arsenic	<0.05 - 0.12
Barium	<1
Cadmium	0.03 - 0.11
Chromium	<0.05 - 0.94
Lead	<0.05 - 0.16
Mercury	<0.002
Selenium	<0.01 - 0.06
Silver	<0.05



WATER SUPPLY SYSTEM

A - Piped spray nozzle locations (#3 only as required)

B - Stockpile water spray system

C - Enclosed Chutes

D - Drop Chute

E - Cover

ORLANDO AGGREGATE EQUIPMENT LAYOUT

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: Buck Oven

Through: Preston Lewis

From: Willard Hanks

Date: June 4, 1992

Subject: OUC Stanton Energy Center PA 81-14
Module 8024

The application for the material handling system for the referenced facility did not contain enough information for BAR to evaluate it. We need the following information to determine if the project can be approved:

1. What is the chemical analysis of the FGD by-product? Include the metals and moisture concentrations.

2. How will this material be removed from the landfill and transported to the crusher? What precautions will be used to minimize fugitive emissions at this step? What will be the maximum visible emissions during the removal, transport, and feeding the crusher operations?

3. Provide drawings of the feed bin, crusher, conveyer, and shaker screen showing how the shroud will enclose this equipment.

4. What other precautions will be used to control fugitive emissions from the bin, crusher, conveyer, and shaker screen during operation? What will be the maximum visible emissions from each operation?

5. What precautions will be used to minimize fugitive dust emissions from the product storage piles? What will be the maximum visible emissions?

6. Describe how the product will be handled, loaded, and shipped from the storage piles. What precautions will be used to minimize fugitive dust emissions? What will be the maximum visible emissions during this part of the operation?

7. Please evaluate the feasibility of using a baghouse(s) to control the particulate matter emissions from the crusher and screen, and adjustable drop chute for the radial conveyer drop points, and sprinklers on the product storage piles. Estimate the change in the particulate matter emission rates (lbs/hr) that would result from the use of this equipment.

Any questions on the information requested should be referred to Willard Hanks at 904/488-1344.

C: Alan Zahm

5/15 Barry
Please handle by
due date.
Clair

For Routing To Other Than The Addressee

To	CLAIR	Location	AIR
To	FANCY	Location	
To		Location	
From		Date	

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

TO: Clair Fancy
Chuck Collins

FROM: Buck Oven

DATE: May 14, 1992

SUBJECT: OUC Stanton Energy Center PA 81-14
Module 8024

RECEIVED
MAY 14 1992
Division of Air
Resources Management

Please review and comment on the attached amendment to the OUC Stanton Energy Center site. OUC has provided completed application forms for construction of an air pollution source. Please indicate your approval or disapproval of this amendment by June 15, 1992. If approvable, please suggest applicable conditions of certification.

Alan Zahm suggested VC letter

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE • P. O. BOX 3193 • ORLANDO, FLORIDA 32802 • 407/423-9100

VIA FEDERAL EXPRESS

May 13, 1992

Mr. Hamilton S. Oven, Jr., P. E.
Administrator Siting
Coordination Office
Florida Department of
Environmental Regulation
2800 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center PA 81-14

Dear Mr. Oven:

Orlando Utilities Commission (OUC) requests the Florida Department of Environmental Regulation (FDER) grant approval to operate equipment which would allow Conversion Systems, Inc. (CSI) and OUC to take stabilized FGD by-product and convert it to a saleable material. The equipment required to be operated was outlined in previous letters to your office.

Emissions generated from this mobile source are categorized as an Unconfined Emission of Particulate Matter as defined in FDER regulation 17-2.610(3). The equipment is provided with a water spray system (20 gpm maximum flow-dependant on operation dust generated) to control fugitive emissions from the operation. In addition, the equipment is shrouded throughout between the inlet hopper and the discharge chute.

Per your request, enclosed is the complete Application to Operate/Construct Air Pollution Sources, photographs, detail of spray points, and a site plan location. We have addressed all applicable information regarding this material handling process and request your approval.

If you have any questions regarding this application, please contact Greg DeMuth at 407/423-9141.

Very truly yours,

W. H. Herrington,
Vice President
Electric Business Unit

WHH:rc

xc: G. M. Standridge
T. B. Tart
F. F. Haddad
G. A. DeMuth
J. Story, CSI
J. Juzwiak, CSI

30 ORL 480137

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Material Handling [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Orlando Utilities Commission COUNTY: Orange

Identify the specific emission ~~point~~ source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Crusher-sizer

SOURCE LOCATION: Street 5100 S. Alafaya Trail City Orlando

28°29'01" UTM: East 446825 17-483.5 North 1507828 3150.6

81°10'07" Latitude ~~28~~ 29 ° ~~29~~ 29 ' ~~or~~ "N Longitude 81 ° 10 ' 30 "W

APPLICANT NAME AND TITLE: William H. Herrington, Vice President Electric Business Unit

APPLICANT ADDRESS: 500 S. Orange Avenue, Orlando, FL 32802

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Orlando Utilities Commission

I certify that the statements made in this application for a Modification 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:

W. H. Herrington, Vice President Electric Business Unit
Name and Title (Please Type)

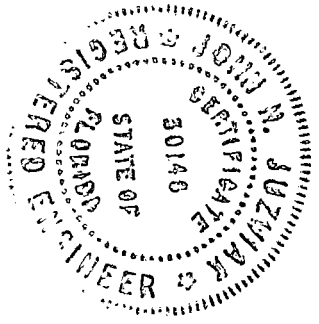
Date: May 13, 1992 Telephone No. (407) 423-9100

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

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

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 H. Juzwiak
Name (Please Type)

Conversion Systems, Inc.
Company Name (Please Type)

200 Welsh Road, Horsham, PA 19044
Mailing Address (Please Type)

Florida Registration No. 30148 Date: May 11, 1992 Telephone No. (215) 784-0990

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.

Orlando Utilities Commission intends to operate a crushing unit at the Stanton Energy Center to convert stabilized FGD sludge to a saleable product. Unconfined emissions will be controlled with a water spray system. Any runoff will be collected in the lined active combustion waste storage area runoff pond.

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

Start of Construction _____ Completion of Construction _____

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.)

Approximate $ 9,000.00 capital

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

N/A

E. Requested permitted equipment operating time: hrs/day 12 ; 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)

1. Is this source in a non-attainment area for a particular pollutant? No

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

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

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

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants? _____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any 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		
Stablized FGU Sludge	Particulate	100	200,000	

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

1. Total Process Input Rate (lbs/hr): 200,000

2. Product Weight (lbs/hr): 200,000

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	<36.17		36.17	36.17			

Process Wt for table for 105 T/H note

[1]See Section V, Item 2.

[2]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)

[3]Calculated from operating rate and applicable standard.

[4]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)
Water Spray	Particulate	85-95	N/A	

E. Fuels N/A

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

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

_____

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

Annual Average _____ Maximum _____

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

_____

_____

_____

_____

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

Stack Height: N/A ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diamter: _____ 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: _____

_____

_____

_____

_____

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

_____

_____

_____

_____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

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

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles: Spraying Contact w/dust

c. Efficiency:[1] 85-95

d. Capital Cost: $9,000

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availaoility of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]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:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]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

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^{2}* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)_____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

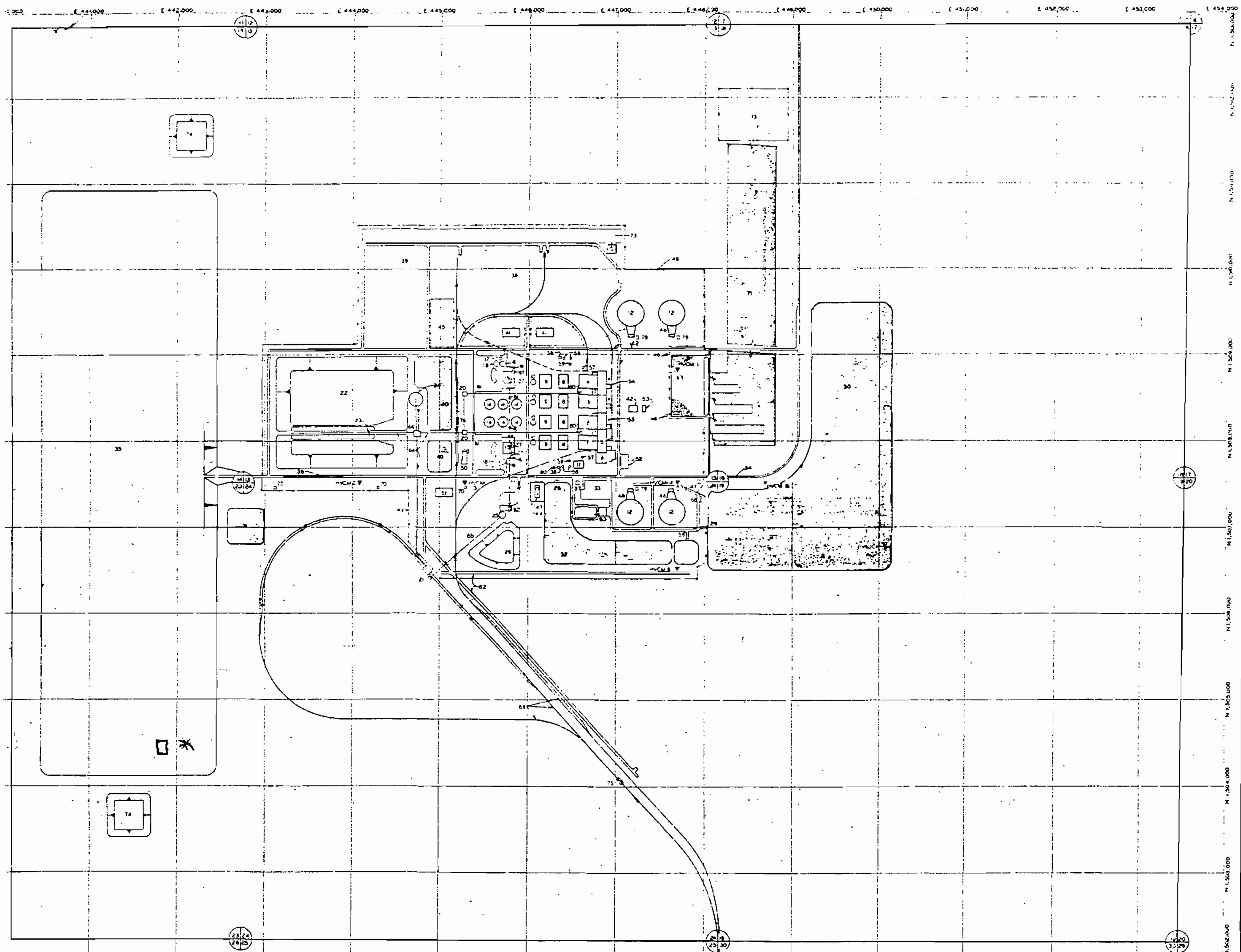
Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

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

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

BEST AVAILABLE COPY



* LOCATION OF CRUSHING EQUIPMENT

FACILITIES LEGEND

1. UNIT 1 STEAM GENERATOR
2. UNIT 2 STEAM GENERATOR
3. UNIT 3 STEAM GENERATOR
4. UNIT 4 STEAM GENERATOR
5. TURBINE ROOM
6. ADMINISTRATION AND PLANT SERVICES BUILDING
7. CONTROL CENTER BUILDING
8. PRECIPITATOR
9. AIR QUALITY CONTROL BUILDING
10. CHIMNEY
11. WATER MANAGEMENT BUILDING
12. COOLING TOWER
13. SUBSTATION
14. THICKENER
15. SLUDGE CONDITIONING BUILDING
16. FLY ASH SILO
17. ASH DEWATERING TANK
18. ASH SETTLING TANK
19. ASH WATER STORAGE TANK
20. COAL CRUSHER BUILDING
21. COAL CAR UNLOADING BUILDING
22. COAL STORAGE AREA
23. STACKER RECLAIMER
24. EMERGENCY STOCKOUT AND RECLAIM
25. SCRUBBER ADDITIVE STOCKOUT
26. SCRUBBER ADDITIVE STORAGE
27. SCRUBBER ADDITIVE STORAGE TANK
28. SCRUBBER MAKEUP WATER PUMP STRUCTURE
29. CIRCULATING WATER MAKEUP PUMP STRUCTURE
30. MAKEUP WATER SUPPLY STORAGE POND
31. ACTIVE COMBUSTION WASTE AREA RUNOFF POND
32. RECYCLE BASIN
33. ADMINISTRATION AND PLANT SERVICES PARKING LOT
34. MAIN PLANT ACCESS ROAD
35. COMBUSTION WASTE STORAGE AREA
36. COMBUSTION WASTE HAUL ROAD
37. COMPRESSED GAS STORAGE BUILDING
38. WATER STORAGE PUMP BUILDING
39. CONSTRUCTION LAYDOWN AREA
40. COAL STORAGE AREA RUNOFF POND
41. CONSTRUCTION WAREHOUSES
42. CONSTRUCTION OFFICE BUILDING
43. FUEL OIL STORAGE
44. OIL SPILL CONTAINMENT BERM
45. CONCRETE BATCH PLANT
46. GUARD STATION
47. SECURITY BUILDING
48. CIRCULATING WATER PUMP STRUCTURE
49. SECURITY FENCE
50. YARD SERVICES BUILDING
51. PERMANENT WAREHOUSE
52. VISITORS PARKING LOT
53. CONSTRUCTION CHANGE BUILDING
54. LUBE OIL STORAGE ROOM
55. GENERATOR TRANSFORMER AREA
56. WASTEWATER RETURN PUMP STRUCTURE
57. NEUTRALIZATION BASIN
58. SERVICE WATER STORAGE TANKS
59. DEMINERALIZED WATER STORAGE TANK
60. CONDENSATE STORAGE TANKS
61. COMBUSTION WASTE LOADING AREA
62. PLANT SERVICE ROADS
63. CONSTRUCTION PARKING
64. YARD COAL CONVEYOR
65. YARD SCRUBBER ADDITIVE CONVEYOR
66. COAL TRANSFER STRUCTURE
67. LIME STORAGE SILO
68. SEWAGE TREATMENT PLANT
69. RAILROAD
70. WELL WATER PUMP HOUSE
71. SITE TRANSMISSION CORRIDOR
72. MAKEUP WATER SUPPLY PUMP STRUCTURE (LOCATED AT IRON BRIDGE FACILITY)
73. CONSTRUCTION POWER SUBSTATION
74. TOPSOIL COVER STOCKPILE
75. TRACK SCALE
76. LIME UNLOADING BUILDING
77. TRUCK SCALE
78. TEMPORARY ACCESS ROAD
79. CIRCULATING WATER CHEMICAL FEED BUILDING
80. EMERGENCY GENERATOR BUILDING
81. THICKENER PUMP BUILDING
82. LIMESTONE STORAGE COVER AND RECLAIM
83. WASTEWATER TREATMENT BUILDING

▼ HYCM - SURVEY CONTROL MONUMENT SEE DRAWING LATER

NOT TO BE USED FOR CONSTRUCTION

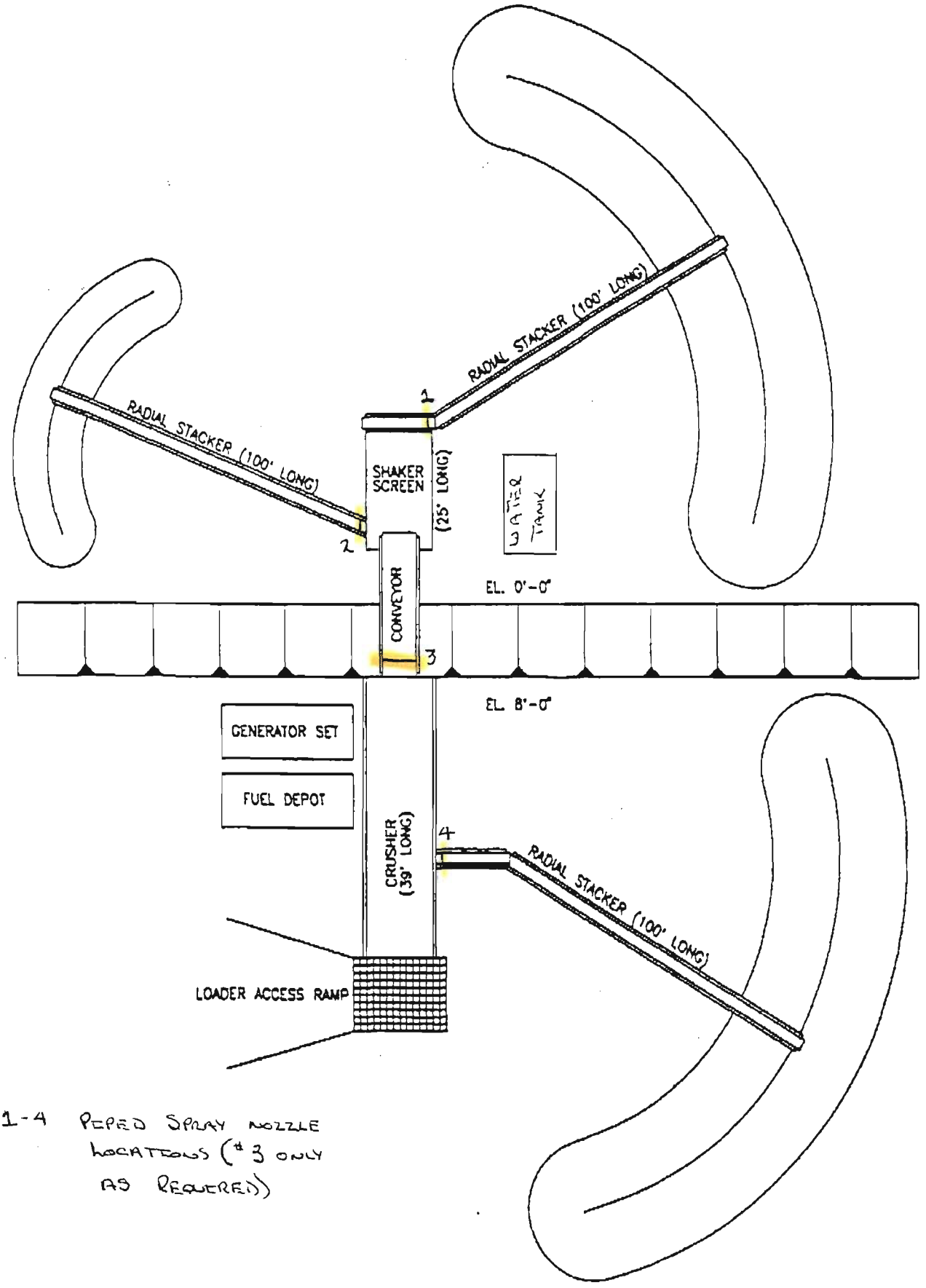
0 | 1-16-... | CONFORMED TO CONSTRUCTION RECORDS

BLACK & VEATCH CONSULTING ENGINEERS

ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER - UNIT 1
GENERAL SITE ARRANGEMENT

8927 - CSTU - S1001 | 0

WATER SUPPLY FROM A PUMP AT THE WATER TANK. PIPED WITH PVC TO SPRAY NOZZLE LOCATIONS NOTED.



1-4 PIPED SPRAY NOZZLE LOCATIONS (#3 ONLY AS REQUIRED)

ORLANDO AGGREGATE EQUIPMENT LAYOUT

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 20, 1992

Mr. Greg A. DeMuth, Director
Environmental Division
Orlando Utilities Commission
P.O. Box 3193
Orlando, Florida 32802

Re: Stanton Energy Center PA 81-14

Dear Mr. DeMuth:

Thank you for your letter of April 14, 1992. Please submit a completed DER Form 17-1.202(1), Application to Operate/Construct an Air Pollution Source for the FGD crushing unit proposed for the Stanton Energy Center. Include with the form the appropriate description of the housing to demonstrate containment and control of dust including flow rates and control systems. Also please indicate the proposed location of this crushing facility on a site plan.

Sincerely,

Hamilton S. Oven

Hamilton S. Oven, P.E.

cc: Chuck Collins
Preston Lewis

Certified Mail No. P-795-058-066
Return Receipt Requested

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE • P. O. BOX 3193 • ORLANDO, FLORIDA 32802 • 407/423-9100

April 14, 1992

APR 16 1992

Mr. H. S. Oven, Administrator
Siting Coordination Office
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Oven:

Per our telephone conversation last week regarding the reclaimation of fixed scrubber solids from our Stanton Energy Center active combustion waste storage area, I am enclosing the following documents for your review:

Attachment 1) Copy of a letter from John E. Story of Conversion System, Inc. (CSI) dated April 7, 1992.

Attachment 2) A proposal pending before the Full House Energy and Commerce Committee regarding the RCRA reauthorization legislation encouraging the "reuse" of fossil fuel combustion wastes.

We believe that CSI's process is in keeping with the intent of the proposed legislation, and we are requesting your approval to operate the equipment at our Stanton Energy Center, as described in Attachment 1. The equipment will be operated in compliance with the material handling limitation found in the Stanton Condition of Certification (PA81-14) and therefore, should not require modification to the existing conditions.

If you need additional information or have any questions, please call me at 407/423-9141.

Very truly yours,

G. A. DeMuth, Director
Environmental Division

GAD:rc
gad0408
Enclosure

xc: W. H. Herrington
T. B. Tart
G. M. Standridge
F. F. Haddad
D. M. Spencer
R. F. Hicks

ATTACHMENT 1

CONVERSION SYSTEMS, INC.
5100 S. Alafaya Trail, Orlando, Florida 32831 (407) 281-1801

APR 13 92

Greg DeMuth
Director Environmental Affairs
Orlando Utilities Commission
500 South Orange Avenue
Orlando, Florida 32802

April 7, 1992

Dear Mr. DeMuth,

Conversion Systems, Inc. has operated the waste stabilization facility and landfill at the Orlando Utility Commission Stanton Energy Center Unit 1 for the past five years.

We have recently developed a process to utilize the FGD by-product material to produce a saleable product. This process will require CSI to install and operate the following equipment at the landfill area:

1). A portable crushing unit that contains a primary jaw crusher and a secondary roll crusher.

2). A portable shaker/screening assembly to size the material from the crushing assembly.

3). Various conveyors to stockpile the material.

We have shielded appropriate material transfer areas of the system. In addition, we will have a water system available to supply a light mist of water, if required, to eliminate any fugitive dust emissions.

Once this system is operational and the market fully developed, almost all of the combustion materials will be sold and dramatically reduce the landfill quantities.

We believe this portable operation is in accordance with the Florida regulations and will proceed with this concept unless we are notified to do otherwise by your office. If you have any questions, please call.

Sincerely,

John Edward Story
Plant Manager-CSI
Orlando Operations

ATTACHMENT 2

PROPOSED AMENDMENT TO RCRA BILL TO PROMOTE
INCREASED UTILIZATION OF COAL COMBUSTION ASH

SEC. ____. UTILIZATION OF COAL COMBUSTION BYPRODUCTS.

(a) AMENDMENT TO SUBTITLE E. Subtitle E is amended by adding the following new section at the end thereof:

"SEC. 5007. UTILIZATION OF COAL COMBUSTION BYPRODUCTS.

"(a) DEFINITIONS.--As used in this section, the term coal combustion byproducts means the residues from the combustion of coal including ash, slag, and flue gas desulfurization materials. When utilized as a product, as an ingredient thereof, or as a raw material, or when handled, transported or stockpiled for such utilization, these byproducts are considered product materials.

"(b) FINDINGS.--The Congress finds with respect to utilization of coal combustion byproducts --

"(1) Coal combustion byproducts have commercial applications, including as replacement of cement in concrete, snow and ice control abrasive, additives in paints and plastics, lightweight manufacturered aggregate, highway road base and embankment and structural fill material, and have been used in construction of bridges, highways, airports, dams, tunnels, buildings, reclamation projects, and numerous other technically proven commercial applications;

"(2) The Environmental Protection Agency has reported to Congress that utilization of coal combustion byproducts has been done in an environmentally safe manner;

"(3) The use of coal combustion byproducts in an environmentally safe manner is beneficial to society in the following respects:

"(A) It conserves energy. Since these materials are byproducts of the combustion process, they require no additional energy to produce and thus conserve the energy necessary to extract and produce virgin materials;

"(B) It conserves natural resources by substituting for virgin materials such as sand, gravel and soil;

"(C) It lowers electricity costs to ratepayers by producing revenues from the sale of the byproducts and by avoiding disposal costs;

"(D) It conserves land resources by reducing the need for disposal facilities;

"(E) It provides superior quality construction materials at lower cost.

"(4) The federal and state governments, consistent with the purposes of this Act, should actively encourage the utilization of coal combustion byproducts.

"(c) GUIDELINES.--To encourage the utilization of coal combustion byproducts, the Administrator of the Environmental Protection Agency shall, not later than ___ months after enactment of this section, promulgate a guideline or guidelines under section 6002 for the utilization of coal combustion byproducts with respect to projects or activities carried out or funded by the Administrator, including (A) stabilization and treatment in connection with response actions pursuant to the

Comprehensive Environmental Response Compensation and Liability Act (42 U.S.C. § 9601 et seq.) and corrective actions pursuant to this Act; and (B) construction and expansion of publicly owned treatment works and other waste water and sewage treatment projects pursuant to the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.).

"(d) DUTIES OF THE ADMINISTRATOR.--

"(1) To ensure nondiscriminatory treatment for coal combustion byproducts in competition with virgin materials, and to achieve the recovery and use of recovered materials objectives specified in section 4001, (A) the Administrator, in consultation with the Secretary of Commerce and the Secretary of Energy, shall encourage industrial, commercial, and governmental uses, including, but not limited to, procurement by state and federal agencies of items and materials composed of the highest percentage practicable of coal combustion byproducts, and (B) the Administrator, before promulgating any regulations under this Act applicable to coal combustion byproducts, shall conduct an analysis of the economic impact of the regulations on the market position of coal combustion byproducts in relation to competing virgin materials and shall ensure that such regulations do not discourage the utilization of coal combustion byproducts consistent with the protection of human health and the environment.

"(2) The Administrator is authorized to undertake whatever actions are necessary, including, but not

limited to, filing actions seeking injunctive relief, to assure that no law, ordinance, regulation, labeling requirement, or other requirement imposed by any State or local government shall unreasonably impede, delay, or otherwise impair the implementation of the Administrator's duties with respect to the development of new markets for recovered materials, including coal combustion byproducts."

(b) AMENDMENT TO TITLE OF SUBTITLE E. The title of Subtitle E is amended to read:

"Subtitle E - Duties of the Secretary of Commerce and the Administrator in Resource and Recovery."

(c) TABLE OF CONTENTS AMENDMENT. The table of contents for Subtitle E (contained in section 1001) is amended by adding after "Sec. 5006. Authorization of Appropriations" the following:

"Sec. 5007. Utilization of Coal Combustion Byproducts."

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

JAN 10 1992

4APT-AE

Mr. C. 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

Dear Mr. Fancy:

Enclosed is a copy of EPA's Final Determination and permit modifications under the Clean Air Act for Orlando Utilities Stanton Unit 2. The public comment period ran from September 29, 1991, to November 15, 1991. Comments were received from the U.S. Fish and Wildlife Service as well as from the applicant.

Questions on this package may be directed to Mr. Gregg Worley of my staff at (404) 347-5014.

Sincerely yours,

Winston A. Smith

Winston A. Smith, Director
Air, Pesticides and Toxics Management Division

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

PSD-FL-084

PERMIT TO CONSTRUCT UNDER THE RULES FOR THE PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY

Pursuant to and in accordance with the provisions of Part C, Subpart 1 of the Clean Air Act, as amended, 42 U.S.C. §7470 et seq., and the regulations promulgated thereunder at 40 C.F.R. §52.21, as amended at 45 Fed. Reg. 52676, 52735-41 (August 7, 1980),

Orlando Utilities Commission
500 South Orange Avenue
P.O. Box 3193
Orlando, Florida 32802

is hereby authorized to construct/modify a stationary source, specifically Unit 2, at the following location:

Curtis E. Stanton Energy Center
Orlando, Florida

UTM Coordinates: 484.0 km East, 3150.5 km North

Upon completion of this authorized construction and commencement of operation/production, this stationary source shall be operated in accordance with the emission limitations, sampling requirements, monitoring requirements and other conditions set forth in the attached Specific Conditions (Part I) and General Conditions (Part II).

This permit shall become effective on the date signed below.

If construction does not commence within 18 months after the effective date of this permit, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time this permit shall expire and authorization to construct shall become invalid.

This authorization to construct/modify shall not relieve the owner or operator of the responsibility to comply fully with all applicable provisions of Federal, State, and Local law.

2-03-81
Date Signed

Patricia M. Tidwell
for Greer C. Tidwell
Regional Administrator

The Specific Conditions of federal permit PSD-FL-084 shall be modified as follows:

1. The proposed steam generating station shall be constructed and operated in accordance with the capabilities and specifications of the application including the 4,136 MMBTU/hr heat input rate for Unit 1 and the 4,286 MMBTU/hr heat input rate for Unit 2.

2. The emissions for Unit 1 shall not exceed the allowable emission limits listed in the following Table for SO_2, PM, NO_x and visible emissions:

Allowable Emissions

Pollutant	lb/MMBTU
PM	0.03
SO_2	1.14 (3-hr average) and 90 percent reduction (30-day rolling average)
NO_x	0.60 (30-day rolling average)
Visible Emissions	20% (6-minute average), except for one 6-minute period per hour of not more than 27% opacity

The emissions for Unit 2 shall not exceed the allowable emission limits listed in the following Table for SO_2, PM, NO_x, CO, VOC, and visible emissions:

Allowable Emissions

Pollutant	lb/MMBTU
PM	0.02
PM_{10}	0.02
SO_2	0.25 (30-day rolling average) 0.67 (24-hour average) 0.85 (3-hour average)

Pollutant	lb/MMBTU
NO_x	0.17 (30-day rolling average)
CO	0.15
VOC	0.015
Visible Emissions	20% (6-minute average), except for one 6-minute period per hour of not more than 27% opacity.

Additional conditions are added to PSD-FL-084 as follows:

14. Compliance with the emission limits contained in Specific Condition #2 for Unit 2 shall be determined as follows:

    PM — Compliance with the particulate limits in this permit shall be demonstrated by emission tests conducted in accordance with the provisions of 40 CFR §60.48a(b).

    SO_2 — Compliance with the SO_2 emission limits and emission reduction requirements in this permit shall be demonstrated in accordance with the provisions of 40 CFR §60.48a(c).

    NO_x — Compliance with the NO_x emission limits in this permit shall be demonstrated in accordance with the provisions of 40 CFR §60.48a(d).

    VOC — Compliance with the volatile organic compound limit shall be determined in accordance with Reference Method 25 or 25A of 40 CFR Part 60, Appendix A.

    CO — Compliance with the carbon monoxide limit shall be determined in accordance with Reference Method 10A or 10B of 40 CFR Part 60, Appendix A.

    VE — Compliance with the opacity limit in this permit shall be demonstrated using EPA Reference Method 9 in accordance with the provisions of 40 CFR §60.11.

15. The nitrogen oxide emissions from Unit 2 shall be controlled with low-NO_x burners, advanced combustion controls, and Selective Catalytic Reduction (SCR) technology. The SCR system will be designed to achieve a NO_x emission rate of less than 0.1 lb/MMBTU.

16. Ammonia slip from the NO_x control system shall be limited to less than 5 ppmvw, uncorrected. An ammonia monitoring protocol shall be submitted to EPA for review and approval prior to the operation of Unit 2.

17. In the event that alternative technologies capable of achieving the NO_x emission limit specified in Condition #2 for Unit 2 are developed prior to the operation of Unit 2, such technologies, after review and approval by the EPA Regional Office, may be implemented in place of the SCR system. Such alternative technologies will be required to meet the NO_x emission limit specified in Condition #2.

18. The flue-gas desulfurization system and mist eliminators for Unit 2 will be maintained and operated in a manner consistent with good air pollution practice for minimizing emissions pursuant to the requirements of 40 CFR §60.11(d).

The General Conditions are hereby modified as follows:

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to:

Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division
U.S. EPA Region IV
345 Courtland Street, NE
Atlanta, Georgia 30365

FINAL DETERMINATION
AND RESPONSE TO COMMENTS

PERFORMED FOR ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER UNIT 2
ORANGE COUNTY, FLORIDA
PSD-FL-084

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
AIR, PESTICIDES AND TOXICS MANAGEMENT DIVISION

DECEMBER 1991

Response to Comments on EPA's September 20, 1991, Preliminary Determination for OUC

Public notice was published on September 29, 1991, for the purpose of soliciting comments on the preliminary determination issued by EPA for Orlando Utilities Commission. Comments were received from two parties: The United States Fish and Wildlife Service and OUC.

The comments from the United States Fish and Wildlife Service can be summarized as follows:

NO_x BACT

COMMENT: There is overwhelming support for Selective Catalytic Reduction (SCR) as BACT for new pulverized coal boilers. Therefore, we agree with you that SCR, in combination with low-NO_x burners and combustion controls, is BACT for Stanton Unit 2. We also agree that the 0.17 lb/million BTU (MMBTU) limit (design rate of 0.10 lb/MMBTU) reflects a level that can be achieved on a continuous basis.

RESPONSE: None necessary

SO_2 BACT

COMMENT: Regarding your SO_2 analysis, we understand that the basis for your BACT determination is the use of 2.0 percent sulfur coal, along with a wet limestone scrubber with a continuous removal efficiency of 92 percent, resulting in a SO_2 limitation of 0.25 lb/MMBTU (30-day rolling average). We agree that a wet flue gas desulfurization system is BACT for Unit 2. However, we are aware of two other recent BACT determinations for coal-fired utility projects that were not referenced on page 12 of your PDD.

RESPONSE: The comment referred to the permits issued for South Carolina Public Service Authority (PSA) Cross Generating Station and Old Dominion Electric Cooperative (ODEC) Clover Station. The permit for PSA Cross required an SO_2 removal rate of 95 percent; however, the permit allowed 15 percent of the flue-gas to by-pass the scrubber, resulting in an emission limit of 0.34 lb/MMBTU. The permit for OUC will require an emission limit of 0.25 lb/MMBTU.

As stated in the comment letter, "The ODEC permit contains SO_2 limitations of 0.10 lb/MMBTU (annual average) and 0.156 lb/MMBTU (30-day rolling average)." The ODEC unit is not a zero (water) discharge unit as is OUC Unit 2. As explained in the preliminary determination, the recycling of the scrubber effluent, while environmentally beneficial from a water standpoint, causes a buildup of trace constituents such as chlorides in the scrubber system. This buildup is expected to slightly degrade scrubber efficiency based on experience with OUC Unit 1, thus resulting in a lower actual removal efficiency than the design of 95 percent.

Relevant Comments received from Orlando Utilities Commission were as follows:

COMMENT: SCR systems have not been used at facilities burning eastern United States coal. As such, OUC has significant concerns regarding the effect of trace elements on catalyst life. The most significant catalyst poisons are arsenic and alkali elements. For example, average arsenic concentrations (the most active catalyst poison) for eastern US coals are three to four times the worldwide average. The average and maximum expected arsenic concentrations for OUC coal is 22 and 113 ppm, respectively. The average worldwide arsenic concentration is 5.0 ppm. Therefore, considering the level of SCR demonstration status in the United States it is reasonable and prudent that caps on potential catalyst life be included in the final PSD permit.

Precedent for this recommendation has already been established in the PSD permit issued for the Chambers Cogeneration Project to be located in Carneys Point, New Jersey. In this permit, catalyst replacements were limited to no more than 50 percent of the initial catalyst charge within each 5-year operating period. This permit condition was drafted to maintain a Lowest Achievable Emission Rate (LAER) NO_x emission limit of 0.10 lb/MBtu consistent with nonattainment status for VOC emissions (ozone). Recognizing the uncertainties associated with transfer of this technology, this permit allowed a maximum emission of 0.17 lb/MBtu should this catalyst life threshold be exceeded. Similarly, for Unit 2 considering the higher allowable BACT NO_x emission limit for Unit 2, but also considering the SCR synergy for fly ash sales and waste fixation (related to zero water discharge status from the

Stanton site and the sound environmentally balanced disposal practices currently utilized in the plant design) it is recommended that should an SCR system be used, catalyst changeouts be limited to no more than

50 percent of the initial catalyst charge within each 5-year operating period. Should changeouts exceed this threshold an appropriate NO_x emission limit will be established up to a maximum of 0.22 lb/MBtu.

RESPONSE: The commentor is correct in that the average expected arsenic concentration for OUC coal is 22 ppm. An EPA document, Estimating Air Toxics Emission From Coal and Oil Combustion Sources (EPA-450/2-89-001), provides data which shows the mean concentration of arsenic in United States bituminous coals to be 20.3 ppm while the mean concentration of arsenic in Appalachian coals is 22.2 ppm. The correlation between OUC coal and the worldwide average arsenic concentration in coal is not apparent. The EPA document shows a trend in United States coals that the arsenic concentrations in bituminous coals (20.3 ppm) and lignite coals (22.8 ppm) are higher than in subbituminous coals (6.17 ppm) or anthracite coals (7.67 ppm). In addition, mean arsenic concentrations in the United States range from 22.2 ppm (Appalachian) to 4.72 ppm (Rocky Mountains).

The fact that the worldwide average arsenic concentration in coal is stated by the applicant to be 5.0 ppm is not particularly relevant. What <u>is</u> relevant is the arsenic concentration of the coals currently being utilized in operations with SCR systems in Japan and West Germany. To date, the applicant has not provided information to indicate that the arsenic concentrations of coals used in these applications are substantially different from the coal projected to be utilized by OUC.

The commentor related the NO_x emission limit set for Chambers Cogeneration Project to the emission limit proposed for OUC Unit 2. What the commentor did not point out is that the emission limit for the Chambers Cogeneration Project is based on a 180-minute average, whereas the OUC Unit 2 NO_x emission limit was proposed as a 30-day rolling average. Catalyst changeout, control of ammonia slip and protecting downstream equipment were all considered when

establishing the OUC limit on a 30-day rolling average. It is EPA's position that this averaging time allows OUC the flexibility to operate the unit in a reliable manner. It is therefore unnecessary to establish permit requirements related to the timing of catalyst changeout or to increase the NO_x emission limit.

COMMENT: As stated on page 24 of the preliminary determination and page 3 of the draft permit modifications the basis of the nitrogen oxides emission limitation is use of a SCR system designed to achieve a NO_x emission of 0.1 lb/MBtu.

However, discussion on page 24 of the preliminary determination indicated that to maintain unit reliability and to minimize ammonia slip emissions, the NO_x emission limit established by the EPA for Unit 2 is 0.17 lb/MBtu on a 30-day rolling average. In addition, the preliminary determination and the draft permit modifications provided flexibility for permit revisions to incorporate the use of a technology other than SCR (either low NO_x burners, selective non-catalytic reduction, or other alternative NO_x emission control technologies) for use on Unit 2. The perliminary determination and the draft permit modifications also indicate that permit revisions are required should OUC be capable of demonstrating the capability of an alternate NO_x emission control technology. OUC does not feel that permit revisions should be necessary to obtain flexibility.

As previously stated, the nitrogen oxides emission limit for Unit 2 has been set at 0.17 lb/MBtu. Design of a post combustion NO_x control system for a LAER emission level of 0.1 lb/MBtu adds substantial cost to the project above the considerable cost impact already agreed to for reducing NO_x emissions from 0.32 to the BACT level of 0.17 lb/MBtu. A requirement for a LAER design target of 0.1 lb/MBtu also eliminates consideration or development of more cost effective systems such as a selective non-catalytic reduction (SNCR) systems, or a hybrid of SNCR and SCR systems.

This position as earlier referenced is further substantiated by the statutory definition of BACT determinations in 40 CFR 52.21(b)(12). Accordingly, a source is free to select the means of meeting emission limitations insofar as compliance is maintained with said and enforceable standard. This flexibility allows source owners and engineers to select

either existing or newly developed, cost effective, reliable control technologies. Therefore, OUC, in exercising its right independently to select control technologies, must make sure such technologies are capable of meeting the Unit 2 NO_x emission limit of 0.17 lb/MBtu (30 day rolling average). In addition, no permit revisions should be required for this flexibility. The independent determination of NO_x emissions control technology will also ensure that adverse impacts on unit availability are minimized. Based on the legislated definition of BACT all references specifically requiring a SCR system and all references to a design target of 0.1 lb/MBtu should be removed from the final determination and permit modifications, consistent with the operative terms and regulatory thrust of the preliminary determination and the Draft permit modifications.

RESPONSE: As stated on page 7 of the preliminary determination, "Best available control technology" is defined in 40 CFR § 52.21(b)(12) as: "an emissions limitation (including a visible emissions standard) based upon the maximum degree of reduction for each pollutant...(emphasis added)."

The requirement for the design of the SCR system to achieve 70 percent removal (i.e. 0.10 lb/MMBTU) of NO_x emissions is based on the capability of the SCR systems in foreign experience on coal and both foreign and United States experience on gas and fuel oil. As stated earlier, the emissions limit of 0.17 lb/MMBTU was established to provide operational flexibility and reliability of the Unit. To design the SCR systems for a limit of 0.17 lb/MMBTU would remove such flexibility.

In addition, the commentor believes that the design level of 0.10 lb/MMBTU would apply to any alternate technology selected. This is not the case. To clarify this, condition #15 of the permit will be modified as follows:

15. The nitrogen oxide emissions from Unit 2 shall be controlled with low-NO_x burners, advanced combustion controls, and Selective Catalytic Reduction (SCR) technology. The SCR system will be designed to achieve a NO_x emission rate of less than 0.10 lb/MMBTU.

The commentor expressed an added concern that the wording of the preliminary determination did not allow the flexibility for the source to demonstrate an alternate technology without requiring a permit revision, contrary to the intent of the permit. The preliminary determination stated EPA's position on alternate technologies on page 24 as follows:

> OUC Stanton Unit 2 is not scheduled to begin operation until 1997. In deference to the constant improvement in burner technologies and the development of other NO_x control technologies such as SNCR, the permit is being conditioned such that should OUC be able to demonstrate the capability of a technology other than SCR to be able to meet the established limit, the permit may be revised to incorporate the alternative technology.

In addition, specific condition #17 of the draft permit stated:

17. In the event that alternative technologies capable of achieving the NO_x emission limit specified in condition #2 for Unit 2 are developed prior to the operation of Unit 2, such technologies, after review and approval by EPA Regional Office, may be implemented in place of the SCR system.

The intent of EPA in preparing this permit was to allow the source flexibility in developing a NO_x control option while receiving adequate assurances that the option selected by the source would meet specific requirements. It is not the intent of EPA that the implementation of an alternative technology would necessitate a permit revision. Rather, condition #17 was written to allow the implementation of such technology upon review and approval by EPA. In order that the No_x BACT analysis will be consistent with the intent of the permit as well as specific condition #17, the analysis is being revised as follows:

> OUC Stanton Unit 2 is not scheduled to begin operation until 1997. In deference to the constant improvement in burner technologies and the development of other NO_x control technologies such as SNCR, the permit is being conditioned such that should OUC be able to

demonstrate the capability of a technology other than SCR to be able to meet the established limit, the alternative technology, after review and approval by EPA, may be incorporated

Further, to clarify specific condition #17, the condition is revised as follows:

17. In the event that alternative technologies capable of achieving the NO_x emission limit specified in Condition #2 for Unit 2 are developed prior to the operation of Unit 2, such technologies, after review and approval by EPA Regional Office, may be implemented in place of the SCR system. Such alternative technologies will be required to meet the NO_x emission limit of Condition #2.

COMMENT: Page 3 of the draft permit modifications dictates the use of aqueous ammonia (less than 28 percent in water) should be used with a SCR system and presumably in a SNCR system. Once again OUC believes that the permit should be silent on the specific technological requirements of meeting emission requirements. If use of aqueous ammonia is more effective, and can be stored, handled, and permitted appropriately, OUC should make the technical selection of an ammonia type. The discussion of aqueous ammonia should be eliminated.

In addition, the commentor noted that the estimates of annual NO_x and NH_3 emissions on page 19 of the preliminary determination were incorrect and that the ammonia concentrations should be expressed as volumetric wet, uncorrected.

RESPONSE: The estimates of annual emissions of MO_x and NH_3 on page 19 of the preliminary determination were calculated based on the existing permit limit of 4,136 MMBTU/hr. The corrected estimates based on the requested heat input of 4,286 MMBTU/hr with NH_3 concentrations expressed as volumetric wet, uncorrected, are as follows:

	EMISSIONS NO_3		EMISSIONS NH_3	
	lb/MMBTU	TPY	PPM	TPY
Conventional Burner	0.60	11,263	N/A	N/A
Low-NO_x Burner	0.32	6,007	N/A	N/A
LNB + SNCR (40% removal)	0.19	3,567	20	476
LNB + SNCR (30% removal)	0.22	4,130	10	238
LNB + SCR (47% removal)	0.17	3,191	5	119
LNB + SCR (70% removal)	0.10	1,877	5	119

The permit required the use of aqueous ammonia due to concerns expressed about safety and precedent sit in permitting of Chambers Cogeneration. The selection of reagent, however, should be the choice of the source after an evaluation of safety as well as environmental concerns. Thus, EPA will remove the requirement of the use of aqueous ammonia from the permit. Specific condition #16 will be revised to read as follows:

> 16. Ammonia slip from the NO_x control system shall be limit to less than 5 ppmvw, uncorrected.

COMMENT: In page 13 of the preliminary determination the EPA recognized the potential eventuality of restricted low sulfur coal supplies and resultant price increases. this will require Unit 2, a source designed for 95 percent SO_2 removal, to burn a coal that directly competes with others sources implementing fuel switching to achieve compliance with the 1990 Clean Air Act Amendments. This scenario will likely lead to restricted supplies of low sulfur coal and increased price. Accordingly, OUC believes that language should be added to the SO_2 BACT determination to cap this potential economic burden.

RESPONSE: As stated in the preliminary determination, EPA cannot be a prognosticator of future coal market conditions. The BACT determination was made based on information available today. This does not mean that the applicant cannot request a permit revision in the future should market conditions drastically affect the cost and availability of low sulfur coal. The same option is available to any permitted source. EPA cannot "cap" potential economic burden when this burden has not been established.

COMMENT: OUC believes that only site specific cost considerations should be included in the final determination. Costs presented in OUC's BACT analysis were prepared for Unit 2 based on site specific manufacturer quotations and cost factors. Comparison with other facilities cost estimates or generalized industry information is inappropriate. Should the EPA be inclined to correlate economics, site specific comparisons could then be made. OUC requests that economic comparisons could then be made. OUC requests that economic comparisons made on a non-site specific basis be eliminated from the final determination.

RESPONSE: Not only is comparison with other facilities cost estimates or generalized industry information appropriate, but is in fact recommended by EPA's New Source Review Workshop Manual. The use of comparisons to other facilities or industry wide information is a useful tool in establishing whether a particular determination is consistent with other recent determinations and as an indicator of potential economic differences from one source to the next.

COMMENT: Page 19, last paragraph, and page 24, first paragraph discusses sulfur resistant catalysts. OUC is not aware of this product offering nor are recognized suppliers of SCR systems who have been contacted regarding this description. Please clarify or eliminate discussion.

RESPONSE: The term sulfur resistant catalyst refers to the new generation of catalysts (typically of the extruded type) which have low conversion (< 1%) of SO_2 to SO_3. Such catalysts are referred to in the following papers presented at the 1991 Joint Symposium on Stationary Combustion NO_x Control.

1. L. Balling, et al. "Poisoning Mechanisms in Existing SCR Catalytic Converters and Development of a New Generation for Improvement of Catalytic Properties"

2. E. Brehens, et al. "SCR Operating Experience on Coal-Fired Boilers and Recent Progress"

3. B.K. Speronello, et al. "Application of Composite NO_x SCR Catalysts In Commercial Systems"

4. T.R. Gouker, et al. "SCR Catalyst Developments for the U.S. Market"

5. R. Jaerschky, et al. "SO_3 Generation - Jeopardizing Catalyst Operation?"

COMMENT: Page 22, paragraph 2 discusses that there have been recent reductions in catalyst costs. These reductions are reflected in the site specific economic analyses submitted by OUC for Unit 2. Either relate this comment specifically to Unit 2 or delete paragraph.

RESPONSE: Page 22 of the preliminary determination states "[a] trend in the catalyst manufacturer industry in which catalyst costs have steadily decreased over time." This is supported by a statement from the T.R. Gouker paper referenced earlier which reads: "Since its introduction in Japan in the 1970's, the cost of SCR has dropped continually, primarily because of technological advances.

COMMENT: Page 19 or 20 of the preliminary determination did not describe how spent catalyst will be classified and how it will be disposed. This would appear to be a significant environmental impact. What provisions will be incorporated in the permit to allow for safe and effective spent catalyst disposal? OUC is concerned about the classification of this potentially hazardous waste product due to the concentration of catalyst poisons inherent with Eastern coals. Again this is but one factor in balancing the various environmental concerns.

RESPONSE: The selection of catalyst to be used if an SCR System is constructed is up to the source. This may or may not involve the classification of spent catalyst as hazardous waste, depending upon the catalyst. According to catalyst

vendors, the current practice is for the catalyst manufacturer to accept back spent catalyst. In any event, should the source choose a catalyst which would be classified as hazardous waste when used, the disposal procedures would be established under RCRA regulations rather than specified in a federal PSD permit.

COMMENT: Either page 19 or 20 should also indicate the potential increase in sulfuric acid mist emissions as an environmental impact of SCR use.

RESPONSE: The commentor indicated that approximately 1% of the sulfur in coal would be converted to SO_3. According to AP-42 approximately 0.7% of the sulfur in bituminous coal is converted to SO_3. In addition, the commentor stated that approximately 1% of the SO_2 in the flue gas would be converted to SO_3 due to the catalyst. Many catalyst manufacturers will guarantee an SO_2 to SO_3 conversion of less than 1%. The applicant received a quote from one catalyst supplier of a 0.5 to 0.6% conversion rate of SO_2 to SO_3.

The formation of sulfuric acid mist (H_2SO_4) will be affected by many variables including the sulfur content of the coal, any formation of SO_3 due to combustion, oxidation of SO_2 to SO_3 on the SCR catalyst bed, the rate of formation of any ammonium salts, and the effectiveness of the flue-gas desulfurization (FGD) system as well as the mist eliminators in reducing the emissions of H_2SO_4.

Without being able to predict an emission rate of H_2SO_4 with certainty due to the number of variables potentially affecting emissions, EPA feels that the BACT requirements for sulfuric acid mist can be met through the application of work practice standards (i.e, good operation and maintenance of the FGD system and state-of-the-art mist eliminators.)

Specific condition 18 will be added to the permit as follows:

18. The flue-gas desulfurization system and mist eliminators for Unit 2 will be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions pursuant to the requirements of 40CFR §60.11(d).

WORLEY	BEALS	SHAVER	HARPER	MILLER
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SMITH	TOBIN	POEPPELMAN	TIDWELL
12/19/91			

DRAFT:12/18/91:ADC/KEH:DISK-3:DOC-PSD-OUC:FILE-
FINAL:12/19/91:ADC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION IV
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FROM: Brian Beals PHONE: 404 347-5014

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SPECIAL INSTRUCTIONS FOR RECEIVER: Richard - Please share with Barry Andrews/Clair Fancy. Thanks, Brian Beals

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
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SEP 20 1991

Mr. J.S. Crall, Director
Environmental Division
Orlando Utilities Commission
500 South Orange Avenue
P.O. Box 3193
Orlando, Florida 32803

RE: Orlando Utilities Commission, Stanton Energy Center Unit 2
PSD-FL-084

Dear Mr. Crall:

The review of your application to modify the commence construction date for Stanton Unit 2 along with a determination of best available control technology (BACT) for this unit has been completed pursuant to federal Prevention of Significant Deterioration (PSD) regulations found at 40 CFR §52.21.

Attached is one copy of the Agency's Preliminary Determination and draft permit modifications for PSD-FL-084. This action addresses a modification to the commence construction date for Unit 2, a modification to the heat input rate for Unit 2, and a reevaluation of BACT for Unit 2.

A public notice soliciting comments and offering the availability of a public hearing on this determination will be published in the near future.

Sincerely yours,

Winston A. Smith, Director
Air, Pesticides and Toxics
Management Division

cc: Mr. C.H. Fancy, FDER

PRELIMINARY DETERMINATION
AND
TECHNICAL EVALUATION

PERFORMED FOR ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER UNIT 2
ORANGE COUNTY, FLORIDA
PSD-FL-084

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
AIR, PESTICIDES AND TOXICS MANAGEMENT DIVISION

SEPTEMBER 1991

BACKGROUND

On June 10, 1982, the Orlando Utilities Commission (OUC) received a federal Prevention of Significant Deterioration (PSD) permit for their Curtis H. Stanton Energy Center Units 1 and 2. The permit was a "phased" construction permit issued by EPA Region IV pursuant to federal PSD regulations (40 CFR §52.21) which required that construction on Unit 1 begin no later than 18 months after the issuance of the permit (PSD-FL-084) and that construction of Unit 2 commence no later than 18 months after July 1, 1990. In addition, pursuant to 40 CFR §52.21(j)(4), the "determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of a multi-phased project." Should these commence construction deadlines not be met, the PSD permit would expire pursuant to the provisions of 40 CFR §52.21(r).

Construction commenced on Unit 1 on or about November 29, 1983, with operation commencing on or about May 12, 1987. After further assessment of power needs, however, OUC determined that the most advantageous time for Unit 2 to come on line would be 1997. Based on this revised estimate, OUC requested a meeting with EPA to discuss available options for the construction of Unit 2. In the meeting of February 23, 1989, EPA explained OUC's options for delaying the construction of Unit 2, based on 40 CFR §52.21(r)(2) and EPA's "Revised Draft Policy on Permit Modifications and Extensions" which was issued on July 5, 1985. These options were as follows:

1. Commence construction of Unit 2 prior to the January 1, 1992 deadline.

2. Complete and submit a new, separate permit application for the construction of Unit 2, letting the original construction authority for Unit 2 expire.

3. Request a permit modification in order to change the commence construction dates for Unit 2. Such a request must be made no later than six months prior to the expiration of the original permit.

OUC chose option number 3 - to request a permit modification for the commence construction dates. Since EPA had issued the original permit and since the State of Florida does not have the authority to modify EPA issued permits, the permit modification request has been processed by EPA. OUC submitted the modification request to EPA on March 18, 1991, thus meeting the requirement that such application be submitted to the reviewing agency no later than six months prior to the expiration of the permit.

The proposed modification consists of three parts:

1. The insertion of a commence construction date for Unit 2 of January 1, 1992. This would allow OUC until June 1, 1993, to commence construction on Unit 2 before the permit would expire.

2. A change to Specific Condition #1 of PSD-FL-084 to specify a heat input rate of 4,286 MMBTU/hr for Unit 2. The current condition specifies a heat input rate of 4,136 MMBTU/hr for each unit. This change will not affect the power generation of Unit 2 which will remain rated at 460 MW (gross) and 440 MW (net) as originally permitted.

3. A revised BACT determination for Unit 2 in fulfillment of Specific Condition #2 of PSD-FL-084 and federal PSD regulations. This determination will be completed for the pollutants PM, SO_2, NO_x, VOC, CO, and visible emissions.

I. Commence Construction Date

As discussed previously, later phase commence construction dates in a PSD permit cannot be automatically extended utilizing the provisions of 40 CFR §52.21(r). This section allows the Administrator to extend the initial 18-month commence construction period where such extension is determined to be justified. It does not, however, allow for automatic extensions for time periods between construction of approved phases of multi-phased projects.

While later phase commence construction dates cannot be changed by the granting of extensions, they can be changed through a permit modification, since the dates are part of the permit itself. The permit modification policy addresses this fact as follows:

> [t]he intent of 40 CFR §52.21(r)(2) is to establish an automatic 18-month expiration date for permits, with provisions for extending the expiration on a case-by-case basis. For phased projects with a single comprehensive permit, EPA presumed that commencement dates for each phase of the project, except the initial phase commencement date, would be incorporated into the permit. Therefore, initial phase commencement date changes would be handled with a 40 CFR §52.21(r)(2) extension, and subsequent phase commencement dates would be handled through permit changes. This acknowledges and preserves the validity and legality of the conditions specified in a permit.

Thus the appropriate mechanism for changing the commence construction date for Stanton Unit 2 would be permit modification. Such a modification is considered to be an Administrative change requiring public notice and comment.

In the specific case of OUC Stanton Unit 2, the Agency finds that the applicant's request for a change in the commence construction date is justified based upon a reevaluated schedule of need for power. In keeping with EPA's past policy of generally only allowing an 18-month extension of commence construction dates, it is appropriate to set the commence construction date for Unit 2 as January 1, 1992. Under PSD regulations, a continuous program of construction of Unit 2 must begin no later than 18 months after the commence construction date or the permit will automatically expire.

II. Modification to Heat Input Rate

The original PSD permit for Stanton Energy Center specified a heat input rate for each of the identical coal-fired boilers, Units 1 and 2, of 4,136 MMBTU/hr each. The resulting power generation from each boiler was calculated to be 460 MW (gross) and 440 MW (net). Through experience with Unit 1 and with boiler design improvements, the applicant has requested that the heat input rate to be specified for Unit 2 be changed to 4,286 MMBTU/hr. Since the BACT for Unit 2 is being reevaluated and will result in much lower emissions than originally projected for Unit 2, this change is not considered significant.

III. BEST AVAILABLE CONTROL TECHNOLOGY

On June 10, 1982, OUC was issued a federal PSD permit (PSD-FL-084) for Units 1 and 2 of the Curtis H. Stanton Energy Center. Best available control technology (BACT) was established for each of the 460 MW (gross) coal-fired units in PSD-FL-084 as follows:

POLLUTANT	CONTROL	ALLOWABLE LIMIT
PM	electrostatic precipitator	0.03 lb/MMBTU
SO_2	flue gas desulfurization	1.14 lb/MMBTU(3-hr avg.) and 90% reduction (30-day rolling average)
NO_x	combustion controls	0.60 lb/MMBTU (30-day rolling average)
Visible Emissions		20% (6-min. avg), except for one 6-minute period per hour of not more than 27% opacity

In addition, since the PSD permit is a phased construction permit, Specific condition #2 contained a requirement that the adequacy of the BACT determination for Unit 2 be re-evaluated no later than 18 months prior to the commencement of construction of the unit.

The associated potential emissions for the two units combined was as follows in tons per year:

POLLUTANT	POTENTIAL EMISSIONS
PM	1,042
SO_2	39,606
NO_X	20,845
CO	1,737
VOC	17

a. Based on 4,136 X 10^6 BTU/hr heat input rate for each unit and 50 weeks per year operation.

b. Estimated 0.0005 lb VOC/MMBTU average emission rate.

These emissions were used in determining PSD applicability for the original permit and in the air quality analysis which demonstrated that the National Ambient Air Quality Standards would be protected while the PSD increments would not be exceeded.

BACT Determination Requested by the Applicant

OUC proposed a BACT determination consisting of an ESP to control particulates, flue-gas desulfurization (FGD) to control SO_2, and combustion controls for NO_x and CO.

The FGD system proposed by the applicant is a wet limestone scrubber designed to meet an emissions limit of 0.32 lb/MMBTU based upon a design coal sulfur content of 2.5%. The combustion control proposed by the applicant includes the use of "low-NO_x" burners to achieve a NO_x emission rate of 0.32 lb/MMBTU.

The applicant has requested BACT emissions rates on a pollutant-by-pollutant basis as shown below.

a. PM - (Total Suspended Particulate)

0.020 lb/MMBTU

b. PM_{10}

0.020 lb/MMBTU

c. SO_2

0.32 lb/MMBTU (30-day rolling average)
0.67 lb/MMBTU (24-hour average)
0.85 lb/MMBTU (3-hour average)

d. NO_x

0.32 lb/MMBTU (30-day rolling average)

e. CO

0.15 lb/MMBTU

Trace constituents of the coal will be controlled through the combination of wet scrubbing (acid gases) and the ESP (particulates and heavy metals).

BACT DETERMINATION PROCEDURE:

Pursuant to federal regulations for Prevention of Significant Deterioration (PSD), 40 CFR §52.21, a new major stationary source "must apply best available control technology for each pollutant subject to regulation under the Act that it would have the potential to emit in significant amounts." Additionally, in relation to phased construction projects, paragraph (j)(4) states:

> "For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable Stationary Source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source."

"Best available control technology" is defined in 40 CFR §52.21(b)(12) as:

> "an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through the application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques of control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of a work standard infeasible, a design, equipment, work practice, operational standard, or a combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results."

In addition to the pollutants specifically subject to PSD review for a particular source, credence must be given to the control of any "unregulated" pollutants when determining best available control technology for an emissions unit. This policy, a result of the 1986 remand of a PSD permit for the North County Resource Recovery Facility by the Administrator of EPA, generally specifies that a more stringent emission limit for a "regulated" pollutant may be imposed if a reduction in "nonregulated" pollutants can be directly attributed to the control device selected as BACT for the "regulated" pollutants.

Emissions from fossil fuel-fired electric utility boilers can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the air emissions can be classified as follows:

- Combustion Products (Particulates and Heavy Metals) controlled generally by particulate control devices.
- By-products of incomplete combustion (CO, VOC, toxic organic compounds). Control is largely achieved by proper combustion techniques.
- Acid gases (SO_2, NO_x, HCl, F, H_2SO_4) Controlled generally by gaseous control devices.

BACT ANALYSIS

Combustion Products:

Under the review completed for PSD-FL-084, the combustion product for which a BACT analysis is required is particulate matter. Based on information now available, vendors can use either an electrostatic precipitator or fabric filter technology to achieve a level of 0.02 lb/MMBTU.

The "Standards of Performance for New Sources" (NSPS) which apply to Stanton Unit 2 are found in 40 CFR Part 60 Subpart Da. These standards establish a particulate emissions limit of 0.03 lb/MMBTU. Under Clean Air Act requirements, an applicable NSPS or NESHAP limit is the minimally acceptable level which can be selected as BACT. In addition, Subpart Da limits opacity to a maximum of 20%.

A review of the BACT/LAER Clearinghouse indicates that recent emissions limits on PM from pulverized coal (PC) boilers have been as follows:

SOURCE	LIMIT
Mecklenburg Cogeneration, VA	PM - 0.020 lb/MMBTU PM_{10} - 0.018 lb/MMBTU
Chambers Cogeneration, NJ (fabric filtration)	PM - 0.018 lb/MMBTU PM_{10} - 0.018 lb/MMBTU
Roanoke Valley Project, NC	PM - 0.020 lb/MMBTU PM_{10} - 0.018 lb/MMBTU

The applicant evaluated the use of fabric filtration as well as an ESP. In this evaluation, the feasibility of reaching an emission level of 0.012 lb/MMBTU on a continuous basis was assessed in relation to energy, economic, and environmental impacts. The base case selected by the applicant was the emissions level of 0.020 lb/MMBTU.

ESPs are historically the most widely used particulate control equipment for coal-fired power plants. The devices remove particulate from the flue gas stream by charging fly ash particles with very high dc voltage and then attracting these particles to oppositely charged collection plates. The collected particulate is then removed from the plates by periodic "rapping" which causes the particulate to drop into collection hoppers below the ESP.

Fabric Filtration, as the name implies, utilizes filter bags to "trap" particulate from the flue gas stream. As the flue gas passes through the filter bags, a "cake" of collected particulate builds up. This cake is necessary to increase the collection efficiency of the bags. The collected particulate can be removed in a variety of methods: reverse gas, shake-deflate, or pulse jet. The applicant, based on the size of the gas stream along with relative economics, chose the reverse gas method to be used in the BACT analysis.

Energy Impacts

According to the applicant, the use of an ESP would consume 85% more energy than a fabric filter designed to meet the same emission level. The applicant points out, however, that this energy consumption is equivalent to only 0.2 percent of the plant power output.

Economic Impacts

The applicant evaluated three scenarios:

1. The use of fabric filtration to meet an emissions level of 0.012 lb/MMBTU;

2. The use of an ESP to meet an emissions level of 0.020 lb/MMBTU; and,

3. The use of fabric filtration to meet an emissions level of 0.02 lb/MMBTU.

The factors which influence the cost of fabric filtration to meet the lowest limit include increased frequency of bag change-out and construction material of the bags. In addition, due to the nature of the device, baghouses are more susceptible to flue gas slip. Increased inspection and maintenance would be needed to ensure compliance with the low limit.

Factors influencing the cost of an ESP designed to meet a level of 0.020 lb/MMBTU include increased collection area, increased power usage, and increased inspection and maintenance over that required to achieve a level of 0.030 lb/MMBTU.

The applicant compared annualized costs for each of these control devices (Table 3.4-5 of Attachment 1) with the following results:

	1997 Total Levelized Annual Cost
FF - 0.012	$11.5 million
ESP - 0.020	$8.65 million
FF - 0.020	$8.77 million

The incremental cost in achieving the lowest limit was calculated to be $19,180 per additional ton of particulate removed.

Environmental Impacts

According to the applicant, ESPs are more effective than fabric filters at limiting the emissions of particulate sized less than 10 microns (PM_{10}). The National Ambient Air Quality Standard (NAAQS)

for particulate matter is based on PM_{10}. Other environmental impacts include the fact that ESPs do not need to be "conditioned" over time to achieve the established removal efficiency. It is not necessary to allow time for a filter cake to build up in order to achieve the required removal efficiency.

Products of Incomplete Combustion

The products of incomplete combustion which are subject to a revised BACT analysis are carbon monoxide and VOCs. These pollutants are a direct relation to combustion conditions in the boiler.

Recent determinations for PC boilers include the following:

Mecklenburg Cogeneration, VA	CO - 0.020 lb/MMBTU VOC - 0.003 lb/MMBTU
Chambers Cogeneration, NJ	CO - 0.11 lb/MMBTU VOC - 0.0036 lb/MMBTU
Roanoke Valley Project, NC	CO - 0.20 lb/MMBTU VOC - 0.03 lb/MMBTU

There are no emissions standards in Subpart Da for either CO or VOC. The possible alternatives for reducing the pollutants are to change the boiler operating conditions or to install a catalytic conversion device to complete the oxidation of these pollutants. At this time, however, catalytic conversion of CO and VOC is not technically feasible for pulverized coal-fired boilers.

In regards to changing boiler operating conditions, the major impact would be environmental, i.e., decreasing CO and VOC could cause a resultant increase in NO_x emissions. The emissions levels proposed by the applicant, 0.15 lb/MMBTU for CO and 0.015 lb/MMBTU for VOCs is based upon the utilization of "low-NO_x" burners.

ACID GASES

Emissions of sulfur dioxide and oxides of nitrogen are known precursors to "acid rain," a major emphasis of the Clean Air Act Amendments of 1990. In addition, NO_x is a known precursor of ground level ozone, another major concern of the CAAA of 1990. These amendments have mandated reductions of 10 million tons per year of SO_2 and 2 million tons per year of NO_x from existing coal-fired

facilities. Although both pollutants are "acid gases," their formation and control are fundamentally different, thus, they will be addressed separately.

$\underline{SO_2}$

The formation of sulfur dioxide and its subsequent emissions are a direct result of the sulfur content of the fuel to be used. For Stanton Unit 2, the applicant has proposed a maximum sulfur content of 2.5% in the coal. This corresponds to an uncontrolled SO_2 emissions rate of 4.0 lb/MMBTU. Current practice for new coal-fired units is to add a flue-gas desulfurization (FGD) unit to lower SO_2 emissions.

40 CFR Part 60, Subpart Da sets an emissions standard of 1.2 lb/MMBTU and 90% removal; or 0.6 lb/MMBTU and 70% removal.

The current permit for Unit 1 contains a limit of 1.14 lb/MMBTU; however, due to the usage of low sulfur coal, Unit 1 has historically been able to achieve a level of 0.20 to 0.27 lb/MMBTU.

Recent determinations for PC boilers have been as follows:

Mecklenburg Cogeneration, VA	SO_2 - 0.17 lb/MMBTU (30-day average)
Chambers Cogeneration, NJ	SO_2 - 0.22 lb/MMBTU (60-min. average)
Roanoke Valley Project	SO_2 - 0.213 lb/MMBTU (30-day average)

The applicant has proposed the following emission levels for Unit 2 based on the use of 2.5% S coal and 92% removal of SO_2 on a continuous basis:

0.32 lb/MMBTU - 30 day rolling average

0.67 lb/MMBTU - 24 hr. average

0.85 lb/MMBTU - 3 hr. average

The control scenarios evaluated by the applicant include the use of a wet lime scrubber to meet a level of 0.24 lb/MMBTU; a wet limestone scrubber designed to meet a level of 0.32 lb/MMBTU; and, a lime spray dryer system designed to meet a level of 0.32 lb/MMBTU. The corresponding emissions of SO_2 with these scenarios was provided by the applicant as follows:

	Uncontrolled Emission (lb/MMBTU)	Controlled Emission Rate (lb/MMBTU)	Annual Emission (tons/year)
Wet lime	4.03	0.24	4,506
Wet limestone	4.03	0.32	6,008
Lime spray dryer	4.03	0.32	6,008

The air quality control systems evaluated by the applicant for SO_2 removal included particulate removal equipment since ESP's can be used with the first two options but a fabric filter must be used in conjunction with the lime spray dryer.

Energy Impacts

The energy impacts provided by the applicant for the different control systems included the energy requirements of the particulate control devices. As discussed in the analysis of the energy impacts for combustion products, the energy requirement for the ESP is 85% greater than for the fabric filter. As a result, the lime spray dryer system shows the lowest energy impacts - roughly half of the energy requirements for the wet limestone system. The energy requirements for the wet lime scrubber system is roughly 4/5 of the requirements for the wet limestone system. The use of a lower sulfur coal does not result in any significant energy impacts.

Economic Impacts

The economics related to establishing a BACT level for SO_2 are two-fold. First, there are the economics related to the capital and operating costs of specific control equipment. Secondly, there are the much more speculative economics related to the availability and projected future costs of low sulfur coal.

In the first case, comparative costs of the selected air quality control systems were provided by the applicant (Table 3.4-11 of Attachment 1). The results from this analysis were as follows:

Control Devices	1997 Total Levelized Annual Cost
Wet Lime AQCS	$46,550,000
Wet Limestone AQCS	$36,270,000
Wet Spray Dryer AQCS	$52,440,000

The applicant calculated an incremental removal cost from 0.32 lb/MMBTU to 0.24 lb/MMBTU of $6,780 per additional ton removed. The main differential between the control devices lies in the cost of the additives, where the cost of pebble lime ($80/ton) is reported to be 10 times more expensive than the limestone ($8/ton).

The economics of future coal supplies are much more difficult to ascertain. The applicant provided an analysis (Attachment 2) of projected future low sulfur coal supplies as well as speculation on how costs and supplies of Eastern U.S. low sulfur coal could be affected by future "fuel-switchers." Fuel-switchers refers to existing coal-fired facilities which will switch to lower sulfur content coals in order to meet requirements of Title IV (Acid Rain) of the CAAA of 1990.

It is impossible for EPA to be a prognosticator of future coal market conditions and how changes of such conditions on a macro-economic scale would affect the ability of OUC to obtain low sulfur coal for Stanton Unit 2 at a reasonable cost. OUC is currently able to obtain 1% Sulfur coal for Unit 1. Recent BACT determinations have included the use of coal with sulfur content less than 2%. Considering BACT is determined on a case-by-case basis, that Stanton Unit 2 will not start-up until 1997, and that projections on future costs and supplies of low sulfur coals contain many factors that may or may not be altered during the life of the plant, it must be concluded that the use of lower sulfur content coal is currently a viable alternative.

Environmental Impacts

The original PSD permit for Stanton Unit 2, allowed SO_2 emissions of 1.14 lb/MMBTU which equates to 4,715 lb/hr. or 19,803 TPY (based on 50 week per year operation). The SO_2 emission level proposed by the applicant, 0.32 lb/MMBTU, equates to 6008 TPY. An emission limit comparable to recent BACT determinations (0.21 lb/MMBTU) would equate to 3,942 TPY SO_2 emissions.

As discussed previously, SO_2 is a precursor to acid rain. In keeping with the congressional mandate for reductions in acid rain - causing pollutants, SO_2 emissions from new sources need to be minimized.

Also of considerable importance is the fact that the air quality modelling for Unit 2 indicated that 99% of the PSD Class II 24-hr. increment will be consumed.

Other Considerations

According to the applicant, FGD systems can only be expected to achieve a removal efficiency of roughly 3% less than the target rate on a continuous basis. This assertion is based on a statistical analysis of the operation of FGD systems (Attachment 2) and carries the premise that a target removal rate guaranteed by a vendor (i.e., 95%) can be met only under ideal conditions, not on a continuous basis. Using this assumption, the highest practical removal rate for a target rate of 95% would be 92%.

If this assumption is accepted, the maximum continuous removal rate for the control systems evaluated would be:

Wet lime AQCS	94%
Wet limestone AQCS	92%
Lime spray dryer	92%

Unit 2, like Unit 1, will be a "zero (water) discharge" unit. This means that the scrubber effluent will be recycled numerous times. While environmentally beneficial from a water standpoint, this recycling causes a buildup in the concentrations of trace constituents such as chlorides in the scrubber system. The applicant has presented data to demonstrate that this chloride buildup has slightly degraded the removal efficiency of Unit 1's scrubber over time.

Nitrogen Oxides

As discussed previously, NO_x is a precursor to acid rain as well as to ground level ozone. Subpart Da of the NSPS establishes a NO_x limit for utility boilers burning bituminous coal of 0.60 lb/MMBTU of heat input. This NSPS limit was established as BACT in PSD-FL-084; however, Stanton Unit 1 has historically been able to achieve a NO_x emission level of 0.4 to 0.5 lb/MMBTU.

The current status of control techniques for NO_x includes the use of combustion controls to limit the formation of NO_x as well as add-on controls to reduce NO_x emissions. These add-on controls include selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR).

Recently permitted PC boilers have NO_x limits as follow:

Mecklenburg Cogeneration, VA low-NO_x	NO_x - 0.33 lb/MMBTU (30-day average)
Chambers Cogeneration, NJ SCR	NO_x - 0.17 lb/MMBTU (180 -min. average)
Roanoke Valley Project, NC low-NO_x burners	NO_x - 0.33 lb/MMBTU (30-day average)

Low NO_x Burners

The NO_x control system proposed by the applicant, the use of "low-NO_x" burners, is the result of efforts made by burner manufacturers to reduce the formation of fuel NO_x (the oxidation of fuel bound nitrogen). Over the last several years, burner manufacturers have been guaranteeing NO_x emissions levels of between 0.30 and 0.40 lb/MMBTU utilizing a "staged" combustion process for coal fired units.

While several recent permits have been issued for low-NO_x burners on coal-fired boilers, there has been some concern expressed as to whether these burners can meet manufacturers' claims on a continuous basis. In addition, test results have shown that the use of "staged" combustion will increase the fixed carbon content in the fly ash. This could present a problem to a source such as OUC which utilizes fly ash as a salable product. However, according to the applicant, estimates of carbon content in the fly ash for Stanton Unit 2 will not be high enough to cause the ash to fail to meet ASTM standards for mineral admixtures to concrete (C618-89a, Attachment 3).

Selective Catalytic Reduction

Selective catalytic reduction (SCR) is a flue gas cleaning method which utilizes the injection of ammonia into the flue gas in the presence of a catalyst to dissociate NO_x into N_2 and water. SCR

was first developed in the U.S. in the late 1950's but received its first widespread use in power generation service in Japan in the 1970's. SCR has been utilized on gas, oil and coal-fired units. Likewise many West German coal-fired units (129 to date) have been retrofitted with SCR systems to minimize NO_x emissions. In the United States, one recent PSD permit was issued requiring SCR on a PC boiler (Chambers Cogeneration in New Jersey).

The major technical concerns in the past for the application of SCR to coal-fired service have revolved around potential ammonia slip; conversion of SO_2 to SO_3 by the catalysts and the resultant formation of ammonia salts; and poisoning of the catalyst by trace constituents of the coal.

Based upon operating experiences in Japan and Europe, catalysts manufacturers have developed "new generation" catalysts in an attempt to alleviate the problems mentioned above. The current status of the "sulfur resistant" catalysts on the market is such that manufacturers will guarantee that SO_2 to SO_3 conversion will be limited to less than 1%. By limiting this conversion, the amount of SO_3 available to react with ammonia is minimized. The new catalysts are typically of the extruded "honeycomb" type which offer better reaction surface area than the older plate-type catalysts.

The limiting of ammonia slip is also important for several reasons. First, in conjunction with the sulfur resistant catalysts, low ammonia slip minimizes formation of ammonia salts. Secondly, limiting ammonia slip reduces their potential for reaction with any trace quantities of chloride from the coal which may result in an ammonium chloride plume. At ammonia slip levels typically found with SCR systems (i.e., around 5 ppm), this potential is virtually eliminated. The third major reason for limiting ammonia slip is to prevent contamination of the fly ash such that the fly ash remains a salable product. According to the applicant, ammonia slip must be limited to below 5 ppm for coal with seven percent ash. The design coal, however, has an ash content of 12%, thus assuring that the fly ash ammonia concentrations will be even less. In any event, if the ash will be used in clinker production by the cement industry, the ammonia will be driven off in the clinker kiln.

In regards to catalyst poisoning by trace constituents in U.S. coals, the applicant has not provided any evidence that the projected constituents of the design coal are such that the projected catalyst life would be severely altered. Over normal operation of the SCR system, catalyst will degrade or deactivate and require change-out. There is no indication that the design coal constituents would cause more frequent change-out of catalyst than would normally be guaranteed.

Based on operating experiences with various coals, the availability of sulfur resistant catalysts and the ability to minimize ammonia slip, it must be concluded that the use of SCR is technically feasible for Stanton Unit 2.

Selective non-catalytic reduction

Selective non-catalytic reduction (SNCR) systems utilize either ammonia or urea as reagent to inject in the flue gas. There is a very precise temperature window in which the reagent must be injected. Additionally, since the reaction is not in the presence of a catalyst, a greater than stoichiometric amount of reagent is necessary to achieve desired NO_x removal efficiencies. This in turn can lead to ammonia slip much greater than from an SCR system. As discussed previously, elevated ammonia slip could result in excessive formation of ammonia salts, the formation of an ammonia chloride plume, or contamination of fly ash. To minimize ammonia slip it would be necessary to carefully limit the reagent/gas ratio which would probably result in an effective control efficiency of 30 to 40%.

Current installations of SNCR include municipal waste incinerators and circulating fluidized bed (CFB) coal-fired boilers. The temperature profile of a CFB is much more stable than in a PC boiler and thus is conducive to establishing the proper temperature window to effectively operate SNCR. An additional concern is the possibility that an SNCR system may convert some of the NO_x emissions into N_2O.

ENERGY IMPACTS

The energy impacts of an SNCR system include the need for both steam and electrical energy. The applicant has estimated this need to be roughly 0.5 percent of the total plant power output.

The power needs for the SCR system was also estimated at 0.5 percent of the total plant power output. Also an energy consideration is the possible loss of boiler efficiency due to higher air heater exit temperatures related to the presence of SO_3 in the flue gas.

ENVIRONMENTAL IMPACTS

The area in which Stanton Energy Center is located is currently designated attainment for NO_2. As stated previously, NO_x is a known precursor to both acid rain and ground level ozone.

The NO_x emissions of Unit 1 as compared to the evaluated alternatives is given below:

	EMISSIONS NO_x		EMISSIONS NH_3	
	lb/MMBTU	TPY	PPM	TPY
Conventional Burner	0.60	10,869	N/A	N/A
Low-NOx Burner	0.32	5,934	N/A	N/A
LNB + SNCR (40% removal)	0.19	3,604	20	240
LNB + SNCR (30% removal)	0.22	4,205	10	120
LNB + SCR (70% removal)	0.10	1,280	5	60

As discussed previously, ammonia slip from the SNCR system could result in the formation of ammonium chloride (visible plume) as well as increase the particulate loading due to formation of ammonia salts.

With the SCR system, ammonia slip related issues can be minimized. Systems manufacturers typically recommend special air heater designs which along with the sulfur resistant catalyst and minimum ammonia slip, serve to increase the reliability of the system. Japanese and

German experience has shown that cleaning ammonia salts from downstream components can be achieved with water washing and is usually limited to routine plant down-times, thus creating no impact on overall plant reliability.

The last environmental consideration is the storage of ammonia, a hazardous material. In order to alleviate safety concerns, many manufacturers recommend that aqueous ammonia be used rather than the much more volatile anhydrous ammonia. The PSD permit for Chambers Cogeneration requires the use of aqueous ammonia (less than 28% solution in water).

Economic Impacts

The economic analyses provided by the applicant (attachments 1 and 4) were incremental costs analyses for SNCR and SCR as compared to their base case of low-NO_x burners. In addition, cost analyses for low-NO_x burners and SCR were obtained from EPA's Air and Energy Environmental Research Laboratory, based on cost models established by the Electric Power Research Institute (EPRI).

The analysis for SNCR provided by the applicant estimated an increase in capital costs of $14 million and $11 million for systems designed to meet 40% and 30% removal respectively. These costs result in estimated incremental cost effectiveness numbers of $2,700 per ton of NO_x removed (40%) and $3,100 per ton of NO_x removed (30%).

The cost estimation provided by the AEERL for the low-NO_x burner estimated capital costs to be increased by about $3.6 million over the cost of a conventional burner. The model assumed a NO_x reduction of 62%, resulting in a cost effectiveness number of $41.86 per ton of NO_x removed. The model also estimated a first year busbar cost of power at 0.009 mills/KWH and a levelized annual busbar cost of 0.11 mills/KWH.

The long-term NO_x emission limit established for Chambers Cogeneration is 0.17 lb/MMBTU; however, the system must be designed for 70% removal with 5 ppm ammonia slip - equivalent to 0.10 lb/MMBTU.

The cost estimate provided by AEERL considered two different scenarios:

1) 100% capacity and reduction to 0.17 lb/MMBTU;
2) 100% capacity and reduction to 0.10 lb/MMBTU;

This model made estimates of total costs of the SCR plus the low NO_x burners. The results are as follows:

CASE	LEVELIZED ANNUAL REQUIREMENTS $	SYSTEM COST $/KW	FIRST YEAR BUSBAR MILLS/KWH	LEVELIZED ANNUAL BUSBAR MILLS/KWH	COST PER TON NO_x REMOVED $/TON
1	12,654,900	114.93	2.37	3.28	982.71
2	12,934,200	115.89	2.41	3.36	905.32

The cost analysis provided the applicant was an incremental analysis and evaluated two scenarios: 1) a two year catalyst life; and 2) a two to four year catalyst life: In each case, the amount of NO_x removed only considered reaching the level of 0.17 lb /MMBTU (i.e., a reduction of 47% of the NO_x available after application of low-NO_x burners). The analysis also included the cost of lost fly ash sales as well as the cost of landfilling the fly ash. As discussed earlier, it is not readily apparent that fly ash sales will be affected; thus, the $1.4 million in levelized annual costs attributed to these activities should not be included in the analysis.

The resulting incremental cost effectiveness numbers for each scenario, considering removals of 47% and 70%, are as follows:

	Total Annual Cost($)	NO_x Emissions Reduced (TPY)	Incremental Cost ($/Ton)
2 yr Catalyst	17,730,000	(47%) 2810 - (70%) 4160 -	$6,309 - $4,262 -
2/4 yr Catalyst	13,710,000	(47%) 2810 - (70%) 4160 -	$4,879 - $3,295 -

In a paper presented at the 1991 Joint Symposium on stationary combustion NO_x Control by C.P. Robie, et. al., entitled "Technical Feasibility and Cost of SCR for U.S. Utility Application" (Attachment 5) , costs were estimated by EPRI for SCR being installed on new 500 MW coal-fired units. From this study, costs were expected to be in the range of $78 - 87/KW. The levelized cost was estimated to be in the range of 5.3 - 5.9 mills/KWH. The resulting cost efficiency was estimated to be $3,300 - $3,800/ton of NO_x removed. In addition, the report stated that the SCR capital cost in a new plant is substantially less than in a retrofit application.

The report also pointed out that reductions in catalyst unit costs have a large impact on the levelized costs. This mirrors a trend in the catalyst manufacturer industry in which catalyst costs have steadily decreased over time.

BACT Determination by EPA

Based on the preceding analyses, information provided by the applicant, information obtained form AEERL, review of the BACT/LAER Clearinghouse, review of papers presented at the 1991 Joint Symposium on Stationary Combustion NO_x Control, as well as review of permits for similar sources, the Agency has the following determination.

Particulate Matter

The use of an electrostatic precipitator (ESP) for the control of particulates is acceptable as BACT for Stanton Unit 2. The emission limit proposed by the applicant, 0.020 lb/MMBTU, is consistent with recent BACT determinations. Emission limits for Unit 2 are being established as follows:

PM (Particulate Matter):

0.020 lb/MMBTU

PM_{10}

0.020 lb/MMBTU

VE (Visible Emission)

Visible emissions from the stack shall not exceed 20% (6 minute average) except for one 6 minute period for hour of not more than 27% opacity.

Sulfur Dioxide

The two major factors in SO_2 emissions are sulfur content of the coal and scrubber removal efficiency. The removal efficiency proposed by the applicant is 92% on a continuous basis utilizing a wet limestone scrubber. The vendor guarantee for this system is 95% removal; however, due to the fact that Stanton Unit 2 will be a ~~"zero-discharge"~~ unit, some degradation of the scrubber removal efficiency is expected. The applicant has stated that the maximum expected removal rate will be 93.7%

The second factor in the BACT determination for SO_2, sulfur content of the coal, must be evaluated based upon what is available today rather than on what may or may not be available in the future. OUC is currently able to obtain low sulfur coal (< 2% S) for Stanton Unit 1. Recent permits have been issued in Region IV on the basis of low sulfur coal. FDER is currently processing several permits in which coal-fired units will utilize low sulfur coal. In the current market, low sulfur coal is cheaper than high sulfur coal. It must be concluded that coal with a sulfur content less than that proposed by the applicant is readily available as of today.

The basis of the Agency's determination is the use of 2.0% sulfur coal along with a wet limestone scrubber with a continuous removal efficiency of 92%. Calculations of various removal efficiencies for different sulfur content coals (Attachment 7) yield an emission rate of 0.25 lb/MMBTU for 2.0% coal with 92% removal. An emission limit of 0.25 lb/MMBTU allows Stanton Unit 2 to utilize 2.5% sulfur coal when their scrubber removal efficiency approaches the expected maximum of 93.7%.

The SO_2 emission limits are being set for Stanton Unit 2 as follows:

0.25 lb/MMBTU (30-day rolling average)
0.67 lb/MMBTU (24 hour average)
0.85 lb/MMBTU (3 hour average)

Carbon Monoxide and Volatile Organic Compounds

The determination of BACT for the control of CO and VOCs is the use of combustion controls to minimize incomplete combustion. The resulting emissions rates for these pollutants are:

CO

0.15 lb/MMBTU

VOC

0.015 lb/MMBTU

Nitrogen Oxides

Selective catalytic reduction (SCR) is an available technology which has been utilized on combustion turbines, gas/oil-fired boilers, and coal-fired boilers world-wide. Through several decades of operating experience, SCR systems have been developed which, when properly designed and operated, can achieve high levels of NO_x reductions while minimizing ammonia slip and its associated problems. As discussed in the analysis, catalysts are readily available which are sulfur resistant.

The basis for the BACT determination for NO_x emissions is the use of a SCR system designed to achieve a NO_x emission limit of 0.1 lb/MMBTU with ammonia slip limited to a maximum of 5 ppm before catalyst changeout. Recognizing the importance of maintaining unit reliability, the emission limit being established contains flexibility for the source in order to ensure that ammonia slip is minimized. To that end, the NO_x emission limit for Unit 2 is being set as follows:

NO_x

0.17 lb/MMBTU (30-day rolling average)

OUC Stanton Unit 2 is not scheduled to begin operation until 1997. In deference to the constant improvement in burner technologies and the development of other NO_x control technologies such as SNCR, the permit is being conditioned such that should OUC be able to demonstrate the capability of a technology other than SCR to be able to meet the established limit, the permit may be revised to incorporate the alternative technology.

PROPOSED PERMIT MODIFICATIONS TO PSD-FL-084

The Specific Conditions of federal permit PSD-FL-084 shall be modified as follows:

1. The proposed steam generating station shall be constructed and operated in accordance with the capabilities and specifications of the application including the 4,136 MMBTU/hr heat input rate for Unit 1 and the 4,286 MMBTU/hr heat input rate for Unit 2.

2. The emissions for Unit 1 shall not exceed the allowable emission limits listed in the following Table for SO_2, PM, NO_x and visible emissions:

Allowable Emissions

Pollutant	lb/MMBTU
PM	0.03
SO_2	1.14 (3-hr average) and 90 percent reduction (30-day rolling average)
NO_x	0.60 (30-day rolling average)
Visible Emissions	20% (6-minute average), except for one 6-minute period per hour of not more than 27% opacity

The emissions for Unit 2 shall not exceed the allowable emission limits listed in the following Table for SO_2, PM, NO_x, CO, VOC, and visible emissions:

Allowable Emissions

Pollutant	lb/MMBTU
PM	0.02
PM_{10}	0.02
SO_2	0.25 (30-day rolling average) 0.67 (24-hour average) 0.85 (3-hour average)

Pollutant	lb/MMBTU
NO_x	0.17 (30-day rolling average)
CO	0.15
VOC	0.015
Visible Emissions	20% (6-minute average), except for one 6-minute period per hour of not more than 27% opacity.

Additional conditions are added to PSD-FL-084 as follows:

14. Compliance with the emission limits contained in Specific Condition #2 for Unit 2 shall be determined as follows:

PM Compliance with the particulate limits in this permit shall be demonstrated by emission tests conducted in accordance with the provisions of 40 CFR §60.48a(b).

SO_2 Compliance with the SO_2 emission limits and emission reduction requirements in this permit shall be demonstrated in accordance with the provisions of 40 CFR §60.48a(c).

NO_x Compliance with the NO_x emission limits in this permit shall be demonstrated in accordance with the provisions of 40 CFR §60.48a(d).

VOC Compliance with the volatile organic compound limit shall be determined in accordance with Reference Method 25 or 25A of 40 CFR Part 60, Appendix A.

CO Compliance with the carbon monoxide limit shall be determined in accordance with Reference Method 10A or 10B of 40 CFR Part 60, Appendix A.

VE Compliance with the opacity limit in this permit shall be demonstrated using EPA Reference Method 9 in accordance with the provisions of 40 CFR §60.11.