Florida Department of Environmental Regulation

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

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Dane Meredith, Manager
Florida Steel Corporation - Tampa Mill
Post Office Box 31328
Tampa, Florida 33631

May 3, 1989

Enclosed is construction permit No. AC 29-159192 for Florida Steel Corporation to construct a new electric arc furnace (EAF) from the existing No. 4 EAF and to remove the existing No. 3 EAF from service. The new EAF will use the existing Nos. 1-4 baghouse systems to control particulate emissions and visible emissions at the permittee's existing facility in Tampa, Hillsborough County, Florida. The new EAF is subject to the standards of performance for stationary sources, 40 CFR 60, Subpart AAa. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

B. Thomas, SW District
J. Campbell, EPCHC
R. S. Sholtes, P.E., RSS, P.A.
T. Sack, FSC - Tampa Mill

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on May 4, 1989.

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

Martha J. Wise — Clerk

May 4, 1989 — Date

Final Determination

Florida Steel Corporation
Hillsborough County
Tampa, Florida

Construction Permit Number:
AC 29-159192

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

May 2, 1989

Final Determination

The construction permit application and supplementary material have been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in The Tampa Tribune on April 5, 1989. The Technical Evaluation and Preliminary Determination were available for public inspection at the offices of the Environmental Protection Commission of Hillsborough County, the DER's Southwest District, and the Bureau of Air Quality Management.

Comments were received from Dr. Robert S. Sholtes, P.E. of record and representing Florida Steel Corporation, on April 12, 1989. The comments will be addressed in the same order as they are stated in the letter and the Bureau's responses follow:

I. Technical Evaluation and Preliminary Determination (TE & PD)

- Response #1: The Bureau agrees that the SO_2 emission factor noted in Table 1 was incorrectly displayed and acknowledges that the factor should have been 0.01 lb/ton processed.

- Response #2: The Bureau acknowledges that the potential lead (Pb) emissions displayed in Table 2 should have been 1.4 TPY.

- Response #3: The Bureau acknowledges that the net Pb emissions in Table 3 should have been +0.4 TPY with the potential Pb emissions at 1.4 TPY (see Response #2 above).

- Response #4: The Bureau agrees to the request to include the additional language in the allowable emission limiting standard for PM (particulate matter). Since the TE & PD will not be reissued, the requested language will be incorporated into the appropriate Specific Condition (No. 4) of the construction permit.

II. Permit No. AC 29-159192:

- Response #1: The Bureau agrees with the request for an increase in the natural gas usage rate and the following will be changed:

Specific Condition No. 3:

From: Maximum heat input from natural gas shall not exceed 20.5 MMBtu/hr (1.95 x 10^4 cf/hr).

To: Maximum heat input from natural gas shall not exceed 31.0 MMBtu/hr (2.95 x 10^4 cf/hr).

- Response #2: The Bureau acknowledges the correct mailing address and the cover page will be changed to reflect the following:

Cover Page: PERMITTEE
Florida Steel Corporation
Tampa Mill Division
P. O. Box 31328
Tampa, Florida 33631

- Response #3: The Bureau agrees with the request to change the expiration date and the following will be changed:

Expiration Date:

From: June 30, 1990

To: June 30, 1991

- Response #4: As stated in Response #4, above, for the TE & PD, the Bureau agrees with the request and the following will be changed:

Specific Condition No. 4:

From: Maximum allowable particulate emissions shall not exceed 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr, 54.8 TPY), pursuant to 40 CFR 60.272a.

To: Maximum allowable particulate emissions from the baghouse systems shall not exceed 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr total, 54.8 TPY total, pursuant to 40 CFR 60.272a and based on a total flow rate of 292,817 scfm).

- Response #5: The Bureau agrees with the request and the following will be changed:

Specific Condition No. 7:

From: The baghouse systems shall be performance tested for particulate matter (PM) emissions using EPA Reference Methods 1-5, Appendix A, 40 CFR 60.

To: The baghouse systems shall be performance tested for particulate matter (PM) emissions using EPA Reference Methods 1-5 (including 5D), Appendix A, 40 CFR 60.

o Response #6: As stated in Response #2, above, for the TE & PD, the Bureau agrees with the request and the following will be changed:

Specific Condition No. 17:

From: For PSD and nonattainment review purposes, the projected potential pollutant emissions in TPY are:

Source	PM	NO_x	SO_2	CO	Pb
EAF		16.3	1.6	211.3	2.4
EAF: Melt & Refine	0.4				
EAF Charge & Tap	16.3				

To: For PSD and nonattainment review purposes, the projected potential pollutant emissions in TPY are:

Source	PM	NO_x	SO_2	CO	Pb
EAF		16.3	1.6	211.3	1.4
EAF: Melt & Refine	0.4				
EAF Charge & Tap	16.3				

III. Attachment to be Incorporated:

7. Dr. Robert S. Shotes' letter received April 12, 1989.

The Bureau will incorporate the changes in the construction permit, as referenced above in the final determination. It is recommended that the construction permit be issued as drafted, with the above revisions and attachment incorporated.

FLORIDA STEEL CORPORATION
"Steel when you want it"

Tampa, FL

one 813/251-8811

TAMPA STEEL MILL DIVISION
7105 6TH AVENUE • P.O. BOX 23328 • TAMPA, FL 33630

Mr. Bill Thomas
State of Florida
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

April 7, 1989

Subject: Proof of Publication of intent to issue a permit for rebuilding No. 4 electric furnace and remove No. 3 electric furnace
DER File No. AC 29-159192

Dear Bill,

Please find enclosed the original affidavit from the Tampa Tribune stating that the legal notice, regarding the above, was in the Wednesday, 4/5/89, edition of the Tampa Tribune. Please accept this as proof of publication.

Please do not hesitate to call if you have any questions.

cc: DM
LN
R. Scholtes
B. Thomas, SW Dist
J. Campbell, EPCHC } 4-11-89 RRL
B. Mitchell

Thomas J. Sack
Division Engineer

Day 90: June 12, 1989

THE TAMPA TRIBUNE

Published Daily
Tampa, Hillsborough County, Florida

State of Florida
County of Hillsborough } ss.

Before the undersigned authority personally appeared G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a LEGAL NOTICE

in the matter of NOTICE OF INTENT

was published in said newspaper in the issues of April 5, 1989

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

G. T. Gleason

Sworn to and subscribed before me, this 5th *day of* April *A.D. 19* 89

NOTARY PUBLIC; STATE OF FLA.
MY COMMISSION EXPIRES ... 19...
(SEAL)
BONDED THRU AGENT'S ...

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Florida Steel Corporation, 7105 6th Avenue, P. O. Box 23328, Tampa, Florida 33630, to construct a new electric arc furnace (EAF) from the existing No. 4 EAF and to remove the existing No. 3 EAF from service. The new EAF will use the existing Nos. 1-4 baghouse systems to control particulate emissions and visible emissions. The new EAF is subject to the standards of performance for stationary sources, 40 CFR 60, Subpart AAa. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

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

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

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

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

The application is available for public inspection during 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
Quality Management
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Dept. of Environmental
Regulation
Southwest District Office
7601 Highway 301 N.
Tampa, Florida 33610

Environmental Protection
Commission
of Hillsborough County
1410 North 21st Street
Tampa, Florida 33605

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

2128 4/5/89

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

PERMITTEE:
Florida Steel Corp.
Tampa Mill Division
P. O. Box 31328
Tampa, FL 33631

Permit Number: AC 29-159192
Expiration Date: June 30, 1991
County: Hillsborough
Latitude/Longitude: 27°57'18"
82°22'34"W
Project: New Electric Arc Furnace

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

For the construction of a new electric arc furnace (EAF) from the existing No. 4 EAF and the removal of the existing No. 3 EAF from service. The new EAF will be connected to the existing baghouse systems, Nos. 1-4, for the control of visible and particulate matter emissions. Also, a new hood will be constructed/installed to control PM emissions from the new EAF during tapping and charging. The maximum production rate is 65 TPH with a maximum sustainable rate of 47.5 TPH. The new EAF will be constructed at the permittee's existing facility located at 7105 6th Avenue in Tampa, Florida.

The UTM coordinates are Zone 17, 364.63 km East and 3092.82 km North.

The Standard Classification Codes are:

o EAF: stack (alloy steel)	3-03-009-04	tons produced
o Charging: EAF	3-03-009-06	tons produced
o Tapping: EAF	3-03-009-07	tons produced

The source shall be 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 to Construct Air Pollution Sources, DER Form 17-1.202(1), received January 10, 1989.
2. Mr. T. J. Sack's letter with processing fee received January 10, 1989.
3. Mr. Victor San Agustin's Interoffice Memorandum received January 30, 1989.

Attachments continued:

4. Mr. C. H. Fancy's letter dated February 3, 1989.
5. Dr. Robert S. Sholtes' letter with attachments received February 17, 1989.
6. Technical Evaluation and Preliminary Determination dated March 29, 1989.
7. Dr. Robert S. Sholtes' letter received April 12, 1989.

PERMITTEE:
Florida Steel Corp.

Permit Number: AC 29-159192
Expiration: June 30, 1991

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. This permit also constitutes:

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

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

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

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The permitted hours of operation are 24 hours/day, 7 days/week, and 50 weeks/year, for a total of 8,400 hours/year.

2. For PSD and nonattainment review purposes, the EAF's maximum production rates shall not exceed 47.5 tons per hour, 1,140 tons per day, and 325,000 tons per year. For compliance and performance testing, the maximum production rate shall not exceed 65 tons per hour.

3. Maximum heat input from natural gas shall not exceed 31.0 MMBtu/hr (2.95×10^4 cf/hr).

SPECIFIC CONDITIONS:

4. Maximum allowable particulate emissions from the baghouse systems shall not exceed 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr total, 54.8 TPY total), pursuant to 40 CFR 60.272a and based on a total flow rate of 292,817 scfm.

5. Visible emissions shall be in accordance with 40 CFR 60.272a and are:

a. less than 3% opacity from the Nos. 1-4 baghouse systems; and,
b. less than 6% opacity from the shop during all phases of operation.

6. The visible emissions limitations shall be determined by EPA Reference Method 9, Appendix A, 40 CFR 60.

7. The baghouse systems shall be performance tested for particulate matter (PM) emissions using EPA Reference Methods 1-5 (including 5D), Appendix A, 40 CFR 60.

8. Minimum sample volume and time per run shall be as defined in 40 CFR 60, Subpart AAa, unless another methodology has been approved by the Department.

9. Emissions monitoring shall be in accordance with 40 CFR 60.273a.

10. Monitoring of operations shall be in accordance with 40 CFR 60.274a.

11. Test methods and procedures shall be in accordance with 40 CFR 60.275a.

12. Recordkeeping and reporting requirements shall be in accordance with 40 CFR 60.276a.

13. The EAF shall be in compliance with all applicable requirements of F.A.C. Chapters 17-2 and 17-4.

14. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

15. The operations are subject to F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operations-Problems.

PERMITTEE:
Florida Steel Corp.

Permit Number: AC 29-159192
Expiration: June 30, 1991

SPECIFIC CONDITIONS:

16. The offices of the DER's Southwest District and the Environmental Protection Commission of Hillsborough County (EPCHC) shall be notified in writing 15 days prior to source testing pursuant to F.A.C. Rule 17-2.700(2)(a)5. Written reports shall be submitted to the offices of the DER's Southwest District and the EPCHC within 45 days of test completion pursuant to F.A.C. Rule 17-2.700(7).

17. For PSD and nonattainment review purposes, the projected potential pollutant emissions in TPY are:

Source	PM	NO_x	SO_2	CO	Pb
EAF		16.3	1.6	211.3	1.4
EAF: Melt & Refine	0.4				
EAF Charge & Tap	16.3				

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

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

Issued this 2 day
of May, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary

ATTACHMENT

ROBERT S. SHOLTES, P.A. Environmental Consultants
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 374-4439

April 10, 1989

RSS 101-88-05

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

RE: Florida Steel Corporation - Tampa Mill
FDER File No. AC29-159192

Dear Mr. Fancy:

Please accept the following comments for the Department's consideration regarding your March 29, 1989 correspondence on the subject file. I have reviewed the Notice of Intent to Issue, the Technical Evaluation and Preliminary Determination, and the Draft Construction Permit (AC29-159192) and would present the following comments for consideration.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

(1) In the text immediately preceding Table 2, where emission factors are delineated, correction should be made to Item 3 to indicate a factor of 0.01 lbs/ton processed for sulfur dioxide.

(2) In Table 2 of the Preliminary Determination, an error was made in the lead emission. This is shown as 2.9 tons per year. In this situation, we have a double error; the first being the carryover of 2.9 tons per year from the permit application, whereas the application states 2.44 tons per year which is the second error, inasmuch as the application should reflect emissions of 1.43 tons of lead per year; or two percent of the particulate matter emissions. The following material illustrates the proper numerical content of Table 2.

TABLE 2

SOURCE	Potential Pollutant Emissions (tpy) PM	NOx	SO_2	CO	Pb
New EAF		16.3	1.6	211.3	1.4
Baghouses	54.8				
Melt & Refine	0.4				
Charge & Tap	16.3				
TOTAL	71.5	16.3	1.6	211.3	1.4

(3) Inasmuch as Table 2 carries this error, it will in turn be reflected in Table 3 of the Preliminary Determination as shown below.

TABLE 3

SOURCE	New Pollutant Emissions (tpy) PM	NOx	SO_2	CO	Pb
Proposed EAF	71.5	16.3	1.6	211.3	1.4
EAF Nos. 3&4	51.1	10.5	1.1	477.8	1.0
NET	+20.4	+5.8	+0.5	-266.5	+0.4

(4) In Section III, A. of the Preliminary Determination, Table 4 delineates the allowable emission rate for the proposed new Electric Arc Furnace. For clarification, we would ask that Table 4 be modified as shown below in order that no confusion arise in the future with respect to the emission limits as quoted, including emissions other than those from the baghouse filers.

TABLE 4

SOURCE	POLLUTANT	ALLOWABLE EMISSION LIMITING STANDARD
New EAF	PM	Mass emission equal to or less than 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr and 54.8 tpy from bagfilters based on 292,817 SCFM flow).
EAF Baghouses	VE	Less than 3 percent opacity.
Shop Roof	VE	Less than 6 percent opacity.

PERMIT NO. AC29-159192

The applicant, Florida Steel Corporation, wishes to increase the maximum hourly natural gas usage rate from 20.5 x 10^6 Btu's, as stated in the permit application and as proposed in Specific Condition 3 in the draft permit, to 31 x 10^6 Btu's. This change does not affect the pollutant calculations as determined for this application.

Please note that the correct mailing address, as specified in the permit application is P. O. Box 31328, Tampa, Florida 33631.

The completion date of this work will be no sooner than December 1990. A June 1991 expiration date for this construction permit would be more appropriate.

The applicant suggests that, in the interest of clarity, Specific Condition No. 4 be reworded as follows:

4. Maximum allowable particulate emissions from the baghouse systems shall not exceed 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr total, 54.8 TPY total, pursuant to 40 CFR 60.272a. and based upon a total flow rate of 292,817 SCFM).

Again, for clarity, the applicant would suggest the following rewording of Specific Condition No. 7 as follows:

7. The baghouse systems shall be performance tested for particulate matter (PM) emissions using EPA Reference Method 1-5 (including 5D), Appendix A, 40 CFR 60.

The applicant would further suggest that Specific Condition No. 17 be revised as follows to make the correction in lead emissions which was previously noted.

17. For PSD and nonattainment review purposes, the projected potential pollutant emissions in TPY are:

SOURCE	PM	NOx	SO_2	CO	Pb
EAF		16.3	1.6	211.3	1.4
EAF: Melt & Refine	0.4				
EAF: Charge & Tap	16.3				

For the most part, these suggested changes are submitted in the interest of clarity and do not constitute any technical changes to the permit or the permit application. Your favorable consideration of these suggestions will be appreciated. If you have any questions regarding these items, please contact me at your convenience.

Sincerely,

Robert S. Sholtes

Robert S. Sholtes, Ph.D., P.E.

RSS:ssc

cc: Mr. Tom Sack
Mr. Luis Nieves

cc'd: B. Mitchell
L. Thomas, SW Dist
J. Campbell, HCEPC
CH+F/ST

Bruce's Copy

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

March 29, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dane Meredith, Manager
Florida Steel Corporation-Tampa Mill
7105 6th Avenue
P. O. Box 23328
Tampa, Florida 33630

Dear Mr. Meredith:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Florida Steel Corporation to construct a new electric arc furnace (EAF) from the existing No. 4 EAF and to remove the existing No. 3 EAF from service. The new EAF will use the existing Nos. 1-4 baghouse systems to control particulate emissions and visible emissions. The new EAF is subject to the standards of performance for stationary sources, 40 CFR 60, Subpart AAa.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

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

CHF/ks

Attachments

cc: B. Thomas, SW District
J. Campbell, EPCHC
R. S. Sholtes, P.E., RSS, P.A.
T. Sack, FSC-Tampa Mill

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 3-29-89.

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

Martha J. Wise — Clerk

3-29-89 — Date

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Florida Steel Corp.-Tampa Mill
Post Office Box 23328
Tampa, Florida 33630

DER File No. AC 29-159192

INTENT TO ISSUE

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

The applicant, Florida Steel Corporation, applied on January 10, 1989, to the Department of Environmental Regulation for a permit to construct a new electric arc furnace (EAF) from the existing No. 4 EAF and to remove the existing No. 3 EAF from service. The new EAF will use the existing Nos. 1-4 baghouse systems to control particulate emissions and visible emissions. The new EAF is subject to the standards of performance for stationary sources, 40 CFR 60, Subpart AAa. The project will occur at the applicant's existing facility located at 7105 6th Avenue, Tampa, Hillsborough County, Florida.

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

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

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

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

The Petition shall contain the following information;

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

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

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

(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 applicant have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

B. Thomas, SW District
J. Campbell, EPCHC
R. S. Sholtes, P.E.
T. Sack, FSC-Tampa Mill

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Florida Steel Corporation, 7105 6th Avenue, P. O. Box 23328, Tampa, Florida 33630, to construct a new electric arc furnace (EAF) from the existing No. 4 EAF and to remove the existing No. 3 EAF from service. The new EAF will use the existing Nos. 1-4 baghouse systems to control particulate emissions and visible emissions. The new EAF is subject to the standards of performance for stationary sources, 40 CFR 60, Subpart AAa. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

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

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

The application is available for public inspection during 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 Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation
Southwest District Office
7601 Highway 301 N.
Tampa, Florida 33610

Environmental Protection Commission
of Hillsborough County
1410 North 21st Street
Tampa, Florida 33605

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

Technical Evaluation
and
Preliminary Determination

Florida Steel Corporation
Hillsborough County
Tampa, Florida

Construction Permit Number:
AC 29-159192

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

March 29, 1989

I. Application

A. Applicant

Florida Steel Corporation
Tampa Mill Division
P. O. Box 23328
Tampa, Florida 33623

B. Project and Location

The applicant proposes to remove from service existing electric arc furnace (EAF) No. 3 and to substantially rebuild existing EAF No. 4, which will become a source subject to the new source performance standards (NSPS), subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 17, 1983. The proposed modified EAF will have a maximum design production capacity of 65 tons per hour, a sustainable production rate of 47.5 tons per hour, and an annual maximum production rate of 325,000 tons per year. Proposed hours of operation are 24 hrs/day, 7 days/wk, and 50 wks/yr, for a total of 8,400 hrs/yr.

The EAF will be of a direct current (DC) design. This type of design requires only one carbon electrode. The electrical input to the furnace will be augmented by permanently installed oxy-fuel burners utilizing natural gas as a fuel. The maximum total heat input of these burners will be 20.5×10^6 Btu/hr.

The pollution control equipment for the proposed new EAF will consist of four (4) existing baghouse control systems.

The project will occur at the applicant's existing facility located in Hillsborough County, Florida. The UTM coordinates are Zone 17, 364.63 km East and 3092.82 km North.

C. Process and Controls

The proposed new EAF will be a single charge type furnace, meaning that all the scrap steel for a given heat will be placed in the furnace during one charging period. Fugitive particulate matter (PM) emissions will be reduced considerably since the existing furnaces' current charging practice involves at least two and often three separate charge drops.

A fourth hole evacuation will provide a reduction of approximately 80% for carbon monoxide (CO) emissions. A new canopy hood system will provide a reduction and capture of PM and visible emissions.

The baghouse systems are: 1) a Wheelabrator 3168; 2) a Wheelabrator #171; 3) a Wheelabrator #168; and, 4) a Fuller Model 6000.

Collected baghouse dust (PM) will be shipped off site for reclamation or disposal. Slag will be crushed and sold for roadway base by a separate company.

The Standard Industrial Codes are:

- Industry no. 3312: Blast Furnaces, Steel Works, and Rolling mills

The Standard Classification Codes are:

o EAF: Stack (alloy steel)	3-03-009-04	tons produced
o Charging: EAF	3-03-009-06	tons produced
o Tapping: EAF	3-03-009-07	tons produced

II. Rule Applicability

The project is subject to preconstruction review in accordance with Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4.

The application package was deemed complete on February 17, 1989.

The existing facility is located in an area designated nonattainment for the pollutant PM in accordance with F.A.C. Rule 17-2.410(a)1.

The following table exhibits the contemporaneous pollutant emissions (actuals) associated with existing EAFs Nos. 3 and 4 in tons per year (TPY).

Table 1

	Contemporaneous Pollutant Emissions: Actual (TPY)				
Source	PM	NO_x	SO_2	CO	Pb
EAFs Nos. 3 & 4		10.5	1.1	477.8	1.0
o Baghouses	28.0				
o Melt & Refine	7.9				
o Charge & Tap	15.2				
Total	51.1	10.5	1.1	477.8	1.0

Note:
- o Hours of operation at 6,087 (1987 production hrs)
- o EAF No. 3: production @ 15.5 TPH and 94,500 TPY
- o EAF No. 4: production @ 19.0 TPH and 115,500 TPY
- o Emission factors:

1. PM: used EPA's 1983 Factors
   a. Melt & Refine: 27 lbs/ton processed
      1) EAF No. 3 - efficiences
         o side draft @ 95%
         o canopy @ 90%
      2) EAF No. 4 - efficiencies
         o side draft @ 98%
         o canopy @ 95%

   b. Tap & Charge: 2 lbs/ton processed
      1) EAF No. 3 - efficiency
         o canopy @ 90%
      d) EAF No. 4 - efficiency
         o canopy @ 95%
2. NO_x: 0.1 lb/ton processed (EPA 450/3-82-020a)
3. SO_2: 0.1 lb/ton processed (EPA 450/3-82-020a)
4. CO: 6.5 lbs/ton processed (EPA 450/3-82-020a)
5. Pb: 2% by wt. of EAF dust (EPA 450/3-82-020a)

The following table exhibits the proposed new EAF's potential pollutant emissions in TPY:

Table 2

Source	Potential Pollutant Emissions (TPY) PM	NOx	SO_2	CO	Pb
New EAF		16.3	1.6	211.3	2.9
o Baghouses	54.8				
o Melt & Refine	0.4				
o Charge & Tap	16.3				
Total	71.5	16.3	1.6	211.3	2.9

Note: o Operation hours are 8,400 hrs/yr.
o 65 TPH maximum production capacity
o 325,000 TPY maximum annual production capacity
o Emissions Factors:

1. PM:
   a. Baghouses - 12 mg/dscm (0.0052 gr/dscf)
   b. Melt & Refine - 27 lbs/ton processed
   c. Tap & Charge - 2 lbs/ton processed
   d. Efficiencies
      1) Canopy hood - 99% during melt
                     - 95% during tap & charge
      2) Side draft/direct evacuation - 99%
2. NO_x - 0.1 lb/ton processed
3. SO_2 - 0.01 lb/ton processed
4. CO - 6.5 lbs/ton process with 80% oxidation in furnace evacuation system (fourth hole vent)
5. Pb - 2% by wt. of EAF dust

The following table exhibits the net change due to contemporaneous pollutant emissions from the existing EAF's Nos. 3 and 4 and the potential pollutant emissions for the proposed new EAF:

Table 3

Source	Net Pollutant Emission (TPY) PM	NO_x	SO_2	CO	Pb
Proposed EAF	71.5	16.3	1.6	211.3	2.9
EAFs Nos. 3 & 4 (-)	51.1	10.5	1.1	477.8	1.0
Net:	+20.4	+5.8	+0.5	-266.5	+1.9

Since the net pollutant emissions are less than the significant emissions rates contained in Table 500-2, F.A.C. Rule 17-2, the proposed project's emissions are not subject to new source review pursuant to F.A.C. Rules 17-2.500(5) and 17-2.510(4). Therefore, the emissions are subject to review pursuant to F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

Pursuant to F.A.C. Rule 17-2.660, Standards of Performance for New Stationary Sources (NSPS), the NSPS for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 (Subpart AAa), has been adopted by reference.

The new EAF is subject to the provision of the NSPS, Subpart AAa, 40 CFR 60.270a. Pursuant to 40 CFR 60.272a, standard for PM, no owner or operator shall cause to be discharged into the atmosphere from the EAF any gases which:

1) exit from a control device and contain PM in excess of 12 mg/dscm (0.0052 gr/dscf);
2) exit from a control device and exhibit 3 percent opacity or greater; and,
3) exit from a shop and, due solely to the operations of any affected EAF, exhibit 6 percent opacity or greater.

Emissions monitoring shall be in accordance with 40 CFR 60.273a.

Monitoring of operations shall be in accordance with 40 CFR 60.274a.

Test methods and procedures shall be in accordance with 40 CFR 60.275a.

Recordkeeping and reporting requirements shall be in accordance with 40 CFR 60.276a.

III. Summary of Emissions

A. Emission Limitations

The proposed new EAF is subject to emission limitations for PM and is subject to various visible emission (VE) limitations, depending on the operation mode. The following table exhibits the emission limitations applicable to the new EAF:

Table 4

Source	Pollutant	Allowable Emission Limiting Standard
new EAF	PM	12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr and 54.8 TPY)
EAF baghouses	VE	less than 3% opacity
Shop roof	VE	less than 6% opacity

The emission limiting standards are consistent with the applicable requirements pursuant to F.A.C. Chapters 17-2 and 17-4 and 40 CFR 60, Subpart AAa.

B. Air Quality

From a technical review of the application package and supplementary information, an air quality analysis was not required.

IV. Conclusion

Based on the information provided by Florida Steel Corporation, the Department has reasonable assurance that the proposed construction of a new electric arc furnace, 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 provisions 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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

PERMITTEE:
Florida Steel Corp.
Tampa Mill Division
P. O. Box 23328
Tampa, FL 33623

Permit Number: AC 29-159192
Expiration Date: June 30, 1990
County: Hillsborough
Latitude/Longitude: 27°57'18"
82°22'34"W
Project: New Electric Arc Furnace

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

For the construction of a new electric arc furnace (EAF) from the existing No. 4 EAF and the removal of the existing No. 3 EAF from service. The new EAF will be connected to the existing baghouse systems, Nos. 1-4, for the control of visible and particulate matter emissions. Also, a new hood will be constructed/installed to control PM emissions from the new EAF during tapping and charging. The maximum production rate is 65 TPH with a maximum sustainable rate of 47.5 TPH. The new EAF will be constructed at the permittee's existing facility located at 7105 6th Avenue in Tampa, Florida.

The UTM coordinates are Zone 17, 364.63 km East and 3092.82 km North.

The Standard Classification Codes are:

o EAF: stack (alloy steel)	3-03-009-04	tons produced
o Charging: EAF	3-03-009-06	tons produced
o Tapping: EAF	3-03-009-07	tons produced

The source shall be 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 to Construct Air Pollution Sources, DER Form 17-1.202(1), received January 10, 1989.
2. Mr. T. J. Sack's letter with processing fee received January 10, 1989.
3. Mr. Victor San Agustin's Interoffice Memorandum received January 30, 1989.

Attachments continued:

4. Mr. C. H. Fancy's letter dated February 3, 1989.
5. Dr. Robert S. Sholtes' letter with attachments received February 17, 1989.
6. Technical Evaluation and Preliminary Determination dated March 29, 1989.

PERMITTEE:
Florida Steel Corp.

Permit Number: AC 29-159192
Expiration: June 30, 1990

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. This permit also constitutes:

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

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

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

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The permitted hours of operation are 24 hours/day, 7 days/week, and 50 weeks/year, for a total of 8,400 hours/year.

2. For PSD and nonattainment review purposes, the EAF's maximum production rates shall not exceed 47.5 tons per hour, 1,140 tons per day, and 325,000 tons per year. For compliance and performance testing, the maximum production rate shall not exceed 65 tons per hour.

3. Maximum heat input from natural gas shall not exceed 20.5 MMBtu/hr (1.95×10^4 cf/hr).

SPECIFIC CONDITIONS:

4. Maximum allowable particulate emissions shall not exceed 12 mg/dscm (0.0052 gr/dscf, 13.05 lbs/hr, 54.8 TPY), pursuant to 40 CFR 60.272a.

5. Visible emissions shall be in accordance with 40 CFR 60.272a and are:

a. less than 3% opacity from the Nos. 1-4 baghouse systems; and,
b. less than 6% opacity from the shop during all phases of operation.

6. The visible emissions limitations shall be determined by EPA Reference Method 9, Appendix A, 40 CFR 60.

7. The baghouse systems shall be performance tested for particulate matter (PM) emissions using EPA Reference Methods 1-5, Appendix A, 40 CFR 60.

8. Minimum sample volume and time per run shall be as defined in 40 CFR 60, Subpart AAa, unless another methodology has been approved by the Department.

9. Emissions monitoring shall be in accordance with 40 CFR 60.273a.

10. Monitoring of operations shall be in accordance with 40 CFR 60.274a.

11. Test methods and procedures shall be in accordance with 40 CFR 60.275a.

12. Recordkeeping and reporting requirements shall be in accordance with 40 CFR 60.276a.

13. The EAF shall be in compliance with all applicable requirements of F.A.C. Chapters 17-2 and 17-4.

14. Objectionable odors shall not be allowed off plant property pursuant to F.A.C. Rule 17-2.620(2).

15. The operations are subject to F.A.C. Rules 17-2.240: Circumvention; 17-2.250: Excess Emissions; and, 17-4.130: Plant Operations-Problems.

PERMITTEE:
Florida Steel Corp.

Permit Number: AC 29-159192
Expiration: June 30, 1990

SPECIFIC CONDITIONS:

16. The offices of the DER's Southwest District and the Environmental Protection Commission of Hillsborough County (EPCHC) shall be notified in writing 15 days prior to source testing pursuant to F.A.C. Rule 17-2.700(2)(a)5. Written reports shall be submitted to the offices of the DER's Southwest District and the EPCHC within 45 days of test completion pursuant to F.A.C. Rule 17-2.700(7).

17. For PSD and nonattainment review purposes, the projected potential pollutant emissions in TPY are:

Source	PM	NO_x	SO_2	CO	Pb
EAF		16.3	1.6	211.3	2.4
EAF: Melt & Refine	0.4				
EAF Charge & Tap	16.3				

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

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

Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

ATTACHMENT 1
(Available Upon Request)

ATTACHMENT 2

Available Upon Request.

ATTACHMENT 3

1-27-89
Tampa, FL

Main file copy

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

Date 1/27/89

To Bruce Mitchell, CAPS

From Victor San Agustin, P.E. thru Jerry Campbell, P.E.
VSA VSA for

Subject: Day 30 Comments for Florida Steel

This letter requests that you incorporate the following concerns in your letter of incompletion:

1. The new PM allowable pursuant to NSPS Subpart AAa is 0.0052 grldscf. The most recent tests (May, 1988) conducted on each of the four baghouse systems are:

Baghouse System	Actual PM (grldscf)
Baghouse No. 1	0.0044
Baghouse No. 2	0.003
Baghouse No. 3	0.0106
Baghouse No. 4	0.002

An AC permit cannot be issued to Florida Steel because PM emissions from Baghouse #3 are in excess of the new PM allowable. They must provide us some reasonable assurance that the new PM limit will be met.

2. Pursuant to 40 CFR 60.272a the NSPS allowable for v.e.'s exhausting from the shop is 6% opacity. The applications project description states, "the redesign of the control equipment will involve improvements to the fugitive emissions system." Past inspections of tapping and charging operations show average opacities greater than 6%. We need to know what these improvements are so we can have some assurance that this stricter standard will be met.

Your consideration is requested. If you have any questions, please call.

ph

cc: Bruce Mitchell } 1-30-89 RAM
CHF/BT

ATTACHMENT 4

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

February 3, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. T. J. Sack
Division Engineer
Florida Steel Corporation
Tampa Steel Mill Division
7105 6th Avenue
P. O. Box 23328
Tampa, Florida 33630

Dear Mr. Sack:

Re: Completeness Review for the Application Package
Construction Permit No. AC 29-159192

The Department received the above referenced application package and appropriate fee on January 10, 1989, to construct a new electric arc furnace (EAF). Based on a technical review of the application package, it has been deemed incomplete. Please submit the following information, including all assumptions, calculations and reference material, to the Bureau of Air Quality Management and the status will, again, be ascertained:

1. A reference document (EPA 450/3-82-020a) was used for emission factors. Please provide a copy of the pages, charts, etc., used to determine the EAF's potential pollutant emissions.

2. In the assumptions used to calculate the potential pollutant emissions, the proposed maximum hourly production rate is 47.5 tons per hour (TPH) and the annual is 325,000 tons. At the requested hours of operation of 8,400, the annual production rate would be at 399,000 tons. Please recalculate and submit the potential pollutant emissions at the maximum annual rate.

3. If it is the company's desire to be permitted at inconsistent production rates of 47.5 TPH and 325,000 TPY, the following phrasing is offered as a "specific condition" for federal enforceability:

   "For PSD and Nonattainment review purposes, the electric arc furnace's maximum production rates shall not exceed 47.5 tons per hour, 1,140 tons per day, and 325,000 tons per year. For performance testing, the maximum production rate shall not exceed 47.5 tons per hour".

Note: If the proposed "specific condition" is acceptable, please request it or propose one for the Bureau to consider. Also, accepting the proposal would negate the need to respond to No. 2.

4. The Bureau received comments from the Environmental Protection Commission of Hillsborough County and a copy of the memorandum is attached. Please address the "two" concerns discussed in the document.

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

Sincerely,

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

CHF/ks

attachment

cc: B. Thomas, SW District
J. Campbell, EPCHC
R. S. Sholtes, P.E.
J. Alves, Esq., HEG & S

1-27-89
Tampa, FL

Mail File Copy

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

MEMORANDUM

Date 1/27/89

To Bruce Mitchell, CAPS

From Victor San Agustin, P.E. thru Jerry Campbell, P.E.
VSA VSA for

Subject: Day 30 Comments for Florida Steel

This letter requests that you incorporate the following concerns in your letter of incompletion:

1. The new PM allowable pursuant to NSPS Subpart AAa is 0.0052 grldscf. The most recent tests (May, 1988) conducted on each of the four baghouse systems are:

Baghouse System	Actual PM (grldscf)
Baghouse No. 1	0.0044
Baghouse No. 2	0.003
Baghouse No. 3	0.0106
Baghouse No. 4	0.002

An AC permit cannot be issued to Florida Steel because PM emissions from Baghouse #3 are in excess of the new PM allowable. They must provide us some reasonable assurance that the new PM limit will be met.

2. Pursuant to 40 CFR 60.272a the NSPS allowable for v.e.'s exhausting from the shop is 6% opacity. The applications project description states, "the redesign of the control equipment will involve improvements to the fugitive emissions system." Past inspections of tapping and charging operations show average opacities greater than 6%. We need to know what these improvements are so we can have some assurance that this stricter standard will be met.

Your consideration is requested. If you have any questions, please call.

ph

cc: Bruce Mitchell } 1-30-89 SAM
CHF/BT

ATTACHMENT 5

2-16-89
Gainesville, FL

RECEIVED
FEB 17 1989
DER-BAQM

ROBERT S. SHOLTES, P.A. *Environmental Consultants*
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 374-4439 FAX (904) 377-7427

February 15, 1989

RSS 101-88-05

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Incompleteness Letter on Permit No. AC29-159192
Florida Steel Corporation

Dear Mr. Fancy:

On behalf of the Florida Steel Corporation, I am submitting this response to your February 3, 1989 completeness review for the subject permit. The responses are delineated in order of your comments.

1. I have copied and attached hereto the appropriate sections of EPA 450/3-82-02a, which document served as the basis for emission factors used in our calculations. If these data do not adequately fulfill your needs, please advise.

2. Your suggested language in Item No. 3 of the February 3rd letter is an acceptable and desired language from Florida Steel's perspective with the exception that production rates during performance/compliance testing may reach 65 tons per hour. The reason for this is the method that is used for determining rates during these relatively short periods of time. The method used is one suggested by Hillsborough County Environmental Protection Commission and has been used for past compliance tests. The method is as follows:

   Production Rate Per Furnace =

   $$\frac{\text{Billet tons of steel produced for a particular heat}}{\text{End of Tap Time for This Heat - End of Tap Time for Previous Heat}}$$

   The 65 tons per hour rate, determined from this method, is the maximum rate that may be achieved by using the minimum time (i.e., ideal conditions) to produce one "heat" of steel. Due to the physical limitations of the facility it would not be possible to sustain this rate for subsequent heats. The maximum sustainable rate for the proposed installation is 47.5 tons per hour as specified in the permit application. Through this letter, please consider this Specific Condition language as acceptable.

3. You have received comments from the Hillsborough County Environmental Protection Commission through a Memorandum dated January 27, 1989. The Memorandum properly points out that on occasion during past tests, Baghouse No. 3 has not met the NSPS emission limit of 0.0052 grains per standard cubic foot. In the permit application, you should have received a summary of test results for this and the other three baghouses at the Tampa Mill for the years 1985-1988. You will note that indeed Baghouse No. 3 did have emissions in excess of 0.0052 on two of the four annual tests. The applicable NSPS, Subpart AAa, which I have reproduced in part and attached hereto, stipulates in Section 60.275a(f) that "When more than one control device serves the EAF or AOD vessel being tested, the concentration of particulate matter shall be determined using the following equation:", after which an equation is presented by which a concentration average is determined using a weighted averaging technique to arrive at an overall grain loading for the multiple baghouses in question. I would submit to you that this procedure, when applied to the four years of data already submitted with the permit application, results in the following average concentrations.

Test Year	Average Concentration gr/scf
1985	0.0036
1986	0.0035
1987	0.0027
1988	0.0048

These data clearly provide reasonable assurance that the new particulate matter limits can and will be attained.

The Hillsborough County Environmental Protection Commission Memorandum further expresses concern with the fact that in the past, visible emissions from this shop have considerably exceeded the six percent opacity which will be allowed in the future. The applicant is well aware of this fact and is making the following improvements to achieve compliance with this part of the NSPS regulation.

A. The new furnace will employ a direct evacuation system which in itself constitutes the best capture system for an electric arc furnace during the melt down and refining phases. Secondarily, the installation of this direct evacuation system, coupled with the fact that all baghouse capacity is now directed toward controlling emissions from one furnace, will allow considerably increased exhaust air flow from the canopy hood and building. Inasmuch as the outstanding anticipated problem in meeting the six percent opacity limit will be during tapping and charging, these enhanced flow rates are of importance.

B. Additional sheeting is being applied to the old trusses and metal wind curtains are to be built inside the shop.

C. With the elimination of existing arc furnace No. 3, the company will be able to, and plans to, close off the westward facing bay which currently houses furnace No. 3. In the past, having this bay open created fugitive emission problems with wind having a westerly component. By closing off this opening into the main building, the detrimental effects of westerly winds will be eliminated or at least minimized.

D. In the past, a northerly wind has created an occasional fugitive emission escape problem by virtue of the fact that the north end of the existing building is open to the entry of such winds. This detrimental effect on fugitive emission capture is going to be minimized by sheeting off the trusses as referred to in B above, and also by the addition of an air curtain, similar to that used in cold storage buildings, with an upward air movement to act as a barrier to the inadvertent escape of fugitive emissions from tapping and charging.

The applicant realizes the need to attain compliance with the NSPS limit of six percent opacity and, is making plans as described above to meet that limit. It is fair to say that this opacity limit will be attained, even if additional building modifications are necessary.

I hope that these data and responses will satisfactorily enable you to proceed with the permitting process. If you have any questions or require further data, please advise at your earliest convenience.

Sincerely,

Robert S. Sholtes

Robert S. Sholtes, Ph.D., P.E.

RSS:ssc
Attachments

cc: Mr. Tom Sack
Mr. Luis Nieves
Mr. Jim Alves
cpied: B. Mitchell
E. Lorac, EPA
J. Campbell, HCEPC
CHF/CT

United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

EPA-450/3-82-020a
July 1983

Air

EPA

Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Industry — Background Information for Proposed Revisions to Standards

Draft EIS

NSPS

TABLE 3-8. TRACE CONSTITUENT EMISSION FACTORS (UNCONTROLLED)[1,25,26,36]

Constituent	EAF's		AOD vessels		EAF's and AOD vessels controlled together	
	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton
Carbon monoxide	0.26-3.3[a]	0.52-6.5	--	--	--	--
Nitrogen oxides	0.05	0.1	--	--	--	--
Sulfur oxides	0.005	0.01	--	--	--	--
Fluoride	0.002-0.35[b]	0.004-0.7	0.13	0.27	0.37	0.74
Chromium	--	--	0.43	0.87	0.31	0.61
Lead	--	--	0.019	0.039	0.066	0.13
Nickel	--	--	0.19	0.38	0.13	0.25

TABLE 3-10. EXHAUST GAS PARTICULATE MATTER COMPOSITION[22,26,27,32,46]
(Percent)

Constituent	Process	
	EAF[a]	AOD[b]
Fe_2O_3	19-53	--
CaO	3-14	7.4
Al_2O_3	1-13	1.6
SiO_2	0.9-9	8.9
MgO	2-15	3.2
Mn_2O_3	0.6	--
ZnO	0-16.3	3.4
NiO	0-3	3.1
Cr_2O_3	0-14	11.4
CuO	0.1	--
MnO	0.6-12	15.6
WO_3	--	0.2
MoO_3	--	0.9
Cu_2O	--	0.4
Cl	1.2	0.4
V_2O_5	--	0.1
TiO_2	--	0.8
PbO	0-4	1.2
Nb_2O_3	--	0.1
FeO	4-10	34.4
C	--	1.7
P	--	0.1
S	--	0.7
Na_2O	1.5	--
LOI[c]	4.3-6.8	--
Other	4.8	3.9

[a]Carbon steel.
[b]Specialty steel.
[c]Loss on ignition.

4. EMISSION CAPTURE AND CONTROL TECHNIQUES

4.1 INTRODUCTION

This chapter presents the capture and control techniques for EAF and AOD units. The requirements for emission capture and control equipment vary with each plant's individual design and operating practices. The engineering factors that must be addressed when choosing an emission capture system include the size of the EAF or AOD vessel and the operational practices of the individual furnace or vessel, such as the oxygen blow rate, the type and amount of alloys added, the number of backcharges added to the EAF, the melt rate of the EAF, and the grades of steel produced. The size, layout, and number of openings in the melt shop building have an impact on the choice of which emission capture arrangement and air flow rate will meet the required emission limit at the most favorable cost. The Federal, State, or local emission regulations for each plant will also influence the choice of emission capture equipment.

Control of emissions from EAF's and AOD vessels requires two separate steps: (1) the evacuation and containment (capture) of the emissions and (2) the removal of various pollutants--primarily particulate matter--from the evacuated gas stream (control). Emissions must be captured during the melting and refining processes (process emissions) and the charging and tapping processes (fugitive emissions).

The air pollution capture systems to be discussed in the following sections are compatible with processes used to make the many different grades of steel. Fabric filters are the most widely used control devices to treat the exhaust gases from EAF's. There is one ESP (installed in 1958) in operation at an EAF plant in Cleveland, Ohio. Only one scrubber has been installed on an EAF, and no ESP's have been installed since 1974. Only fabric filters are known to be in use on AOD vessels.

New developments and improvements in the steel industry have resulted in the use of higher air flows per megagram of steel produced to effectively evacuate the process and fugitive emissions. These include the use of UHP EAF's, the use of AOD vessels in specialty steel shops, and shortened heat times in both carbon and specialty steel shops to increase the production rate. These changes have resulted in increased use of large single or segmented canopy hoods and closed roof monitors over the furnace, local tapping hoods, and scavenger systems to capture emissions that bypass the canopy hood. These fugitive emissions capture systems are the most significant improvements over the capture systems that were in use during the development of the existing standards of performance. An alternative to the canopy hood/scavenger duct capture system or closed roof shop is the total furnace enclosure (TFE). Several TFE's have been installed in carbon shops in the past 5 years. These various capture systems are discussed in the following sections.

4.2 CAPTURE OF EAF PROCESS AND FUGITIVE EMISSIONS

Several capture systems are used by the industry to meet the requirements of State and local regulatory agencies and the existing standards of performance for EAF's. These systems include:

1. Direct-shell evacuation control systems;
2. Side draft hoods;
3. Partial furnace enclosures;
4. Total furnace enclosures;
5. Canopy hoods;
6. Tapping hoods;
7. Scavenger duct systems;
8. Shop roof configurations; and
9. Building evacuation.

Each system is described below, along with design and operational factors that affect its performance.

4.2.1 Direct-Shell Evacuation Control System

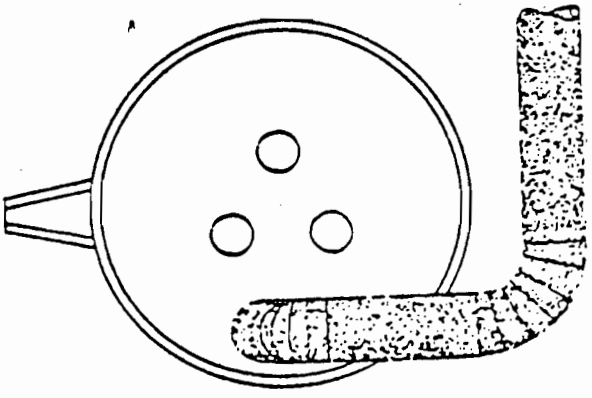
The DEC system, also known as the fourth-hole evacuation system, requires a hole in the furnace roof in addition to the three holes required for the electrodes. A water-cooled or refractory-lined duct

attaches to the furnace roof and, when the furnace roof is in place, joins a duct that is connected with the emission control device (Figure 4-1). At the connecting point of the two ducts, there is a small gap that allows dilution air to enter the duct. The dilution air cools the exhaust gases and causes the combustion of the carbon monoxide and unburned hydrocarbons. The gap also allows room for the furnace roof to be elevated and rotated to the side for furnace charging and for the furnace to be tilted for tapping molten steel or for slagging. During the times when the furnace is tilted or the furnace roof is rotated aside for charging, the DEC system is ineffective, and the fugitive emissions drift toward the building roof or canopy hood.

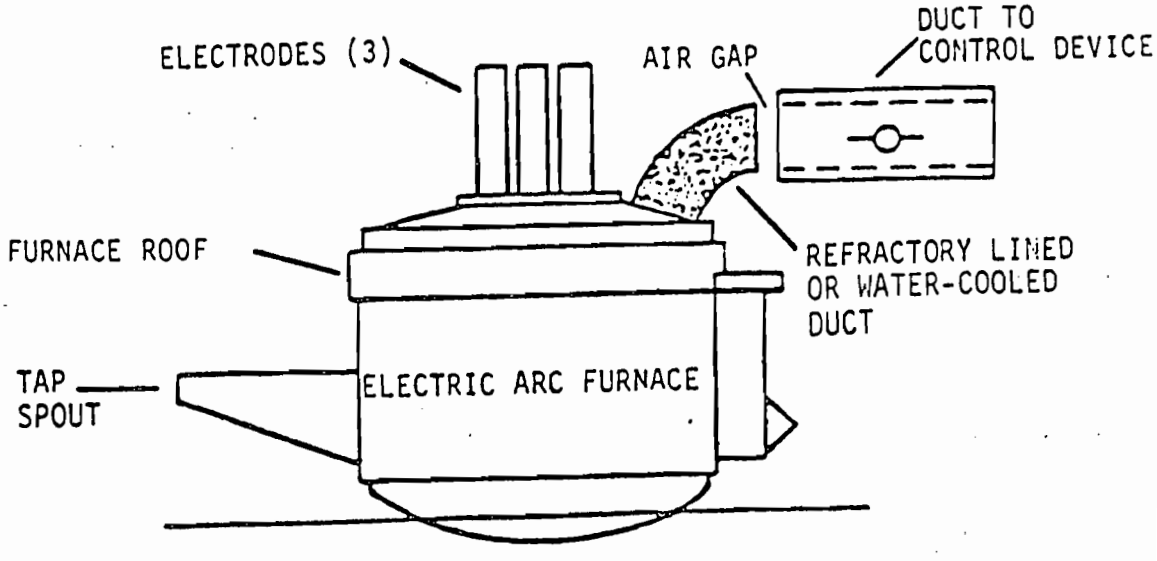
When the furnace roof is in place, the DEC system provides good emission control with a minimum of energy since the air volume withdrawn is the lowest of the process emissions capture devices. During melting and refining operations, a slight negative pressure is maintained within the furnace to withdraw effectively the emissions through the DEC system.

The DEC withdraws between 90 and 100 percent of the melting and refining (process) emissions from the furnace before they escape the furnace and are diluted with ventilation air. A typical particulate matter emission capture efficiency with a properly operated DEC system is estimated to be 99 percent of the process emissions.[1]

The DEC system of fume extraction has been widely used in the steel industry for many years to capture EAF emissions. It can be used on EAF's that produce any grade of steel, including common carbon grades and alloy steel grades. In the past, when EAF's performed both the melting and refining operations, the DEC system could not be used in specialty steel shops when a second or reducing slag operation was performed. The reducing slag was used to remove impurities from the molten steel, and the introduction of outside air into the furnace (due to the negative pressure created by the DEC system) oxidized the slag and rendered it ineffective. With the wide acceptance of AOD vessels and other secondary refining operations (i.e., duplexing, or the use of a vessel other than the EAF in which to carry out refining), the use of a reducing slag has been diminished. Duplexing allows the use of the DEC fume extraction system in most EAF shops.



A. PLAN



B. ELEVATION

Figure 4-1. Direct-shell evacuation control (two views).

The direct evacuation system can be retrofitted to an existing furnace. However, careful design is needed to avoid problems such as: excessive weight on the furnace roof of small furnaces, excessive deterioration of shell refractories and roofs, inadequate water cooling, and inadequate clearance for the DEC when rotating the furnace roof for charging.[1,2] The DEC system, however, is very popular in new installations, and no problems are known to exist when the DEC system is built as a part of the new furnace.

4.2.2 Side Draft Hoods

The side draft hood is another fume extraction system that is used on EAF's to capture melting and refining (process) emissions (Figure 4-2). The side draft hood is mounted on the EAF roof, with one side open to avoid restricting the movement of the electrodes. This system requires a tight fit of the furnace roof so that all the emissions that leave the furnace escape only around the electrode annuli. The side draft hood, like the DEC system, operates only when the furnace roof is in place and when the furnace is in an upright position.

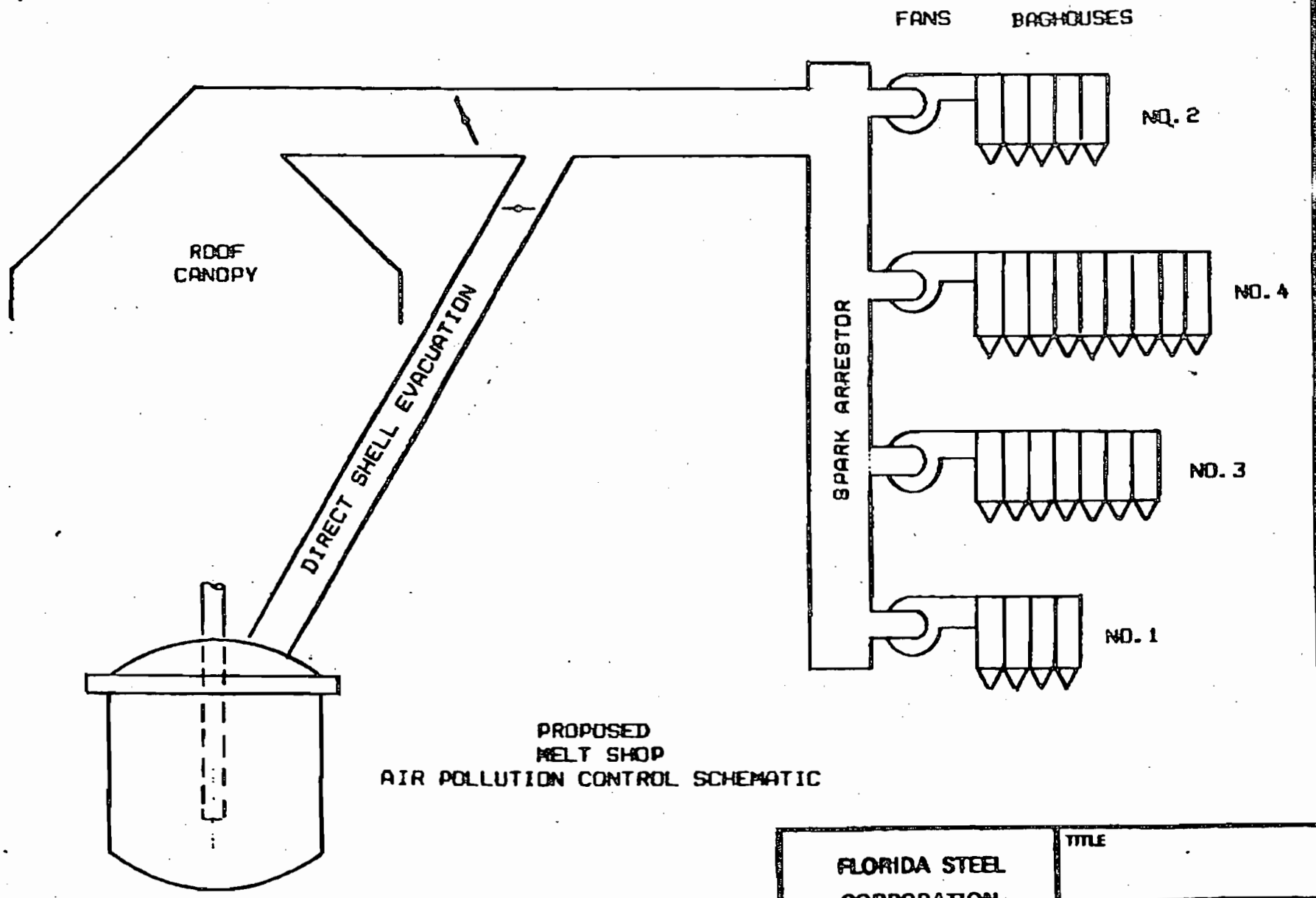
Side draft hoods are not used as widely as DEC systems and, because of higher operating costs, are typically used only on small furnaces.[2] The side draft hood requires a larger exhaust volume than a DEC system.[1] The exhaust volume serves to introduce dilution air to cool the exhaust emissions and ensure combustion of the carbon monoxide and unburned hydrocarbons.

The side draft hood has an estimated particulate emission capture efficiency of between 90 and 100 percent of the melting and refining emissions. The typical particulate capture efficiency is estimated to be 99 percent.[1]

Retrofitting an existing EAF with a side draft hood generally presents few problems. The side draft hood allows easy access to the electrodes and annuli to perform needed maintenance. It is believed that the use of this system on new furnaces will be limited to small furnaces.

4.2.3. Partial Furnace Enclosures

The partial furnace enclosures (PFE's) have walls on three sides of the furnace area that act as a chimney directing the fugitive emissions



PROPOSED
MELT SHOP
AIR POLLUTION CONTROL SCHEMATIC

FLORIDA STEEL CORPORATION TAMPA, FLORIDA	TITLE DRAWN DATE CHECKED APPROVED

· equipment (e.g., presence of holes ductwork or hoods, flow constric- ns caused by dents or accumulated st in ductwork, and fan erosion). y deficiencies shall be noted and per maintenance performed.

e) The owner or operator may peti- n the Administrator to approve any ernative to monthly operational tus inspections that will provide a ntinuous record of the operation of ch emission capture system.

f) If emissions during any phase of e heat time are controlled by the e of a DEC system, the owner or op- ator shall install, calibrate, and aintain a monitoring device that ows the pressure in the free space side the EAF to be monitored. The onitoring device may be installed in y appropriate location in the EAF DEC duct prior to the introduction ambient air such that reproducible sults will be obtained. The pressure onitoring device shall have an accu- cy of ±5 mm of water gauge over its rmal operating range and shall be librated according to the manufac- rer's instructions.

(g) When the owner or operator of EAF controlled by a DEC is re- ired to demonstrate compliance ith the standard under 60.272a(a)(3) of this subpart, and at y other time the Administrator may quire (under section 114 of the lean Air Act, as amended), the pres- ure in the free space inside the fur- ace shall be determined during the elting and refining period(s) using ne monitoring device required under aragraph (f) of this section. The wner or operator may petition the dministrator for reestablishment of he 15-minute integrated average of he pressure whenever the owner or perator can demonstrate to the Ad- inistrator's satisfaction that the AF operating conditions upon which he pressures were previously estab- shed are no longer applicable. The ressure determined during the most ecent demonstration of compliance hall be maintained at all times when he EAF is operating in a meltdown nd refining period. Operation at igher pressures may be considered by operation and maintenance of the af- fected facility.

(h) During any performance test required under § 60.8, and for any report thereof required by § 60.275a(d) of this subpart, or to determine compliance with § 60.272a(a)(3) of this subpart, the owner or operator shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;

(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used;

(3) Control device operation log; and

(4) Continuous monitor or Reference Method 9 data.

§ 60.275a Test methods and procedures.

(a) Reference methods in Appendix A of this part, except as provided under § 60.8(b), shall be used to determine compliance with the standards prescribed under § 60.272a of this subpart as follows:

(1) Method 1 for sample and velocity traverses;

(2) Method 2 for velocity and volumetric flow rate;

(3) Method 3 for gas analysis;

(4) Either Method 5 for negative-pressure fabric filters and other types of control devices or Method 5D for positive-pressure fabric filters for concentration of particulate matter and associated moisture content; and

(5) Method 9 for the opacity of visible emissions.

(b) For Method 5 or 5D, the sampling time for each run shall be at least 4 hours. When a single EAF or AOD vessel is sampled, the sampling time for each run shall also include an integral number of heats. Shorter sampling times, when necessitated by process variables or other factors, may be approved by the Administrator. For Method 5 or 5D, the minimum sample volume shall be 4.5 dsm^3 (160 dscf).

(c) Visible emissions observations of modular, multiple-stack, negative-pressure or positive-pressure fabric filters shall occur at least once per day of operation when the furnace or vessel is operating in the melting or refining phase of a heat cycle. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Reference Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in § 60.272(a) of this subpart.

(d) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with § 60.272a(a) of this subpart and furnish the Administrator a written report of the results of the test. This report shall include the following information:

(1) Facility name and address;

(2) Plant representative;

(3) Make and model of process, control device, and continuous monitoring equipment;

(4) Flow diagram of process and emission capture equipment including other equipment or process(es) ducted to the same control device;

(5) Rated (design) capacity of process equipment;

(6) Those data required under § 60.274a(h) of this subpart;

(i) List of charge and tap weights and materials;

(ii) Heat times and process log;

(iii) Control device operation log; and

(iv) Continuous monitor or Reference Method 9 data.

(7) Test dates and test times;

(8) Test company;

(9) Test company representative;

(10) Test observers from outside agency;

(11) Description of test methodology used, including any deviation from standard reference methods;

(12) Schematic of sampling location;

(13) Number and location of sampling points;

(14) Description of sampling equipment;

(15) Listing of sampling equipment calibrations and procedures;

(16) Field and laboratory data sheets;

(17) Description of sample recovery procedures;

(18) Sampling equipment leak check results;

(19) Description of quality assurance procedures;

(20) Description of analytical procedures;

(21) Notation of sample blank corrections; and

(22) Sample emission calculations.

(e) During any performance test required under § 60.8, no gaseous diluents may be added to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

(f) When more than one control device serves the EAF(s) or AOD vessel(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$C = \frac{\sum_{n=1}^{N} (CQ)_n}{\sum_{n=1}^{N} (Q)_n}$$

where:

C = concentration of particulate matter in mg/dsm^3 (gr/dscf) as determined by Method 5 or 5D.

N = total number of control devices tested.

Q = volumetric flow rate of the effluent gas stream in dsm^3/h (dscf/h) as determined by Method 2.

$(CQ)_n$, $(Q)_n$ = value of the applicable parameter for each control device tested.

(g) Any control device subject to the provisions of the subpart shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

(h) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner

or operator may use any of the following procedures during a performance test:

(1) Base compliance on control of the combined emissions;

(2) Utilize a method acceptable to the Administrator that compensates for the emissions from the facilities not subject to the provisions of this subpart, or;

(3) Any combination of the criteria of paragraphs (h)(1) and (h)(2) of this section.

(i) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, determinations of compliance with § 60.272a(a)(3) will only be based upon emissions originating from the affected facility(ies).

(j) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under § 60.8 to demonstrate compliance with § 60.272a(a) (1), (2), and (3) of this subpart.

§ 60.276a Recordkeeping and reporting requirements.

(a) Records of the measurements required in § 60.274a must be retained for at least 2 years following the date of the measurement.

(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(c) Operation at a furnace static pressure that exceeds the value established under § 60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under § 60.274a(c) or operation at flow rates lower than those established under § 60.274a(c) may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator semiannually.

(d) The requirements of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under § 60.275a (h)(2) or (h)(3), the owner or operator shall obtain approval from the Administrator of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked 30 days prior to the performance test.

(Approved by the Office of Management and Budget under control number 2060-0038)

Subpart BB—Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in Subpart A.

(a) "Kraft pulp mill" means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) "Neutral sulfite semichemical pulping operation" means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) "Total reduced sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.

(d) "Digester system" means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).

(e) "Brown stock washer system" means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.

(f) "Multiple-effect evaporator system" means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) "Black liquor oxidation system" means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) "Recovery furnace" means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) "Straight kraft recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent

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[43 FR 7572, Feb.
FR 18544, May 2

§ 60.282 Standa

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FLORIDA STEEL CORPORATION
"Steel when you want it"

one 813/251-8811

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TAMPA STEEL MILL DIVISION
7105 6TH AVENUE • P.O. BOX 23328 • TAMPA, FL 33630

December 22, 1988

RECEIVED
JAN 10 1989
DER-BAQM

Mr. Bill Thomas
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blairstone Road, Twin Towers
Tallahassee, Florida 32301

1031

Subject: Application to Modify Air Pollution Source at Florida Steel Corporation's Tampa Mill Division, Tampa, Florida

Dear Bill,

Please find enclosed four (4) signed and certified copies of a permit application. This application is for replacing the two electric arc furnaces at the Tampa Mill with one furnace.

Enclosed is a check for $200.00.

Please do not hesitate to call if you have any questions.

Sincerely,

FLORIDA STEEL CORPORATION

T. J. Sack

T. J. Sack
Division Engineer

vb

cc: Victor San Agustin
R. Scholtes
L. Neives
D. Meredith

enclosures: 4 copies of Perm
Check -

FLORIDA STEEL CORPORATION
"Steel when you want it"

TAMPA STEEL MILL DIVISION
P. O. BOX 23328
TAMPA, FLORIDA 33623

To Mr. Bill Thomas
Bureau of Air Quality Management
Florida Department of Environmental Regulations
2600 Blairstone Rd., Twin Towers
Tallahassee, Florida 32301

POSTMASTER: Contents — Merchandise. This package may be opened for Postal Inspection if necessary. RETURN POSTAGE GUARANTEED.

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TAMPA STEEL MILL DIVISION
7105 6TH AVENUE • P.O. BOX 23328 • TAMPA, FL 33630

December 22, 1988

Mr. Victor San Agustin
Hillsborough County Environmental Protection
Commission
1410 North 21st Street
Tampa, Florida 33605

Subject: Application to Modify Air Pollution Source at Florida Steel Corporation's Tampa Mill division, Tampa, Florida.

Dear Victor,

Please find enclosed a copy of the application being sent to the D.E.R. This application is for replacing the two Electric Arc Furnaces at the Tampa Mill with one furnace.

Enclosed is a check for $365.00. Please do not hesitate to call if you have any questions.

Sincerely,

FLORIDA STEEL CORPORATION

T. J. Sack/vb

T. J. Sack
Division Engineer

vb

cc: Bill thomas - DER
R. scholtes
L. Neives
D. Meredith

enclosures: Check
Copy of Permit Application dated 12/22/88

AC29-159192 #2500 pd 1-10-89

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

JAN 10 1989

DER - BAQM

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Steel Manufacturing [ ] New[1] [XX] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [XX] Modification (17-2.520)

COMPANY NAME: Florida Steel Corporation, Tampa Mill COUNTY: Hillsborough

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) Electric Arc Furnace

SOURCE LOCATION: Street 7105 6th Avenue City Tampa

UTM: East 17 - 364.63 North 3092.82

Latitude 27 ° 57 ' 18 "N Longitude 82 ° 22 ' 34 "W

APPLICANT NAME AND TITLE: Dane Meredith, Manager, Florida Steel Corp., Tampa Mil

APPLICANT ADDRESS: P. O. Box 31328, Tampa, Florida 33631

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Florida Steel Corp.

I certify that the statements made in this application for a Modification (17-2.5 permit are true, correct and complete to the best of my knowledge and belief. Furthe I agree to maintain and operate the pollution control source and pollution contr facilities in such a manner as to comply with the provision of Chapter 403, Flori Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transferab and I will promptly notify the department upon sale or legal transfer of the permitt establishment.

*Attach letter of authorization

Signed: Dane Meredith

Dane Meredith
Name and Title (Please Type)

Date: 12/22/88 Telephone No. (813) 251-8811

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 ha been designed/examined by me and found to be in conformity with modern engineeri principles applicable to the treatment and disposal of pollutants characterized in t permit application. There is reasonable assurance, in my professional judgment, th

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

the pollution control facilities, when properly maintained and operated, will discharg 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 prope maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Robert S. Sholtes

Robert S. Sholtes
Name (Please Type)

Robert S. Sholtes, P.A.
Company Name (Please Type)

1213 NW 6th Street, Gainesville, FL 32601
Mailing Address (Please Type)

Florida Registration No. 7601 Date: _____ Telephone No. (904) 374-4439

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See attached material

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.)

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

Existing Furnaces Permitted under AO 029-108747, AO 029-91418
AO 029-108748 and AO 029-92513; AC 29-17437 and AC 29-17438

PROJECT DESCRIPTION

The Tampa Mill of Florida Steel Corporation has been at its present location since the mid-1950's. Improvements have been made from time to time to the existing facility, however, it remains a basically older technology plant. Current market demand and recent achievements in the industry relative to operating efficiency now indicate that Florida Steel Corporation should undertake certain alterations at this steel making facility. The Tampa Mill currently has two electric arc furnaces (EAFs). EAF No. 3 will be taken out of service and EAF No. 4 will be substantially rebuilt. The only component of EAF No. 4 that will continue to be utilized will be part of its foundation. Most auxiliary facilities and structures will remain intact. The combined existing furnaces in 1987 produced 210,000 tons of steel. The post-alteration furnace will have a maximum design capacity of 325,000 tons per year, with an expected production of approximmately 250,000 tons per year during the first few years after start-up.

The new arc furnace is to be installed on the existing foundations of Furnace No. 4 and will be of a direct current (DC) design. This type of design requires only one carbon electrode versus the three electrodes normally used for alternating current furnaces. The electrical input to the furnace will be augmented by permanently installed oxy-fuel burners utilizing natural gas as a fuel. The total heat input of these burners will be on the order of 20.5×10^6 Btu per hour.

The pollution control equipment for this new installation will consist of the existing four baghouses in use at Tampa with their service assignments realigned as illustrated in the diagram attached to this application. The redesign of the control equipment will involve improvements to the existing fugitive emissions system and a new direct evacuation system. Pollutant emissions will be further minimized by the fact that this furnace will be a single charge furnace meaning that all the scrap steel for a given heat (32-35 tons) will be placed in the furnace during one charging operation. The current charging practice on the existing furnaces involve at least two and quite often three, separate charge drops. For this reason, fugitive emissions resulting from charging operations will be considerably reduced.

Quantitative estimates of emissions of criteria pollutants from this facility are addressed individually in another section of this permit application.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 50 ;

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? Yes

   a. If yes, has "offset" been applied? No

   b. If yes, has "Lowest Achievable Emission Rate" been applied? No

   c. If yes, list non-attainment pollutants. Particulate, Oxidants (VOC)

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? Yes

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? Yes

   a. If yes, for what pollutants? Particulate

   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 Average	Relate to Flow Diagram
	Type	% Wt		
Scrap Steel	Dust	Variable	93,300	
Lime, Slag Coke, Alloy Materials	--	--	7,000	

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

1. Total Process Input Rate (lbs/hr): 100,300 Average 113,400 Maximum

2. Product Weight (lbs/hr): 84,000 Average 95,000 Maximum

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	13.51	45.04	0.0052 gr/scf	13.05	1.43×10^5	71.51	
Carbon Monox	309	162.5	No rule	No rule	4.23×10^5	211.3	
Nitrogen Ox	4.75	12.5	No rule	No rule	32,500	16.25	
Sulfur Oxid	0.48	1.25	No rule	No rule	3,260	1.63	
VOC	0.0	0.0	No rule	No rule	0	0	
Lead	0.27	0.90	No rule	No rule	4,880	2.44	

[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).

* Based on baghouse emissions only.

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)
Wheelabrator #168	Particulate	99+	0.5 to 50	Estimate
Wheelabrator #171	Particulate	99+	0.5 to 50	Estimate
Wheelabrator #168	Particulate	99+	0.5 to 50	Estimate
Fuller Model 6000	Particulate	99+	0.5 to 50	Estimate

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	1.95×10^4 ft^3/hr	1.95×10^4 ft^3/hr	20.5×10^6 Btu/hr

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

Fuel Analysis: (Natural Gas)

Percent Sulfur: Negligible Percent Ash: Negligible

Density: _____ lbs/gal Typical Percent Nitrogen: 0.55

Heat Capacity: 1050 Btu/ft^3 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.

Collected baghouse dust will be shipped off site for reclamation or disposal.

Slag will be crushed and sold for roadway base by a separate company.

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

Stack Height: See Attached Sheet ft. Stack Diameter: _____ ft.

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

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Pleatics)	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) _____

H. Control Device Emissions Geometry

Baghouse	Height (feet)	Diameter	Actual SCFM	Actual Temp(F)	H^2O(%)	Velocity (fps)
1	40	2' x 3'	41,039	105	1 - 2	25.4
2	40	2'	63,729	150	1 - 2	66.0
3	40	3.3' x 3.3'	64,516	155	1 - 2	15.1
4	40	2' x 3'	123,533	155	1 - 2	31.0

D. Control Device Details

Baghouse	Manufacturer	Model	Flow		Pressure Drop (in H^2O)	Air/ Cloth Ratio	Discharge Temperature
			Design (ACFM)	Actual (SCFM)			
1	Wheelabrator	Dustube 168	55,000	41,039	3 - 4	2.54:1	105
2	Wheelabrator	171	91,000	63,729	4 - 8	2.69:1	150
3	Wheelabrator	168	100,000	64,516	3 - 5	2.41:1	155
4	Fuller	6000	160,000	123,533	3 - 5	2.95:1	155

FLORIDA STEEL CORPORATION
TAMPA MILL

PARTICULATE MATTER EMISSIONS SUMMARY

Source	Present Emissions Actual lb/hr	Present Emissions Actual tpy	Present Emissions Potential tpy	Proposed Emissions Actual lb/hr	Proposed Emissions Actual tpy	Proposed Emissions Potential lb/hr	Proposed Emissions Potential tpy
Baghouses	9.20	28.00	109.92	9.20	32.20	13.05	54.82
Furnace(s) Melt	2.60	7.94	11.83	0.11	0.34	0.13	0.44
Furnace(s) Charge & Tap	5.00	15.23	22.78	4.20	12.50	4.75	16.25
	16.80	51.17	144.53	13.51	45.04	17.93	71.51

NAA
28.0
7.9
15.2
51.1

OTHER POLLUTANTS EMISSIONS SUMMARY

Pollutant	Present Emissions Actual tpy	Present Emissions Potential tpy	Proposed Emissions Actual tpy	Proposed Emissions Potential tpy
Carbon Monoxide	477.80	717.5	162.50	211.30
Nitrogen Oxides (NOx)	10.50	15.8	12.50	16.25
Sulfur Dioxide (SO_2)	1.05	1.6	1.25	1.63
Lead	1.02	2.9	0.90	2.44
VOC	0.00	0.0	0.00	0.00

12/06/88

BSD
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1.1
1.0

FLORIDA STEEL CORPORATION
TAMPA MILL

BASIS OF EMISSION CALCULATIONS

I. PRESENT ACTUAL EMISSIONS

Baghouses - Based on tested emissions 1985-1988

Fugitive - 27 lbs dust/ton steel - Melt and Refine Periods*
2 lbs dust/ton steel - Tap and Charge Periods*

Capture Efficiencies (Based on EPA/PEDCo 1983 Estimates)

Canopy Hood -	#3 - 90%	#4 - 95%
Side Draft Hood -	#3 - 95%	#4 - 98%

Steel Production of 210,000 tpy (1987 Rate) in 6087 hrs.
#3 - 94,500 tons #4 - 115,500 tons

Carbon Monoxide-6.5 lbs CO/ton steel (EPA Factor**) with 30% oxidation to carbon dioxide in side draft.

NOx - 0.1 lb NOx/ton steel (EPA Factor**)

SO_2 - 0.01 lb SO_2/ton steel (EPA Factor**)

VOC - 0.00 (EPA Factor**)

Lead - 2% by weight of particulates
(Average of EPA quoted range of 0-4%**)

II. PRESENT PERMITTED EMISSIONS

Same as I. except 8,760 hours at permitted rate of 16 tons/hour for #3 and 20 tons/hr for #4, resulting in total steel production of 315,360 tons steel per year.

* These factors derive from a Region IV EPA survey of southeast steel mills. They are the factors recommended by the Region IV offices in various correspondence and reports.

** BID document for EAF NSPS revision (EPA 450/3-82-020a).

FLORIDA STEEL CORPORATION
TAMPA MILL

BASIS OF EMISSION CALCULATIONS
(Continued)

III. PROPOSED POTENTIAL EMISSIONS

Baghouses - Based on flow rate average from 1985-1988 tests
Permitted concentration of 0.0052 gr/SCF and permitted operating hours of 8,400 hrs/yr.

Fugitive - 27 lbs dust/ton steel - Melt and Refine Periods
2 lbs dust/ton steel - Tap and Charge Periods

Capture Efficiencies (Based on redesign of canopy hood and installation of combination side draft/direct evacuation at furnace and consideration of attainable efficiency presented by EPA in EPA 450/3-82-020a).

Canopy Hood - 99% during melt 95% during tap and charge
Side Draft/Direct Evacuation - 99%.

Steel Production of 325,000 tons steel per year. vs 399,000 TPY
Maximum Hourly Rate - 47.5 tons per hour.
Carbon Monoxide - 6.5 lbs CO/ton steel (EPA Factor) with 80% oxidation in furnace evacuation system.

NOx - 0.1 lb NOx/ton steel (EPA Factor)

SO_2 - 0.01 lb SO_2/ton steel (EPA Factor)

VOC - 0.00 (EPA Factor)

Lead - 2% by weight of particulates (Average of EPA quoted range of 0-4%).

See Section I. for sources of EPA factors.

IV. PROPOSED ACTUAL EMISSIONS

Baghouses - Based on flows and concentrations as determined by 1985-1988 tests, to determine lb/hour discharge.

Fugitive - Same as III.

Steel Production - 250,000 tons steel/yr at 42 tons/hr.

CO, NOx, SO_2, VOC, Lead - Same as III.

FROM PEDCO INSP REPORT 8-83

3.5 ACTUAL EMISSIONS RATES

3.5.1 Mass Emissions

The total mass emissions rate for EAFs 3 and 4 is calculated to be 20 lbs/hour or 0.5 lbs/ton of steel, based on the operating conditions of the furnaces and control equipment on the dates of inspection. There is no allowable mass emission rate according to the state regulations.

The calculations are based on the following:

1. The emission factor used to calculate uncontrolled meltdown and refining emissions is 27 lb/ton of steel. The emission factor used to calculate charge and tap emissions is 2 lb/ton. These factors are based on recent EPA documents, and have been recommended by EPA OAQPS, and Region IV steel specialists. The actual total production rate assumed is 17.8 and 21.75 tons/hour for EAF 3 and EAF 4 respectively at the time of inspection.

2. The average capture efficiency of EAF 3 side draft hood is estimated to be 95 percent and that of EAF 4 at 98 percent. The roof canopy efficiency for EAF 3 was estimated at 90 percent and that of EAF 4 at 95 percent. Thus to calculate shop roof emission during meltdown and refining:

   EAF 3: 17.8 tons/hour x 27 lbs/ton x 5 percent penetration at side draft hood x 10 percent at canopy = 2.4 lbs/hour

   EAF 4: 21.75 tons/hour x 27 lbs/ton x 2 percent penetration x 5 percent penetration at canopy = 0.6 lbs/hour

   Emissions during charging and tapping:

   EAF 3: 17.8 tons/hour x 2 lbs/ton x 10 percent penetration = 3.6 lbs/hour

   EAF 4: 21.75 tons/hour x 2 lbs/ton x 5 percent penetration = 2.2 lbs/hour

3. The collection efficiency of all the baghouses is estimated to be 99 percent at the time of inspection.

FROM PEDCO INSP REPORT 8-83

From EAF 3: (17.8 tons/hour x 27 lbs/ hour x 95 percent penetration x 1 percent) + (17.8 tons/hour x 2 lbs/hour x 90 percent penetration x 1 percent) = 4.9 lbs/hour.

From EAF 4: (21.75 x 27 x 98 percent x 1 percent) + (21.75 x 2 x 95 percent x 1 percent) = 6.2 lbs/ton

4. The total particulate emissions resulting from the operation of EAFs 3 and 4 is (2.4 + 0.6 + 3.6 + 2.2 + 4.9 + 6.2) = 20 lbs/hour.

3.5.2 Visible Emissions

Visible emissions were observed at all the roof monitors in accordance with Method 9. On 08/04/83, two observers were positioned to read southwest and north monitors. Similarly on 08/05/83, two observers were positioned for reading north and south roof monitors.

Figures 3-3, 3-4, 3-5, and 3-6 indicate the opacity (6 minute rolling average) vs. time, for the two-day opacity observations. Uncaptured emissions, particularly during charging and tapping, drifted to the roof monitor and resulted in moderate opacities.

3.6 AMBIENT AIR QUALITY STATUS

Table 3-6 shows the TSP annual geometric mean for the past five years for the monitoring sites closest to the Florida Steel EAF shop. Figure 3-7 shows the location of the sites relative to the EAF shop. Site No. 82 is located only 300 meters east of the plant, but the prevailing wind is from the west. The three other monitors are located between 7.3 and 10.8 kilometers from the

FROM PEDCO INSP REPORT 8-83

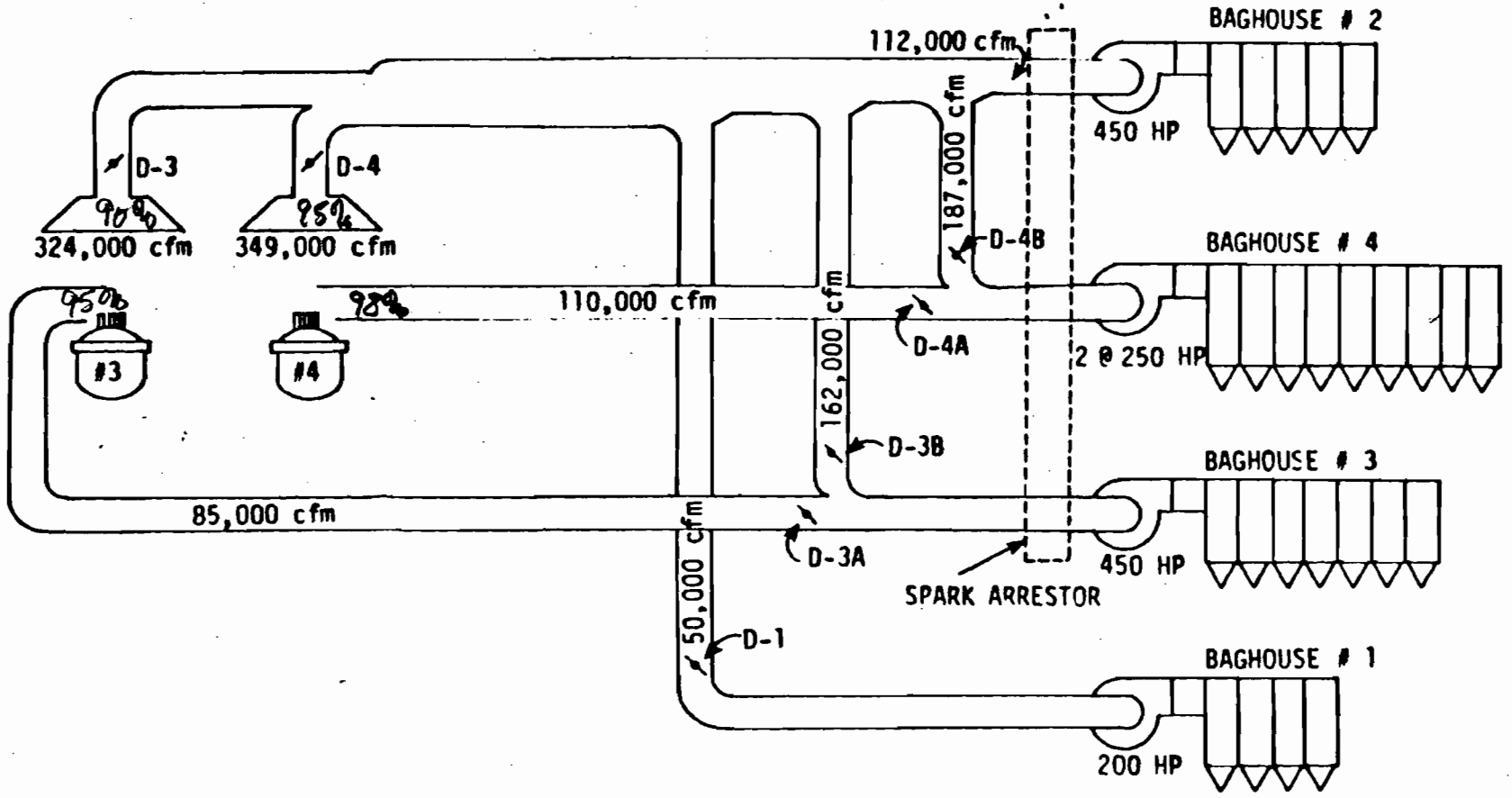


Figure 3-2. Florida Steel, Tampa, damper position and flow rates to baghouses.

PARTICULATE EMISSIONS

Present:

34.5 tph production	#3 - 15.5 tph	#4 - 19.0 tph
210,000 tpy	#3 - 94,500 tpy	#4 - 115,500 tpy
Present Potential Production (Permit Limit)	#3 - 140,160 tpy	#4 - 175,200 tpy

Baghouse Emissions - See Separate Sheet.

Present Actual Fugitive Emissions (Using EPA 1983 Factors): NAA

Melt & Refine: #3 15.5 tph x 27 lb/ton x .05 escape side draft x 0.10 escape canopy = 2.09 lb/hr emission.

94,500 tpy x 27 lb/ton x .05 escape side draft x 1/2000 x 0.10 escape canopy = 6.38 tpy emission. 6.4

#4 19.0 tph x 27 lb/ton x .02 escape side draft x 0.05 escape canopy = 0.51 lb/hr emission.

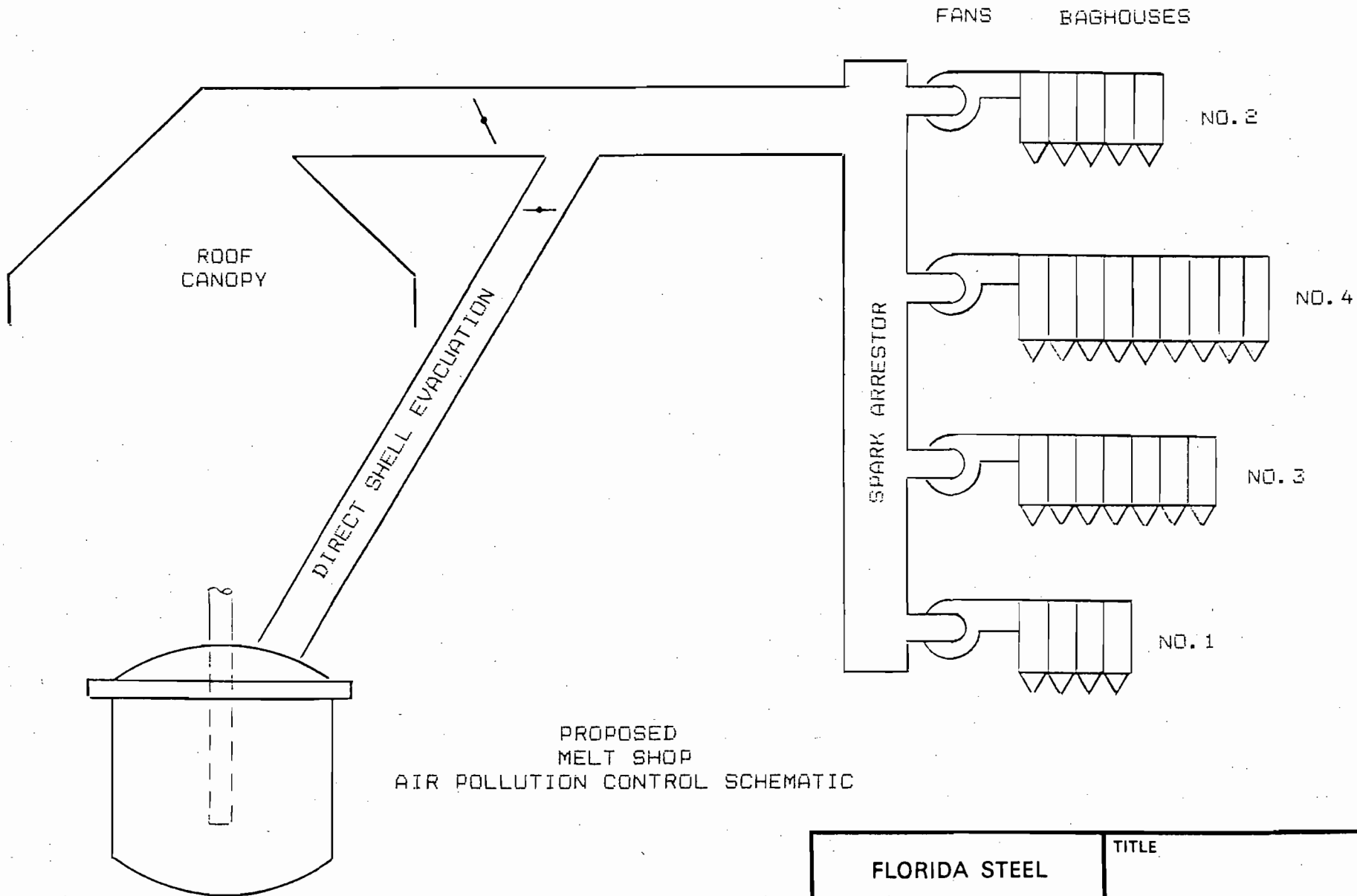
115,500 tpy x 27 lb/ton x .02 escape side draft x 0.05 escape canopy x 1/2000 = 1.56 tpy emission. 1.6

Tap & Charge: #3 15.5 tph x 2 lb/ton x 0.10 escape canopy = 3.1 lb/hr emission.

94,500 tpy x 2 lb/ton x 0.10 escape canopy x 1/2000 = 9.45 tpy emission. 9.6

#4 19.0 tph x 2 lb/ton x 0.05 escape canopy = 1.9 lb/hr emission.

115,500 tpy x 2 lb/ton x 0.05 escape canopy x 1/2000 5.78 tpy. 5.8



PROPOSED
MELT SHOP
AIR POLLUTION CONTROL SCHEMATIC

FLORIDA STEEL CORPORATION TAMPA, FLORIDA	TITLE DRAWN DATE CHECKED APPROVED

FLORIDA STEEL CORPORATION
TAMPA MILL
EMISSION TEST HISTORY

Baghouse No. 1

Test Date	Flow (SCFM)	Concentration (gr/scf)	Actual Emissions lb/hr	tpy	Present Potential Emissions* lb/hr	tpy
4/85	36,562	0.0057	1.78	---	3.13	---
4/86	39,713	0.0023	0.78	---	3.40	---
5/87	47,426	0.0014	0.56	---	4.07	---
5/88	40,456	0.0044	1.53	---	3.47	---
Average	41,039	0.0035	1.16	3.53	3.52	15.42

Baghouse No. 2

4/85	62,569	0.0023	1.23	---	5.36	---
4/86	64,294	0.0047	2.59	---	5.51	---
5/87	59,714	0.0027	1.40	---	5.12	---
5/88	68,337	0.0030	1.58	---	5.86	---
Average	63,729	0.0032	1.70	5.17	5.46	23.91

Baghouse No. 3

4/85	64,639	0.0045	2.49	---	5.54	---
4/86	67,593	0.0024	1.39	---	5.79	---
5/87	43,873	0.0053	2.07	---	3.76	---
5/88	81,958	0.0106	7.45	---	7.02	---
Average	64,516	0.0057	3.35	10.20	5.53	24.22

Baghouse No. 4

4/85	99,668	0.0031	2.64	---	8.54	---
4/86	132,391	0.0039	4.42	---	11.35	---
5/87	133,405	0.0024	2.69	---	11.43	---
5/88	128,668	0.0023	2.21	---	11.03	---
Average	123,533	0.0029	2.99	9.10	10.59	46.38

* Based upon concentration limit of 0.01 gr/scf and 24 hrs, 7 days, 52 weeks/year (8,760 hours).

Note: 1987 Production hours = 6,087.

Emissions	Present Actual lb/hr	tpy	Present Potential lb/hr	tpy
#1	1.16	3.53	3.52	15.42
#2	1.70	5.17	5.46	23.91
#3	3.35	10.20	5.53	24.22
#4	2.99	9.10	10.59	46.38
	9.20	28.00	25.10	109.90

PRESENT POTENTIAL EMISSIONS
FLORIDA STEEL CORPORATION
TAMPA MILL

Present Potential

A. Baghouses - See Separate Sheet

B. Fugitive - Based on 36 tph and 8760 hours = 315,300 tons steel/year

Tap & Charge: #3 140,160 tpy x 2 lb/ton x 0.1 x 1/2000
= 14.02 tons dust/yr.

#4 175,200 tpy x 2 lb/ton x 0.05 x 1/2000
= 8.76 tons dust/yr.

TOTAL = 22.78 tons dust/yr.

Melt & Refine: #3 140,160 tpy x 27 lb/ton x .05 x 0.1 x 1/2000
= 9.46 tons dust/yr.

#4 175,200 tpy x 27 lb/ton x .02 x .05 x 1/2000
= 2.37 tons dust/yr.

TOTAL = 11.83 tons dust/yr.

PROPOSED ACTUAL EMISSIONS
FLORIDA STEEL CORPORATION
TAMPA MILL

Basis Present baghouses maintain present flow and particulate concentration.

Actual steel production is 250,000 tons steel per year at 42 tons per hour.

Baghouses - Same as present actual emissions hourly basis which is 9.20 pounds per hour. On the basis of 5,952 hours per year for new plant -

9.20 x 5,952 x 1/2000 = 32.2 tons dust per year.

Fugitive Emissions:

Melt & Refine: 42 tph x .01 x .01 x 27 = 0.11 lb/hr
250,000 tpy x .01 x .01 x 27 x 1/2000 = 0.34 tons dust/yr

Tap & Charge: 42 tph x .05 x 2 = 4.20 lb/hr.
250,000 tpy x .05 x 2 lb/ton x 1/2000 = 12.5 tons dust/yr.

Carbon Monoxide: 6.5 lb CO/ton x 250,000 tons x 0.2 x 1/2000 = 162.5 tpy.

NOx: 0.1 lb NOx/ton x 250,000 tpy x 1/2000 = 12.5 tpy.

SO_2: 0.01 lb SO_2/ton x 250,000 tpy x 1/2000 = 1.25 tpy.

VOC: No Emissions.

Lead: (32.2 + 0.34 + 12.5) = 45.04 tpy particulate x 0.02 = 0.9 tpy.

PROPOSED POTENTIAL PARTICULATE EMISSIONS
FLORIDA STEEL CORPORATION
TAMPA MILL

Assumptions: Maximum Production Rate = 47.5 tons steel per hour and 325,000 tons steel/year.

vs 399,000 TPY ?

Maximum hours of production = 8,400.

Fourth Hole Evacuation - 99% efficiency.

New Canopy Hood System - 99% efficiency during Melt & Refine
95% efficiency during Tap & Charge.

Melt & Refine Emissions:

47.5 tph x .01 escape 4th hole x .01 escape canopy x 27 lb/ton
= 0.13 lb/hr emission.

325,000 tpy x .01 x .01 x 27 x 1/2000
= 0.439 tpy emission.

MAR
0.4

Tap & Charge Emissions:

47.5 tph x .05 escape canopy x 2 lb/ton
= 4.8 lb/hr emission.

325,000 tpy x .05 escape canopy x 2 lb/ton x 1/2000
= 16.25 tpy emission.

16.3

Baghouses:

1985-1988 Average Flow = 292,817 SCFM
Emissions = 292,817 x 0.0052 gr/scf x 60 min/hr x 1/7000
= 13.05 lbs/hr.
13.05 lbs/hr x 8,400 hrs x 1/2000 = 54.82 tpy.

54.8

71.5

3-8-89
@ 65 TPH (letter dated 2-15-89 by RSS)

PM

- Melt & Refine:

  65 tph x 0.01 escape 4th hole x 0.01 escape canopy x 27 lbs/ton = 0.176 lbs/hr

- Tap & Charge:

  65 tph x 0.05 escape canopy x 2 lbs/ton = 6.5 lbs/hr

MISCELLANEOUS EMISSIONS
FLORIDA STEEL CORPORATION
TAMPA MILL

Carbon Monoxide:

Present: 6.5 lb/ton steel (EPA 450/3-82-020a) 30% oxidation in side drafts
210,000 tons steel/yr x 6.5 lb CO/ton x 0.7 x 1/2000
= 477.8 tons CO/year.

Present Potential: 477.8 x 315,360 tons/210,000 tons
= 717.5 tons CO/yr.

Proposed Potential: 6.5 lb/ton steel (EPA 450/3-82-020a) 80% oxidation in 4th hole system.
325,000 tons steel/yr x 6.5 x 0.2 x 1/2000
= 211.3 tons CO/yr.

6.5 lb/ton steel x 47.5 tons/hr
= 309 lb/hr. 0.2 = 61.75

3-8-89
Calc. @ 65 tph for perform. test

C.O. 6.5 lbs/ton x 65 tph x 0.2 = 84.5 lbs/hr

Nitrogen Oxides: 0.1 lb/ton steel

Present: 0.1 lb/ton x 210,000 ton/yr x 1/2000
= 10.5 tons NOx/yr.

Present Potential: 10.5 x 315,360 tons/210,000 tons
= 15.77 tons NOx/yr.

Proposed Potential: 0.1 lb/ton x 325,000 tons/yr x 1/2000
= 16.25 tons NOx/yr.

0.1 lb/ton x 47.5 tons/hr
= 4.75 lbs NOx/hr.

NO_x 0.1 x 65 = 6.5 lbs/hr

Sulfur Dioxide: 0.01 lb/ton.

Present: 0.01 lb/ton x 210,000 ton/yr x 1/2000
= 1.05 ton SO_2/yr.

Present Potential: 1.05 tons x 315,360 tons/210,000 tons
= 1.58 tons SO_2/yr.

Proposed Potential: 0.01 lb/ton x 325,000 ton/yr x 1/2000
= 1.63 tons SO_2/yr.

SO_2 0.01 x 65 = 0.65 lbs/hr

VOC: No Emissions

VOC 0

Lead: Lead is judged to be 2% by weight of EAF dust.

Present: 0.34 lb/hr and 1.02 tons/yr.

Present Potential: 0.02 x 144.53 tons/yr = 2.89 tons/yr.

109.92
22.78
11.83

Pb 13.05 + 0.176 + 6.5 = 19.726 x 0.02 = 0.39 lb/hr

Proposed Potential: 0.60 lb/hr and 2.44 ton/yr.

54.82 TPY
16.25
0.439
71.509 x 0.02 = 1.43

0.13
4.8
13.05
17.99 x 0.02 → 0.36 lb/hr and 1.43 ?

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 b 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 constructio permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 6 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (I 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:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[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 operat 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 operat 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.