

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



BOB GRAHAM
GOVERNOR

Victoria J. Tschinkel
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

December 4, 1981

CERTIFIED MAIL

Robert B. Hutchens
Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

Dear Mr. Hutchens:

Enclosed is Permit Number AC 16-47926, dated December 2, 1981
to Florida Steel Corporation
issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

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

cc: Johnny Cole
Steve Pace
John Koogler

Final Determination

Florida Steel Corporation

Mill Modification

Duval County

Construction Permit

Application Number:

AC 16-47926

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

November 30, 1981

Florida Steel Corporation

Mill Modification

The construction/modification permit has been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in the Florida-Times Union on October 23, 1981. The preliminary determination and technical evaluation were available for public inspection at the Duval County's Bio-Environmental Services (BES), the DER's St. Johns River Subdistrict and Bureau of Air Quality Management.

There were no comments received on the Department's Intent to Issue. Therefore, it is recommended that the construction/modification permit be issued as drafted.



STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

NO. AC 16-47926

FLORIDA STEEL CORPORATION
P. O. Box 518
BALDWIN, FLORIDA 32234

DATE OF ISSUANCE

December 2, 1981

DATE OF EXPIRATION

APRIL 11, 1982

VICTORIA TSCHINKEL
SECRETARY



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

PERMIT/CERTIFICATION
NO. AC 16-47926

COUNTY: Duval

PROJECT: Modification of
the Billet Reheat
Furnace: Increase in
Annual Throughput

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the modification of the annual operating hours and throughput for the existing billet reheat furnace at the mill located on Yellow Water Rd. in Baldwin, Duval County, Florida. The UTM coordinates are 405.7 km. East and 3350.2 km. North.

Modification shall be in accordance with the permit application amendment to the original (dated 4/22/77), plans, documents, and drawings except as noted on pages 3 and 4, "Specific Conditions".

Attachments are as follows:

1. Amendment request to the original application to Construct Air Pollution Sources (dated 4/22/77) DER Form PERM 12-1 (Apr. 76) Page 3 of 6, and accompanying cover letter.
2. Application to Construct Air Pollution Sources (4/22/77) DER FORM PERM 12-1 (Apr. 76).
3. DER BACT Determination
4. Stack sampling drawing.
5. Application to Construct Air Pollution Sources (10/9/81) DER FORM 17-1. 122(16) and cover letter.

BEST AVAILABLE COPY

PERMIT NO.: AC 16-47926
APPLICANT: Florida Steel Corporation

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 Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court 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 indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. 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 the cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. 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.
4. As provided in subsection 403.087(6), 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.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. 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 Section 403.111, F.S.
7. In the case of an operation permit, 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.
8. 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, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.
13. This permit also constitutes:
 - Determination of Best Available Control Technology (BACT)
 - Determination of Prevention of Significant Deterioration (PSD)
 - Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 16-47926
APPLICANT: Florida Steel Corporation

SPECIFIC CONDITIONS:

1. Maximum operation time shall be 4,891 hours per year.
2. Maximum product throughput shall be 90 billet tons per hour and 440,172 billet tons per year of rebar steel.
3. Maximum sulfur content of the No. 4 Fuel Oil shall be 0.7% by weight.
4. Maximum heat input shall be 185 million Btu per hour.
5. Maximum fuel oil utilization shall not exceed 29.8 barrels per hour.
6. No billet steel shall be imported except under emergency conditions. Emergency conditions mean if and only if the upstream electric arc furnace cannot meet the annual product output of 440,172 billet tons of rebar steel. Bio-Environmental Services (BES) of Jacksonville and DER's St. Johns River Subdistrict must be notified in writing to justify the need to import billet steel. Approval must be granted by BES.
7. Submit for this source quarterly reports showing:
 - A. Monthly quantities of No. 4 Fuel Oil used in the operation of this source.
 - B. Fuel Oil Analysis from the vendor (must contain % sulfur content)
 - C. Product throughput in billet tons of rebar steel.
8. Testing for all pollutants' emissions will be EPA reference methods 1, 2, 3, 5, and 9 as in 40 CFR 60, Appendix A, or other state approved method. The source must be operating at 90-100% of the permitted rated capacity. Failure to submit input rates and to operate at conditions which do not reflect actual operating conditions may invalidate the data. Stack sampling facilities shall include eyebolts and angle as described in the attached figure (Attachment 4).
9. Compliance testing as found in No. 8 shall be conducted before issuance of the "Operating Permit". If the compliance test proves satisfactory, visible emissions of the plume density shall be conducted on an annual basis. All reports must be submitted not more than 15 days after completion of the test(s).

PERMIT NO.: AC 16-47926
APPLICANT: Florida Steel Corporation

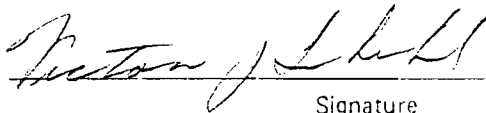
10. The applicant shall submit a request for an "Operating Permit" to BES prior to the expiration of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or until issuance of an operating permit.
11. Upon obtaining an operating permit, the applicant shall be required to submit annual reports on the actual operation and emissions of the source.
12. Any changes in the information contained in the permit application must be approved via request, in writing, to BES.

Expiration Date: April 11, 1982

Issued this 2 day of December, 1981

4 Pages Attached.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION


Signature

PAGE 4 OF 4

DEPARTMENT

ROUTING AND TRANSMITTAL SLIP

FILE NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Bill Thomas

Initial

Date

2.

Mark Zilberberg

RECEIVED
JUL 2 1983

Initial

Date

3.

4.

Dept. of Environmental Reg.
Office of General Counsel

Initial

Date

REMARKS:

The attached letter is self explanatory. Is this an acceptable form, legally and otherwise, to accomplish the letter's expressed intent?

Returned 8/6/87 with comments

Signed 8/10/87

FROM:

Willard Hanks

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

DATE 6/23/83

PHONE

8-1344



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

TO: Pam
FROM: umh
SUBJECT: Florida Steel Corp
DATE: Duval County Facility
12/8/87

The permit was issued
Construction permit No. AC 16-41114
for an electric arc furnace.

Can you tell me what the
current operation permit is
for this source?

Florida Steel Yellow Water Rd. Jax.
Electric Arc Furnace w/ 14 Baghouses

AC 16-99999 (no data)

AC 16-55485

(Issued 10/8/82, Expired 7/31/87)

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Initial

Date

Clair Faney

2.

Initial

Date

3.

Initial

Date

4.

Initial

Date

REMARKS:

EPA wants the state permit to be consistent with the federal permit, This will require!

- ① adding 6% VE standard for the shop in the state permit
- ② deleting the 20%/40% VE allowance from the shop that is in the state permit.

The state construction permit has expired. The federal permit is more restrictive than the state. I'm not sure of the procedure John is using as BAQM issued the const. permit

FROM:

lml

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

DATE

6-12-87

PHONE

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Willard

Initial

Date

2.

Initial

Date

3.

Initial

Date

4.

Initial

Date

REMARKS:

Since it is CAPS const. permit we need to change it.

Need to write to company asking if they have a problem with it.

6% only would need to go into og permit - for sure - because of EPA

I assumed his was 1 that set 2 permits - state & federal PSD

pls handle

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

FROM:

[Signature]

DATE

PHONE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY

June 3, 1987

Mr. Khurshid Mehta
Duval County Department of Health,
Welfare & Bio-Environmental Services
Division of Bio-Environmental Services
515 West Sixth Street
Jacksonville, Florida 32206

Dear Mr. Mehta:

Subject: Amendment of Air Permit

In order to close our the enforcement case with Florida Steel Plant #157, EPA requested that the State permit be revised to reflect the same opacity limit (6%) as reflected in the federal PSD permit.

Please prepare a recommended revision for review and signature by Ernie Frey. As I recall, Jerry Woosley verbally agreed that this should be done during the March Compliance Teleconference.

Please advise when this action is completed. If this action is taken EPA will consider the past opacity violation de minimus and will close the case. Your cooperation is appreciated.

Sincerely,

Clair Fancy, P.E.
Deputy Bureau Chief
Central Air Permitting
Bureau of Air Quality
Management

CF:JB:ht

cc: Dick Dubose
Jerry Woosley
Bill Stewart, NE District

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Clear Jimmy Willard 6/9

Initial

Date

2.

Please check this. It seems as though

Initial

Date

3.

we have to talk to EPA.

Initial

Date

4.

Clear

Initial

Date

REMARKS:

Please sign if you concur. Willard sees no problem - I merely negotiated this with Region IV to get this case closed.

I need this from June if possible

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

FROM:

John Brown

DATE

PHONE

6/5

PERMIT NO.: AC 16-41114
APPLICANT: Florida Steel Corporation

SPECIFIC CONDITIONS:

1. Maximum operation time will be 328 production days per year at 20.65 production hours per day.
2. Maximum process input rate will be 145,262 pounds per hour (lbs./hr.) and 483,705 tons per year (TPY). Maximum product weight will be 65 billet tons per hour (bTPH) and 440,172 bTPY.
3. Maximum allowable particulate emissions will be 8.00 lbs/hr.
4. Maximum allowable carbon monoxide emissions will be 58.5 lbs./hr.
5. Maximum allowable sulfur dioxide emissions will be 20.0 lbs./hr.
6. Maximum allowable nitrogen oxide emissions will be 1.1 lbs/hr.
7. Visible emissions shall not exceed: a) 3% from the baghouse, b) 20% from the shop roof during charging, and c) 40% from the shop roof during tapping.
8. Particulate emissions of the source shall be continuously monitored in accordance with the provisions of Paragraph 60.273 and 60.274 of 40 CFR 60, Subpart AA-Standards of Performance for Steel Plants: Electric Arc Furnaces. The applicant shall also comply with all other applicable requirements of 40 CFR 60, Subpart AA. Quarterly reports of excess emissions from this facility will be submitted to Duval County's Bio-Environmental Services.
9. Particulate emissions of the source shall be tested in accordance with the provisions of Paragraph 60.275 of 40 CFR 60, Subpart AA-Standards of Performance for Steel Plants: Electric Arc Furnaces. Annual test data from this facility will be submitted to Duval County's Bio-Environmental Services.
10. Construction/modification shall reasonably conform to the plans submitted in the application.
11. The applicant shall report any delays in construction and completion of these modifications to the Duval County's Bio-Environmental Services.
12. Before this construction/modification permit expires, the baghouse and roof monitors will be tested for visible emissions and stack tests will be run for particulate. Test procedures will be EPA reference methods 1, 2, 3, 5, and 9 as published in 40 CFR 60, Appendix A, dated July 1, 1978, or by any other state-approved method. Minimum sample volume and time per run will be as defined in 40 CFR 60, Subpart AA. The Department and Bio-Environmental Services will be notified 30 days in advance of the compliance test. The test will

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

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

Florida Steel Corporation
Baldwin, Florida

is, as of the effective date of this permit authorized to construct/modify a stationary source at the following locations:

Yellow Water Road
SR 217 South of I-10

UTM Coordinates: 405.7 kmE., 3350.2 kmN.

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

This permit is hereby issued on _____ and shall become effective thirty (30) days after receipt hereof unless a petition for administrative review is filed with the Administrator during that time. If a petition is filed any applicable effective date shall be determined in accordance with 40 CFR §124.19(f)(1)(i)-(iii).

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

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

SEP 14 1983

/s/ Charles R. Jeter
Regional Administrator

Date Signed

Regional Administrator

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-2-

This final permit decision is subject to appeal under 40 CFR §124.19 by petitioning the Administrator of the EPA within thirty (30) days after receipt thereof. The petitioner must submit a statement of reasons for the appeal and the Administrator must decide on the petition within a reasonable time period. If the petition is denied, the permit shall become effective upon notice of such action to the parties to the appeal. If the petition is granted, any applicable effective date shall be determined by the results of the appeal proceedings. If no appeal is filed with the Administrator, the permit shall become effective thirty (30) days after receipt of this letter. Upon the expiration of the thirty (30) day period, EPA will notify you of the status of the permit's effective date.

Receipt of this letter does not constitute authority to construct. Approval to construct this facility shall be granted as of the effective date of the permit. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Mr. Richard S. DuBose, Chief, Air Engineering Section, Air and Waste Management Division at 404/881-7654.

Sincerely yours,

Thomas W. Devine, Director
Air and Waste Management Division

Enclosure

cc: Mr. Steve Smallwood, P.E. Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation

BRANDON:mvl:7654:7/15/83 DOC. 37

<i>BRANDON</i>	BRANDON	ARONSON	PFAFF	DUBOSE	SMITH	WILBURN	DEVINE	<i>Miller</i>
<i>APH</i>	<i>Brandon</i>	<i>ltb</i>	<i>[Signature]</i>	<i>RSD</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>CHS/12</i>	<i>8/22</i>
<i>9/19</i>	<i>8/15/83</i>	<i>8/15/83</i>	<i>8/15</i>	<i>8/16</i>	<i>8/18</i>	<i>8/22</i>		<i>8/22</i>
<i>working</i>								
<i>april to change</i>								
						<i>[Signature]</i>		
						<i>9/13</i>		

PART I
SPECIFIC CONDITIONS

A. General

1. The applicant must comply with the provisions and requirements of the attached General Conditions.
2. The applicant will comply with all emission limits and enforceable restrictions required by the State of Florida's Department of Environmental Regulation (FDER) which may be equal to or more restrictive than emission limits and operating requirements than the following Specific Conditions.

B. Electric Arc Furnace

1. Maximum operating time shall not exceed 328 production days per year at 20.65 production hours per day.
2. Maximum process input rate shall not exceed 145,262 pounds per hour (lbs/hr.) and 483,705 tons per year (TPY). And maximum steel production shall not exceed 65 billet tons per hour (bTPH) and 440,172 bTPY.
3. Maximum heat input from the fuels below shall not exceed 26.9 MMBTU/hr. Fuels permitted to be fired in the unit are the No. 4 "New Fuel Oil" (at a maximum sulfur and nitrogen content of 0.7% and 0.15% by weight, respectively), and natural gas.

NOTE: "New Fuel Oil" means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

4. Maximum allowable particulate emissions shall be 0.0052 gr/dscf, not to exceed 13.10 lbs/hr, from entire baghouse system including the particulate matter in the exhaust gases which are captured and ducted from EAF and lime silo.

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5. Maximum allowable carbon monoxide emissions shall be 58.5 lbs/hr. (total of emissions from entire baghouse system).
6. Maximum allowable sulfur dioxide emissions shall be 20.0 lbs/hr. (total of emissions from entire baghouse system).
7. Maximum allowable nitrogen oxide emissions shall be 1.1 lbs/hr. (total of emissions from entire baghouse system).
8. Visible emissions shall not exceed: a) 3% opacity from the baghouse, b) ~~6% opacity from the shop during all phases of operation.~~ The visible emission limits above shall be determined by Reference Method 9, Appendix A, 40 CFR 60.
9. Particulate emissions from the source shall be continuously monitored in accordance with the provisions of Paragraph 60.273 and 60.274 of 40 CFR 60, Subpart AA-Standards of Performance for Steel Plants: Electric Arc Furnaces. The applicant shall also comply with all other applicable requirements of 40 CFR 60, Subpart AA.
10. Particulate emissions from the source shall be tested in accordance with the provisions of Paragraph 60.275 of 40 CFR 60, Subpart AA-Standards of Performance for Steel Plants: Electric Arc Furnaces.
11. The baghouse system and roof monitors shall be tested for visible emissions and stack tests shall be conducted on the baghouse system. Test procedures will be EPA Reference Methods 1-5, 6, and 9 as published in 40 CFR 60, Appendix A, dated July 1, 1978. Minimum sample volume and time per run shall be as defined in 40 CFR 60, Subpart AA.

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An EPA compliance test procedure for particulate was transmitted on April 22, 1976 to Florida Steel Corporation as an approved option. This procedure is not a substitute for Method No. 9. [The April 22, 1976, procedures (attached as Attachment "A") shall become a part of this permit.]

C. Billet Reheat Furnace

1. Maximum operation time shall not exceed 4,891 hours per year.
2. Maximum allowable emissions are:

<u>Pollutant</u>	<u>lbs/hr.</u>
Particulate Matter	8.76
SO ₂	137.55
NO _x	38.80
CO	6.26
HC	1.25

3. Maximum product throughput shall not exceed 90 billet tons per hour and 440,172 billet tons per year of rebar steel.

Maximum sulfur content of the No. 4 "New Fuel Oil" shall not exceed 0.7% by weight.

NOTE: "New Fuel Oil" means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

5. Maximum nitrogen content of the No. 4 "New Fuel Oil" shall not exceed 0.15% by weight.
6. Maximum heat input shall not exceed 185 million Btu per hour.

BEST AVAILABLE COPY

7. Maximum fuel oil utilization shall not exceed 29.8 barrels per hour.
8. No billet steel shall be used other than that produced by this facility except under emergency conditions. Emergency conditions mean if and only if the upstream electric arc furnace cannot meet the annual production output of 440,172 billet tons of rebar steel.
9. Testing for all pollutants' emissions will be EPA Reference Methods 1-5, 6, and 9 as in 40 CFR 60, Appendix A.

D. Lime Storage Silo

1. All emissions shall exhaust to the 14-compartment baghouse system servicing the EAF.
2. There shall be no visible emissions from the lime storage silo.

BRANDON:dib:3/14/83

Doc 38 (ORIGINALLY ON WANG)
Copied onto Dick

June 25, 1987

*Printed
Aug 19, 1987*

W.H. Hutchens

*① BT 6/22/87
② ME*

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. B. Hutchens
Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

12/2/87

*Jim Aho (222-7500)
Requested delay till
mid-June '88. They
will ask EPA to modify
VE std. + Corp DSE
John Brown is informed in
their plans*

Dear Mr. Hutchens:

Re: Visible Emissions Standard for Electric Arc Furnace (EAF)

The EPA, Region IV, has requested the Department modify the applicable permits for your EAF to be consistent with the federal permit (PSD-FL-074) for this source. The Department proposes to replace Specific Condition No. 7 of the state permit No. AC 16-41114 which says, "Visible emissions shall not exceed: a) 3% from the baghouse, b) 20% from the shop roof during charging, and c) 40% from the shop roof during tapping" with Specific Condition No. 8 of the federal permit No. PSD-FL-074 which says, "Visible emissions shall not exceed: a) 3% opacity from the baghouse, b) 6% opacity from the shop during all phases of operation. The visible emissions limits above shall be determined by Reference Method 9, Appendix A, 40 CFR 60." Similar changes would be made to the current operating permit for this source.

The changes will result in a reduction in the allowable visible emissions in the state permits of 20% opacity from the shop roof during charging and 40% from the shop roof during tapping to 6% opacity from the shop during all phases of operation. As the federal permit already restricts the visible emissions from the shop to 6% opacity during all phases of operation, the proposed change will not require the Company to meet a more restrictive emission standard than they are currently subject to. Rule 17-4.080, Modification of Permit Conditions, gives the Department legal authority to make the proposed reduction in the allowable emissions in the state permits for the EAF.

If Florida Steel Corporation has any comments on the proposed change to your permits, we request you reply in writing to the Department within 30 days of receipt of this letter. Otherwise, the state permits will be modified as discussed in this letter.

Sincerely,

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

CHF/WH/s

cc: Dick Dubose
Jerry Woosley
Bill Stewart
John Brown

P 274 021 718

RECEIPT FOR CERTIFIED MAIL

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

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

PS Form 3800, June 1985

Sent to R.B. Hutchens FL Steel Corporation	
Street and No. P.O. Box 518	
P.O., State and ZIP Code Baldwin, FL 32234	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 08/10/87 Permit: AC 16-41114 Federal: PSD-FL-074	

PS Form 3811, July 1983 447-845

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

- Show to whom, date and address of delivery.
- Restricted Delivery.

3. Article Addressed to:
Mr. R.B. Hutchens
Florida Steel Corporation
P.O. Box 518
Baldwin, FL 32234

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 274 021 718

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee
X

6. Signature - Agent
X

Handwritten signature

Date of Delivery
AUG 12 1987

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

DOMESTIC RETURN RECEIPT

Handwritten mark

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY

August 10, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. B. Hutchens
Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

Dear Mr. Hutchens:

Re: Visible Emissions Standard for Electric Arc Furnace (EAF)

The EPA, Region IV, has requested the Department to modify the applicable permits for your EAF to be consistent with the federal permit (PSD-FL-074) for this source. In response, the Department proposes to replace Specific Condition No. 7 of the state permit No. AC 16-41114 which states, "Visible emissions shall not exceed: a) 3% from the baghouse, b) 20% from the shop roof during charging, and c) 40% from the shop roof during tapping" with Specific Condition No. 8 of the federal permit No. PSD-FL-074 which states, "Visible emissions shall not exceed: a) 3% opacity from the baghouse, b) 6% opacity from the shop during all phases of operation. The visible emissions limits above shall be determined by Reference Method 9, Appendix A, 40 CFR 60." Similar changes will be made to the current operating permit for this source.

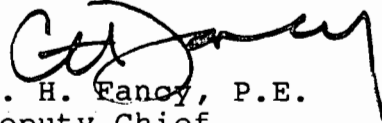
The changes will result in a reduction in the allowable visible emissions in the state permits of 20% opacity from the shop roof during charging and 40% from the shop roof during tapping to 6% opacity from the shop during all phases of operation. Since the federal permit already restricts the visible emissions from the shop to 6% opacity during all phases of operation, the proposed changes will not require the Company to meet a more restrictive emission standard than that to which they are currently subjected. Rule 17-4.080, FAC, Modification of Permit Conditions, gives the Department legal authority to make the proposed reduction in the allowable emissions in the state permits for the EAF.

If Florida Steel Corporation has any comments on the proposed change to its permits, we request you to reply in writing to the

Mr. R. B. Hutchens
Page Two
August 10, 1987

Department within 30 days of your receipt of this letter.
Otherwise, the state permits will be modified as discussed in
this letter.

Sincerely,



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

CHF/WH/s

cc: Dick Dubose
Jerry Woosley
Bill Stewart
John Brown

Maggie W. (W)

~~At~~ Florida Steel

letter on VE - same

30 days. They want

more time. Find out if

okay. Don't want another 30 days.

Car

Jim Alves
222-7500

→ P5/10

Check Sheet

Company Name: Florida Steel Corp.
Permit Number: AC 16 - 47926
PSD Number:
County:
Permit Engineer:
Others involved:

Application:

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

Intent:

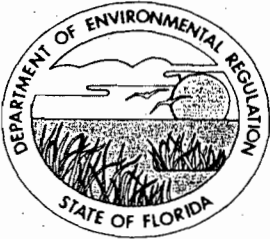
- Intent to Issue
- Notice to Public
- Technical Evaluation
- BACT Determination
- Unsigned Permit
- Correspondence with:
 - EPA
 - Park Services
 - County
 - Other
- Proof of Publication
- Petitions - (Related to extensions, hearings, etc.)
- Other

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination
- Other

Post Permit Correspondence:

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



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

September 17, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alton Davis, Division Manager
Florida Steel Corporation-Baldwin Mill
P. O. Box 518
Baldwin, Florida 32234-0518

Dear Mr. Davis:

Re: Amendment Request to Construction Permits AC 16-41114,
AC 16-47926, and PSD-FL-074

The Department has reviewed the Mr. Darrell J. Hall's letter with attachments received August 23, 1990, which contained a request to amend permits related to the Electric Arc Furnace (EAF; AO 16-55485) and Billet Reheat Furnace (BRF; AO 16-135272). Based on a review of the information, the following conclusions have been made:

1. A modification application plus process fee will have to be submitted for the EAF, since the construction permit (AC 16-41114) and the federal PSD permit (PSD-FL-074) contain federally enforceable conditions that cannot be changed by an amendment.
2. A modification application plus process fee will have to be submitted for the BRF, since the construction permit (AC 16-47926) and the federal PSD permit (PSD-FL-074) contain federally enforceable conditions that cannot be changed by an amendment.

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

Sincerely,

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

CHF/BM/plm

c: A. Kutyna, NE District
D. Hall, BESD

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

March 30, 1983

CERTIFIED MAIL RECEIPT

Mr. Robert B. Hutchens, Plant Manager
Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

Dear Mr. Hutchens:

The Bureau has received your request to modify the following permits:

1. AC-16-47926 -: Billet Reheat Furnace (BRF)
2. AC 16-41114 : Electric Arc Furnace (EAF)
3. PSD-FL-074 : Federal PSD Permit

The request was to delete the capability of firing reclaimed lubricating oil and crude sulphate turpentine as a fuel. The other request was to modify the referenced permits to allow the firing of natural gas as a fuel.

In order to modify the referenced permits, calculate and submit per furnace the maximum hourly and annual consumption of natural gas and the maximum potential pollutant emissions, including assumptions, referencing current permitted conditions, and attaching copies of all referenced material (AP-42 Emission Factors, etc.).

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

Sincerely,

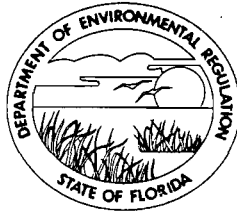
C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/BM/bjm

cc: Jerry W. Woosley, BES
Robert S. Sholtes, Environmental Consultants, Inc.
Mary Smallwood, General Counsel

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

July 29, 1983

Mr. R. B. Hutchens
Plant Manager
Florida Steel Corporation
Post Office Box 518
Baldwin, Florida 32234

Dear Mr. Hutchens:

The bureau is in receipt of your request for a modification of your construction permit, No. AC 16-47926. This request is acceptable and the condition is added as follows:

Specific Conditions:

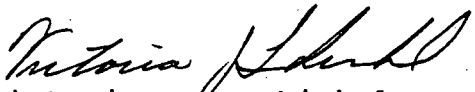
"No. 13": Maximum natural gas consumption and heat input shall not exceed 177,543 cubic feet per hour and 185×10^6 Btu per hour, respectively.

Attachments to be included are as follows:

6. Robert S. Sholtes' letter dated March 16, 1983.
7. C. H. Fancy's letter dated March 30, 1983.
8. John B. Koogler's letter dated May 19, 1983.

This letter and attachments must be attached to your permit, No. AC 16-47926, and shall become a part of that permit.

Sincerely,


Victoria J. Tschinkel
Secretary

VJT/RBM/bm

ATTACHMENT 6



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-82-09

March 16, 1983

DER

Mr. Bruce Mitchell
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

MAR 21 1983

BAQMD

MAR 21 1983

Dear Mr. Mitchell:

The Florida Steel Corporation, Baldwin mill wishes to initiate modifications to their state and federal permits to reflect a change in fuel utilization. The permits of interest are listed below.

1. AC16-47926 (A016-47926) - Reheat Furnace
2. AC16-41114 (A016-55485) - Arc Furnace
3. PSD FL 074

In these various permits and PSD studies alternate fuels were included, specifically reclaimed lubricating oil and crude sulphate turpentine. The company has now determined that they no longer wish to propose the use of these two alternate fuels and would like to have reference thereto purged from the permits.

As an additional change, the company has found it economically attractive to modify both the reheat furnace and the electric arc furnace for utilization of natural gas in place of the fuels oils mentioned and studied in this permitting process. The company would like to retain the option of using the specified fuel oils, however, would like to advise the Florida Department of Environmental Regulation that insofar as possible natural gas will be used on these units in the foreseeable future.

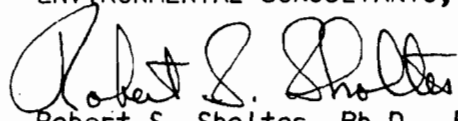
Mr. Bruce Mitchell
Florida Department of
Environmental Regulation

March 16, 1983
Page two

If you need further clarification or more information, please advise.

Sincerely,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS, INC.


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

FLORIDA STEEL CORPORATION,
BALDWIN MILL


Robert Hutchens

RSS:ldh

cc: Mr. Jerry W. Woosley

ATTACHMENT 7

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

March 30, 1983

CERTIFIED MAIL RECEIPT

Mr. Robert B. Hutchens, Plant Manager
Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

Dear Mr. Hutchens:

The Bureau has received your request to modify the following permits:


1. AC 16-47926 : Billet Reheat Furnace (BRF)
2. AC 16-41114 : Electric Arc Furnace (EAF)
3. PSD-FL-074 : Federal PSD Permit

The request was to delete the capability of firing reclaimed lubricating oil and crude sulphate turpentine as a fuel. The other request was to modify the referenced permits to allow the firing of natural gas as a fuel.

In order to modify the referenced permits, calculate and submit per furnace the maximum hourly and annual consumption of natural gas and the maximum potential pollutant emissions, including assumptions, referencing current permitted conditions, and attaching copies of all referenced material (AP-42 Emission Factors, etc.).

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/BM/bjm

cc: Jerry W. Woosley, BES
Robert S. Sholtes, Environmental Consultants, Inc.
Mary Smallwood, General Counsel

ATTACHMENT 8



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-79-08

May 19, 1983

Mr. Bruce Mitchell
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

DER

MAY 20 1983

BAQM

Subject: Florida Steel Corporation
Baldwin, Florida
AC16-47926-Reheat Furnace
AC16-41114-Electric Arc Furnace
PSD FL-074

Dear Bruce:

In response to our telephone conversation of May 18, 1983, I am providing the following fuel consumption information for the Florida Steel Corporation's Baldwin Mill. The information provided herein relates to the proposed consumption of natural gas in the electric arc furnace and the billet reheat furnace as addressed in Dr. Sholtes' letter to you dated March 16, 1983.

The electric arc furnace was permitted (by the subject permits) for a heat input rate by supplemental fuel of 26.9 million BTU per hour. The quantity of natural gas required to produce this heat input, at a heating value of 1042 BTU per cubic foot of natural gas, is 0.026 million cubic feet of gas per hour. Based on an annual operating time of 6,770 hours, the annual consumption of natural gas in the electric arc furnace will be 174.8 million cubic feet per year, maximum.

The billet reheat furnace was permitted (by the subject permits) for a heat input of 185 million BTU per hour. The quantity of natural gas required to produce this heat is 0.178 million cubic feet per hour. Based on an annual operating time of 4,891 hours, the annual natural gas consumption for the billet reheat furnace will be 868.4 million cubic feet per year, maximum.

In both the electric arc furnace and the billet reheat furnace, Florida Steel still wishes to have the option to burn new No. 4 fuel oil as presently permitted. This oil will be used as a stand-by fuel only. Natural gas will be the primary fuel in both sources.

Air pollutant emission rates, as affected by the type of fuel burned, were calculated for both the electric arc furnace and the billet reheat furnace assuming natural gas to be the fuel. The emission factors used were published in Supplement 13 of AP-42. It should be noted that a nitrogen oxide emission factor of 140 pounds per million cubic feet of gas was used since the billet reheat furnace is better represented by the operation of an industrial boiler than by the operation of a utility boiler. Nitrogen oxides emissions from the electric arc furnace were calculated by the same method that was used in the original permit application for the electric arc furnace.

The calculated air pollutant emission rates for the billet reheat furnace, assuming the furnace to be fired 100 percent of the time by natural gas, are:

<u>Source</u>	<u>Hourly Emission Rate (Lbs Per Hour)</u>	<u>Annual Emission Rate (Tons Per Year)</u>
Particulate Matter	0.9	2.2
Sulfur Dioxide	0.1	0.3
Nitrogen Oxide	24.9	60.8
Carbon Monoxide	7.1	17.4
V.O.C.	0.2	0.6

The pollutant emission rates calculated for the electric arc furnace, again, assuming that natural gas to be fired 100 percent of the time are:

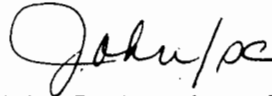
<u>Pollutant</u>	<u>Hourly Emission Rate (Lbs Per Hour)</u>	<u>Annual Emission Rate (Tons Per Year)</u>
Sulfur Dioxide	0.1	0.1
Nitrogen Oxide	0.3	1.2

With the electric arc furnace the emission rate of particulate matter, carbon monoxide, volatile organic compounds will not be influenced significantly by the type of fuel burned. All of the emission rates reported in the above tables are less than emission rates that would be expected if No. 4 fuel oil, as addressed in the original permit applications, was burned 100 percent of the time.

If there are any further questions regarding this matter, please do not hesitate to contact me.

Very truly yours,

SHOLTES & KOOGLER,
ENVIRONMENTAL CONSULTANTS, INC.



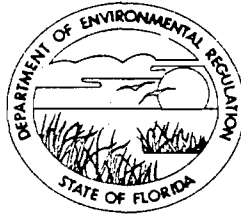
John B. Koogler, Ph.D., P.E.

JBK:sc

cc: Mr. Robert B. Hutchens
Mr. Louis Mustain

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

MEMORANDUM

TO: Robert B. Hutchens, Florida Steel Corporation
John B. Koogler, Sholtes and Koogler Environmental
Consultants
Johnny Cole, FDER, St. Johns River Subdistrict

FROM: C. H. Fancy, Deputy Chief, Bureau of Air Quality
Management

DATE: October 21, 1981

SUBJ: Preliminary Determination - Florida Steel Corporation
Application to Modify Air Pollution Source

Attached is one copy of the application, Technical Evaluation and Preliminary Determination, BACT Determination, and proposed permit to modify (increase hours of operation) the Billet Reheat Furnace at the Florida Steel Corporation facility near Baldwin, Duval County, Florida.

Please submit any comments which you wish to have considered concerning this action, in writing, to Bill Thomas of the Bureau of Air Quality Management.

CHF/bjm

Attachment

Public Notice

The Florida Department of Environmental Regulation (FDER) has received an application from and intends to issue a construction/modification permit to Florida Steel Corporation to increase their permitted annual process throughput to 440,172 billet tons of rebar steel for their existing Billet Reheat Furnace (BRF). This throughput will result in an increase in maximum annual operating hours from 4160 to 4891. The source will fire No. 4 New Fuel Oil at a maximum rate of 29.8 barrels per hour, with a maximum 0.7% sulfur content, and with a maximum heat input of 185 million Btu per hour. The source will be included in the State and Federal review for Prevention of Significant Deterioration (PSD) requiring Best Available Control Technology (BACT) review. The permit will include conditions to assure compliance with Chapter 17-2, Florida Administrative Code (F.A.C.).

Any person wishing to file comments on this proposed action may do so by submitting such comments in writing to:

Mr. Clair Fancy
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Any comments received within thirty (30) days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interest would be affected by the Department's intended action on this permit may request an administrative hearing by filing a petition as set forth in Section 28-5.15 F.A.C. within fourteen (14) days of the date of this notice with:

Ms. Mary Clark
Office of General Counsel
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Technical Evaluation
and
Preliminary Determination

Florida Steel Corporation
Duval County
Baldwin, Florida

Application Number:

AC 16-47926

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

I. PROJECT DESCRIPTION

A. Applicant

Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

B. Project and Description

The applicant requests to increase the annual maximum throughput of rebar steel for the existing billet reheat furnace (BRF) to 440,172 billet tons per year (bTPY). Based on the hourly rated capacity of 90 billet tons per hour (bTPH), the maximum annual hours of operation shall be 4,891, an increase of 731 hours above the existing permit's (AO 16-2691) maximum hours of operation of 4160. The increased operational schedule is a result of modifications to the electric arc furnace (EAF). The BRF is located at the Florida Steel Corporation's Mill on Yellow Water Road (S.R. 217), south of I-10, and east of U.S. 301 Baldwin, Florida. UTM coordinates are 405.7 km. East and 3350.2 km. North.

C. Process and Controls

Steel billets are produced in the upstream EAF and stockpiled. Prior to rolling into concrete reinforcing bars, the steel billets are reheated in the BRF. The BRF has a maximum permitted capacity (AO 16-2691) of 90 billet tons per year (bTPH). No. 4 New Fuel Oil⁽¹⁾ shall be fired in the unit with a maximum capacity of 29.8 barrels per hour, a maximum 0.7% sulfur content, and a maximum heat input of 185 million Btu per hour.

- (1) The term "new oil" means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

There is no control equipment associated with the BRF. However, the SO₂ emissions are kept minimal by the use of low sulfur fuel oil.

II. RULE APPLICABILITY

The proposed project is subject to premodification review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code (FAC).

The billet reheat furnace (BRF) is a major emitting source because it has the potential to emit 100 tons per year (TPY) or more of SO₂ and NO_x (Chpt.17-2.01(77)(f), FAC). The increase in annual operating hours from 4160 to 4891, which increases the potential to emit particulate matter (PM), NO_x, SO₂, CO, and HC, makes this operational change a "modification" (Chpt. 17-2.01(81), FAC). Further, SO₂ potential emissions will increase by 50 TPY, which is above the de minimus level, requiring a prevention of significant deterioration (PSD) and best available control technology (BACT) review (Chpt. 17-2.04 and 17-2.03 respectively, FAC).

Further Chpt.17-2.05, FAC, prohibits existing sources from discharging into the atmosphere any air pollutants the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart the opacity of which is equal to or greater than 20 percent. Also, no person shall cause, let, permit, suffer or allow the emissions of PM, from any source whatsoever, including but not limited to vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling, without taking reasonable precautions to prevent such fugitive emissions.

III. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS

A. Since there is no control equipment associated with the BRF, the SO₂ emissions will be kept minimal by employing BACT requiring the use of low sulfur fuel oil with a maximum 0.7% sulfur content.

The maximum allowable emissions that will be permitted, based on 440,172 bTPY (4891 hrs.), are:

<u>Pollutant</u>	<u>Emission Limit</u>	<u>Plant Allowable Emissions</u> (TPY)
Visible Emissions	20% maximum Opacity	
PM		21.42
SO ₂	0.7% Sulfur content (BACT)	336.38
NO _x	15% Nitrogen content	94.89
CO		15.31
HC		3.06

The pollutants emissions are based on AP-42, Table 1.3-1, emission factors for fuel oil combustion.

The permitted emissions are in compliance with all applicable requirements of Chapter 17-2, FAC.

B. Air Quality Impacts

The impact on ground level concentrations due to the emissions of the BRF will not cause or contribute to any violation of the Florida ambient air quality standards or PSD increments. This conclusion is based upon acceptable dispersion modeling completed by the applicant in conjunction with ambient air quality monitoring.

IV. CONCLUSIONS

The permitted emissions from the facility, with its maximum throughput of 90 bTPH and 440,172 bTPY, will not cause or contribute to any violation of ambient air quality standards.

The emission limit of 20% maximum opacity for all pollutants and the use of low sulfur fuel oil, imposed by BACT, have been determined to be acceptable and can be achieved at this source.

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



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Florida Steel Corporation
P. O. Box 518
Baldwin, Florida 32234

PERMIT/CERTIFICATION
NO. AC 16-47926

COUNTY: Duval

PROJECT: Modification of
the Billet Reheat
Furnace: Increase in
Annual Throughput

This permit is issued under the provisions of Chapter 403, Florida Statutes; and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the modification of the annual operating hours and throughput for the existing billet reheat furnace at the mill located on Yellow Water Rd. in Baldwin, Duval County, Florida. The UTM coordinates are 405.7 km. East and 3350.2 km. North.

Modification shall be in accordance with the permit application amendment to the original (dated 4/22/77), plans, documents, and drawings except as noted on pages 3 and 4, "Specific Conditions".

Attachments are as follows:

1. Amendment request to the original application to Construct Air Pollution Sources (dated 4/22/77) DER Form PERM 12-1 (Apr. 76) Page 3 of 6, and accompanying cover letter.
2. Application to Construct Air Pollution Sources (4/22/77) DER FORM PERM 12-1 (Apr. 76).
3. DER BACT Determination
4. Stack sampling drawing.
5. Application to Construct Air Pollution Sources (10/9/81) DER FORM 17-1. 122(16).and cover letter.

PERMIT NO.: AC-16-47926
APPLICANT: Florida Steel Corporation

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 Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court 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 indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. 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.

4. As provided in subsection 403.087(6), 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.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. 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 Section 403.111, F.S.

7. In the case of an operation permit, 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.

8. 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, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.

13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT).
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 16-47926

APPLICANT: Florida Steel Corporation

SPECIFIC CONDITIONS:

1. Maximum operation time shall be 4,891 hours per year.
2. Maximum product throughput shall be 90 billet tons per hour and 440,172 billet tons per year of rebar steel.
3. Maximum sulfur content of the No. 4 Fuel Oil shall be 0.7% by weight.
4. Maximum heat input shall be 185 million Btu per hour.
5. Maximum fuel oil utilization shall not exceed 29.8 barrels per hour.
6. No billet steel shall be imported except under emergency conditions. Emergency conditions mean if and only if the upstream electric arc furnace cannot meet the annual product output of 440,172 billet tons of rebar steel. Bio-Environmental Services (BES) of Jacksonville and DER's St. Johns River Subdistrict must be notified in writing to justify the need to import billet steel. Approval must be granted by BES.
7. Submit for this source quarterly reports showing:
 - A. Monthly quantities of No. 4 Fuel Oil used in the operation of this source.
 - B. Fuel Oil Analysis from the vendor (must contain % sulfur content)
 - C. Product throughput in billet tons of rebar steel.
8. Testing for all pollutants' emissions will be EPA reference methods 1, 2, 3, 5, and 9 as in 40 CFR 60, Appendix A, or other state approved method. The source must be operating at 90-100% of the permitted rated capacity. Failure to submit input rates and to operate at conditions which do not reflect actual operating conditions may invalidate the data. Stack sampling facilities shall include eyebolts and angle as described in the attached figure (Attachment 4).
9. Compliance testing as found in No. 8 shall be conducted before issuance of the "Operating Permit". If the compliance test proves satisfactory, visible emissions of the plume density shall be conducted on an annual basis. All reports must be submitted not more than 15 days after completion of the test(s).

PERMIT NO.: AC 16-47926
APPLICANT: Florida Steel Corporation

10. The applicant shall submit a request for an "Operating Permit" to BES prior to the expiration of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or until issuance of an operating permit.
11. Upon obtaining an operating permit, the applicant shall be required to submit annual reports on the actual operation and emissions of the source.
12. Any changes in the information contained in the permit application must be approved via request, in writing, to BES.

Expiration Date: April 11, 1982

Issued this _____ day of _____, 19_____

4 Pages Attached.

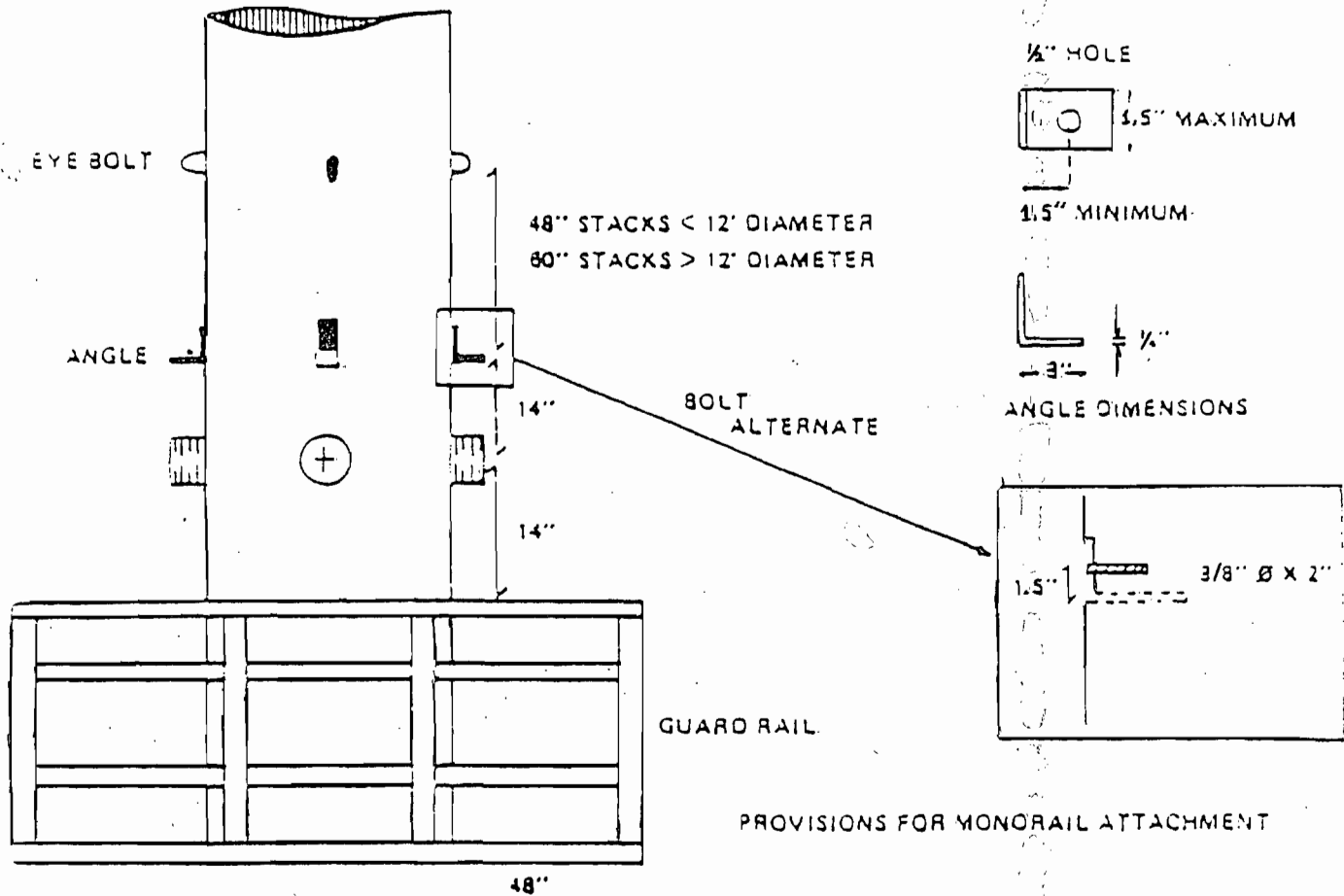
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Signature

PAGE 4 OF 4

Attachment 4

AN EYEBOLT AND ANGLE SHALL BE ATTACHED DIRECTLY ABOVE EACH PORT OF VERTICAL STACKS AND ABOVE EACH VERTICAL SET OF PORTS FOUND ON THE SIDES OF HORIZONTAL DUCTWORK 1.8 WORKING PLATFORMS. THE DIMENSIONS AND PLACEMENT OF THESE FIXTURES ARE SHOWN IN FIGURE 1-1.



IF EYEBOLT IS MORE THAN 120 INCHES ABOVE THE PLATFORM A PIECE OF CHAIN SHOULD BE ATTACHED TO IT TO BRING THE POINT OF ATTACHMENT WITHIN SAFE REACH. THE EYEBOLT SHOULD BE CAPABLE OF SUPPORTING A 500 POUND WORKING LOAD.

FLORIDA STEEL CORPORATION

"Steel when you want it"



JACKSONVILLE STEEL MILL DIVISION

HWY. 217, YELLOW WATER RD. • P. O. BOX 518 • BALDWIN, FL 32234

October 12, 1981

Mr. Bruce Mitchell
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301



Subject: Florida Steel Corporation
Billet Reheat Furnace
PSD-FL-074
A016-2691

Dear Mr. Mitchell:

Enclosed are five copies of a Construction Permit Application for the Billet Reheat Furnace at the Jacksonville Steel Mill.

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

Sincerely,

FLORIDA STEEL CORPORATION
Jacksonville Steel Mill

Robert B. Hutchens
Robert B. Hutchens
Division Manager

RBH:rf

Enclosure



10/9/81

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
APPLICATION TO ~~OPERATE~~ CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Billet Reheat Furnace New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification
COMPANY NAME: Florida Steel Corporation COUNTY: Duval
Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Oil-fired billet reheat furnace
SOURCE LOCATION: Street Yellow Water Rd. (SR 217) So. of I-10 City Jacksonville
UTM: East 405.7 North 3350.2
Latitude ° ' "N Longitude ° ' "W
APPLICANT NAME AND TITLE: Robert B. Hutchens, Plant Manager,
APPLICANT ADDRESS: Florida Steel Corporation, P. O. Box 518, Baldwin, FL 32234

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

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

*Attach letter of authorization

Signed: Robert B. Hutchens
Robert B. Hutchens, Plant Manager
Name and Title (Please Type)
Date: 10/12/81 Telephone No. (904)266-4261

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

This is to certify that the engineering features of this pollution control project have been ~~designed~~ examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: John B. Koogler
John B. Koogler, P.E.
Name (Please Type)
SHOLTES & KOOGLER ENVIRONMENTAL CONSULTANTS
Company Name (Please Type)
1213 NW 6th St., Gainesville, FL 32601
Mailing Address (Please Type)
Date: _____ Telephone No. (904)377-5822



Florida Registration No. 12925

¹See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

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.

The hours of operation of an existing billet reheat furnace are being increased from 4160 hours per year to 5256 hours per year, at rated capacity, so that the furnace can accommodate an increase in the production rate of an associated electric arc furnace.

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

Start of Construction N/A Completion of Construction N/A

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

NONE

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

A016-2691 issued 6/6/1977
expires 4/30/1982

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: Annual operating factor for the furnace at rated capacity will be 0.60 or 5256 hours per year.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?

NO

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

--

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

--

c. If yes, list non-attainment pollutants.

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

YES

3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII.

YES

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

NO

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

NO

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Steel Billets	NONE		180,000*	(1)
*Steel billets are heated, at a maximum rate of 90 tons/hour, to a temperature that is necessary for rolling. The billet weight does not change in the reheat furnace.				

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

- Total Process Input Rate (lbs/hr): 180,000
- Product Weight (lbs/hr): 180,000

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Part. Matter	8.8	23	17-2.630	8.8	8.8	23	(2)
Sulfur Dioxide	137.4	361	"	137.4	137.4	361	
Nitrogen Oxides	38.8	102	"	38.8	38.8	102	
CO	6.2	16	"	6.2	6.2	16	
Hydrocarbons	1.2	3	"	1.2	1.2	3	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
NONE				

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

⁴Emission, if source operated without control (See Section V, Item 3)

⁵If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
#4 Fuel Oil	26.8	29.8	185

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 0.7 Percent Ash: 0.03
 Density: 8.0 lbs/gal Typical Percent Nitrogen: Nil - Oil
 Heat Capacity: 18,500 BTU/lb 148,000 BTU/gal
 Other Fuel Contaminants (which may cause air pollution): NONE

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum

G. Indicate liquid or solid wastes generated and method of disposal.
NONE

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

Stack Height: 160 ft. Stack Diameter: 2.75 ft.
 Gas Flow Rate: ACFM Gas Exit Temperature: 579 °F.
 Water Vapor Content: 10 % Velocity: 42.6 FPS

SECTION IV: INCINERATOR INFORMATION
 NOT APPLICABLE

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste

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

Approximate Number of Hours of Operation per day days/week

Manufacturer

Date Constructed Model No.

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation. (See III,A)
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. (See Attachment 1)
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). (See Attachment 1)
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, etc.). (Not Applicable - No Control Equipment)
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). (Not Applicable - No Control Equipment)
6. An 8½" 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. (See Attachment 2)
7. An 8½" 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). (See Attachment 3)
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. (See Attachment 4)

9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
Particulate Matter	8.8 lb/hr (0.05 lb/10 ⁶ Btu)
Sulfur Dioxide	137.4 lb/hr (0.74 lb/10 ⁶ Btu-obtained by using oil with 0.7% sulfur)

- D. Describe the existing control and treatment technology (if any). (See Attachment 5 for BACT discussion. Attachment 5 is copies from PSD Application PSD-FL-074).

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency:* | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- 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*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- 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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

- a. Control Device
- b. Operating Principles:
- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- 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*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

- (7) Emissions*:

Contaminant	Rate or Concentration

- (8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

(8) Process Rate*:

10. Reason for selection and description of systems:

*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
(Refer to PSD Application PSD-FL-074)

A. Company Monitored Data

1. 1 no sites TSP SO₂* _____ Wind spd/dir
Period of monitoring 10 / 18 / 79 to 10 / 12 / 80
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

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. 5 Year(s) of data from 1 / 1 / 72 to 12 / 31 / 76
month day year month day year

2. Surface data obtained from (location) Jacksonville, Florida

3. Upper air (mixing height) data obtained from (location) Jacksonville, Florida

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

C. Computer Models Used

- CRSTER, unmodified Modified? If yes, attach description.
- PTMPW, unmodified Modified? If yes, attach description.
- PTMAX, unmodified Modified? If yes, attach description.
- _____ 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 on 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. (See Vols. I and II of PSD Application PSD-FL-074)

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

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.

(See Vol. I of PSD Application PSD-FL-074)

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.

POTENTIAL AND ACTUAL EMISSION CALCULATIONSBILLET REHEAT FURNACEParticulate Matter

$$\begin{aligned}\text{Hourly} &= 1250 \text{ gal/hour} \times 7 \text{ lb/1000gal} \\ &= 8.75 \text{ lb/hr}\end{aligned}$$

$$\begin{aligned}\text{Annual: Operating Factor} &= 0.6 \text{ from original application} \\ &= 1.25 \times 10^3 \text{ gal/hr} \times 7 \text{ lb/1000gal} \times 8760 \times 0.6 \times 1/2000 \\ &= 23.0 \text{ tons/year}\end{aligned}$$

Sulfur Dioxide

$$\begin{aligned}\text{Hourly} &= 1250 \text{ gal/hr} \times [157(0.7)] \times 1/1000 \\ &= 137.4 \text{ lb/hr}\end{aligned}$$

$$\begin{aligned}\text{Annual} &= 1.25 \times 10^3 \times 157(0.7) \times 8760 \times 0.6 \times 1/2000 \\ &= 361.1 \text{ tons/year}\end{aligned}$$

Nitrogen Oxides

$$\begin{aligned}\text{Hourly} &= 1250 \times [22 + 400(0.15)^2] \times 1/1000 \\ &= 38.8 \text{ lb/hour}\end{aligned}$$

$$\begin{aligned}\text{Annual} &= 1250 \times 31/1000 \times 8760 \times 0.6 \times 1/2000 \\ &= 101.8 \text{ tons/year}\end{aligned}$$

Carbon Monoxide

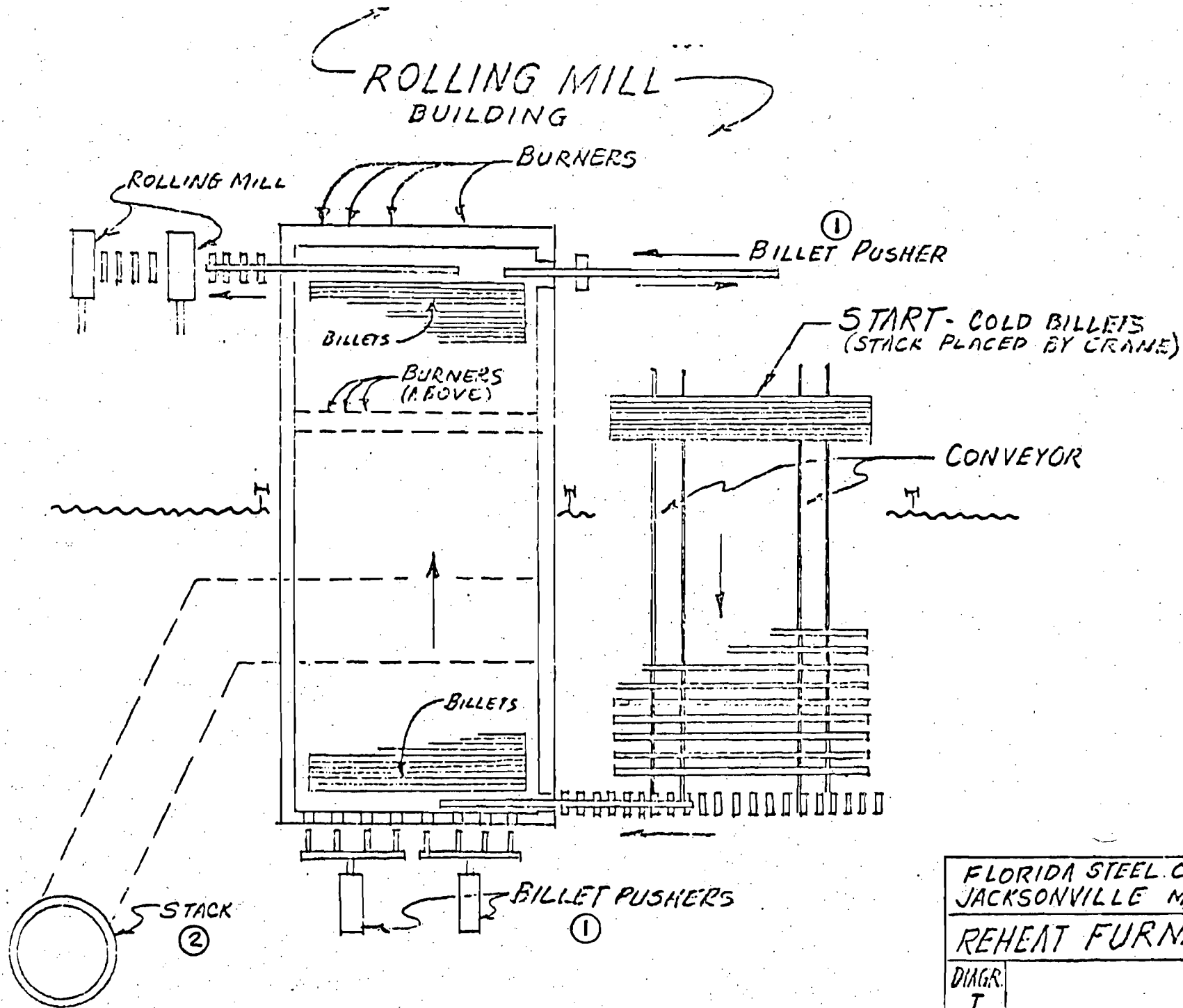
$$\begin{aligned}\text{Hourly} &= 1250 \times 5/1000 \text{ lb/gal} \\ &= 6.25 \text{ lb/hour}\end{aligned}$$

$$\begin{aligned}\text{Annual} &= 1250 \times 5/1000 \times 8760 \times 0.6 \times 1/2000 \\ &= 16.4 \text{ tons/year}\end{aligned}$$

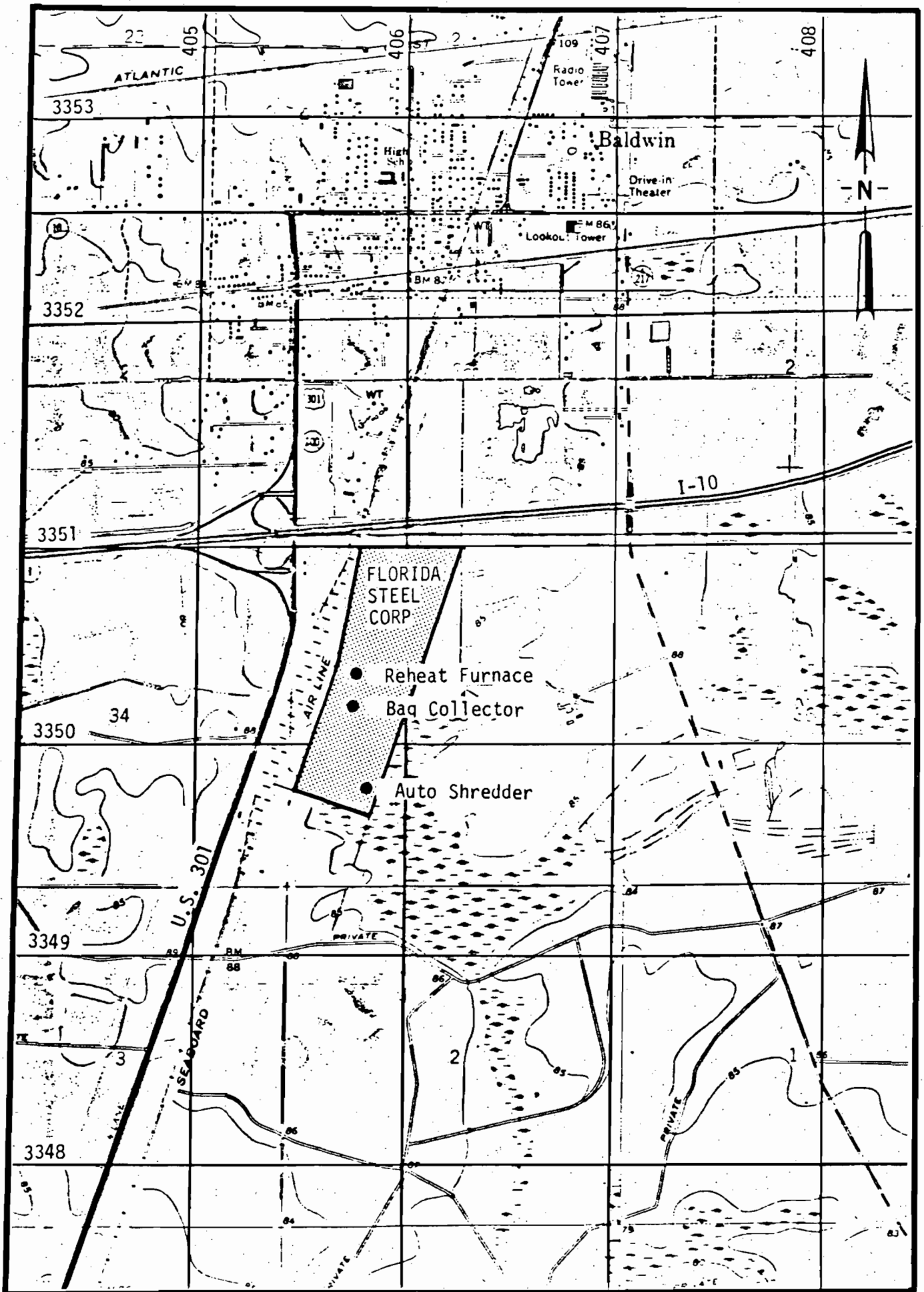
Hydrocarbons

$$\begin{aligned}\text{Hourly} &= 1250 \times 1/1000 \text{ lb/gal} \\ &= 1.25 \text{ lb/hr}\end{aligned}$$

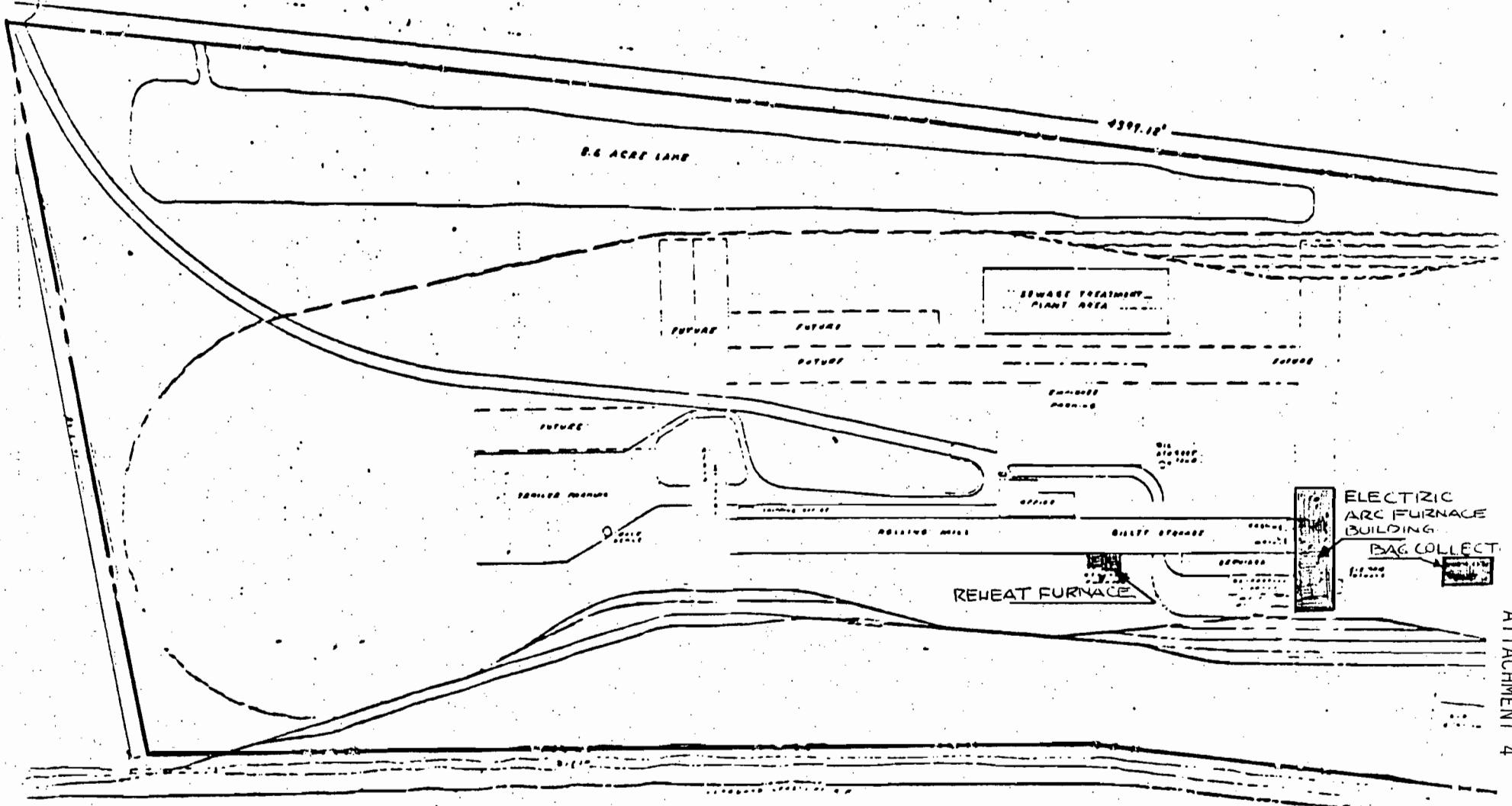
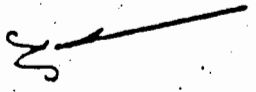
$$\begin{aligned}\text{Annual} &= 1250 \times 1/1000 \times 8760 \times 0.6 \times 1/2000 \\ &= 3.3 \text{ tons/year}\end{aligned}$$



FLORIDA STEEL CORP JACKSONVILLE MILL	
REHEAT FURNACE	
DIAGR. I	DR: 9-57 J.P.H.



YELLOW WATER ROAD





SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-79-10

June 5, 1981

Mr. Steve Smallwood
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: Federal PSD Review
Florida Steel Corporation
Baldwin Mill

Dear Mr. Smallwood:

This letter is in response to your letter dated June 1, 1981 in which you set forth several issues which require clarification or additional information relative to the Federal PSD Application for the subject source. The issues raised in your letter were raised either by Mr. Roger Pfaff of EPA, Region IV in Atlanta or by Mr. Jeff Shumaker of TRW; a contractor to EPA. I will respond to the issues using the same numeration as used in your letter of June 1st.

- A1) Since the entire facility will be reviewed under existing PSD regulations we have calculated emissions of all pollutants that will be emitted from the mill including emissions from secondary sources. These emissions are summarized in Attachment 1 to this letter. All of the emissions were used in the Air Quality Review for the facility.
- A2) The assessment of the impact of mill emissions on soils, vegetation and visibility will not change as a result of including the total emissions from the facility above the baseline in the Air Quality Review since this is the assumption used in the initial secondary impacts assessment.

The air quality modeling for particulate matter, sulfur dioxide, carbon monoxide and nitrogen oxides indicates that the expected levels of these pollutants will be well below the secondary air quality standards established for these pollutants; standards which have been developed with the margin of safety to protect to human health and welfare. The emissions used in this Air Quality Review include all of the emissions from the mill, the automobile shredder located adjacent to the mill and from secondary emissions resulting from truck, rail and automobile traffic to and from the mill.

The mill is located in an industrial area at the intersection of Interstate 75 and U.S. 301. The area includes a major rail yard, a major truck stop and other minor commercial sources. There are no residences within approximately one mile of the mill and no significant commercial crops with the exception of possibly planted pines. The emissions from the mill have not had a significant impact on the soils or vegetation within the area since the mill began operation in 1976 and the continued operation of the mill is not expected to adversely impact soils or vegetation in the area.

Florida Steel is making major efforts to reduce fugitive emissions from the mill which will reduce the impact of the facility on visibility. The electric arc furnace building is being 95 percent enclosed, the building vent system is being upgraded and the vent system on the electric arc furnace is being greatly improved. These steps will reduce fugitive emissions so that the combination of fugitive emissions and point source emissions will not create a significant impact on the visibility in the area.

- A3) Billet Reheat Furnace BACT Review. The purpose of the billet reheat furnace is to heat cold billets to the temperature necessary for rolling. This furnace is fired with a No. 4 fuel oil with 0.7 percent sulfur content and 0.15 percent nitrogen content. The maximum heat input to the furnace is 185 million Btu per hour.

EPA has determined in the past that Best Available Control Technology for fuel burning sources with a heat input of less than 250 million Btu per hour is the use of a fuel oil that will minimize particulate matter, sulfur dioxide and nitrogen oxides emissions. Another alternative for controlling nitrogen oxides emissions is the use of low-NO_x burners. Particulate matter and sulfur dioxide can also potentially be controlled by add-on control devices such as electrostatic precipitators or fabric filter collectors.

Florida Steel has elected to use a fuel oil which will reduce sulfur dioxide, particulate matter and nitrogen oxide emissions. In addition, the inherent nature of the furnace results in a relatively large amount of excess air in the furnace. This quenches the peak flame temperature more rapidly than would be experienced in a furnace operating with low excess air. This in turn minimizes NO_x emissions much the way a low-NO_x burner would.

Florida Steel is proposing to use No. 4 fuel with 0.7 percent sulfur and 0.15 percent nitrogen. Other fuels that Florida Steel could have used were No. 2 fuel oil with approximately 0.2 percent sulfur and a No. 6 fuel oil with between 1.5 and 2.5 percent sulfur and about 0.5 percent nitrogen. The cost of the various fuels and the cost per million Btu are:

No. 2 Fuel \$0.8901/gallon, or \$6.40 per million Btu,
No. 4 Fuel \$0.6523/gallon, or \$4.50 per million Btu, and
No. 6 Fuel \$0.5224/gallon, or \$3.48 per million Btu.

Assuming a mill production of 440,172 tons per year and a billet heat requirement of 1.1 million Btu per ton, the use of the No. 4 fuel will cost Florida Steel approximately \$490,000 per year in excess of what the use of No. 6 fuel would cost. The use of No. 2 fuel oil will cost Florida Steel \$1.4 million in excess of what No. 6 fuel will cost and \$920,000 in excess of what No. 4 fuel will cost.

Considering the cost associated with fuel and the impact of billet reheat emissions ambient air quality, Florida Steel elected to use the No. 4 fuel oil as Best Available Control Technology for minimizing emissions from the billet reheat furnace.

- A4) Florida Steel has conducted particulate matter monitoring in the vicinity of the site and has used these data in the original permit application to demonstrate that air quality standards are not threatened by the existing mill and also used these data to establish background particulate matter levels. Since the modifications proposed for the mill will result in a decrease in actual particulate matter emissions in the area, it is apparent that the modifications will not result in a threat to ambient air quality standards. The air quality modeling conducted by Florida Steel also verifies that particulate matter air quality standards and particulate matter PSD increments will not be threatened.

Air quality review also demonstrates that sulfur dioxide, carbon monoxide and nitrogen oxide air quality standards will not be threatened. Because the air quality review demonstrates air quality standards and PSD increments will not be threatened Florida Steel is of the opinion that preconstruction monitoring is not necessary.



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS

1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-79-10

October 9, 1981

Mr. R. Bruce Mitchell
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: Florida Steel Corporation
Billet Reheat Furnace
PSD-FL-074
A016-2691



Dear Mr. Mitchell:

I received your letter of October 7, 1981 regarding the permit conditions for the Florida Steel Corporation Billet Reheat Furnace and the manner in which these permit conditions will be incorporated into the Florida Steel Mill modification PSD Approval. I was quite surprised by the letter and equally perturbed.

In August of this year we had a telephone conversation in which you pointed out an inconsistency between the hours of operation stated in the current billet reheat furnace operating permit (A016-2691) and the hours of operation stated for the Billet Reheat Furnace in Federal PSD Application (PSD-FL-074). During this conversation it was agreed that the inconsistency could best be resolved by modifying the existing operating permit for the billet reheat furnace. The Air Quality Review and BACT Analysis for the billet reheat furnace had already been addressed in the referenced PSD Application.

As a result of this conversation I mailed to your office, on August 28, 1981, the revised pages from the existing billet reheat furnace operation necessary to modify the operating permit. A copy of this correspondence is attached.

Following this correspondence, I spoke with you in Tallahassee on September 9, 1981 regarding a few questions you had related to the permit applications for the Florida Steel Mill modification. During this conversation it was suggested that a Construction Permit Application fee of \$20.00 be forwarded to the Florida Department of Environmental

Regulation so that the materials submitted and related to the billet reheat furnace could be considered a Construction Permit Application to modify the hours of operation of the billet reheat furnace. During the conversation nothing was said of preparing a Construction Permit Application for the billet reheat furnace.

On September 14, 1981 we mailed to your office a check for \$20.00 payable to the Florida Department of Environmental Regulation specifying the check was an application fee for a Construction Permit Application to allow the proposed modification to the furnace. I further stated in the letter that if anything further was required that I should be contacted. A copy of this correspondence is also attached.

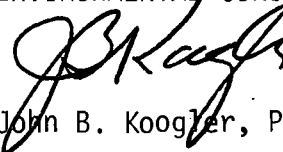
I was not contacted by your office requesting further information until I received your letter of October 7. From the above described history of the matter I believe you can understand the reason for my surprise at the receipt of your letter.

To resolve matters, I have prepared a Construction Permit Application for the Billet Reheat Furnace and have enclosed a copy for your immediate review. Five copies of the application have been forwarded to the Florida Steel Corporation Baldwin Mill for signature by the plant manager. By this letter I am asking that they be signed and forwarded to your office.

I certainly hope that the emission rates and hours of operation contained in the attached permit application become a part of the permit conditions for the modified mill rather than the permit conditions contained in the original Billet Reheat Furnace Operating Permit. If you have any questions regarding the enclosed application or if anything further is required to complete the permitting of the modified mill, please contact me.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

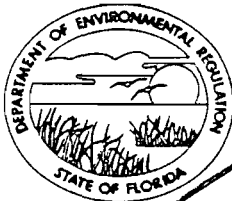


John B. Koogler, Ph.D., P.E.

JBK:ls
Attachment

cc: Mr. Clair Fancy, FDER
Mr. John Hilburn, Florida Steel Corporation
Mr. Robert Hutchins, Florida Steel Corporation

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



BOB GRAHAM
GOVERNOR
JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

File

FL. TIMES UNION
1 RIVERSIDE AV
JACKSONVILLE, FL 32202

10-9-81

Dear Sir:

We are forwarding to you a legal/~~classified~~ advertisement to be published:

MONDAY
10-19-81
ONE TIME ONLY

Subject: PROPOSED AGENCY ACTION

To ensure prompt payment, please send an invoice and proof of publication for legal ads to the address below:

Department of Environmental Regulation
PURCHASING OFFICE
2600 Blair Stone Road
Tallahassee, FL 32301

If you have any questions, please contact us at 904/488/0870.

Sincerely,

W H Wallace
William H. Wallace
Purchasing Office



Enclosure: (1)

NOTICE OF PROPOSED AGENCY ACTION

The Florida Department of Environmental Regulation (DER) has received an application from and intends to issue a Construction/Modification Permit to Florida Steel Corporation for an increase in permitted annual operating hours of their existing Billet Reheat furnace located at their facility in Baldwin, Duval County, Florida. A determination of Best Available Control Technology was required. Copies of the Applications, BACT Determination, Technical Evaluation, and Departmental Intent are available for inspection at the following offices:

FDER, St. Johns River Subdistrict	DER, Bureau of Air Quality Mgmt.
3426 Bills Road	2600 Blair Stone Road
Jacksonville, Florida 32207	Tallahassee, Florida 32301

Comments on this action shall be submitted in writing to Bill Thomas of the Tallahassee office, within 30 days of this notice.

To appear in: Jacksonville
Florida Times-
Union on 10/19/81

*To purchasing
10/9/81*

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

October 7, 1981

Dr. Robert Sholtes and Dr. John Koogler
Sholtes and Koogler, Environmental Consultants
1213 NW 6th Street
Gainesville, Florida 32601

RE: Florida Steel Corporation, Billet Reheat Furnace

Dear Sirs:

I recently received a part of an application on Florida Steel Corporation to modify their existing billet reheat furnace. It was not a complete application and was on an old application form. Therefore, it will be assumed that the old application on the billet reheat furnace, dated 4-22-77, will become a part of the modification package.

If there are any questions please call me at (904) 488-1344.

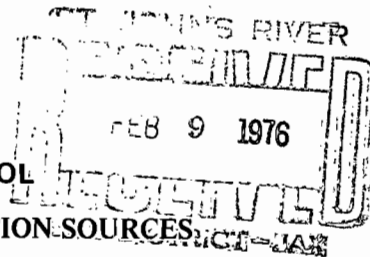
Sincerely,

R. Bruce Mitchell
Bureau of Air Quality Management
Central Air Permitting Section

RBM:caa



STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL



APPLICATION TO OPERATE/CONSTRUCT POLLUTION SOURCES

SECTION I - GENERAL INFORMATION FOR ALL POLLUTION SOURCES
I TO BE FILLED IN BY APPLICANT

Source Type: Air Pollution
Type application: Operation Temporary Operation Construction
Status Source: New Existing Modification

Source Name: Florida Steel Corporation County: Duval
Source Location: Street: Yellow Water Rd. (SR 217) near Interstate 10 and Hwy. 301 City: Jacksonville
(Water Source Only) Lat: _____ Long: _____
(Air Source Only) UTM: East - 406300 North = 3350500

Appl. Name and Title: D. J. Andrew, Manager, Jacksonville Steel Mill
Appl. Address: Florida Steel Corporation, P.O.Box 37116, Jacksonville, Fla. 32205

II TO BE FILLED IN BY REGION (*BY BUREAU OF PERMITTING)

Control No: _____ Region _____ County _____ Type _____ *Project _____

Type Permit	Date Rec'd	*Permit No.	*Issue Date	*Compl. Date	*Exp. Date
_____	_____	_____	_____	_____	_____

Source Description: _____
Control Equipment: _____

Water Permits

Receiving Body Code: _____ Surface Water Code: _____
Station No.: Influent: _____ Effluent: _____

Effluent:	Average	Design	% Reduction
Flow rate, MGD	_____	_____	_____
BOD, lbs/day	_____	_____	_____
Susp. Sol., lbs/day	_____	_____	_____
Other: _____	_____	_____	_____

Air Permits

Operating Time: Continuous Intermittent
Fuel: Type _____ M-BTU/hr. In Put _____
Incinerator: Capacity, tons/day _____ Type Waste _____
Mfg. & Model _____

Pollutant Emissions, lbs/day	Actual	Design	Allowable
Particulate	_____	_____	_____
Sulfur Oxides	_____	_____	_____
Other: _____	_____	_____	_____

Implementation: Estimated Appl. Filing Date _____
Estimated Start of Const. _____ Estimated Compliance Date _____

DESCRIPTION OF PROPOSED PROJECT

A. Describe the nature and extent of the proposed project. Refer to existing pollution control facilities, DPC permits, conditions, orders and notices, expected improvement in performance of the facilities and state whether the proposed project will result in full compliance of the source. Attach additional sheet if necessary.

The reheat furnace is a two-zone, recuperative furnace capable of utilizing #2 thru #6 fuel oil at a maximum heat input of 185 million BTU per hour (for #6). Its purpose is to heat steel billets (having a 4 1/2" square cross-section and a maximum length of 30') from "room temperature" to 2100° - 2200° so they can be rolled in a continuous rolling mill into finished steel products. Under these conditions its maximum capacity is 90 tons her hour. Designed by Bricmont & Assocs. of Pittsburgh, the burners and combustion system will be furnished by Bloom Engineering and the furnace will be built by Florida Steel Corp. Billet flow is shown in Diagram I. While being pushed through the furnace, billets are heated by ten burners in Zone 1. Twelve burners at the discharge end of the furnace furnish heat in the soaking zone. Inside dimensions of the furnace are 32' x 63'. Stack height 160'.

B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Federally or State Financed Projects only:

Planning Complete _____

Financing Program Complete _____

Indicate other local, state and/or federal agency approvals and dates _____

All projects:

Start of Construction MARCH 15, 1976 _____

Completion of Construction NOVEMBER 1, 1976 _____

C. Costs of Construction (Show a breakdown of costs for individual components/units of the proposed project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit.

There is no pollution control equipment.

Estimated cost of the furnace is \$1,500,000.

D. Indicate any previous DPC permits, issuance dates, and expiration dates.

None

DESCRIPTION OF PROPOSED PROJECT

A. Describe the nature and extent of the proposed project. Refer to existing pollution control facilities, DPC permits, conditions; orders and notices, expected improvement in performance of the facilities and state whether the proposed project will result in full compliance of the source. Attach additional sheet if necessary.

The reheat furnace is a two-zone, recuperative furnace capable of utilizing #2 thru #6 fuel oil at a maximum heat input of 185 million BTU per hour (for #6). Its purpose is to heat steel billets (having a 4 1/2" square cross-section and a maximum length of 30') from "room temperature" to 2100° - 2200° so they can be rolled in a continuous rolling mill into finished steel products. Under these conditions its maximum capacity is 90 tons per hour. Designed by Bricmont & Assocs. of Pittsburgh, the burners and combustion system will be furnished by Bloom Engineering and the furnace will be built by Florida Steel Corp. Billet flow is shown in Diagram I. While being pushed through the furnace, billets are heated by ten burners in Zone 1. Twelve burners at the discharge end of the furnace furnish heat in the soaking zone. Inside dimensions of the furnace are 32' x 63'. Stack height 160'.

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There is no pollution control equipment.

Estimated cost of the furnace is \$1,500,000.

D. Indicate any previous DPC permits, issuance dates, and expiration dates.

None

AIR POLLUTION SOURCES & CONTROL DEVICES

A. Identification of Air Contaminants

- 1) Particulates
 - a) Dust
 - b) Fly Ash
 - c) Smoke
 - d) Other (Identify)
- 2) Sulfur Compounds
 - a) SO_x as SO₂
 - b) Reduced Sulfur as H₂S
 - c) Other (Identify)
- 3) Nitrogen Compounds
 - a) NO_x as NO₂
 - b) NH₃
 - c) Other (Identify)
- 4) Fluorides
- 5) Acid Mist
- 6) Odor
- 7) Hydrocarbons
- 8) Volatile Organic Compounds
- 9) Other (Specify): _____

B. Raw Materials and Chemicals Used (Be Specific)

Description	Utilization Tons/day, lbs./day, etc.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
Steel Billets	1000 Tons/day	None	-	Diagram I

C. Process Weight:

- 1) Total Process Weight Rate 180,000 lbs./hr. [See Sec. 17-2.04(2)] (Max.)
- 2) Product Weight 180,000 lb./hr. expressed as billet tons
- 3) Normal Operating Time 16 hrs/day, if seasonal describe: _____
5 day/week, 52 weeks/year

D. Airborne Contaminants Discharged: Based upon "Compilation of Air Pollutant Emission Factors," Feb. 1972, EPA, Table 1-5

Name of Contaminant	Calculated Max. Discharge	Discharge Criteria*	Allowable Discharge*	Relate Location to Flow Diagram
Particulate	25.6 lb/hr	LAT	LAT	Diagram I
Sulfur Dioxide	136 lb/hr	LAT	LAT	Diagram I

* Refer to Chapter 17-2 Florida Administrative Code
(Discharge Criteria: Process Weight Rate, #/tonP₂O₅, #/M BTU/hr etc.)

E. Control Devices:

Name	Eff.	Conditions of Operation, Particle Size Range, etc.	Relate to Flow Diagram
NONE			

F. Fuels:

Type (Be specific) **	(Gallons) Daily Consumption		Heat Input BTU/hr X 10 ⁶		Relate to Flow Diagram
	MAX.	NORMAL	MAX.	NORMAL	
Blend: 20% #6, 80% Distillate	36,192	21,600	185	110	Diagram I
Fuel Oil, (Max. sulfur 0.7%)					

G. Describe briefly, without revealing trade secrets, the unit processes/operations generating the airborne emissions identified in this application:

Steel billets (at room temperature) are heated directly to 2000°-2100° F by combustion gases (and radiation) which pass directly overhead and out the flue below the furnace. This softens the steel so it can be "hot rolled" in a mill. Firing rate varies with the product rolled.

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

Mill scale in small quantities is used as an oxidizer in the melting operation or sold for use in ferro-cement.

** See Eastern Seaboard Petroleum Co. letter of August 21, 1975

E. Control Devices:

Name	Eff.	Conditions of Operation; Particle Size Range, etc.	Relate to Flow Diagram
NONE			

F. Fuels:

Type (Be specific) **	(Gallons)		Heat Input		Relate to Flow Diagram
	Daily Consumption		BTU/hr X 10 ⁶		
	MAX.	NORMAL	MAX.	NORMAL	
Blend: 20% #6, 80% Distillate	36,192	21,600	185	110	Diagram I
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Mill scale in small quantities is used as an oxidizer in the melting operation or sold for use in ferro-cement.

** See Eastern Seaboard Petroleum Co. letter of August 21, 1975

STATEMENTS BY APPLICANT AND ENGINEER

A. Applicant

The undersigned owner or authorized representative of * Florida Steel Corporation is fully aware that the statements made in this application for a construction permit are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403 Florida Statutes and all the rules and regulations of the Department or revisions thereof. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted establishment.

Dennie J. Andrew

Signature of the Owner or Authorized Representative

Dennie J. Andrew, Manager, Jacksonville Mill

Name and Title (Please Type)

Date: Oct 7, 1975 Telephone No.: 226-4226

* Attach a letter of authorization

B. Professional Engineer Registered in Florida:

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the control and discharge of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution source(s) with appropriate control facilities, when properly maintained and operated, will comply 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 the applicant a set of instructions for the proper maintenance and operation of the installation covered in this application.

Signature

Charles A. Sutton

Name: Charles A. Sutton
(please type)

Mailing Address: Florida Steel Corporation
P. O. Box 37116
Jacksonville, Fla. 32205
Telephone No.: (904) 783-0201

Florida Registration Number 3855
(Please affix seal)

Date: October 7, 1975

If applicant is a corporation, a Certificate of Good Standing must be submitted with application.

This may be obtained, for a \$5.00 charge, from the Secretary of State, Bureau of Corporate Records, Tallahassee, Florida 32304.

PERMITTED

BY

LOWER ST. JOHNS RIVER SUB DISTRICT
DEPARTMENT OF ENVIRONMENTAL REGULATION

PERMIT NO. AL 16-2546

DATE 2/18/76

Stack data

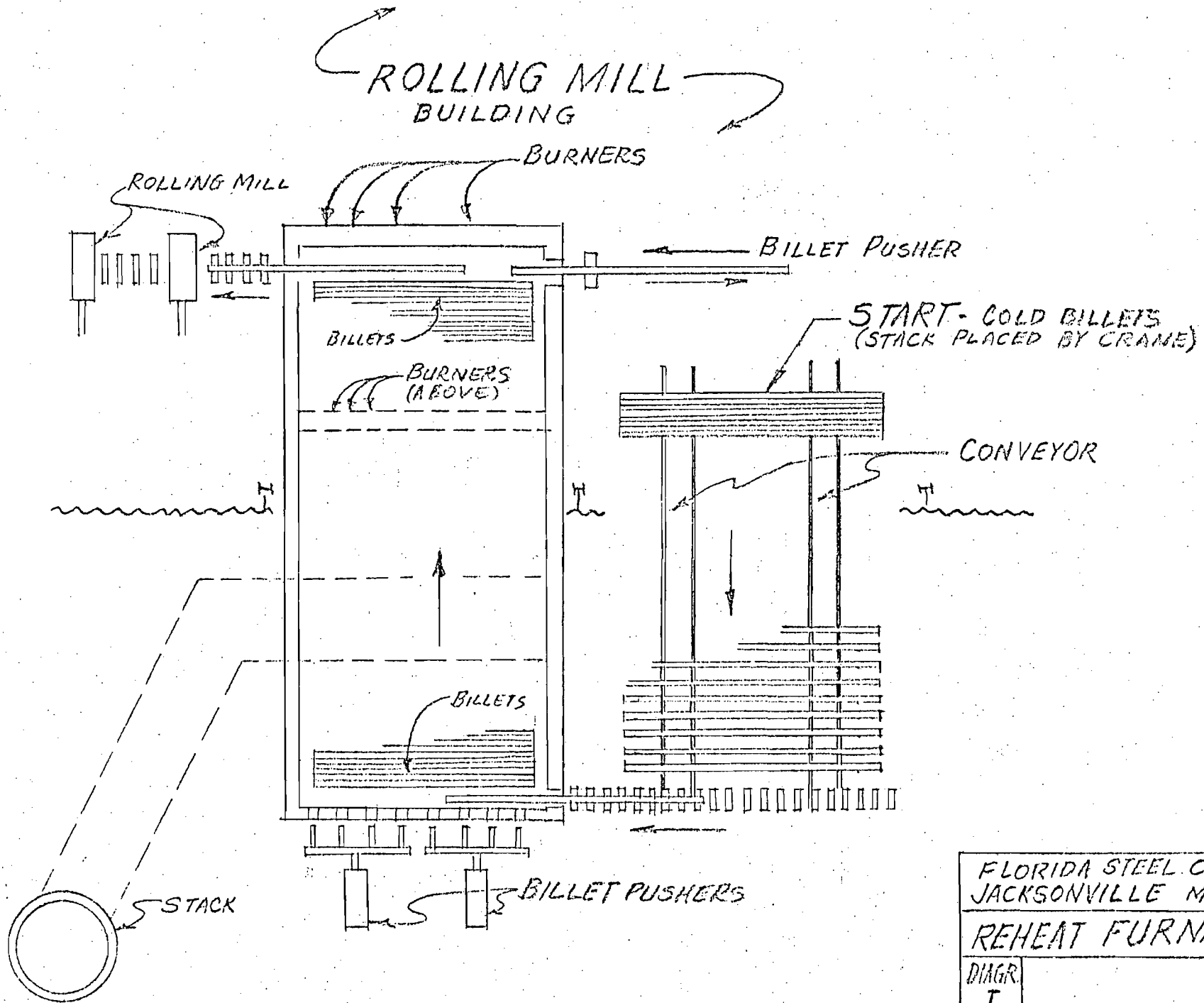
Height 160'

Width 7'4"

Temp 107.9°

Flow Rate 34500 CFM at 107.9°

from P.E. on phone



FLORIDA STEEL CORP JACKSONVILLE MILL	
REHEAT FURNACE	
DIAGR. I	DR: 9-5-75 J.F.H.

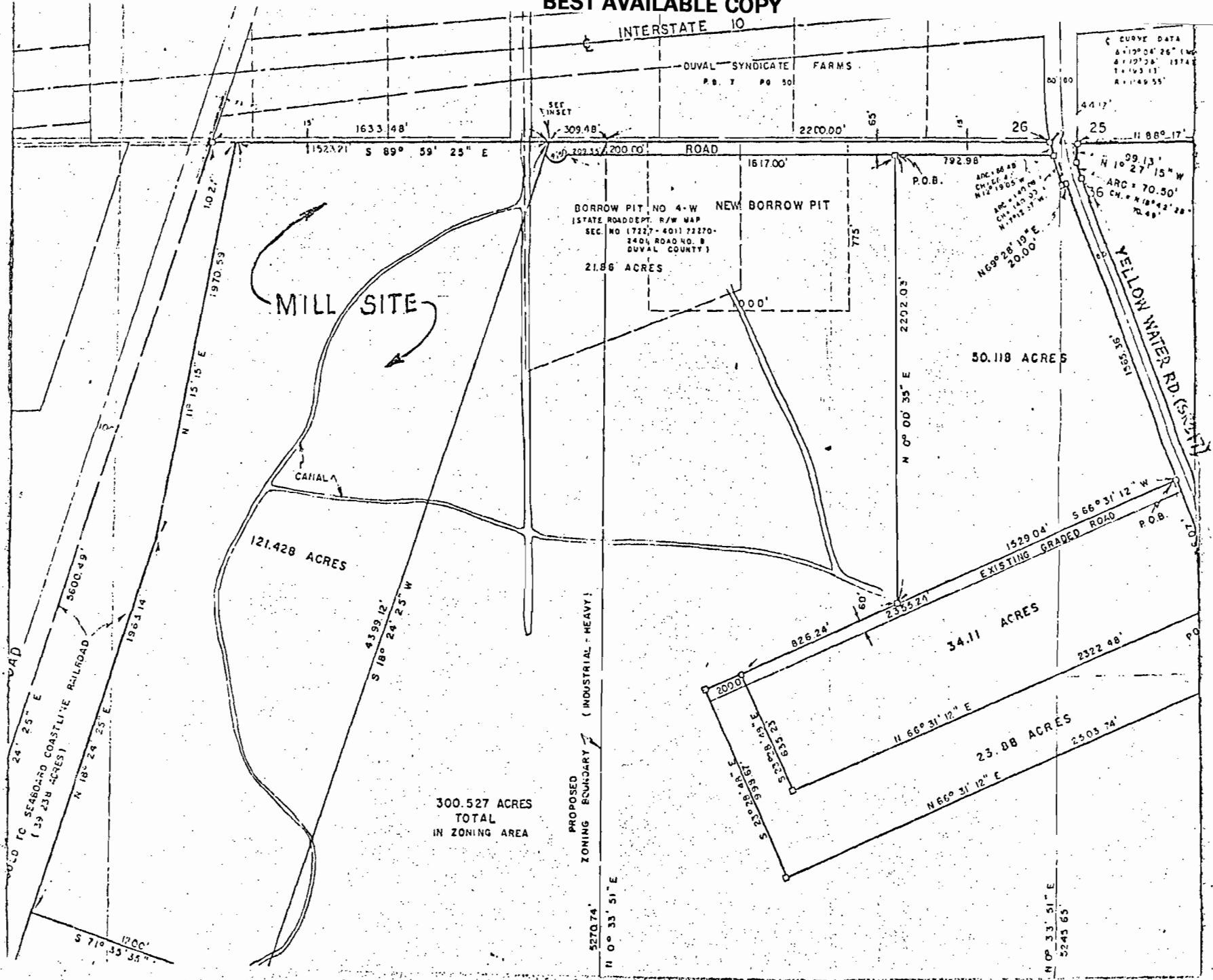
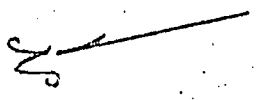


DIAGRAM II-A - MILL SITE LOCATION
SEC. 35, T-2S, R-23E, DUVAL CTY

Diagram II-B - SITE LAYOUT

WATER ROAD

50



4399.12'

8.6 ACRE LAKE

FUTURE

FUTURE

FUTURE

FUTURE

FUTURE

TRAILER PARKING

WELD SCALE

WATER TOWER

SHIPPING OFFICE

ROLLING MILL

OFFICE

BILLET STORAGE

CASTING

DIE STORAGE TANK

REHEAT FURNACE

SERVICES

RESTROOMS

STORAGE

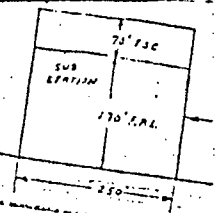
OFFICE

ELECTRIC SUBSTATION

RAILROAD AREA

DITCH

SEWARD COASTLINE R.R.



EASTERN SEABOARD PETROLEUM COMPANY, INC.

P. O. BOX 3233, STATION F — 6531 EVERGREEN AVE.

JACKSONVILLE, FLORIDA 32208

OFFICES

JACKSONVILLE
TAMPA

TELEPHONE 904/355-9678

CABLE ADDRESS
EASTPET

August 21, 1975

Mr. J. McCullough
Florida Steel Corporation
P. O. Box 37116
Jacksonville, Florida 32205

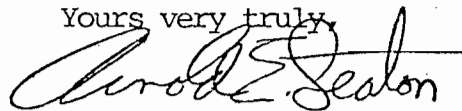
Dear Mr. McCullough:

In accordance with our telephone conversation today, following is the fuel oil specification you requested for typical 0.7 Low Sulphur Fuel Oil:

Flash Point	187°F
API Gravity	
@ 60°/60°	25.05
Sulfur	0.65%
Viscosity, SSU	
@ 100°F	71.5 seconds

If I can be of further help, please let me know.

Yours very truly,



Arnold E. Seaton
Accountant

AES/cr
CC: BWM

FLORIDA STEEL
CORPORATION

"Steel when you want it"



GENERAL OFFICES

1715 CLEVELAND ST. • P. O. BOX 23328 • TAMPA, FLA. 33622

FROM THE OFFICE OF
THE PRESIDENT

April 2, 1975

LETTER OF AUTHORIZATION

TO WHOM IT MAY CONCERN:

This authorizes D. J. Andrew, Manager, Jacksonville Steel Mill Division to act as the general agent of this corporation for the construction and operation of a steel mill in the City of Jacksonville.

Yours very truly,

FLORIDA STEEL CORPORATION

Edward L. Flom
Edward L. Flom

ELF:mew

DIVISIONS

FORT MYERS, FLORIDA • JACKSONVILLE, FLORIDA • MIAMI, FLORIDA • ORLANDO, FLORIDA • TAMPA, FLORIDA
CHARLOTTE, NORTH CAROLINA • RALEIGH, NORTH CAROLINA • AIKEN, SOUTH CAROLINA • ATLANTA, GEORGIA • INDIANTOWN, FLORIDA

State of Florida

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices
And/Or To Other Than The Addressee

To: _____	Loctn.: _____
To: _____	Loctn.: _____
To: _____	Loctn.: _____
From: _____	Date: _____

TO: Victoria Tschinkel
FROM: Steve Smallwood
DATE: October 1, 1981
SUBJ: BACT Determination for Florida Steel Corporation

Attached, please find a BACT determination for the billet reheat furnace to be constructed/modified in Baldwin, Duval County, Florida.

We recommend that you approve and sign the determination, the results of which will be made specific conditions of the construction permit.

SS/bjm

Best Available Control Technology (BACT) Determination

Florida Steel Corporation

Duval County

The applicant proposes to increase product output from an existing billet reheat furnace located at their facility in Baldwin, Florida. The 90 ton per hour billet reheat furnace is currently permitted (AO 16-2691) to operate 4160 hours per year. The applicant requests the 4160 be changed to 4891 hours per year, an increase of 731 hours. The change in operating hours is necessary to process the increased output from the upstream electric arc furnace. Consumption of No. 4 fuel oil is 32 barrels per hour at maximum furnace throughput.

Air Emissions Inventory (Ton/year):

<u>Pollutant</u>	<u>Permitted</u>	<u>Requested</u>	<u>Increase</u>
Particulates	19.60	23.04	3.44
SO ₂	307.50	361.52	54.02
NO ₂	86.74	101.98	15.24
CO ^x	14.00	16.46	2.46
HC	2.80	3.29	.49

BACT Determination Requested by the Applicant:

<u>Pollutant</u>	<u>Emission Limit</u>
Sulfur Dioxide	Use of low sulfur fuel oil

Date of Receipt of a BACT Application:

September 21, 1981

Date of Publication in the Florida Administrative Weekly:

October 9, 1981

Review Group Members:

This determination was based upon information from the New Source Review Section and the Air Modeling Section.

BACT Determination by DER:

Operation of the billet reheat furnace will not exceed 4891 hours per year.

The increase in the annual SO₂ emissions due to the operating schedule change will be minimized by using No. 4 new ⁽¹⁾ fuel oil with a sulfur content not to exceed 0.7 percent by weight.

(1) The term "new oil" means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

Justification of DER Determination:

The increased operational schedule is a result of modifications made to the electric arc furnace, for which a federal PSD application is currently being reviewed (PSD-FL-074). The State permit for the billet reheat furnace is being revised to be consistent with the information being reviewed for the Federal permit.

Atmospheric dispersion modeling predicts no violation of the sulfur dioxide increment using fuel oil with a maximum sulfur content of 0.7 percent.

The term "new oil" is included to prevent the use of re-refined or waste oil as fuel, emissions from which were not considered in this BACT analysis.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

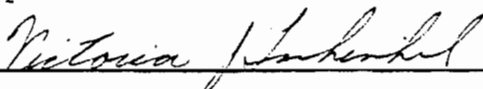


Steve Smallwood, Chief, BAQM

Date:

10/2/81

Approved:



Date:

11/5/81



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS

1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-79-10

September 14, 1981

Mr. Clair Fancy
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

RE: Florida Steel Corporation
Baldwin, Florida
Billet Reheat Furnace



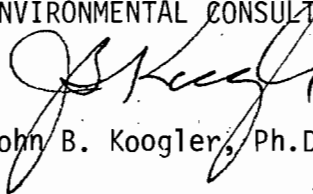
Dear Mr. Fancy:

In accordance with our discussion of September 9, 1981 regarding the modification to the Florida Steel billet reheat furnace, I have enclosed a \$20.00 check payable to the Florida Department of Environmental Regulation for the application fee for a construction permit to allow the proposed modification.

If anything further is required please contact me.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS


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

JKB:ls

cc: Bruce Mitchell, EPA
John Hilburn, Florida Steel Corporation
Robert Hutchens, Florida Steel Corporation

*Fla Steel Corp. file
AC16-41114*

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#000000047926 COE# DER PROCESSOR:MITCHELL DER OFFICE:TLH
FILE NAME:FLA STEEL CORP DATE FIRST REC: 09/21/81 APPLICATION TYPE:AC
APPL NAME:HUTCHENS APPL PHONE:(904)266-4261 PROJECT COUNTY:16
ADDR:P O BOX 518 CITY:BALDWIN ST:FLZIP:32234
AGNT NAME:KOOGLER AGNT PHONE:(904)377-5822
ADDR:1213 CITY:NW 6TH STREET ST:FLZIP:32601

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: / / COMMENTS NEC:Y DATE REQ: / / DATE REC: / /
LETTER OF INTENT NEC:Y DATE WHEN INTENT ISSUED: / / WAIVER DATE: / /

HEARING REQUEST DATES: / / / / / /
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N

FEE PD DATE#1:09/21/81 \$0020 RECEIPT#00033580 REFUND DATE: / / REFUND \$
FEE PD DATE#2: / / \$ RECEIPT# REFUND DATE: / / REFUND \$
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:AC DATE:09/21/81
REMARKS: MODIFICATION TO A016-2691

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

No. 33580

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Sholtes & Kroger Environmental Consultants Date 21 SEPT 1981

Address 1213 NW 6th Street - Gainesville, FL Dollars \$ 70⁰⁰

Applicant Name & Address Almida Steel Corp. - 3261 P.O. Box 518
Goldwin, FL 32734

Source of Revenue _____

Revenue Code 0101 Application Number AC 16-47926

By Jim Powell

Rec'd ✓ 21 Sept '81
Receipt # 33580

SK SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

AC 16-47926

August 28, 1981

Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301



Subject: Duval County AP
Florida Steel Corporation
Billet Reheat Furnace
AO 16-2691

Dear Mr. Smallwood:

In accordance with a recent request from your office we are modifying the existing State operating permit for the Billet Reheat Furnace operated by the Florida Steel Corporation in Baldwin, Florida so that the operating permit is consistent with information included in a Federal PSD Application that is currently being reviewed by your office (PSD-FL-074).

The existing operating permit for the Billet Reheat Furnace (AO 16-2691) was issued on June 6, 1977 and expires on April 30, 1982. In the application submitted for this permit it was stated that the Billet Reheat Furnace would operate 16 hours a day, 5 days a week and 52 weeks per year, for a total annual operating time of 4160 hours. This translates to an annual operating factor of 0.475.

In order for the Billet Reheat Furnace to accomodate the increased production of the electric arc furnace addressed in PSD Application PSD FL-074, it will be necessary to operate the Billet Reheat Furnace with an annual operating factor of 0.60. It is possible that the furnace will operate a maximum of 24 hours in any given day and seven days in a given week. Over an annual period, however, the furnace will operate at no more than 60 percent of its maximum capacity. One of the revisions to the present operating permit reflects this change in hours of operation.

The second revision in the operating permit modifies pollutant emission rates so that the permitted emission rates will be consistent with emission rates stated in the reference PSD Application.

The Air Quality Review section of the PSD Application was based on the Billet Reheat Furnace operating at maximum design rate for a three-hour and 24-hour periods and with an annual operating factor of 0.60 for the annual period. The emissions from the Billet Reheat Furnace

used in the Air Quality Review are consistent with the emission on the attached revision to the current State operating permit. The Air Quality Review included in the PSD Application shows that the proposed operating rate of the Billet Reheat Furnace will not result in a threat to ambient air quality standards or PSD increments.

If there are any questions regarding this modification please feel free to contact me.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS



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

JBK:ls
Attachment

cc: Bruce Mitchel, FDER, Tallahassee
Johnny Cole, FDER, Jacksonville
Steve Pace, Duval County Environmental Services
Jack Hilburn, Florida Steel, Tampa
Lou Mustane, Florida Steel, Tampa
Bob Hutchens, Florida Steel, Baldwin

AIR POLLUTION SOURCES & CONTROL DEVICES A016-2691
 (other than incinerators)

A. Identification of Air Contaminants:

- 1) Particulates
 a) Dust b) Fly Ash c) Smoke d) Other (Identify)
- 2) Sulfur Compounds
 a) SO_x as SO₂ b) Reduced Sulfur as H₂S c) Other (Identify)
- 3) Nitrogen Compounds
 a) NO_x as NO₂ b) NH₃ c) Other (Identify)
- 4) Fluorides 5) Acid Mist 6) Odor
- 7) Hydrocarbons 8) Volatile Organic Compounds
- 9) Other (Specify): Carbon Monoxide

B. Raw Materials and Chemicals Used (Be Specific):

Description	Utilization Rate lbs./hr.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
Steel Billets	180,000	None		Diagram I

C. Process Rate:

- 1) Total Process Input Rate (Units*): 180,000 lb/hr.
 2) Product Weight (Units*): 180,000 lb/hr.
 3) Normal Operating Time: 0800 - 2400, if seasonal describe: _____
 hrs./day: 24 days/wk.: 7 wks/yr.: 52
 with maximum annual operating factor of 0.60

D. Airborne Contaminants Discharged:

Name of Contaminant	Actual** Discharge		Discharge Criteria Rate*	Allowable Discharge lbs./hr.	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulate	8.8	23	17-2.03 (BACT)	8.8	Diagram I
Sulfur Dioxide	137.4	361	17-2.03 (BACT)	137.4	Diagram I
NO _x	38.8	102	17-2.03 (BACT)	38.8	Diagram I
CO	6.2	16	17-2.03 (BACT)	6.2	Diagram I
Hydrocarbons	1.2	3	17-2.03 (BACT)	1.2	Diagram I

*Refer to Chapter 17-2.04(2), Florida Administrative Code.
 (Discharge Criteria: Rate = lbs./ton P₂O₅, lbs./M BTU/hr., etc.)
 **Estimate only if this is an application to construct.

AIR POLLUTION SOURCES & CONTROL DEVICES
 (other than incinerators)

A. Identification of Air Contaminants:

- 1) Particulates
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 a) SO_x as SO₂ b) Reduced Sulfur as H₂S c) Other (Identify)
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 a) NO_x as NO₂ b) NH₃ c) Other (Identify)
- 4) Fluorides 5) Acid Mist 6) Odor
- 7) Hydrocarbons 8) Volatile Organic Compounds
- 9) Other (Specify): Carbon Monoxide

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Description	Utilization Rate lbs./hr.	Approximate Contaminant Content		Relate to Flow Diagram
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C. Process Rate:

- 1) Total Process Input Rate (Units*): 180,000 lb/hr.
- 2) Product Weight (Units*): 180,000 lb/hr.
- 3) Normal Operating Time: 0800 - 2400, if seasonal describe: _____
 hrs./day: 24 days/wk.: 7 wks./yr.: 52
 with maximum annual operating factor of 0.60

D. Airborne Contaminants Discharged:

should be: 0.558 ~ 0.56

Name of Contaminant	Actual** Discharge		Discharge Criteria Rate*	Allowable Discharge lbs./hr.	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulate	8.8	23	17-2.03 (BACT)	8.8	Diagram I
Sulfur Dioxide	137.4	361	17-2.03 (BACT)	137.4	Diagram I
NO _x	38.8	102	17-2.03 (BACT)	38.8	Diagram I
CO	6.2	16	17-2.03 (BACT)	6.2	Diagram I
Hydrocarbons	1.2	3	17-2.03 (BACT)	1.2	Diagram I

*max heat input: 185 x 106 btu/hr
 #4 F.O. @ 6100 lbs/hr avg.
 9800 " max.*

* Refer to Chapter 17-2.04(2), Florida Administrative Code.
 (Discharge Criteria: Rate = lbs./ton P₂O₅, lbs./M BTU/hr., etc.)
 ** Estimate only if this is an application to construct.

*0.61405
 7.3: 9
 18,840 heat capacity
 137,538 btu/gal*

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP	ACTION NO.
	ACTION OUT DATE

KAHEL	<u>FANCY</u>	STARNES
BLOMMEL	THOMAS	MARY CLARK
BARKER	GEORGE	HODGES
J. ROGERS	PALAGYI	MARSHALL MOTT-SMITH

REMARKS:

Permit Info

INFORMATION	
<input type="checkbox"/>	REVIEW & RETURN
<input type="checkbox"/>	REVIEW & FILE
<input type="checkbox"/>	INITIAL & FORWARD
DISPOSITION	
<input type="checkbox"/>	REVIEW & RESPOND
<input type="checkbox"/>	PREPARE RESPONSE
<input type="checkbox"/>	FOR MY SIGNATURE
<input type="checkbox"/>	FOR YOUR SIGNATURE
<input type="checkbox"/>	LET'S DISCUSS
<input type="checkbox"/>	SET UP MEETING
<input type="checkbox"/>	INVESTIGATE & REPT
<input type="checkbox"/>	INITIAL & FORWARD
<input type="checkbox"/>	DISTRIBUTE
<input type="checkbox"/>	CONCURRENCE
<input checked="" type="checkbox"/>	FOR PROCESSING
<input type="checkbox"/>	INITIAL & RETURN

FROM: STEVE SMALLWOOD

[Signature]

DATE	9-2
PHONE	

USE The Original!

Received check 21 SEPT '81
Receipt No. 33580

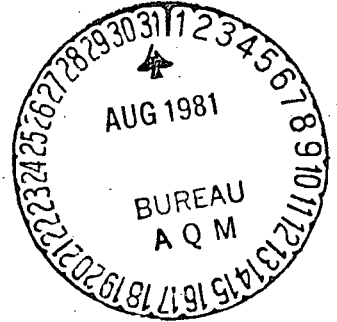


SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

AC 16-47926

August 28, 1981

Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301



Subject: Duval County AP
Florida Steel Corporation
Billet Reheat Furnace
AO 16-2691

Dear Mr. Smallwood:

In accordance with a recent request from your office we are modifying the existing State operating permit for the Billet Reheat Furnace operated by the Florida Steel Corporation in Baldwin, Florida so that the operating permit is consistent with information included in a Federal PSD Application that is currently being reviewed by your office (PSD-FL-074).

The existing operating permit for the Billet Reheat Furnace (AO 16-2691) was issued on June 6, 1977 and expires on April 30, 1982. In the application submitted for this permit it was stated that the Billet Reheat Furnace would operate 16 hours a day, 5 days a week and 52 weeks per year, for a total annual operating time of 4160 hours. This translates to an annual operating factor of 0.475.

In order for the Billet Reheat Furnace to accommodate the increased production of the electric arc furnace addressed in PSD Application PSD-FL-074, it will be necessary to operate the Billet Reheat Furnace with an annual operating factor of 0.60. It is possible that the furnace will operate a maximum of 24 hours in any given day and seven days in a given week. Over an annual period, however, the furnace will operate at no more than 60 percent of its maximum capacity. One of the revisions to the present operating permit reflects this change in hours of operation.

440, 172 BT/40
= 4890.8
Op. Factor = 55831

The second revision in the operating permit modifies pollutant emission rates so that the permitted emission rates will be consistent with emission rates stated in the reference PSD Application.

The Air Quality Review section of the PSD Application was based on the Billet Reheat Furnace operating at maximum design rate for a three-hour and 24-hour periods and with an annual operating factor of 0.60 for the annual period. The emissions from the Billet Reheat Furnace

BEST AVAILABLE COPY

Mr. Steve Smallwood
Florida Department of Environmental Regulation

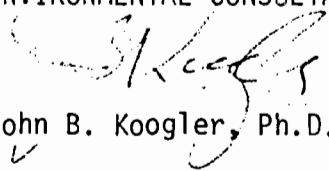
August 28, 1981
Page two

used in the Air Quality Review are consistent with the emission on the attached revision to the current State operating permit. The Air Quality Review included in the PSD Application shows that the proposed operating rate of the Billet Reheat Furnace will not result in a threat to ambient air quality standards or PSD increments.

If there are any questions regarding this modification please feel free to contact me.

Very truly yours,

SHOLTES & KOGLER
ENVIRONMENTAL CONSULTANTS


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

JBK:ls
Attachment

cc: Bruce Mitchel, FDER, Tallahassee
Johnny Cole, FDER, Jacksonville
Steve Pace, Duval County Environmental Services
Jack Hilburn, Florida Steel, Tampa
Lou Mustane, Florida Steel, Tampa
Bob Hutchens, Florida Steel, Baldwin

Florida Steel Corporation
Baldwin, Florida
Duval County
Reheat Furnace
A016-2691

AIR POLLUTION SOURCES & CONTROL DEVICES
(other than incinerators)

A. Identification of Air Contaminants:

- 1) Particulates
 - a) Dust
 - b) Fly Ash
 - c) Smoke
 - d) Other (Identify)
- 2) Sulfur Compounds
 - a) SO_x as SO₂
 - b) Reduced Sulfur as H₂S
 - c) Other (Identify)
- 3) Nitrogen Compounds
 - a) NO_x as NO₂
 - b) NH₃
 - c) Other (Identify)
- 4) Fluorides
- 5) Acid Mist
- 6) Odor
- 7) Hydrocarbons
- 8) Volatile Organic Compounds
- 9) Other (Specify): Carbon Monoxide

B. Raw Materials and Chemicals Used (Be Specific):

Description	Utilization Rate lbs./hr.	Approximate Contaminant Content		Relate to Flow Diagram
		Type	% Wt.	
Steel Billets	180,000	None		Diagram I

C. Process Rate:

- 1) Total Process Input Rate (Units*): 180,000 lb/hr.
- 2) Product Weight (Units*): 180,000 lb/hr.
- 3) Normal Operating Time: 0800 - 2400 hrs./day: 24 days/wk.: 7 if seasonal describe: 52 wks/yr.:
with maximum annual operating factor of 0.60

D. Airborne Contaminants Discharged: should be: 0.5585 ~ 0.56

Name of Contaminant	Actual** Discharge		Discharge Criteria Rate*	Allowable Discharge lbs./hr.	Relate to Flow Diagram
	lbs./hr.	T/yr.			
Particulate	8.8	23	17-2.03 (BACT)	8.8	Diagram I
Sulfur Dioxide	137.4	361	17-2.03 (BACT)	137.4	Diagram I
NO _x	38.8	102	17-2.03 (BACT)	38.8	Diagram I
CO	6.2	16	17-2.03 (BACT)	6.2	Diagram I
Hydrocarbons	1.2	3	17-2.03 (BACT)	1.2	Diagram I

max heat input 185 x 10⁶ Btu/hr
#4 F.O. @ 6100 lbs/hr avg.
9800 max.
0.61405
7.3:9
18,840 heat capacity
137,538 Btu/lb

*Refer to Chapter 17-2.04(2), Florida Administrative Code.
(Discharge Criteria: Rate = lbs./ton P₂O₅, lbs./M BTU/hr., etc.)
**Estimate only if this is an application to construct.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

OPERATION PERMIT

FOR Florida Steel Corporation

P. O. Box 518

Baldwin, Florida 32234

PERMIT NO A016-2691 DATE OF ISSUE June 6, 1977

PURSUANT TO THE PROVISIONS OF SECTIONS 403.061 (16) AND 403.707 OF CHAPTER 403 FLORIDA STATUTES AND CHAPTERS 17-4 AND 17-7 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. D. J. Andrew, Manager

FOR THE OPERATION OF THE FOLLOWING:

Reheat Furnace, 90 T/H Capacity

Using No. 4 Oil

LOCATED AT Yellow Water Road, Baldwin, Duval County, Florida

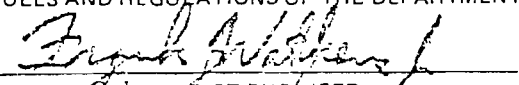
UTM: E-7406300 N-3350500

IN ACCORDANCE WITH THE APPLICATION DATED April 25, 1977

ANY CONDITIONS OR PROVISOS WHICH ARE ATTACHED HERETO ARE INCORPORATED INTO AND MADE A PART OF THIS PERMIT AS THOUGH FULLY SET FORTH HEREIN. FAILURE TO COMPLY WITH SAID CONDITIONS OR PROVISOS SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL SUBJECT THE APPLICANT TO SUCH CIVIL AND CRIMINAL PENALTIES AS PROVIDED BY LAW.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUE UNTIL April 30, 1982

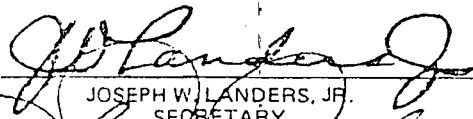
OR UNLESS REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.



SUBDISTRICT ENGINEER
Frank Watkins, Jr.



W. W. Honour, Division Chief
Bio-Environmental Services Division
City of Jacksonville



JOSEPH W. LANDERS, JR.
SECRETARY



SUBDISTRICT MANAGER, Acting
G. Doug Dutton

OPERATIONS PERMIT CONDITIONS
FOR AIR POLLUTION SOURCES

(an "X" indicates applicable conditions)

Permit No: A016-2691

Reheat Furnace
ST. JOHN'S RIVER

JUN 2 1977

Date: June 6, 1977

- X) 1. The permit holder must comply with Florida Statute 403 and the applicable Chapters of the Department of Environmental Regulation in addition to the conditions of this permit. (Florida Statute, subsection (1b) of section 403.161).
- X) 2. Test the emissions for the following pollutant(s) at intervals of see below from the date of May 1, 1977 and submit a copy of test data to the District Engineer of the Florida Department of Environmental Regulation, 3426 Bills Road, Jacksonville, Florida, 32207, and a copy to the City of Jacksonville, Air Pollution Control Activity, 515 West Sixth Street, Jacksonville, Florida, 32206, within fifteen (15) days of such testing. Chapter 17-2.07(1) Florida Administrative Code (FAC).
- | | | | |
|-----|---------------------------|-----|----------------------|
| (X) | Particulates - on request | () | Sulfur Oxides |
| () | Fluorides | () | Nitrogen Oxides |
| (X) | Plume Density - 12 months | () | Hydrocarbons |
| (X) | Fuel Analysis - 6 months | () | Total Reduced Sulfur |
- X) 3. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit input rates or to operate at conditions which do not reflect actual operating conditions may invalidate the data. Florida Statutes 403.161 Section (1c).
-) 4. Submit for this source quarterly reports showing the type and monthly quantities of fuel used in the operation of this source. Also state the sulfur content of each fuel. Chapter 17-4.14 FAC.
- X) 5. Submit for this facility, each year, on or before November 15, an emission report for the preceding year, October 1-September 30, containing the following information: Chapter 17-4.14 FAC.
- (A) Annual amount of materials and/or fuels utilized
(B) Annual emissions (note calculation basis)
(C) Any changes in the information contained in the permit application
-) 6. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the District Office of the DER and the City of Jacksonville's Air Pollution Control Office as per Chapter 17-4.13, FAC. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement actions by the Department.
-) 7. According to the Process Weight Table, the maximum allowable emission rate of particulates for a process rate of _____ tons/hour is _____ pounds/hour. At lesser process rates, the allowable emission rates can be determined from the graph.
-) 8. This permit is associated with a Development of Regional Impact (DRI). It does not waive any other permits that may be required from this or any other state, federal or local agency.
- X) 9. The sulfur content of the oil burned in this furnace shall not exceed 0.7% by weight.

Department of Environmental Regulation

OPERATIONS PERMIT CONDITIONS
FOR AIR POLLUTION SOURCESReheat Furnace
ST. JOHN'S RIVER

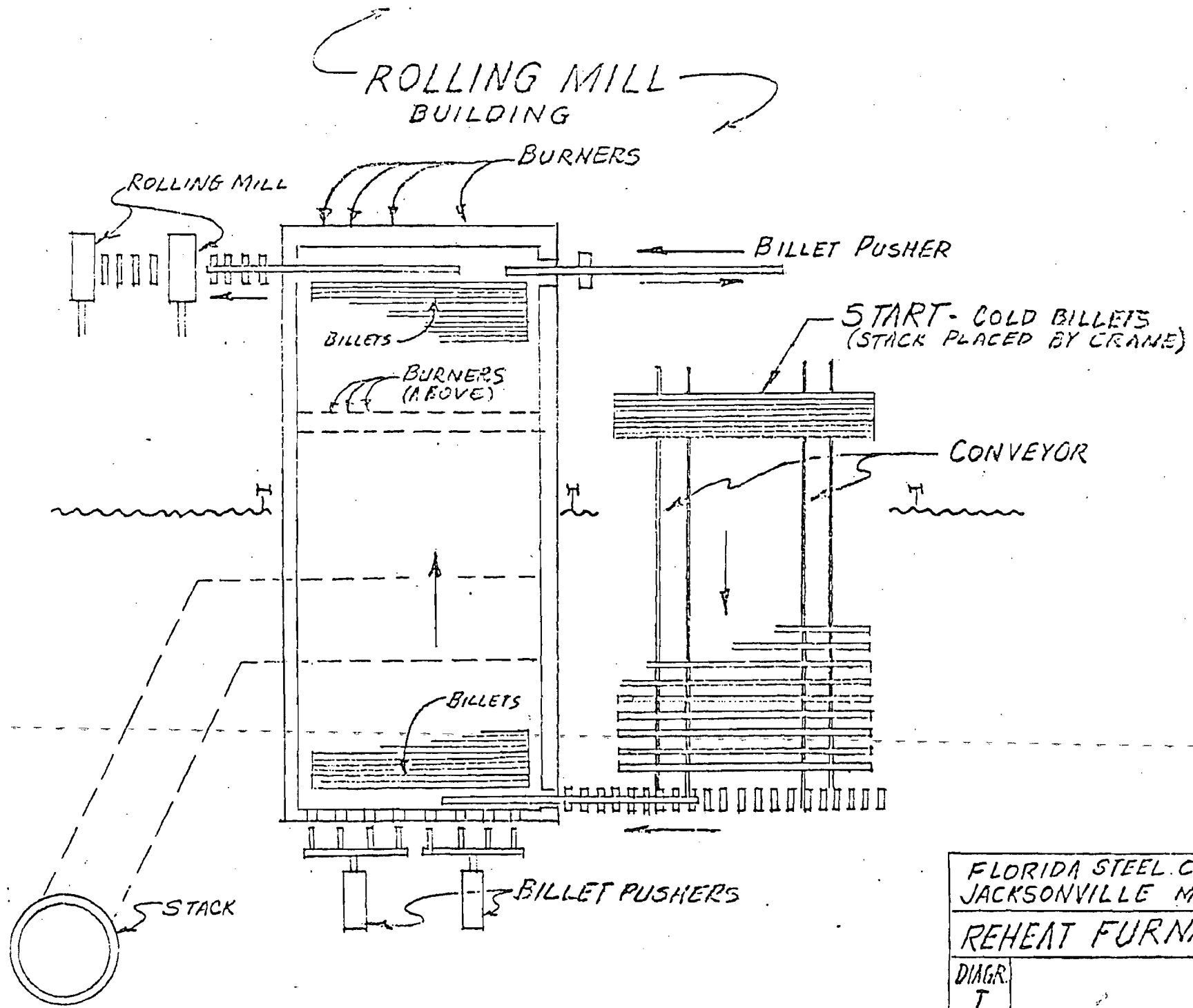
(an "X" indicates applicable conditions)

JUN 2 1977

Date: June 6, 1977

Permit No: A016-2691

- (X) 1. The permit holder must comply with Florida Statute 403 and the applicable Chapters of the Department of Environmental Regulation in addition to the conditions of this permit. (Florida Statute, subsection (1b) of section 403.161).
- (X) 2. Test the emissions for the following pollutant(s) at intervals of see below from the date of May 1, 1977 and submit a copy of test data to the District Engineer of the Florida Department of Environmental Regulation, 3426 Bills Road, Jacksonville, Florida, 32207, and a copy to the City of Jacksonville, Air Pollution Control Activity, 515 West Sixth Street, Jacksonville, Florida, 32206, within fifteen (15) days of such testing. Chapter 17-2.07(1) Florida Administrative Code (FAC).
- | | | | |
|-----|---------------------------|-----|----------------------|
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| () | Fluorides | () | Nitrogen Oxides |
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| (X) | Fuel Analysis - 6 months | () | Total Reduced Sulfur |
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- () 8. This permit is associated with a Development of Regional Impact (DRI). It does not waive any other permits that may be required from this or any other state, federal or local agency.
- (X) 9. The sulfur content of the oil burned in this furnace shall not exceed 0.7% by weight.



FLORIDA STEEL CORP JACKSONVILLE MILL	
REHEAT FURNACE	
DIAGR. I	DR: 9-5-75 J.P.H.

DETAILED DESCRIPTION OF SOURCE

- A. Describe the nature and extent of the project. Refer to existing pollution control facilities, expected improvement in performance of the facilities and state whether the project will result in full compliance. Attach additional sheet if necessary.

The reheat furnace is a two-zone, recuperative furnace capable of utilizing #2 thru #6 fuel oil at a maximum heat input of 185 million BTU per hour (for #6). Its purpose is to heat steel billets (having a 4 1/2" square cross-section and a maximum length of 30') from "room temperature" to 2100° - 2200° so they can be rolled in a continuous rolling mill into finished steel products. Under these conditions its maximum capacity is 90 tons per hour. Designed by Bricmont and Associates of Pittsburgh, the burners and combustion system were furnished by Bloom Engineering and the furnace built by Florida Steel Corporation. Billet flow is shown in Diagram I. While being pushed through the furnace, billets are heated by ten burners in Zone I. Twelve burners at the discharge end of the furnace furnish heat in the soaking zone. Inside dimensions of the furnace are 32' x 63'. Stack height 160'.

This unit (reheat furnace) is being upgraded to match the EAF maximum ^{permitted} capacity of 65 billet tons/hr. and 740,172 BT/hr.

- B. Schedule of Project Covered in this Application (Construction Permit Application Only).

Start of Construction: _____

Completion of Construction: _____

- C. Costs of Construction (Show a breakdown of estimated costs for individual components/units of the project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit.

There is no pollution control equipment.

- D. For this source indicate any previous DER permits, orders, and notices, including issuance dates and expiration dates.

Construction permit AC 16-2546 dated 2/18/76 with an expiration date of 5/1/77.

- E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? _____ Yes No

DETAILED DESCRIPTION OF SOURCE

A. Describe the nature and extent of the project. Refer to existing pollution control facilities, expected improvement in performance of the facilities and state whether the project will result in full compliance. Attach additional sheet if necessary.

The reheat furnace is a two-zone, recuperative furnace capable of utilizing #2 thru #6 fuel oil at a maximum heat input of 185 million BTU per hour (for #6). Its purpose is to heat steel billets (having a 4 1/2" square cross-section and a maximum length of 30') from "room temperature" to 2100° - 2200° so they can be rolled in a continuous rolling mill into finished steel products. Under these conditions its maximum capacity is 90 tons per hour. Designed by Bricmont and Associates of Pittsburgh, the burners and combustion system were furnished by Bloom Engineering and the furnace built by Florida Steel Corporation. Billet flow is shown in Diagram I. While being pushed through the furnace, billets are heated by ten burners in Zone I. Twelve burners at the discharge end of the furnace furnish heat in the soaking zone. Inside dimensions of the furnace are 32' x 63'. Stack height 160'.

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Start of Construction: _____
Completion of Construction: _____

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There is no pollution control equipment.

D. For this source indicate any previous DER permits, orders, and notices; including issuance dates and expiration dates.

Construction permit AC 16-2546 dated 2/18/76 with an expiration date of 5/1/77.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

E. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency*	Conditions of Operations	Basis for Efficiency Operational Data, Test, Design, Data
None				

*See required supplement.
(Include any test data and/or design data for efficiency substantiation)

F. Fuels:

Type (Be Specific)	Consumption*		Maximum Heat Input MMBTU/hr.
	Avg./hr.	Max./hr.	
#4 Oil	6100	9820	185

*Units: Natural Gas – MCF/hr.; Fuel Oils, Coal – lbs./hr.

Fuel Analysis:*

Percent Sulfur: 0.61 Percent Ash: _____

Density: 7.3 lb./gal. _____

Heat Capacity: 18,840 BTU/lb. 137,538 BTU/gal.

Other Fuel Contaminants: _____

*See fuel analysis attached

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

Mill scale in small quantities is used as an oxidizer in the melting operation or sold for use in ferro-cement.

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

Stack Height: 160 ft. Stack Diameter: 7.0 ft.

Gas Flow Rate: 18,400* ACFM Gas Exit Temperature: 600* °F

Water Vapor Content: 10* %

*Based upon tests of April 14, 1977

FLORIDA STEEL CORPORATION

Baldwin Mill

Reheat Furnace Heat Release

The billet reheat furnace is subject to variations in process weight due to many factors which include (a) type of bar being produced, (b) perfect utilization of double line rolling capacity, (c) product demand. The furnace is composed of two zones being designated "heat" and "soak". As the name would imply the "heat" zone is where most of the billet heating takes place, the "soak" zone being one designed for holding and equilibration. As the process weight is increased or decreased, the oil firing in the "heat" zone is adjusted by the number of the ten oil burners used. The following table illustrates this system:

at 90 tons/hour process weight

140×10^6 BTU/hr	Heat zone (10 burners)
<u>45×10^6 BTU/hr</u>	Soak zone (12 burners)
185×10^6 BTU/hr	

at 40 tons/hour process weight

70×10^6 BTU/hr	Heat zone (5 burners)
<u>45×10^6 BTU/hr</u>	Soak zone (12 burners)
115×10^6 BTU/hr	

SOUTHERN ANALYTICAL LABORATORY **BEST AVAILABLE COPY**

A DIVISION OF TECHNICAL SERVICES, INC.
1657 STOCKTON STREET P. O. BOX 32325
JACKSONVILLE, FLORIDA 32201
AREA 904 / 353-5761



Industrial Chemists

ANALYSTS OF INDUSTRIAL MATERIALS
RESEARCH - TECHNICAL REPORTS

Laboratory No. 15670
Sample of OIL
Date Received April 6, 1976

April 21, 19 76

For EASTERN SEABOARD PETROLEUM COMPANY, INC., P.O. Box 3233, Station F,
Jacksonville, Florida 32206

Marks:

CERTIFICATE OF ANALYSIS OR TESTS

Sulphur	0.61%
Vanadium, ppm	9.7
API Gravity @ 60°/60°F	35.6
Viscosity SSU @ 100°	42.4 Seconds
BTU/gal	137,538

SOUTHERN ANALYTICAL LABORATORY

BY Harvey C. Jones, Jr.

BEST AVAILABLE COPY



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 101-79-10

September 14, 1981

Mr. Clair Fancy
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

RE: Florida Steel Corporation
Baldwin, Florida
Billet Reheat Furnace

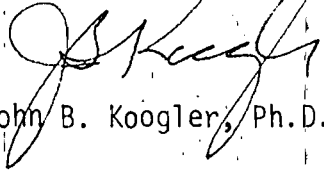
Dear Mr. Fancy:

In accordance with our discussion of September 9, 1981 regarding the modification to the Florida Steel billet reheat furnace, I have enclosed a \$20.00 check payable to the Florida Department of Environmental Regulation for the application fee for a construction permit to allow the proposed modification.

If anything further is required please contact me.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS


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

JKB:ls

cc: Bruce Mitchell, EPA
John Hilburn, Florida Steel Corporation
Robert Hutchens, Florida Steel Corporation

