Is your RETURN ADDRESS completed on the reverse side?

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

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

Consult postmaster for fee.

3. Article Addressed to:

Mr. F. Doug Owenby
Vice President/Operations Mgr.
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

4a. Article Number
P 872 563 611

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

7. Date of Delivery

CANTONMENT, FL APR 1994 1PM

5. Signature (Addressee)

6. Signature (Agent)

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

PS Form 3811, December 1991 ★U.S. GPO: 1992—323-402 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

P 872 563 611

UNITED STATES POSTAL SERVICE

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

Sent to	Mr. F. Doug Owenby
Street and No.	375 Muscogee Road
P.O., State and ZIP Code	Cantonment, Florida 32533
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	Mailed: 4/5/94 AC 17-223343

PS Form 3800, JUNE 1991

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DEP File No. AC 17-223343
Escambia County

Mr. F. Doug Owenby
Vice President/Operations Manager
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

Enclosed is Permit Number AC 17-223343 to allow modifications to be made to the existing pulp mill located in Cantonment, Escambia County, Florida. This permit is issued pursuant to Section(s) 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

C. H. Fancy

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on April 5, 1994 to the listed persons.

Clerk Stamp

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

Barbara J. Boutwell (Clerk) 4/5/94 (Date)

Copies furnished to:

E. Middleswart, NW District
J. Harper, EPA
J. Braswell, OGC
T. Cole, OHF&C
D. Smith, P.E., CE
J. Bunyak, NPS
G. Golson, ADEM
K. Moore, CIC

Final Determination

Champion International Corporation
Escambia County
Cantonment, Florida

Construction Permit No.
AC 17-223343
PSD-FL-200

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

March 25, 1994

Final Determination

Champion International Corporation

Escambia County

AC 17-223343: Mill Modification
PSD-FL-200

The construction permit application package and supplementary material have been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in the Pensacola News Journal on March 13, 1993. The Revised Technical Evaluation and Preliminary Determination was distributed on March 10, 1993, and available for public inspection at the Department's Northwest District office and the Department's Bureau of Air Regulation office.

During the public notice period, petitions for an administrative hearing were received (OGC Case Nos.: 93-0913, 93-1065, 93-1066 and 93-1067; DOAH Case Nos.: 93-2053, 93-2054, 93-2055, 93-2056 and 93-2057). On January 27, 1994, DOAH Hearing Officer P. Michael Ruff issued and signed an Order of the Hearing Officer granting Motions to Dismiss Petitions. Based on the Motions to Dismiss, the Department's Secretary Virginia B. Wetherell signed a Final Order on March 9, 1994, directing the Department's Bureau of Air Regulation to issue the construction permit upon the terms and conditions set forth in the Department's Intent to Issue and draft permit issued March 10, 1993.

Attachments to be incorporated: AC 17-223343 and PSD-FL-200

- Proof of Publication of the Department's Intent to Issue in the Pensacola News Journal issue of March 13, 1993.
- <u>Verified Petition for a Formal Hearing</u> pursuant to Section 120.57, Florida Statutes, received March 23, 1993, by the Department's OGC.
- Mr. Brian Beals' letter dated April 13, 1993.
- <u>Motion to Dismiss Petitions</u> done and ordered on January 27, 1994, by the DOAH Hearing Officer.
- <u>Final Order</u> done and ordered by Secretary Virginia B. Wetherell on March 9, 1994.
- Final Determination dated March 25, 1994.

Based on the closing of OGC Cases 93-0913, 93-1065, 93-1066 and 93-1067, it is recommended that the construction permit, No. AC 17-223343 and PSD-FL-200, be issued as drafted, with the above referenced attachments incorporated.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JACQUELINE M. LANE, FRED GARTH,
NELSON BETHUNE, THORNTON GARTH,
and PERDIDO BAY ENVIRONMENTAL
ASSOCIATION, INC.,

Petitioners,

vs.

CHAMPION INTERNATIONAL
CORPORATION and STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
REGULATION,

Respondents.
_____________________________________/

OGC Case Nos. 93-0913
93-1065
93-1066
93-1067
DOAH Case Nos. 93-2053
93-2054
93-2055
93-2056
93-2057

FINAL ORDER

On January 27, 1994, a Hearing Officer from the Division of Administrative Hearings submitted an Order which the Department of Environmental Protection ("Department"), previously known as the Department of Environmental Regulation, treats as a Recommended Order. A copy of the Recommended Order is attached as Exhibit A. On February 4, 1994, Petitioner JACQUELINE M. LANE filed exceptions to the Recommended Order. On February 21, 1994, Respondent CHAMPION INTERNATIONAL CORPORATION ("Champion") filed responses thereto. The matter thereupon came before me as Secretary of the Department for final agency action.

BACKGROUND

On or about March 10, 1993, the Department gave notice of its intent to issue an air construction permit to Champion for construction of modifications to an existing pulp mill located in

Cantonment, Escambia County, Florida. The permit application was filed in concert with a Consent Order entered by the Department on December 1, 1989. The Consent Order was the subject of a formal administrative hearing which resulted in the entry of a Final Order governing the Consent Order and other permits and variances pertaining to the construction, operation and modification of Champion's pulp mill. As a result of the Final Order, the Department issued Temporary Operating Permit ("TOP") #IT 17-156163 to Champion for operation of a wastewater plant and for discharge of treated effluent to waters of the state. Champion currently operates the pulp mill under the terms of the Consent Order and TOP. In accordance with the Consent Order, the proposed air construction permit authorizes construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers.

On March 23, 1993, Petitioner JACQUELINE M. LANE ("Lane") filed a petition challenging the issuance of the proposed permit. On March 26, 1993, Petitioners FRED GARTH ("F. Garth"), NELSON BETHUNE ("Bethune"), THORNTON GARTH ("T. Garth") and PERDIDO BAY ENVIRONMENTAL ASSOCIATION ("PBEA") filed their petitions challenging the issuance of the proposed permit. The individual Petitioners Lane, F. Garth, Bethune and T. Garth are the owners of property in the vicinity of the mill. The Petitioner PBEA is a non-profit corporation incorporated in the State of Alabama to preserve property around Perdido Bay, in the vicinity of the mill.

Following receipt of the petitions for formal administrative proceedings, the matter was referred to the Division of Administrative Hearings for assignment of a Hearing Officer. Champion subsequently filed motions in opposition to the petitions based in large part on the grounds that Petitioners did not substantially comply with the requirements for a petition for administrative hearing as set forth in Rule 17-103.155(4), Florida Administrative Code. After a hearing on Champion's motions, the Hearing Officer entered an Order on May 14, 1993 consolidating the five related cases and dismissing all of the petitions with leave for the Petitioners to file amended petitions. The Petitioners served their amended petitions on June 2, 1993.

On June 28, 1993, Champion filed motions in opposition to the amended petitions alleging the continued deficiency of the petitions. Following a motion hearing and consideration of several post-hearing submissions by Lane, Champion and the Department, the Hearing Officer entered an order on August 8, 1993 dismissing the petitions with leave for the Petitioners to file second amended petitions. The Hearing Officer's Order incorporated detailed instructions to the Petitioners explaining the specific pleading requirements to establish standing to initiate formal proceedings before the Division of Administrative Hearings.

In August of 1993, Petitioners timely filed second amended petitions. Champion subsequently filed motions in opposition to the second amended petitions. A hearing on Champion's motions was held on November 29, 1993. Upon consideration of the motions and responses thereto and oral argument of the parties, the Hearing Officer concluded that, despite being afforded three opportunities over a period of six months, the Petitioners had failed to demonstrate that they have substantial interests which will be affected or injured by the activity proposed to be permitted different from the interests of the general public. Accordingly, the Hearing Officer entered an Order dismissing the second amended petitions, with prejudice.

RULINGS ON EXCEPTIONS

Exception No. 1

In Lane's first exception to the Recommended Order, she contends that the Hearing Officer erred in finding that "much of the content of the petitions amounted to speculation regarding potential harmful effects which will result from granting the proposed permits." Lane contends that there is ample scientific evidence to support the Petitioners' allegations.

Lane's exception is based on the erroneous conclusion that the Hearing Officer's statement amounts to an evidentiary determination. Rather, the Hearing Officer, in addressing the motions to dismiss, found that as a matter of law the statements themselves failed to establish a proper basis for standing and therefore the Petitioners were ineligible for a hearing on the factual evidence.

Lane apparently misunderstands the purpose of the proceedings on the motions to dismiss, which is to test the sufficiency of the Petitioners' allegations regarding standing. I concur with the Hearing Officer's finding that the allegations of harm in the petitions do not constitute specific factual allegations concerning particular harm caused to these Petitioners as required by Rules 17-103.155, 28-5.103 and 60Q-2.004(3), Florida Administrative Code. Absent the requisite allegations of standing, the Hearing Officer properly dismissed the petitions. The exception is denied.

Exception No. 2

Lane's second exception alleges that the Hearing Officer erred in finding her not to be a substantially affected party. Lane specifically contends that the Hearing Officer ignored statements of the Petitioners that they were affected substantially more than the general public, and that Rules 17-210.350(2)(h) and 275.800(2), Florida Administrative Code, provide that anyone who lives within a 100 kilometer radius of the mill would be a substantially affected party.

Lane's exception is another attempt to reargue the allegations of harm which the Hearing Officer continuously found inadequate. In determining that the Petitioners failed to establish standing in this matter, the Hearing Officer applied the two-prong test set forth in Agrico Chemical Co. v. DER, 406 So. 2d 478 (Fla. 2d DCA 1981), rev. denied, 415 So. 2d 1359 (Fla. 1982). The Agrico test requires a petitioner to show:

> 1) that he will suffer injury in fact which is of sufficient immediacy to entitle him to a section 120.57 hearing, and 2) that his

> substantial injury is of a type or nature which the proceeding is designed to protect. The first aspect of the test deals with the degree of injury. The second deals with the nature of the injury.

Agrico, 406 So. 2d at 482. The Hearing Officer also explained that, to meet the Agrico test, the Petitioners must allege special injury that is different, more specific, and greater than that to be experienced by the public generally. See Florida Home Builders Association v. Department of Labor and Employment Security, 412 So. 2d 351 (Fla. 1982). I concur with the Hearing Officer's finding that the Petitioners' allegations of injury fail in this regard. Much of the content of the petitions amounts to speculation regarding potential harmful effects the Petitioners fear will result to the general public from the proposed permit, rather than specific factual allegations concerning harm particular to these Petitioners. The Hearing Officer properly found that Petitioners were not "substantially affected" parties entitled to an administrative proceeding in this matter.

Further, the provisions cited by Lane have no relevance to these proceedings and Lane's reliance on them is misplaced. Rule 17-175.800(2), Florida Administrative Code, describes those federally designated Class I areas outside of Florida but within 100 kilometers of the state. Rule 17-210.350(2)(h), Florida Administrative Code, provides for notice to the EPA and to the Federal Land Manager of any construction application for a proposed new or modified source which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area. These rules do not designate a "zone of interest" for the purpose of instituting an administrative proceeding and therefore do not confer standing on the Petitioners. Lane's second exception is denied.

Exception No. 3

In Lane's final exception, she contends that the Hearing Officer's decision denies the Petitioners due process because this is the last point of entry into these proceedings. It is, of course, well established that persons whose substantial interests may be affected by agency action must be provided a clear point of entry to file petitions for formal proceedings. See, e.g., Florida Optometric Association v. Department Professional Regulation, Board of Opticianry, 567 So. 2d 928 (Fla. 1990). Petitioners were afforded a point of entry to contest the subject permit prior to its issuance, and Petitioners have, in fact, availed themselves of such point of entry. The procedural history of this case is that in addition to the original petitions, the Petitioners were granted two additional opportunities to adequately allege standing in this matter. In the second order dismissing the petitions herein, the Hearing Officer went to the extent of offering extensive instructions as to the matters needed to be included in petitions for formal administrative proceedings. However, the petitions continued to be deficient.

I conclude that, under the circumstances presented, the Petitioners were afforded due process. The Petitioners were given ample opportunity to properly establish standing to challenge the proposed permit. It is not a lack of due process, but rather Petitioners' failure to meet the requirements for establishing standing which precludes the Petitioners from proceeding to hearing. For this reason, Lane's third exception is denied.

Accordingly, it is

ORDERED:

1. The Recommended Order of the Hearing Officer is adopted in its entirety and is incorporated herein by reference.

2. The Second Amended Petitions filed by Petitioners are hereby dismissed with prejudice.

3. The application of CHAMPION INTERNATIONAL CORPORATION for air construction permit AC 17-223343; PSD-FL-200 is GRANTED. The Department's Bureau of Air Regulation is directed to issue the permit upon the terms and conditions set forth in the Department's Intent to Issue and draft permit issued March 10, 1993.

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

DONE AND ORDERED this 9th day of March, 1994, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell

VIRGINIA B. WETHERELL
Secretary

2600 Blair Stone Rd
Tallahassee FL 32399-2400

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

Clerk 3/09/94 Date

CERTIFICATE OF SERVICE

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

Jacqueline M. Lane
10738 Lillian Hwy
Pensacola FL 32506

Fred Garth
14110 Perdido Key Dr
Pensacola FL 32507

Nelson Bethune
7 South Warrington Rd
Pensacola FL 32507

Thornton Garth
P O Box 424
Lillian AL 36549

Thomas O. Bear, Esq.
P O Box 1238
Foley AL 35536

Segundo J. Fernandez, Esq.
Oertel, Hoffman, et al.
P O Box 6507
Tallahassee FL 32314-6507

and by Hand Delivery to:

P. Michael Ruff
Hearing Officer
Division of Administrative Hearings
The DeSoto Bldg
1230 Apalachee Pkwy
Tallahassee FL 32399-1550

Jefferson M. Braswell, Esq.
Assistant General Counsel
Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee FL 32399-2400

Ann Cole, Clerk
Division of Administrative Hearings
The DeSoto Bldg
1230 Apalachee Pkwy
Tallahassee FL 32399-1550

this 10th day of March, 1994.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Lanette M. Price

LANETTE M. PRICE
Assistant General Counsel
2600 Blair Stone Rd
Tallahassee FL 32399-2400
(904) 488-9314

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

JACQUELINE M. LANE, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2053
FRED GARTH, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2054
NELSON BETHUNE, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2055
THORNTON GARTH, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2056

EXHIBIT A

Best Available Copy

PERDIDO BAY ENVIRONMENTAL ASSOCIATION, INC.,

Petitioner,

vs.

CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION,

Respondents.

CASE NO. 93-2057

ORDER

THIS CAUSE comes before the undersigned upon Motions to Dismiss the above-named Petitioners' Second Amended Petitions filed in this cause pursuant to Order of the Hearing Officer granting a second Motion to Dismiss each of the Petitions and giving the Petitioners a second opportunity to amend their Petitions. The procedural history of this case is as outlined in the Motions in Opposition to Amended Petitions, culminating in the filing of the subject motions, responses thereto, and the conduct of oral argument by the Hearing Officer on November 29, 1993 in Tallahassee, Florida.

The Hearing Officer has carefully considered the motions, responses thereto, and the oral argument of the parties in support of and in opposition to the motions. Despite being accorded three opportunities over a period of approximately six (6) months after this case was filed with the Hearing Officer, the Perdido Bay Environmental Association, Inc., Thornton Garth, Fred Garth, Nelson Bethune, and Jacqueline M. Lane have failed to establish sufficient substantial interests affected by the application and the project proposed to be permitted which are sufficient to invoke a right to a formal administrative proceeding in this forum. The allegations of the Petitioners upon this third opportunity to submit Petitions which might demonstrate entitlement to a formal proceeding involve a misapplication of rules, a misapprehension of the import of certain rules, and still fail to establish that the Petitioners will suffer any substantial injury peculiar unto themselves and different from any condition which the general public is or will be exposed to by the subject project sought to be permitted. Much of the content of the Petitions amounts to speculation regarding potential harmful effects the Petitioners fear will result from the proposed permits grant, rather than specific factual allegations concerning particular harm caused to these Petitioners by alleged violations of the statutes and rules pertaining to the subject matter of the application. The Petitioners' Second Amended Petitions, as was the case with the original and the First Amended Petitions, fail to satisfy the requirements of Rules 17-103.155, 28-5.103, and 60Q-2.004(3), Florida Administrative Code, which provide detailed advice as to matters required to be included in such Petitions for formal proceedings.

The Petitioners, in order to show that their substantial interests will be affected by the agency action proposed, must show that an injury, in fact, will be suffered which is of such sufficient immediacy to entitle the Petitioners to a hearing and that the Petitioners' substantial injuries alleged are of a type and nature which a Section 120.57(1), Florida Statutes, proceeding dealing with the substantive law embodied in Chapter 403, Florida Statutes, and related rules, contained in Title 17, Florida Administrative Code, is designed to protect. Agrico Chemical Co. v. DER, 406 S.2d 478 (Fla. 2d DCA 1981). Moreover, such Petitions must contain allegations of an injury or injuries that are different, more specific, greater than, and peculiar to the Petitioners, such that their injuries rise to a different level and are more specific to them than those merely expected to be experienced by the public generally. See, Florida Home Builders Association v. Department of Labor and Employment Security, 412 S.2d 351 (Fla. 1982).

Upon the Hearing Officer determining that the original Petitions and the First Amended Petitions failed to meet these requirements for establishing standing to initiate a formal proceeding before the Division of Administrative Hearings, the Hearing Officer entered a quite detailed Order on August 9, 1993 providing extensive instructions to the Petitioners, explaining in detailed fashion the specific pleading requirements for establishing substantial injury within the zone of interest involved in the putative proceeding and providing examples of how such specific 'substantial interest-zone of interest' standing pleading could be accomplished. Despite these detailed instructions and after three opportunities, the Petitioners have failed to file Petitions which persuade the Hearing Officer that they have substantial interests which will be affected or injured by the activity proposed to be permitted different from the interests of the general public. The Department itself is charged by statute with protecting the interests of the general public through its regulation and review of such jurisdictional activities as those proposed by the applicant, which may not be the basis for standing of individual, private Petitioners situated as the subject Petitioners.

The Petitioners have not persuaded the Hearing Officer that their interests are different from that of the general public merely by the fact that they live a certain number of miles from the mill and proposed installation. The mileage of Petitioners' residence proximate to the mill was not definitely related to a specific rule or rules which might assist in establishing their standing and substantial interests to be more specific than that of the general public, even had the totality of their allegations otherwise shown specific injury to substantial interests, which they did not. In accordance with the remaining arguments raised in the Motions to Dismiss the Second Amended Petitions and the Respondent's oral arguments in support thereof, all of which are more persuasive and adopted herein, it is, therefore, concluded after long and careful reflection, since the motion hearing of November 29, 1993, that the Second Amended Petitions must be dismissed with prejudice.

DONE AND ORDERED this 27th day of January, 1994, at Tallahassee, Leon County, Florida.

P. Michael Ruff

P. MICHAEL RUFF
Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550
(904) 488-9675

Filed with the Clerk of the Division of Administrative Hearings this 27th day of January, 1994.

Copies furnished to:

Jacqueline M. Lane
10738 Lillian Highway
Pensacola, FL 32506

Fred Garth
14110 Perdido Key Drive
Pensacola, FL 32507

Nelson Bethune
7 South Warrington Road
Pensacola, FL 32507

Thornton Garth
P.O. Box 424
Lillian, AL 36549

Thomas O. Bear, Esq.
P.O. Box 1238
Foley, AL 36536

Jefferson M. Braswell, Esq.
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Segundo J. Fernandez, Esq.
OERTEL, HOFFMAN, ET AL.
P.O. Box 6507
Tallahassee, FL 32314-6507

Florida Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE:

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

Permit Number: AC 17-223343
PSD-FL-200
Expiration Date: Dec. 31, 1995
County: Escambia
Latitude/Longitude: 30°36'30"N
87°19'13"W
Project: Mill Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.); Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297 and 17-4; and, 40 CFR (July, 1991 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the permitting of a mill modification in concert with the mill's wastewater Consent Order, to include the construction of a new natural gas fired No. 6 Power Boiler (PB), the surrendering of the operation permits for the existing Nos. 1 and 2 Power Boilers, modification to both the A and B Bleach Plants, construction of a new methanol storage tank, modification of the No. 2 Multiple Effect Evaporator set by installing new effects, and modification of the Lime Kiln's mud handling system. The UTM coordinates of the existing facility are Zone 17, 469.0 km East and 3386.0 km North.

The Standard Industrial Codes are:

- o Major Group No. 26 - Paper and Allied Products
- o Industry Group No. 2611 - Pulp Mills

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

Attachments to be Incorporated:

1. Application to Construct/Modify Air Pollution Sources, DER Form 17-1.202(1), received 12/21/92.
2. Technical Evaluation and Preliminary Determination (TE&PD) dated 2/25/93.
3. Comments received on 3/4/93, in a meeting.
4. Comment received 3/8/93, via FAX.
5. Revised TE&PD dated 3/8/93.
6. Proof of Publication of the Department's Intent to Issue in the Pensacola News Journal issue of 3/13/93.

Attachments cont.:

7. Verified Petition for a Formal Hearing pursuant to Section 120.57, F.S., received 3/23/93, by the Department's OGC.
8. Mr. Brian Beals' letter dated 4/13/93.
9. Motion to Dismiss Petitions done and ordered on 1/27/94, by the DOAH Hearing Officer.
10. Final Order done and ordered by Secretary Virginia B. Wetherell on 3/9/94.
11. Final Determination dated 3/25/94.

GENERAL CONDITIONS:

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

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

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

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

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

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance

GENERAL CONDITIONS:

with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

13. The permittee shall comply with the following:

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

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

c. Records of monitoring information shall include:

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

14. This permit constitutes compliance with:
a. New Source Performance Standards (NSPS), 40 CFR 60, Subparts Db and Kb;
b. Prevention of Significant Deterioration; and,
c. Best Available Control Technology (BACT).

GENERAL CONDITIONS:

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

SPECIFIC CONDITIONS:

A. <u>No. 6 Power Boiler</u> (PB)

1. The No. 6 PB may operate continuously (i.e., 8760 hrs/yr).

2. The No. 6 PB is permitted to fire natural gas only, with a maximum heat input of 533 MMBtu per hour, yielding a maximum steam product of 385,000 lbs/hr (2-hour average).

3. The No. 6 PB will be an ABB/CE boiler.

4. The Source Classification Code (SCC) is:

1-02-006-01 Ext. Combustion Boiler-Industrial 10^6 $ft.^3$ Burned

5. The No. 6 PB is subject to all applicable standards of 40 CFR 60, Subpart Db (July, 1991 version).

6. The No. 6 PB is subject to all applicable standards of F.A.C. Rule 17-296.405(2).

7. The No. 6 PB's pollutant emissions shall not exceed:

NOx*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
VOC*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity

* 24-hour average

8. Any required compliance testing shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.

SPECIFIC CONDITIONS:

b) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.
f) Upon initial start-up, testing shall be conducted for NO_x, CO, VOC, and VE.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

9. Emission monitoring for nitrogen oxides shall be in accordance with 40 CFR 48b (July, 1991 version).

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.46b (July, 1991 version).

B. <u>Lime Kiln - Mud Dryer System</u> (LK-MDS)

1. Operation permit No. AO 17-181738 is incorporated by reference except for the following changes and/or additions:

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media;

d. after construction/modification is completed, Champion will develop a testing protocol which includes a proposed test schedule to establish scrubber operating parameters and monitoring methods to meet the applicable SO_2 and TRS limits for the LK-MDS.

e. the test protocol will be submitted to the Department's Northwest District office prior to conducting the test program; and,

f. the maximum allowable operating rate of lime product (90% CaO) will be increased from 13.67 to 20.83 tons per hour.

SPECIFIC CONDITIONS:

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx*	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

* 24-hour average
** 12-hour average

Note:
- o Maximum of 500 tons/day lime product (90% CaO);
- o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
- o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm.

h. while firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C, Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

SPECIFIC CONDITIONS:

i. while firing natural gas, initial and subsequent compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C, Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used.
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

C. <u>Chlorine Dioxide (ClO_2) Generator</u>

1. Operation permit No. AO 17-219596 is incorporated by reference except for the following changes and/or additions:

a. the existing chlorine gas handling system will be eliminated;

b. the generating process will be modified from a R3H process to a R8/R10 process, which will use methanol, sulfuric acid, and sodium chlorate to generate ClO_2;

c. the maximum allowable operating rate will be increased from 16 tons/day ClO_2 to 37.4 tons/day;

d. a third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers;

e. the ClO_2 storage tanks will vent to the existing two ClO_2 storage tank chilled water scrubbers;

SPECIFIC CONDITIONS:

f. the existing two ClO_2 storage tank scrubbers will be vented to the tail gas scrubber, which will be modified by adding an additional 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide and sodium sulfide);

g. a new 21,880 gallon methanol storage tank and handling system will be installed and is subject to all applicable standards pursuant to 40 CFR 60, Subpart Kb (July, 1991 version); for PSD tracking purposes, the projected potential VOC emissions are 2.2 TPY; also, the tank will be nitrogen blanketed and equipped with a conservation vent;

SCC: 4-07-008-15	Meth. Tank-Breathing Loss	10^3 gals. storage cap.
4-07-008-16	Meth. Tank-Working Loss	10^3 gals. storage cap.

h. the existing salt unloading and storage system will be shut down and dismantled;

i. the pollutant emissions shall not exceed:

R8/R10 ClO_2 Generator: 37.4 TPD
Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

j. initial compliance testing on the Tail Gas Scrubber for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

D. <u>A and B Bleach Plant Lines</u>

1. Operation permit No. AO 17-219600 is incorporated by reference except for the following changes and/or additions:

a. both lines may operate continuously (i.e., 8760 hrs/yr);

b. the bleaching sequence will be changed from CED to DED;

c. a storage and handling system for the enzyme xylanase may be installed;

d. a storage and handling system for hydrogen peroxide will be installed;

SPECIFIC CONDITIONS:

e. the existing chlorine gas handling system will be eliminated;

f. the pollutant emissions shall not exceed:

1) A-Line Bleach Plant: 888 air dried tons per day, maximum

a) E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) A-Line Scrubber	Cl_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

2) B-Line Bleach Plant: 830 air dried tons per day, maximum

a) E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) B-Line Scrubber	Cl_2	1.0 lb/hr, 4.38 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

3) A-Line and B-Line Bleach Plants: average 1500 air dried tons per calendar day, maximum combined total

h. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

i. after construction/modification is completed, initial compliance testing on the Bleach Plant Scrubbers (A-Line and B-Line) and E_O Washers for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

E. Nos. 1 and 2 Multiple Effect Evaporator (MEE) Sets, Batch and Continuous Digester Systems, and Foul Condensate Steam Stripper System

1. Operation permit No. AO 17-212422 is incorporated by reference except for the following changes and/or additions:

SPECIFIC CONDITIONS:

a. the No. 2 MEE set will be modified to include the addition of new effects, which will be vented to the non-condensible gas (NCG) handling system, which will increase the allowable maximum operating rate from 97,000 to 181,000 lbs/hr dry BLS (black liquor solids) and determined by measuring solids and flow into the system; however, the following operational scenarios are applicable to both of the Nos. 1 and 2 MEE sets:

   1) when the Nos. 1 and 2 MEE sets are operated simultaneously, the maximum operating rate shall be 278,000 lbs/hr as a total combined input to them (24-hour average) and determined by measuring solids and flow into the systems;

   2) when only one MEE set is in operation, the maximum operating rate shall be 181,000 lbs/hr dry BLS and determined by measuring solids and flow into the system (24-hour average); and,

   3) actual total annual dry BLS from the Nos. 1 and 2 MEE sets, as determined by measuring solids and flow into the systems, shall not exceed the average for the years 1991 and 1992 (see AORs).

b. a storage and handling system may be installed for water-transported anthraquinone, an organic catalyst, which may be used in both the batch and continuous digester systems; both systems vent to the NCG handling system; and,

c. an additional foul condensate steam stripper will be installed and will be vented to the lime kiln or calciner for incineration.

F. <u>General</u>

1. The facility shall be in compliance with all applicable standards/limitations of F.A.C. Rules 17-210 thru 297, 17-4, and 40 CFR (July, 1991 version).

2. The permittee is subject to the applicable provisions of F.A.C. Rules 17-4.130: Plant Operation-Problems; 17-210.650: Circumvention; and, 17-210.700: Excess Emissions.

3. Objectionable odors shall not be allowed off plant property in accordance with F.A.C. Rule 17-296.320(2).

SPECIFIC CONDITIONS:

4. The Department's Northwest District office shall be notified in writing at least 15 days prior to source testing pursuant to F.A.C. Rule 17-297.340. Written reports of the tests shall be submitted to the Department's Northwest District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450.

5. Any change in the method of operation, raw materials, equipment, operating hours, etc., pursuant to F.A.C. Rule 17-212.200, Definitions-Modification, the permittee shall submit an application and the appropriate processing fee to the Department's Bureau of Air Regulation (BAR) office.

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

7. An application for an operation permit must be submitted to the Department's Northwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell

Virginia B. Wetherell
Secretary

Florida Department of
Environmental Protection

Memorandum

TO: Virginia B. Wetherell VBW

FROM: Howard L. Rhodes

DATE: March 25, 1994

SUBJECT: Approval of Air Construction Permit
AC 17-223343 and PSD-FL-200
Champion International Corporation

Attached for your approval and signature is an air construction permit No. AC 17-223343 (PSD-FL-200), which will allow the company to modify the existing pulp mill. The proposed modification was prepared by the Department's Bureau of Air Regulation.

The existing facility is a pulp mill located in Cantonment, Escambia County, Florida. The mill processes hardwood and softwood chips into a pulp through a digester process, which is then further processed and subjected to a bleaching process to meet product specifications. The proposed modifications were applied for in concert with the mill's wastewater Consent Order. The proposed modifications include the construction of a new natural gas fired No. 6 Power Boiler, modification of the existing Lime Kiln's mud handling system, modification of the existing A and B Bleach Plant lines and their operations, modification of the existing No. 2 Multiple Effect Evaporator set by adding new effects (evaporator columns), and construction of a new methanol storage tank. Also, there is a requirement to surrender the Operation Permits for the existing Nos. 1 and 2 Power Boilers.

During the Public Notice period, petitions were filed for an administrative hearing and were later dismissed by Order of the Hearing Officer; and, a Final Order was issued by the Department, which directed the Department's Bureau of Air Regulation to issue the proposed draft permit as Public Noticed and described in the Intent to Issue package. Therefore, all pending hearings have been resolved and the proposed permit has been finalized.

I recommend your approval and signature.

HLR/BM/rbm

Best Available Control Technology (BACT) Determination
Champion International Corporation
Escambia County

PSD-FL-200

The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr [385,000 lbs/hr steam (2-hour average)] and the modification of the existing lime kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order.

The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired to be as follows:

Pollutant	Emissions (TPY)	PSD Significant Emission Rate (TPY)
NO_x	138.8	40
SO_2	28.2	40
PM/PM_{10}	-1.3	25/15
CO	189.0	100
VOC	85.5	40
TRS	-1.9	10

Florida Administrative Code (F.A.C.) Rule 17-212.400(2)(f) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

December 21, 1992

BACT Determination Requested by the Applicant

Source	Pollutant	Determination
#6 Power Boiler	NO_x*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx*	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
		Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY
	VOCs*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

* 24-hour average

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-212, Stationary Sources - Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, than the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from the No. 6 Power Boiler can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- Combustion Products (e.g., particulates). Controlled generally by efficient combustion of clean fuels.
- Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- Acid Gases (e.g., NOx). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc,), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion/Incomplete Combustion Products

The projected emissions of carbon monoxide and volatile organic compounds from the proposed modification to Champion International Corporation's facility exceed the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

CO and VOCs:

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, the limits requested are considered reasonable as BACT.

Acid Gas Products

The projected emissions of nitrogen oxides from the proposed modification to Champion International Corporation's facility exceed the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

NOX:

For NOx, the proposed BACT limits for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer System are within the range of similar sources in the BACT/LAER clearinghouse data base.

For the No. 6 Power Boiler, there have been limited cases of SCR impositions, but the cost evaluation of such technology is prohibitive for this project. Costs and process parameters rule out the use of other technologies, such as Selective Catalytic Reduction (SCR), Selective Noncatalytic Reduction (SNCR), and Flue Gas Denitrification (FGDN). The proposal to use Coen low-NOx burners together with flue gas recirculation to the combustion zone for minimizing NOx emissions is considered as BACT. However, available space will be made for the potential retrofit of a control system to control NOx.

For the Lime Kiln-Mud Dryer, the application of SCR, SNCR, or FGDN, have never been applied to a lime kiln system due to process variables. Therefore, the proposal to use good operational practices and proper combustion, along with the proposed emission limitations, is considered BACT.

Adverse Environmental Impact Analysis

The predominant adverse environmental impacts associated with the potential use of add-on control technology (SCR, SNCR or FGDN) are the emissions of other pollutants (i.e., ammonia, urea, hazardous waste from catalysts, etc.) used in the process for NOx control. Although the use of add-on controls do have some positive environmental benefits, the disadvantages may outweigh the benefits provided by reducing NO_x emissions.

From the evaluation of natural gas combustion, toxics are projected to be emitted in very small amounts. Although the emissions of toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber system, the amount of emission reductions would not warrent the added expense. Consequently, the Department does not believe that the BACT determination would be affected by the emissions of the toxic polutants associated with the firing of natural gas.

BACT Determination by DEP

NOx Control

For the No. 6 Power Boiler, the information that the applicant presented indicates that the incremental cost of controlling NOx is high compared to the guidelines. Based on the information presented by the applicant and the evaluation conducted, the Department believes that the use of add-on controls NOx control is not justifiable as BACT. Therefore, the Department will accept the Coen low-NOx burners together with flue gas recirculation to the combustion zone as NOx control when firing natural gas.

For the Lime Kiln-Mud Dryer, there has not been an application of NOx add-on controls for this type of source contained in the data base. Therefore, there will not be any add-on controls required for NOx for this source.

CO and VOC Control

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, there will not be any add-on controls Required for CO or VOCs for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer.

I N T E R O F F I C E   M E M O R A N D U M

Date: 30-Mar-1993 07:13am EST
From: Dea Wahlen TAL
WAHLEN_D
Dept: Office General Counsel
Tel No: (904)488-9730
SUNCOM: 278-9730

TO: Susan Brice PEN (BRICE_S)
TO: Patty Adams TAL (ADAMS_P)

Subject: Champion International

On March 29, 1993, we received another third party petition for administrative hearing concerning Champion International's AC17-223343. Petitioner this time is Perdido Bay Environmental Association, Inc., represented by Thomas O. Bear, Esquire.

I N T E R O F F I C E   M E M O R A N D U M

Date: 29-Mar-1993 08:55am EST
From: Dea Wahlen TAL
WAHLEN_D
Dept: Office General Counsel
Tel No: (904)488-9730
SUNCOM: 278-9730

TO: Susan Brice PEN (BRICE_S)
TO: Patty Adams TAL (ADAMS_P)

Subject: Champion International

On March 26, 1993, we received a third party petition for administrative hearing from Nelson Bethune, a second similar petition from Thornton Garth, and a third similar petition from Fred Garth, concerning Champion International's AC17-223343.

I N T E R O F F I C E   M E M O R A N D U M

Date: 23-Mar-1993 04:05pm EST
From: Dea Wahlen TAL
WAHLEN_D
Dept: Office_General Counsel
Tel No: (904)488-9730
SUNCOM: 278-9730

TO: Susan Brice PEN (BRICE_S)
TO: Patty Adams TAL (ADAMS_P)

Subject: Petition for hearing

On March 23, 1993, we received a third party request for hearing from Jacqueline M. Lane concerning AC17-223343, Champion International Corporation, applicant.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

PERDIDO BAY ENVIRONMENTAL ASSOCIATION, INC., PETITIONERS	*	
VS.	*	DOAH CASE NO. DER NOS:
DEPARTMENT OF ENVIRONMENTAL REGULATION AND CHAMPION INTERNATIONAL, INC., RESPONDENTS	*	

PETITION FOR ADMINISTRATIVE HEARING

Comes now Perdido Bay Environmental Association, Inc. and pursuant to Section 120.57 Florida Statutes requests a hearing to challenge the Notice of Intent to Issue a Permit to Champion International, Inc. (AC 17-223343) and to further challenge the Department of Environmental Regulation's Intent to Issue a variance to said facility which variance will be necessitated by the proposed application by Champion and as grounds for such request, Petitioner states as follows:

1. The Department of Environmental Regulation is the Agency whose interests are affected by this Challenge. The file numbers involved in this challenge are, on information and belief, AC 17-223343 and are seeking to circumvent the prevention of significant deterioration regulation as set forth in its legal notice published in the Pensacola News Journal. Any other file numbers involved in this challenge will be amended later as soon as same are available and if there are such additional files due to previous filings before this Department by Champion International, Inc. concerning similar variances.

2. Perdido Bay Environmental Association, Inc. (PBEA) is a non-profit corporation incorporated in the State of Alabama. Its address is P.O. Box 573, Lillian, Alabama 36549. PBEA has approximately 100 members, some of whom are residents of Florida and some of whom are residents of Alabama. Perdido Bay is located in between Florida and Alabama and discharges into the Bay effect residents of both States. Numerous members own property on Perdido Bay and use the Bay for recreational purposes and others permanent residence is on the Bay. There are some who are commercial fishermen. Other PBEA members are scientists and have an educational and research interest in Perdido Bay. The livelihood of the commercial fishermen and the economic status of most members are directly effected by the preservation of water quality in the Bay in that property values are effected and many members have their entire life savings invested in their property. Other members are real estate developers whose livelihood depends upon marketing properties which ability to so market would be effected by what PBEA considers an adverse operation of Champion's Cantonment plant to being adverse to the quality of the water. Additionally, the same described persons are effected by air quality in that those permanent residents, many of whom are senior citizens and have respiratory vulnerability, are directly effected by any deterioration of the permit as it pertains to air pollution standards. Furthermore, the marketability of property of any owner of property by a PBEA member is directly effected by deterioration of air quality which would result from the proposed permit of Champion and the proposed intent to issue by FDER. The By-Laws of

PBEA authorize action to preserve the property around the Bay for the health, safety and welfare including economic welfare of its members and the public in Baldwin County, Alabama and Escambia County, Florida. The organization has been active in trying to protect the Bay, the air quality surrounding the area, and in participating in the governmental process to prevent further degradation of land values, water quality, air quality, and other aspects of the environment which are highly sensitive to pollutants. Petitioners received notice of the proposed agency action via newspaper notice dated March 13, 1993.

3. Champion International, Inc. applied on December 21, 1992 to the Department of Environmental Regulation for permits to be allowed to make modifications to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. The existing pulp mill is located at 375 Muscogee Road, Cantonment, Escambia County, Florida.

4. Perdido River is classified by the State of Florida as an Outstanding Florida Water pursuant to Section 17-3.041(4)(i), Florida Administrative Code. Eleven-Mile Creek backflows up the Perdido River. The Perdido River is therefore affected by the quality of water flowing from Eleven-Mile Creek.

5. Perdido Bay is an estuarine water body which borders Escambia County, Florida and Baldwin County, Alabama. It has naturally poor flushing conditions.

6. Respondent Champion International, Inc.'s pulp mill is not entitled to an operating permit because it will violate state water quality standards as follows:

a) The discharge from the plant will create objectionable odor and color problems in such an amount as to create a nuisance in violation of §17-3.051(1)(c), F.A.C.

b) The components of the discharge will be in such high amounts as to cause carcinogenic, mutagenic and/or teratogenic effects to significantly locally occurring aquatic species in violation of §17-3.051(1)(e), F.A.C. <u>Inter alia</u>, the discharge contains components that mimic hormones that cause fish and other aquatic life to undergo changes in their sexual characteristics. The chlorine combines with organics to form carcinogenic compounds which adversely effect aquatic life. The effluent by-products contain dioxin, a potent mutagen and carcinogen.

c) The discharges will violate state water quality standards for zinc, iron, transparency and specific conductance in violation of §17-3.121(15), (28) and (29), F.A.C. and §17-3.061(1)(o), F.A.C. Champion has already admitted that its plant will violate these four parameters and thus has applied for a variance.

d) In addition, the discharges will also violate DER standards for BOD (§17-3.061(2)(b), F.A.C.) turbidity (§17-3.061(2)(r), F.A.C.), dissolved oxygen (§17-3.061(2)(g) and 17-

PERDIDO BAY ENVIRONMENTAL ASSOCIATION, INC.,

Petitioner,

vs. CASE NO. 93-2057

CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION,

Respondents.

ORDER

THIS CAUSE comes before the undersigned upon Motions to Dismiss the above-named Petitioners' Second Amended Petitions filed in this cause pursuant to Order of the Hearing Officer granting a second Motion to Dismiss each of the Petitions and giving the Petitioners a second opportunity to amend their Petitions. The procedural history of this case is as outlined in the Motions in Opposition to Amended Petitions, culminating in the filing of the subject motions, responses thereto, and the conduct of oral argument by the Hearing Officer on November 29, 1993 in Tallahassee, Florida.

The Hearing Officer has carefully considered the motions, responses thereto, and the oral argument of the parties in support of and in opposition to the motions. Despite being accorded three opportunities over a period of approximately six (6) months after this case was filed with the Hearing Officer, the Perdido Bay Environmental Association, Inc., Thornton Garth, Fred Garth, Nelson Bethune, and Jacqueline M. Lane have failed to establish sufficient substantial interests affected by the application and the project proposed to be permitted which are

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

JACQUELINE M. LANE, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2053
FRED GARTH, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2054
NELSON BETHUNE, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2055
THORNTON GARTH, Petitioner, vs. CHAMPION INTERNATIONAL CORPORATION and DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO. 93-2056

EXHIBIT A

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Bruce Mitchell

2.

3.

4. AIR

Remarks:

Bruce - let me know when we issue this permit! Thanks -

From Holly Bunnano

Date 3/21

Phone

BEST AVAILABLE COPY

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Ms. Jackie Lane
2. 10738 Lillian Hwy
3. Pensacola, FL 32506
4.

Remarks: 904-453-5488

Dear Ms. Lane:

I am sorry that you have experienced some difficulty in obtaining text from the Champion International Corporation Site. Thanks for pointing this (missing text) out to us. However, it seems quite bizarre to have had this occur.

I hope the enclosed information will satisfy your needs. If there are any questions, please give me a call.

Sincerely,

From: R Bruce Mitchell

Date 4-22-95

Phone 904-488-1344

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CHAMPION Pensacola mill

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ented below:

- Carbon Monoxide
- Volatile Organic Compounds

Florida Statutes, proceeding dealing with the substantive law embodied in Chapter 403, Florida Statutes, and related rules, contained in Title 17, Florida Administrative Code, is designed to protect. Agrico Chemical Co. v. DER, 406 S.2d 478 (Fla. 2d DCA 1981). Moreover, such Petitions must contain allegations of an injury or injuries that are different, more specific, greater than, and peculiar to the Petitioners, such that their injuries rise to a different level and are more specific to them than those merely expected to be experienced by the public generally. See, Florida Home Builders Association v. Department of Labor and Employment Security, 412 S.2d 351 (Fla. 1982).

Upon the Hearing Officer determining that the original Petitions and the First Amended Petitions failed to meet these requirements for establishing standing to initiate a formal proceeding before the Division of Administrative Hearings, the Hearing Officer entered a quite detailed Order on August 9, 1993 providing extensive instructions to the Petitioners, explaining in detailed fashion the specific pleading requirements for establishing substantial injury within the zone of interest involved in the putative proceeding and providing examples of how such specific "substantial interest-zone of interest" standing pleading could be accomplished. Despite these detailed instructions and after three opportunities, the Petitioners have failed to file Petitions which persuade the Hearing Officer that they have substantial interests which will be affected or injured by the activity proposed to be permitted different from the interests of the general public. The Department itself is sufficient to invoke a right to a formal administrative proceeding in this forum. The allegations of the Petitioners upon this third opportunity to submit Petitions which might demonstrate entitlement to a formal proceeding involve a misapplication of rules, a misapprehension of the import of certain rules, and still fail to establish that the Petitioners will suffer any substantial injury peculiar unto themselves and different from any condition which the general public is or will be exposed to by the subject project sought to be permitted. Much of the content of the Petitions amounts to speculation regarding potential harmful effects the Petitioners fear will result from the proposed permits grant, rather than specific factual allegations concerning particular harm caused to these Petitioners by alleged violations of the statutes and rules pertaining to the subject matter of the application. The Petitioners' Second Amended Petitions, as was the case with the original and the First Amended Petitions, fail to satisfy the requirements of Rules 17-103.155, 28-5.103, and 60Q-2.004(3), Florida Administrative Code, which provide detailed advice as to matters required to be included in such Petitions for formal proceedings.

The Petitioners, in order to show that their substantial interests will be affected by the agency action proposed, must show that an injury, in fact, will be suffered which is of such sufficient immediacy to entitle the Petitioners to a hearing and that the Petitioners' substantial injuries alleged are of a type and nature which a Section 120.57(1),

DONE AND ORDERED this 27th day of January, 1994, at Tallahassee, Leon County, Florida.

P. Michael Ruff

P. MICHAEL RUFF
Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550
(904) 488-9675

Filed with the Clerk of the Division of Administrative Hearings this 27th day of January, 1994.

Copies furnished to:

Jacqueline M. Lane
10738 Lillian Highway
Pensacola, FL 32506

Fred Garth
14110 Perdido Key Drive
Pensacola, FL 32507

Nelson Bethune
7 South Warrington Road
Pensacola, FL 32507

Thornton Garth
P.O. Box 424
Lillian, AL 36549

Thomas O. Bear, Esq.
P.O. Box 1238
Foley, AL 35536

Jefferson M. Braswell, Esq.
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Segundo J. Fernandez, Esq.
OERTEL, HOFFMAN, ET AL.
P.O. Box 6507
Tallahassee, FL 32314-6507

charged by statute with protecting the interests of the general public through its regulation and review of such jurisdictional activities as those proposed by the applicant, which may not be the basis for standing of individual, private Petitioners situated as the subject Petitioners.

The Petitioners have not persuaded the Hearing Officer that their interests are different from that of the general public merely by the fact that they live a certain number of miles from the mill and proposed installation. The mileage of Petitioners' residence proximate to the mill was not definitely related to a specific rule or rules which might assist in establishing their standing and substantial interests to be more specific than that of the general public, even had the totality of their allegations otherwise shown specific injury to substantial interests, which they did not. In accordance with the remaining arguments raised in the Motions to Dismiss the Second Amended Petitions and the Respondent's oral arguments in support thereof, all of which are more persuasive and adopted herein, it is, therefore, concluded after long and careful reflection, since the motion hearing of November 29, 1993, that the Second Amended Petitions must be dismissed with prejudice.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

JACQUELINE M. LANE,

Petitioner,

vs.

DER File No.:
CASE NO.:

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL REGULATION and CHAMPION INTERNATIONAL CORPORATION,

Respondents.

RECEIVED
APR 1 1993
Dept. of Environmental Reg.
Office of General Counsel

MOTION IN OPPOSITION TO PETITION

Respondent, CHAMPION INTERNATIONAL CORPORATION, files this Motion in Opposition to Petition pursuant to Section 17-103.010 and Section 28-5.205, Florida Administrative Code, and states as follows:

I. Background Information and Factual Predicate for the Instant Proceeding

A. The following background information pertains to the subject proposed permit and the circumstances leading up to the filing of Champion's request for permit.

1. Respondent, Champion International Corporation ("Champion"), is the applicant for permit in DER Files Nos. AC17-223343/PSD-FL-200, Escambia County.

2. The subject permit is to be issued under and governed by the provisions of Chapter 403, Florida Statutes, and more particularly, Chapter 17-210 through 17-297 and 17-4, Florida Administrative Code, and 40 CFR (July, 1991 version), the

Department's Air Pollution Control Program rules.

3. On March 10, 1993, the Department entered its Intent to Issue an Air Construction Permit to Champion pursuant to Rule 17-210.300(1), Florida Administrative Code. A copy of the Intent to Issue and supporting documents is attached hereto as Exhibit "1."

4. As required by Section 403.815, Florida Statutes and Rule 17-103.150, and Rule 17-210.350, Florida Administrative Code. On March 13, 1993, Champion published in the Pensacola News Journal, the Department's Notice of Intent to Issue Permit, which also provided a thirty (30) day period for submittal of public comments and opportunity to request a public hearing. A copy of the Public Notice is attached hereto as Exhibit "2."

5. The subject permit request was filed in concert with Consent Order OGC File No. 87-1398 entered by the Department on December 1, 1989. A copy of the Consent Order is attached hereto as Exhibit "3."

6. The Consent Order was the subject of a formal administrative hearing pursuant to Section 120.57(1), Fla. Stat., which resulted in the entry of a Final Order governing the Consent Order and other permits and variances pertaining to construction operation, and modification of Champion's pulp mill in Cantonment, Florida. A copy of that Final Order is attached hereto as Exhibit "4."

7. As a result of the Final Order, the Department issued to Champion TOP #IT 17-156163 for operation of the

wastewater plant and for discharge of treated effluent to waters of the state. Champion continues to operate to date under the terms of the Consent Order and TOP. A copy of the TOP is attached hereto as Exhibit "5."

II. **Motion to Dismiss**

B. Champion hereby moves the Department to dismiss Petitioner's request for a hearing for the following reasons:

1. Champion received a copy of the "Request for Hearing Challenging the Legality of the Intended Construction Permit Issued to Champion International Corporation" served by Petitioner, Jacqueline M. Lane ("Lane"), on March 24, 1993. Champion specifically opposes the Department's granting of the request for hearing for the reasons stated below.

2. Rule 17-103.155(4), Florida Administrative Code, specifically provides that the Department shall issue an order dismissing a petition which does not substantially comply with the requirements of Subsection (2) of that rule. Petitioner has failed to comply with the requirements for a petition in several important respects:

a. The statement of how the Petitioner's substantial interests are affected by the Department's proposed action is deficient; first, in Paragraphs 4(a) and (c) of the Petition, Petitioner states that she is a substantially affected person because she owns property on Perdido Bay, and uses the Bay for recreational purposes, and that Champion's effluent discharge has been degrading the water quality and causing a nuisance along the property owned by the Petitioner. The proposed construction permit is an air construction permit issued pursuant to the Department's air rules and not an industrial waste permit issued pursuant to the Department's industrial wastewater/water quality rules. Petitioner's statements pertaining to water quality impacts are irrelevant in this proceeding, where proposed agency action does not affect whatever permit requirements Champion may be required to meet for its wastewater effluent.

b. Secondly, Petitioner has stated in Paragraph 4(b) of the Petition that she lives approximately 15 miles south of Champion and "can see and smell the air emissions from the mill." The mere statement contained in Paragraph 4(b) of the Petition, quoted above, fails to state how Petitioner's substantial interests are affected by the Department's proposed action, or for that matter, how her interests are different from those of the public at large.

3. The Petition does not contain a statement of material facts which are disputed by Petitioner. "Material facts" are defined in Rule 17-103.155(2)(d), Florida Administrative Code, as "those facts upon which the Department's action or proposal is based." Petitioner, in Paragraphs 5, 6, and 7, makes allegations that might arguably be relevant in a permitting proceeding for the wastewater permit or permits that Champion may require, but not for proposed agency action on an air construction permit.

4. Paragraph 8 of Petitioner's request for hearing alleges that Rule 17-210.350, Florida Administrative Code,

requiring a thirty (30) day comment period, is being violated. Petitioner alleges that "the Intent to Issue only gives the public a fifteen (15) day period of comment" and that "the Department does not have at its District Office a complete copy of the modelling program which was required to evaluate the impact of the sufficient increase in certain air emissions." In fact, these allegations are incorrect, as a review of the Public Notice, attached hereto as Exhibit "2," will reveal, for, in its very last paragraph, the Notice states that:

> Any person may send written comments of the proposed action to Mr. Preston Lewis, at the Department's Tallahassee address. All comments received within thirty (30) days of the publication of this Notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such request must be submitted within thirty (30) days of this Notice.

5. As to the modelling which Petitioner claims was not made available, Respondent would note that the Public Notice also states that the applications for permits are available for public inspection during normal business hours at the Department of Environmental Regulation's Tallahassee Office, Bureau of Air Regulation, and at the Department's Northwest District Office in Pensacola, Florida. The results of all air quality modelling are contained in the permit application documents which are and have been available for inspection during the required public notice period.

6. In Paragraph No. 9 of the Petition, Petitioner makes

the bare allegation that Champion has been violating certain requirements of the Florida Administrative Code, specifically Rule 17-296.320(2) [release of obnoxious odors] and 17-210.650 and 17-210.700(4) [by "operating the plant in an irresponsible manner so as to release excessive air emissions and cause harm to the public health"]. Petitioner has failed to identify specific facts on which the Department based its permitting decision ("material facts") that it disputes. The sections which Petitioner has cited in Paragraph 9 of her Petition pertain to operational requirements to which Champion has been subject under its current permits and will be subject to in future permits issued pursuant to these rules.

7. Paragraph 9 of the Petition clearly amounts to a bare conclusion of law ("Champion has violated these rules") without alleging any underlying fact (when, where and how and to what extent) or even identifying and disputing any fact related to these rules on which the Department based its decision and which Petitioner disputes.

8. Likewise, the Petition fails to comply with Rule 17-103.155(2)(f), in that it fails to identify the rules or statutes which Petitioner contends require reversal or modification of the Department's action or proposed action. As previously noted, Petitioner's arguments as to the <u>permitting</u> criteria appear to deal primarily with industrial waste/water quality issues which are not the subject of this proceeding. The one possible exception is Petitioner's identification of a "violation" of Rule 17-210.350(2),

Florida Administrative Code concerning the thirty (30) day public comment period, which assertion is patently mistaken, as can be readily ascertained from a review of the Public Notice attached hereto as Exhibit "2."

9. Petitioner's confusion as to the nature of this proceeding and the inappropriateness of the Petition is more fully revealed in the request for relief that is included in the Petition. The first request for relief pertains to construction permits for wastewater treatment improvements that may be required to insure that the Mill's industrial wastewater effluent will not violate State Water Quality Standards. This request is totally inappropriate in an air permitting proceeding which deals only with the air pollution regulation rules of the Department and which result in the issuance of only an air permit.

10. The second request for relief is that the Department reissue its statement of intent allowing for the thirty day public comment and review, and that the Department make available to the public all information concerning how a determination was made, including the air dispersion model as required by the air rules. As noted above, Petitioner is mistaken on both counts and the Department has complied with the requirements for public notice and public inspection.

11. The third request for relief is entirely irrelevant to any of the issues raised in the preceding paragraphs, lacks any factual predicate, and is a request for a Department investigation, and not a permit-related issue cognizable under the rules purusant

to which the air construction permit has been processed and under which the permit is to be issued.

12. The fourth request for relief is likewise not supported by any specific allegation of fact or law raised in the request. There is no factual predicate laid to enable the Department or the Applicant to respond to this request for relief.

13. In summary, Petitioner's Request for Hearing on the subject air construction permits should be dismissed because:

a. the Request does not comply with the requirements of Rule 17-103.155;

b. the Request raises water quality issues which are not cognizable in an air construction permit proceeding;

c. the Request raises issues about the public notice which are plainly and ascertainably incorrect.

III. Motion in Opposition to the Granting of the Request for a Formal Proceeding.

C. In the alternative, Respondent Champion opposes the granting of a Section 120.57(1), Florida Statutes formal proceeding and suggests that the Department grant a Section 120.57(2), Florida Statutes, informal proceeding, for the following reasons:

1. Petitioner's Request does not specifically ask for a Section 120.57(1), Florida Statutes proceeding. The only instance where a suggestion that a formal proceeding is sought is found in the first sentence of Petitioner's Request wherein the word "formal" appears.

2. Both the issues raised by Petitioner and the request for relief outlined suggest that there are no disputed issues of

material fact, but rather, disputed issues of law, principally, whether an air construction permit may be issued when there are outstanding industrial wastewater/water quality issues that may need to be addressed in permit proceedings under applicable water quality rules.

3. The "Reasons Which Make this Construction Permit Illegal," Paragraphs 7, 8 and 9 of Petitioner's Request, <u>are</u> the issues which Petitioner has raised to be considered in this proceeding. A discussion of these is found in Champion's Motion to Dismiss, above.

4. Section 120.57(1), Florida Statutes, applies <u>only</u> whenever the proceeding involves a disputed issue of material fact. Unless otherwise agreed by all the parties, Section 120.57(2), Florida Statutes, applies in all other cases.

5. Champion specifically does not agree that a Section 120.57(1), Florida Statutes, would be appropriate, because the Request does not raise disputed issues of material fact. If a proceeding is to be granted, a Section 120.57(2), Florida Statutes, proceeding would be the only appropriate forum in which to consider the legal issues raised by Petitioner.

6. Additionally, time is of the essence in the resolution of the issues raised by Petitioner's Request. An informal proceeding before the agency, on legal issues particularly within the expertise of the Department, would be the most expeditious way of assuring that Champion's compliance with the terms of the Consent Order is least interrupted.

IV. Necessity for an Expeditious Resolution of the Proceeding Initiated by Petitioner's Request.

1. Consent Order OGC File No. 87-1398 contains an extensive compliance schedule, specifically in Paragraphs 13 through 22, governing wastewater treatment and water quality impacts.

2. The in-mill improvements which are the subject of the air construction permit at issue in this proceeding are components common to any compliance plan which will be reviewed under the terms of the Consent Order and future industrial wastewater/water quality permits that may be required under the terms of the Consent Order.

3. Department action on the subject air construction permit will not prejudice future Department action on industrial wastewater/water quality permit applications, nor will it prejudice or pre-determine the choice of compliance plan to be submitted to the Department pursuant to the Consent Order.

4. The air construction permit application was filed many months ahead of the schedule required in the Consent Order for wastewater/water quality compliance plans because of the long lead time required to order and construct the component parts of the project which is the subject of the air permit. The subject permit covers activities which are an integral part of Champion's compliance efforts and which entail numerous steps in the mill to recycle rather than discharge various waste streams. Certain modifications to the lime dryer system would also enable a reduction in loading to the wastewater treatment facility. In

addition, the project includes a modification to increase chlorine dioxide generation which is an integral part of Champion's program for the elimination of the use of elemental chlorine at its facility. Because of the need to schedule mill outage times well in advance of certain critical construction dates, and the lead time involved in the ordering and delivery of parts and in actual construction, a delay in these improvements may affect Champion's ability to meet the Department's specified deadlines as required by the Consent Order.

5. Pursuant to Paragraph 33 of the Consent Order, Champion is required to advise the Department of any event which causes a reasonable likelihood of delay in the achievement of the requirements of the Consent Order. In accordance with that provision, Champion specifically advises the Department and the Petitioner that any delays in the permitting of the in-mill improvements covered by the air construction permit, as a result of Petitioner's institution of this proceeding, will likely affect Champion's ability to meet the industrial wastewater/water quality compliance dates in the Consent Order.

6. Champion would likewise place Petitioner on notice that it considers Petitioner's request for hearing a frivolous pleading interposed for improper purposes and subject to the sanction provisions of Section 120.57(1)(b)5, Florida Statutes.

V. Conclusion and Prayer for Relief

WHEREFORE, Respondent Champion International Corporation respectfully requests that DER:

1. Deny Petitioner's Request for Hearing;

2. Dismiss Petitioner's Request for Hearing;

3. In the alternative, determine that Petitioner has not raised disputed issues of material fact, is not entitled to a Section 120.57(1), F.S. proceeding but rather to an informal proceeding pursuant to Section 120.57(2), F.S.;

4. In the second alternative, should the Department forward this matter to the Division of Administrative Hearings, that it forward this Motion as well for oral argument before the assigned Hearing Officer and a ruling on this Motion.

Respectfully submitted,

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.
Post Office Box 6507
Tallahassee, Florida 32314-6507
(904) 877-0099

SEGUNDO J. FERNANDEZ
Fla. Bar ID#218391
TERRY COLE
Fla. Bar ID#133550

Attorneys for CHAMPION INTERNATIONAL CORPORATION

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by United States Mail to JACQUELINE M. LANE, 10738 Lillian Highway, Pensacola, Florida 32506 and JEFF BRASWELL, Assistant General Counsel, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, this 1st day of April, 1993.

Segundo J. Fernandez

Attorney

sjf\1171\1171.mop

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

RECEIVED
APR 19 1993
Dept. of Environmental Reg.
Office of General Counsel

PERDIDO BAY ENVIRONMENTAL
ASSOCIATION, INC.,

Petitioner,

vs. CASE NO.: 93-2057

CHAMPION INTERNATIONAL
CORPORATION and STATE OF
FLORIDA, DEPARTMENT OF
ENVIRONMENTAL REGULATION,

Respondents.
_______________________________/

MOTION IN OPPOSITION TO PETITION FOR ADMINISTRATIVE HEARING

Respondent, CHAMPION INTERNATIONAL CORPORATION, files this Motion in Opposition to the Petition for Administrative Hearing filed by Perdido Bay Environmental Association, Inc., pursuant to Section 17-103.010 and Section 28-5.205, Florida Administrative Code, and states as follows:

I. Background Information and Factual Predicate for the Instant Proceeding

A. The following background information pertains to the subject proposed permit and the circumstances leading up to the filing of Champion's request for permit.

1. Respondent, Champion International Corporation ("Champion"), is the applicant for permit in DER Files Nos. AC17-223343/PSD-FL-200, Escambia County.

2. The subject permit is to be issued under and governed by the provisions of Chapter 403, Florida Statutes, and more particularly, Chapter 17-210 through 17-297 and 17-4, Florida Administrative Code, and 40 CFR (July, 1991 version), the

Department's Air Pollution Control Program rules.

3. On March 10, 1993, the Department entered its Intent to Issue an Air Construction Permit to Champion pursuant to Rule 17-210.300(1), Florida Administrative Code. A copy of the Intent to Issue and supporting documents is attached hereto as Exhibit "1."

4. As required by Section 403.815, Florida Statutes and Rule 17-103.150, and Rule 17-210.350, Florida Administrative Code. On March 13, 1993, Champion published in the Pensacola News Journal, the Department's Notice of Intent to Issue Permit, which also provided a thirty (30) day period for submittal of public comments and opportunity to request a public hearing. A copy of the Public Notice is attached hereto as Exhibit "2."

5. The subject permit request was filed in concert with Consent Order OGC File No. 87-1398 entered by the Department on December 1, 1989. A copy of the Consent Order is attached hereto as Exhibit "3."

6. The Consent Order was the subject of a formal administrative hearing pursuant to Section 120.57(1), Fla. Stat., which resulted in the entry of a Final Order governing the Consent Order and other permits and variances pertaining to construction operation, and modification of Champion's pulp mill in Cantonment, Florida. A copy of that Final Order is attached hereto as Exhibit "4."

7. As a result of the Final Order, the Department issued to Champion TOP #IT 17-156163 for operation of the

wastewater plant and for discharge of treated effluent to waters of the state. Champion continues to operate to date under the terms of the Consent Order and TOP. A copy of the TOP is attached hereto as Exhibit "5."

II. **Motion to Dismiss**

B. Champion hereby moves the Division to dismiss Petitioner's petition for administrative hearing for the following reasons:

1. Champion obtained a copy of the Perdido Bay Environmental Association, Inc.'s Petition for Administrative Hearing on March 31, 1993. According to information provided by Respondent, DER, the Petition was filed with the Department on March 29, 1993. The Petition did not have a certificate of service and was signed by Mr. Thomas O. Bear as attorney for Petitioner. After reasonable inquiry, it does not appear that Mr. Bear is a member of the Florida Bar. Champion specifically opposes the Department's granting of the request for hearing for the reasons stated below.

2. Rule 17-103.155(4), Florida Administrative Code, specifically provides that the Department shall issue an order dismissing a petition which does not substantially comply with the requirements of Subsection (2) of that rule. Petitioner has failed to comply with the requirements for a petition in several important respects:

a. The statement of how the Petitioner's substantial interests are affected by the Department's proposed action is deficient. First, Paragraph 2 of the Petition recites a number of standing allegations that pertain to the PBEA members' ownership of property on or use of Perdido Bay, and the effect of water quality on their enjoyment or use of the Bay. Second, Paragraph 2 alleges that PBEA members are affected by the deterioration of air quality "which would result from the proposed permit." As noted above, the proposed construction permit is an air construction permit issued pursuant to the Department's air rules and <u>not</u> an industrial waste permit issued pursuant to the Department's industrial wastewater/water quality rules. Petitioner's statements pertaining to water quality impacts are irrelevant in this proceeding, where proposed agency action does not affect whatever permit requirements Champion may be required to meet for its wastewater effluent. And with regard to the adverse effect on Petitioner's members of "deterioration of air quality" Champion would point out that no where in the Petition are factual allegations made or legal issues raised pertaining to the air quality standards under which the proposed permit is being issued.

b. Petitioner has simply failed to state with particularity why issuance of this air construction permit affects its interests. Indeed, Petitioner mistakenly alleges that the proposed air construction permit authorizes further degradation and decline in Perdido Bay and that somehow a water quality "variance" is involved. Water quality impacts are neither anticipated by this proposed permit, authorized by this proposed permit, nor relevant to the standards under which this proposed permit is being issued.

3. The Petition does not contain a statement of material facts which are disputed by Petitioner. "Material facts" are defined in Rule 17-103.155(2)(d), Florida Administrative Code, as "those facts upon which the Department's action or proposal is based." Petitioner, in Paragraphs 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 of the Petition, makes allegations that might arguably be relevant in a permitting proceeding for the wastewater permit or permits that Champion may require, but not for proposed agency action on an air construction permit.

4. Likewise, the Petition fails to comply with Rule 17-103.155(2)(f), in that it fails to identify the rules or statutes relevant to the air construction permit application evaluation, which Petitioner contends requires reversal or modification of the Department's action or proposed action. As previously noted, Petitioner's arguments as to the permitting criteria appear to deal entirely with industrial waste/water quality issues which are not the subject of this proceeding.

5. Petitioner's confusion as to the nature of this proceeding and the inappropriateness of the Petition are more fully revealed in the request for relief that is included in the Petition. The requests for operating permit denial and that "the variance be denied" pertain to industrial wastewater/water quality permits, which the subject air construction permit is not. In fact, the entire basis for this Petition appears to be matters which were the subject of DOAH Case Nos. 87-4921, 87-4922, 87-4925, 87-4926, and 88-0229, before Hearing Officer P. Michael Ruff, Final

Order entered November 14, 1989, attached hereto as Exhibit "4" and are totally unrelated to the notice of proposed agency action.

6. In summary, Petitioner's Petition for Administrative Hearing on the subject air construction permit should be dismissed because:

a. the Petition does not comply with the requirements of Rule 17-103.155;

b. the Petition raises water quality issues which are not cognizable in an air construction permit proceeding;

III. Motion in Opposition to the Granting of a Formal Administrative Hearing, and for Relinquishment of Jurisdiction.

C. In the alternative, Respondent Champion opposes the granting of a Section 120.57(1), Florida Statutes formal proceeding and suggests that at best a Section 120.57(2), Florida Statutes, informal proceeding, is appropriate, for the following reasons:

1. Petitioner's Petition does not specifically ask for a Section 120.57(1), Florida Statutes proceeding. Florida case law is clear that Chapter 120 does not require convening an unrequested formal hearing pursuant to Section 120.57(1), Florida Statutes. City of Punta Gorda v. PERC, 358 So.2d 81 (Fla. 1st DCA 1978).

2. Both the issues raised by Petitioner and the requests for relief outlined suggest that there are no disputed issues of material fact, but rather, disputed issues of law, principally, whether an air construction permit may be issued when there are outstanding industrial wastewater/water quality issues that may need to be addressed in permit proceedings under

applicable water quality rules.

3. Section 120.57(1), Florida Statutes, applies only whenever the proceeding involves a disputed issue of material fact. Unless otherwise agreed by all the parties, Section 120.57(2), Florida Statutes, applies in all other cases.

4. Champion specifically does not agree that a Section 120.57(1), Florida Statutes, would be appropriate, because the Petition does not raise disputed issues of material fact. If a proceeding is to be granted, a Section 120.57(2), Florida Statutes, proceeding would be the only appropriate forum in which to consider the legal issues raised by Petitioner.

5. Additionally, time is of the essence in the resolution of the issues raised by Petitioner's Petition. An informal proceeding before the agency, on legal issues particularly within the expertise of the Department, would be the most expeditious way of assuring that Champion's compliance with the terms of the Consent Order is least interrupted.

6. The absence of disputed issues of material fact requires that the Hearing Officer relinquish jurisdiction to the Department to dispose of this matter in a Section 120.57(2), Florida Statutes, informal proceeding.

IV. Necessity for an Expeditious Resolution of the Proceeding Initiated by Petitioner's Petition.

1. Consent Order OGC File No. 87-1398 contains an extensive compliance schedule, specifically in Paragraphs 13 through 22, governing wastewater treatment and water quality impacts.

2. The in-mill improvements which are the subject of the air construction permit at issue in this proceeding are components common to any compliance plan which will be reviewed under the terms of the Consent Order and future industrial wastewater/water quality permits that may be required under the terms of the Consent Order.

3. Department action on the subject air construction permit will not prejudice future Department action on industrial wastewater/water quality permit applications, nor will it prejudice or pre-determine the choice of compliance plan to be submitted to the Department pursuant to the Consent Order.

4. The air construction permit application was filed many months ahead of the schedule required in the Consent Order for wastewater/water quality compliance plans because of the long lead time required to order and construct the component parts of the project which is the subject of the air permit. The subject permit covers activities which are an integral part of Champion's compliance efforts and which entail numerous steps in the mill to recycle rather than discharge various waste streams. Certain modifications to the lime dryer system would also enable a reduction in loading to the wastewater treatment facility. In addition, the project includes a modification to increase chlorine dioxide generation which is an integral part of Champion's program for the elimination of the use of elemental chlorine at its facility. Because of the need to schedule mill outage times well in advance of certain critical construction dates, and the lead

time involved in the ordering and delivery of parts and in actual construction, a delay in these improvements may affect Champion's ability to meet the Department's specified deadlines as required by the Consent Order.

5. Pursuant to Paragraph 33 of the Consent Order, Champion is required to advise the Department of any event which causes a reasonable likelihood of delay in the achievement of the requirements of the Consent Order. In accordance with that provision, Champion specifically advises the Department and the Petitioner that any delays in the permitting of the in-mill improvements covered by the air construction permit, as a result of Petitioner's institution of this proceeding, will likely affect Champion's ability to meet the industrial wastewater/water quality compliance dates in the Consent Order.

6. Champion would likewise place Petitioner on notice that it considers Petitioner's Petition for hearing to be a frivolous pleading interposed for improper purposes, and that Petitioner is individually subject to the sanction provisions of Section 120.57(1)(b)5, Florida Statutes.

V. Conclusion and Prayer for Relief

WHEREFORE, Respondent Champion International Corporation respectfully requests that the Division of Administrative Hearings:

1. Deny Petitioner's Petition for Administrative Hearing;

2. Dismiss Petitioner's Petition for Administrative Hearing;

3. In the alternative, determine that Petitioner has not raised disputed issues of material fact, is not entitled to a Section 120.57(1), F.S., proceeding, but rather to an informal proceeding pursuant to Section 120.57(2), F.S., and relinquish jurisdiction to the Agency;

4. Schedule oral argument before the assigned Hearing Officer for a ruling on this Motion.

Respectfully submitted,

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.
Post Office Box 6507
Tallahassee, Florida 32314-6507
(904) 877-0099

SEGUNDO J. FERNANDEZ
Fla. Bar ID#218391
TERRY COLE
Fla. Bar ID#133550

Attorneys for CHAMPION INTERNATIONAL CORPORATION

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by United States Mail to:

Thomas O. Bear
Post Office Box 1238
Foley, Alabama 36536

Jefferson M. Braswell
Assistant General Counsel
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

this 16th day of April, 1993.

Attorney

sjf\1171\1171-16.pmp

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

JACQUELINE M. LANE,

Petitioner,

vs. DOAH CASE NO. 93-002053

CHAMPION INTERNATIONAL
CORPORATION and
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.

ADDITION OF MATERIAL FACTS TO THE ORIGINAL PETITION OF JACQUELINE M. LANE

COMES NOW, JACQUELINE M. LANE ("Petitioner"), and adds ADDITIONAL MATERIAL FACTS to her original petition for an administrative hearing on the ISSUANCE OF AN "AIR" CONSTRUCTION PERMIT TO CHAMPION INTERNATIONAL. The Petitioner would allege as follows:

1. On March 22, 1993, the Petitioner filed for an Administrative Hearing. Prior to her filing, the Petitioner received a copy of the intended permit from the Department of Environmental Regulation's ("Department") office in Pensacola. Attachment 1 of the Intended Permit was only "Available Upon Request" from the Department's Tallahassee office. Attachment 1 was Champion's Application for the Air Construction Permit ("The Application"). The Petitioner has now received and read Attachment 1, except for pages 6-1 to 6-24 which were missing from the copy of the Application in the Department's office in

Pensacola. Upon reading the Application, the Petitioner would like to add additional MATERIAL FACTS as follows:

a. On Page 2-4 of The Application, Champion clearly states that "the proposed modification would not be undertaken if not for the consent order". The Consent Order referred to is the Consent Order Issued to Champion in December, 1989 (OGC FILE No.87-1398) for improvements to their wastewater treatment system. These changes in air are being undertaken to improve the wastewater, hence the improvements to the wastewater MUST be considered and certain questions be answered, specifically; (1) are these degradations in air quality necessary to improve the wastewater?; and (2) if improvements to wastewater can be achieved without degrading air quality, shouldn't these proposed process changes allowed in the INTENT TO ISSUE be denied?.

2. Under Florida Administrative Code 17-2.630, Best Available Control Technology (BACT) guidelines state that ALL scientific, engineering and technical information must be considered in a review for BACT. The Petitioner alleges that ALL was interpreted in a narrow sense only to include air impacts, and data on wastewater was not considered. The Petitioner further alleges that the BACT would be to NOT allow certain process changes but to make improvements to their wastewater treatment system, thereby preserving air quality as well.

The Petitioner respectfully requests the Hearing Officer to consider these MATERIAL FACTS while deciding the motions presented in this case.

Respectfully submitted,

Jacqueline M. Lane

Jacqueline M. Lane
10738 Lillian Highway
Pensacola, Florida 32506
904-453-5488

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy ofthe foregoing was mailed to P. Michael Ruff, Hearing Officer, Division of Administrative Hearings, The DeSoto Building, 1230 Apalachee Parkway, Tallahassee, Florida 32399-1550 on this 22 day of April 1993.

With copies to:

Segundo Fernandez, Esquire
OERTEL, HOFFMAN, FERNANDEZ, & COLE, P.A.
P.O. Box 6507
Tallahassee, FL 32314-6507

Jefferson M. Braswell, Esquire
Assistant General Counsel
Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399-2400

Thomas O. Bear
P.O. Box 1238
Foley, AL 36536

Fred Garth
14110 Perdido Key Drive
Pensacola, FL 32507

Thornton Garth
P.O. Box 424
Lillian, AL 36549

Nelson Bethune
7 South Warrington
Pensacola, FL 32507

Jacqueline M. Lane

3-9-94

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JACQUELINE M. LANE, FRED GARTH, NELSON BETHUNE, THORNTON GARTH, and PERDIDO BAY ENVIRONMENTAL ASSOCIATION, INC.,	OGC Case Nos. 93-0913, 93-1065, 93-1066, 93-1067
Petitioners,	
vs.	DOAH Case Nos. 93-2053, 93-2054, 93-2055, 93-2056, 93-2057
CHAMPION INTERNATIONAL CORPORATION and STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION,	
Respondents.	

FINAL ORDER

On January 27, 1994, a Hearing Officer from the Division of Administrative Hearings submitted an Order which the Department of Environmental Protection ("Department"), previously known as the Department of Environmental Regulation, treats as a Recommended Order. A copy of the Recommended Order is attached as Exhibit A. On February 4, 1994, Petitioner JACQUELINE M. LANE filed exceptions to the Recommended Order. On February 21, 1994, Respondent CHAMPION INTERNATIONAL CORPORATION ("Champion") filed responses thereto. The matter thereupon came before me as Secretary of the Department for final agency action.

BACKGROUND

On or about March 10, 1993, the Department gave notice of its intent to issue an air construction permit to Champion for construction of modifications to an existing pulp mill located in

Cantonment, Escambia County, Florida. The permit application was filed in concert with a Consent Order entered by the Department on December 1, 1989. The Consent Order was the subject of a formal administrative hearing which resulted in the entry of a Final Order governing the Consent Order and other permits and variances pertaining to the construction, operation and modification of Champion's pulp mill. As a result of the Final Order, the Department issued Temporary Operating Permit ("TOP") #IT 17-156163 to Champion for operation of a wastewater plant and for discharge of treated effluent to waters of the state. Champion currently operates the pulp mill under the terms of the Consent Order and TOP. In accordance with the Consent Order, the proposed air construction permit authorizes construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers.

On March 23, 1993, Petitioner JACQUELINE M. LANE ("Lane") filed a petition challenging the issuance of the proposed permit. On March 26, 1993, Petitioners FRED GARTH ("F. Garth"), NELSON BETHUNE ("Bethune"), THORNTON GARTH ("T. Garth") and PERDIDO BAY ENVIRONMENTAL ASSOCIATION ("PBEA") filed their petitions challenging the issuance of the proposed permit. The individual Petitioners Lane, F. Garth, Bethune and T. Garth are the owners of property in the vicinity of the mill. The Petitioner PBEA is a non-profit corporation incorporated in the State of Alabama to preserve property around Perdido Bay, in the vicinity of the mill.

Following receipt of the petitions for formal administrative proceedings, the matter was referred to the Division of Administrative Hearings for assignment of a Hearing Officer. Champion subsequently filed motions in opposition to the petitions based in large part on the grounds that Petitioners did not substantially comply with the requirements for a petition for administrative hearing as set forth in Rule 17-103.155(4), Florida Administrative Code. After a hearing on Champion's motions, the Hearing Officer entered an Order on May 14, 1993 consolidating the five related cases and dismissing all of the petitions with leave for the Petitioners to file amended petitions. The Petitioners served their amended petitions on June 2, 1993.

On June 28, 1993, Champion filed motions in opposition to the amended petitions alleging the continued deficiency of the petitions. Following a motion hearing and consideration of several post-hearing submissions by Lane, Champion and the Department, the Hearing Officer entered an order on August 8, 1993 dismissing the petitions with leave for the Petitioners to file second amended petitions. The Hearing Officer's Order incorporated detailed instructions to the Petitioners explaining the specific pleading requirements to establish standing to initiate formal proceedings before the Division of Administrative Hearings.

In August of 1993, Petitioners timely filed second amended petitions. Champion subsequently filed motions in opposition to the second amended petitions. A hearing on Champion's motions was held on November 29, 1993. Upon consideration of the motions and responses thereto and oral argument of the parties, the Hearing Officer concluded that, despite being afforded three opportunities over a period of six months, the Petitioners had failed to demonstrate that they have substantial interests which will be affected or injured by the activity proposed to be permitted different from the interests of the general public. Accordingly, the Hearing Officer entered an Order dismissing the second amended petitions, with prejudice.

RULINGS ON EXCEPTIONS

Exception No. 1

In Lane's first exception to the Recommended Order, she contends that the Hearing Officer erred in finding that "much of the content of the petitions amounted to speculation regarding potential harmful effects which will result from granting the proposed permits." Lane contends that there is ample scientific evidence to support the Petitioners' allegations.

Lane's exception is based on the erroneous conclusion that the Hearing Officer's statement amounts to an evidentiary determination. Rather, the Hearing Officer, in addressing the motions to dismiss, found that as a matter of law the statements themselves failed to establish a proper basis for standing and therefore the Petitioners were ineligible for a hearing on the factual evidence.

Lane apparently misunderstands the purpose of the proceedings on the motions to dismiss, which is to test the sufficiency of the Petitioners' allegations regarding standing. I concur with the Hearing Officer's finding that the allegations of harm in the petitions do not constitute specific factual allegations concerning particular harm caused to these Petitioners as required by Rules 17-103.155, 28-5.103 and 60Q-2.004(3), Florida Administrative Code. Absent the requisite allegations of standing, the Hearing Officer properly dismissed the petitions. The exception is denied.

<u>Exception No. 2</u>

Lane's second exception alleges that the Hearing Officer erred in finding her not to be a substantially affected party. Lane specifically contends that the Hearing Officer ignored statements of the Petitioners that they were affected substantially more than the general public, and that Rules 17-210.350(2)(h) and 275.800(2), Florida Administrative Code, provide that anyone who lives within a 100 kilometer radius of the mill would be a substantially affected party.

Lane's exception is another attempt to reargue the allegations of harm which the Hearing Officer continuously found inadequate. In determining that the Petitioners failed to establish standing in this matter, the Hearing Officer applied the two-prong test set forth in <u>Agrico Chemical Co. v. DER</u>, 406 So. 2d 478 (Fla. 2d DCA 1981), <u>rev</u>. <u>denied</u>, 415 So. 2d 1359 (Fla. 1982). The <u>Agrico</u> test requires a petitioner to show:

> 1) that he will suffer injury in fact which is of sufficient immediacy to entitle him to a section 120.57 hearing, and 2) that his

> substantial injury is of a type or nature which the proceeding is designed to protect. The first aspect of the test deals with the degree of injury. The second deals with the nature of the injury.

Agrico, 406 So. 2d at 482. The Hearing Officer also explained that, to meet the Agrico test, the Petitioners must allege special injury that is different, more specific, and greater than that to be experienced by the public generally. See Florida Home Builders Association v. Department of Labor and Employment Security, 412 So. 2d 351 (Fla. 1982). I concur with the Hearing Officer's finding that the Petitioners' allegations of injury fail in this regard. Much of the content of the petitions amounts to speculation regarding potential harmful effects the Petitioners fear will result to the general public from the proposed permit, rather than specific factual allegations concerning harm particular to these Petitioners. The Hearing Officer properly found that Petitioners were not "substantially affected" parties entitled to an administrative proceeding in this matter.

Further, the provisions cited by Lane have no relevance to these proceedings and Lane's reliance on them is misplaced. Rule 17-175.800(2), Florida Administrative Code, describes those federally designated Class I areas outside of Florida but within 100 kilometers of the state. Rule 17-210.350(2)(h), Florida Administrative Code, provides for notice to the EPA and to the Federal Land Manager of any construction application for a proposed new or modified source which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area. These rules do not designate a "zone of interest" for the purpose of instituting an administrative proceeding and therefore do not confer standing on the Petitioners. Lane's second exception is denied.

Exception No. 3

In Lane's final exception, she contends that the Hearing Officer's decision denies the Petitioners due process because this is the last point of entry into these proceedings. It is, of course, well established that persons whose substantial interests may be affected by agency action must be provided a clear point of entry to file petitions for formal proceedings. See, e.g., Florida Optometric Association v. Department Professional Regulation, Board of Opticianry, 567 So. 2d 928 (Fla. 1990). Petitioners were afforded a point of entry to contest the subject permit prior to its issuance, and Petitioners have, in fact, availed themselves of such point of entry. The procedural history of this case is that in addition to the original petitions, the Petitioners were granted two additional opportunities to adequately allege standing in this matter. In the second order dismissing the petitions herein, the Hearing Officer went to the extent of offering extensive instructions as to the matters needed to be included in petitions for formal administrative proceedings. However, the petitions continued to be deficient.

I conclude that, under the circumstances presented, the Petitioners were afforded due process. The Petitioners were given ample opportunity to properly establish standing to challenge the proposed permit. It is not a lack of due process, but rather Petitioners' failure to meet the requirements for establishing standing which precludes the Petitioners from proceeding to hearing. For this reason, Lane's third exception is denied.

Accordingly, it is

ORDERED:

1. The Recommended Order of the Hearing Officer is adopted in its entirety and is incorporated herein by reference.

2. The Second Amended Petitions filed by Petitioners are hereby dismissed with prejudice.

3. The application of CHAMPION INTERNATIONAL CORPORATION for air construction permit AC 17-223343; PSD-FL-200 is GRANTED. The Department's Bureau of Air Regulation is directed to issue the permit upon the terms and conditions set forth in the Department's Intent to Issue and draft permit issued March 10, 1993.

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

DONE AND ORDERED this 9th day of March, 1994, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell
VIRGINIA B. WETHERELL
Secretary

2600 Blair Stone Rd
Tallahassee FL 32399-2400

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

Clerk 3/09/94 Date

CERTIFICATE OF SERVICE

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

Jacqueline M. Lane
10738 Lillian Hwy
Pensacola FL 32506

Fred Garth
14110 Perdido Key Dr
Pensacola FL 32507

Nelson Bethune
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Pensacola FL 32507

Thornton Garth
P O Box 424
Lillian AL 36549

Thomas O. Bear, Esq.
P O Box 1238
Foley AL 35536

Segundo J. Fernandez, Esq.
Oertel, Hoffman, et al.
P O Box 6507
Tallahassee FL 32314-6507

and by Hand Delivery to:

P. Michael Ruff
Hearing Officer
Division of Administrative Hearings
The DeSoto Bldg
1230 Apalachee Pkwy
Tallahassee FL 32399-1550

Jefferson M. Braswell, Esq.
Assistant General Counsel
Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee FL 32399-2400

Ann Cole, Clerk
Division of Administrative Hearings
The DeSoto Bldg
1230 Apalachee Pkwy
Tallahassee FL 32399-1550

this 10th day of March, 1994.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Lanette M. Price
LANETTE M. PRICE
Assistant General Counsel
2600 Blair Stone Rd
Tallahassee FL 32399-2400
(904) 488-9314

File Copy

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

March 8, 1993

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. F. Doug Owenby
Vice President/Operations Manager
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

Dear Mr. Owenby:

Attached is one copy of the Revised Technical Evaluation and Preliminary Determination (original draft dated February 25, 1993) and proposed permit to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers.

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

Sincerely,

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

CHF/BM/rbm

Attachments

c: E. Middleswart, NWD - hand del. by CIC 3-9-93
J. Harper, EPA
J. Braswell, Esq., DER
T. Cole, Esq., OHF&C - hand del. 3-9-93
D. Smith, P.E., CE
J. Bunyak, NPS
G. Golson, ADEM
K. Moore, CIC

Readly File
Bruce
Cleve
Katherine
3/9/93 RBM

Recycled Paper
Printed with Soy Based Inks

P 062 921 973

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

UNITED STATES POSTAL SERVICE

Sent to	F Doug Owenby
Street and No.	Champion Int'l Corp
P.O., State and ZIP Code	Cantonment, Fl
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	3-10-93

AC 17-223343
P30-F1-200

PS Form 3800, June 1991

Is your RETURN ADDRESS completed on the reverse side?

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

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
F. Doug Owenby, VP.-OM
Champion Int'l Corp.
375 Muscogee Rd
Cantonment, Fl
32533

4a. Article Number
P062 921 973

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

7. Date of Delivery
12 MAR 93

5. Signature (Addressee)

6. Signature (Agent)
[signature]

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

PS Form 3811, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of
Applications for Permit by:

DER File Nos. AC 17-223343
PSD-FL-200
Escambia County

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533
_____________________________/

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a permit (copies attached) for the proposed project as detailed in the applications specified above, for the reasons stated in the attached Revised Technical Evaluation and Preliminary Determination (original draft dated February 25, 1993).

The applicant, Champion International Corporation, applied on December 21, 1992, to the Department of Environmental Regulation for permits to be allowed to make modifications to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. The existing pulp mill is located at 375 Muscogee Road, Cantonment, Escambia County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S., and Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be the one with significant circulation in the area that may be affected by the permitting action. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (904-488-1344), within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

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

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

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy

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

cc: E. Middleswart, NWD
D. Smith, P.E., CE
J. Harper, EPA
J. Bunyak, NPS
J. Braswell, Esq., DER
G. Golson, ADEM
K. Moore, CIC
T. Cole, Esq., OHF&C

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 3-10-93 to the listed persons.

Clerk Stamp

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

Clerk 3-10-93
Date

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

Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. o. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Revised Technical Evaluation and Preliminary Determination (original draft dated February 25, 1993).

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

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

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

Department of Environmental Regulation
Northwest District
160 Government Center
Penscaola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Revised
Technical Evaluation
and
Preliminary Determination

Champion International Corporation
Escambia County, Florida

Permit Numbers: AC 17-223343
PSD-FL-200

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

March 8, 1993

I. Application

A. Applicant

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

B. Project Description and Location

The applicant proposes to modify the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modification of the existing A and B Bleach Plant Lines and their operations, the modification of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. Also, the applicant stated that this activity will not result in a mill production increase, thereby eliminating the need to address actual emissions from other mill sources (source annual operation reports will be used to verify).

The existing facility is located in Escambia County, Florida. The UTM coordinates are Zone 17, 469.0 km East and 3,385.8 km North.

C. Process and Controls

1. General

The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips (see Figure 2-3). After the wood chips have been cooked with an alkaline liquor in the batch digesters (hard wood) and the continuous digester (soft wood) and washed, the pulp is screened to separate rejects. The pulp is then further delignified in separate oxygen delignification reactors, washed, and sent to the A and B Bleach Plants, where it is reacted with various chemicals in a sequence for purification, brightening and viscosity control. Chemicals are added in retention towers, and reactants are removed in washers. After being bleached, the pulp is dried on the Nos. 3 and 5 Paper Machines and finished for customer specifications. Market pulp is dried on a pulp drying machine as bales or rolls for final sale.

2. Chemical Cooking

Improved delignification in the cooking processes is proposed for the soft wood chips, which are cooked in the continuous digester, by an extended modified continuous cooking. By adding cooking liquor at different stages and using different cooking conditions, the proposed process is expected to produce a pulp which is easier to wash and, therefore, improving lignin extraction. The continuous digester system is a sealed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln: primary; calciner: backup) for control. No increase in throughput should occur due to the proposed changes to the continuous digester system.

The project may include the installation of storage and handling equipment for anthraquinone (AQ), which is water soluble; and, therefore, Champion proposes to utilize a system designed for transporting and storing water-soluble anthraquinone. AQ is an organic catalyst which accelerates and increases the selectivity of the wood cooking chemicals in the delignification of the pulp fiber. It may be used in both the batch digester system and the continuous digester system for the purpose of reducing the organic loading, the color, and the conductivity in the bleach plant effluent.

It is believed that emissions from the digesters should not change following implementation of these new methods. Since feed rate to the digesters will not change, the material flow rate from the digesters to the brown stock washers will also be unchanged. No net change in black liquor solids to the recovery boilers is anticipated.

As is the continuous digester system, the batch digester system is a closed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln or calciner) for control.

3. O_2 Delignification

The washed brown pulp from the cooking processes goes through further delignification in O_2 reactors on each line (i.e., soft wood and hard wood). If the proposed improvements in the digester cooking processes occur, then less fiber may be wasted, which could result in an increase in the fiber processed through the O_2 delignification systems. Since there could also be reduced levels of lignin in the brown pulp, the actual emissions from the pre- and post-O_2 washers and the O_2 blow tank are not expected to change, even if fiber throughput increases.

4. A and B Bleach Plants

The existing A and B Bleach Plants are identical and use a three stage bleaching sequence commonly referred to as CED (C: a chlorination stage with chlorine dioxide added; E: an oxidative caustic extraction stage; and, D: a final chlorine dioxide bleaching stage). The final bleaching sequence will be referred to as DED (see Figure 1).

The chlorine dioxide (ClO_2) is manufactured on site in a chemical generator employing the R3H process, which reacts salt, sulfuric acid, hydrochloric acid, and sodium chlorate to form a chlorine dioxide/chlorine gas mixture that is absorbed in chilled water and stored in storage tanks for use by both plants.

There are five vent sources associated with the ClO_2 generator, which includes a tail gas scrubber using a sodium hydroxide media to control ClO_2, two ClO_2 storage tanks using chilled water scrubbers to control ClO_2, and two salt unloading/pneumatic transfer systems using separate water spray towers to control particulate emissions.

The proposal will eliminate the existing chlorine gas handling system, add a hydrogen peroxide handling system, add a methanol storage tank, and modify the ClO_2 generator. In addition, enzymes (i.e., xylanase) may be added to the high density storage tanks between the oxygen delignification systems and the bleach plants.

The mill will eliminate the use of molecular chlorine as a bleaching agent, and the first stage of each plant will be 100% ClO_2, which will require a modification to the existing ClO_2 generator. The generator will be modified to an R8/R10 process (see Figure 2), which uses methanol, sulfuric acid, and sodium chlorate to generate ClO_2. The modified reactor's capacity will be increased from 16 tons per day to 37.4 tons per day of ClO_2. A third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers.

The storage tank scrubbers will continue to vent the existing two tanks and will also vent the new storage tank. The exhaust from the two tank vent scrubbers will be directed to the tail gas scrubber. The tail gas scrubber will be modified by installing an extra 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide plus sodium sulfide).

A hydrogen peroxide storage and handling system will be installed. Hydrogen peroxide is an oxidizing agent that works optimally in alkaline conditions and is typically applied to the pulp in a 50% solution. The peroxide is applied in the oxidative extraction stage and is completely reacted. There are no emissions associated with the use of hydrogen peroxide.

The proposal to use the enzyme, xylanase, as a bleach boosting technique is not completely proven. By adding the enzyme prior to pulp bleaching, it is hoped that it will modify the chemical structure to make subsequent bleach stages more efficient and resulting in fewer non-desirable by-products, improved process yields, and significant reductions in ClO_2 required to bleach pulp. Installation of enzyme storage and handling facilities will be

required. Since enzymes are water soluble, there will be no air emissions associated with these systems.

A new 21,880 gallon methanol storage tank will be installed. The tank will be nitrogen blanketed and equipped with a conservation vent.

The existing salt unloading and handling system will be shut down and dismantled.

The existing bleach plant scrubbers are equally effective for Cl_2 and ClO_2 removal, and the scrubber systems have adequate capacity for the expected emissions. Therefore, no changes are planned for these scrubber systems.

5. Nos. 1 and 2 Multiple Effect Evaporator (MEE) Sets

Additional loading (i.e., ~ 50%) is expected on the No. 2 MEE set by the processing of reclaimed sewer effluent. This will be accomplished by the addition of new evaporator effects to the existing No. 2 MEE set, which will increase the allowable maximum operating rate from 97,000 to 181,000 lbs/hr dry BLS (black liquor solids) and determined by measuring the solids and flow into the system; and, when both sets are operated simultaneously, the maximum allowable operating rate shall be 278,000 lbs/hr dry BLS and determined by measuring the solids and flow into the systems. However, the actual total combined maximum annual dry BLS from the Nos. 1 and 2 MEE sets, as determined by measuring the solids and flow into the systems, shall not exceed the average for the years 1991 and 1992 [see AORs (Annual Operation Reports)].

Although the color and B.O.D. reclaimed represents a significant portion of the wastewater load, the associated solids contribution to the chemical recovery system is insignificant. Therefore, the recovery boilers and associated equipment are not impacted. This will be verified by the use of the AORs and, where necessary, other operational data.

6. Foul Condensate Stripper System

An upgrade of the existing contaminated condensate stripper and the installation of an additional steam stripper is planned . With added stripper capacity, initial estimates have shown that the mill effluent B.O.D. load to the wastewater treatment plant could be reduced by as much as 15%. Since a steam stripper directly reduces volatile organic compounds (VOCs) released from the digester steam after the cooking of wood chips, this will decrease the amount of VOCs previously released to the wastewater treatment system. The existing emissions, as well as the new emissions, from the condensate stripper system will be collected and transported to an incinerator (i.e., lime kiln) for control.

7. Lime Kiln-Mud Dryer

The lime kiln and calciner cannot process all of the lime mud produced by the causticizing system, thus discharging the excess mud to the sewer in a weak wash solution. This sewered lime mud with settled mill sludge is collected and landfilled from decanting basins, with the resulting weak wash alkaline solution requiring neutralization using CO_2 injection. The alkaline solution does increase mill effluent conductivity.

The proposal will add a lime mud dryer system (see Figure 3) in order to eliminate the sewering of the excess lime mud in weak wash solution from the causticizing process, reduce landfilling requirements, and reduce conductivity by about 20%.

The upgrade will increase the capacity to 500 tons/day of lime product (90% CaO). A new multifield electrostatic precipitator will be installed between the lime kiln and the existing caustic scrubber will be modified to provide SO_2 scrubbing capability (the packed column will utilize recirculating NaOH as the scrubbing medium). Champion is committed to conducting a test program to determine the scrubber operating conditions required to meet the applicable SO^2 and TRS emission limits. Appropriate process and/or emissions monitoring parameters will be established during the testing program.

A slight increase in non-condensible gases (i.e., total reduced sulfur compounds) will be burned in the lime kiln, resulting in an increase in SO_2 emissions. These SO_2 emissions will be subjected to the lime mud in the lime kiln and a caustic scrubber system. Projected emissions are not significant. A performance test will be required to substantiate this.

8. New No. 6 Power Boiler

Added steam capacity will be required to support the proposed process modifications. The specific added steam demand will come from an increase in evaporation and contaminated condensate stripping capacity, black liquor heaters, the cooking modifications, and bleach plant load reduction technologies.

The new No. 6 Power Boiler will be permitted to fire only natural gas as a fuel, with a maximum heat input of 533 MMBtu/hr. The new boiler will permit the retirement of the existing Nos. 1 and 2 Power Boilers. The new boiler will provide 385,000 pounds per hour of steam product.

D. The Standard Industrial Codes are:

Major Group No. 26 - Paper and Allied Products
Industry Group No. 2611 - Pulp Mills

II. Rule Applicability

The proposed project is subject to preconstruction review in accordance with Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4; and, the 40 CFR (July, 1991 version).

The application package was deemed complete on January 20, 1993.

The plant is located in an area designated as attainment for all pollutants in accordance with F.A.C. Rule 17-275.400.

The existing mill is a major emitting facility in accordance with F.A.C. Rule 17-212.200, Definitions, for the pollutants particulate matter (PM/PM10), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), TRS, and volatile organic compounds (VOCs).

The proposed mill modification will result in a net significant increase for the pollutants NOx, CO and VOCs (see Tables 1 & 2), thus requiring new source review for Prevention of Significant Deterioration (PSD) in accordance with F.A.C. Rule 17-212.400. This review consists of a determination of Best Available Control Technology (BACT) pursuant to F.A.C. Rule 17-212.410 and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The proposed new sources and modified sources shall be in compliance with all applicable provisions of F.A.C. Chapters 17-210 thru 17-297 and 17-4; and, the 40 CFR (July, 1991 version). The proposed source shall be in compliance with all applicable provisions of F.A.C. Rules 17-210.650: Circumvention; 17-210.700: Excess Emissions; 17-296.800: Standards of Performance for New Stationary Sources (NSPS); 17-297: Stationary Point Source Emission Test Procedures; and, 17-4.130: Plant Operation-Problems.

This proposed new No. 6 Power Boiler shall be in compliance with the NSPS for Industrial Steam Generating Units, 40 CFR 60, Subpart Db, and BACT.

The new methanol storage tank shall be in compliance with the NSPS for Storage Vessels for Petroleum Liquids, 40 CFR 60, Subpart Kb.

As a first tier level of review, the pollutants chlorine, chlorine dioxide, and chloroform, were evaluated with considerations given to carcinogenicity and toxicity using risk assessment guidelines. Through these considerations, initial property line acceptable ambient concentrations were established for each pollutant along with the appropriate averaging times.

Since neither State nor Federal ambient standards for chlorine, chlorine dioxide, and chloroform have yet been adopted, post-modification performance tests will be required to quantify the emissions, which might result in additional rule evaluation requirements.

III. Emission Limitations and Impact Analysis

A. Emission Limitations

The proposed project is subject to emission limitations for the pollutants NOx, SO2, CO, VOC, TRS, and PM/PM10. Applicable visible emission (VE) standards will also be imposed. The following table will reflect the allowable emission standards/limitations:

Table A

Source	Pollutant	Allowable Emission Standard/Limitation
1. No. 6 Power Boiler: maximum 533 MMBtu/hr heat input		
	NOx*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
	PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
	SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
	VOC*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
	VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity

* 24-hour average

Source	Pollutant	Allowable Emission Standard/Limitation
2. Lime Kiln-Mud Dryer System: maximum 500 TPD CaO; 34,383 dscfm		
	NOx*	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
		Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
	CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
	VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
	TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
	SO_2	6.49 lbs/hr, 28.4 TPY
	VE	< 20% opacity

* 24-hour average
** 12-hour average

Table A cont.:

3. A-Line Bleach Plant		
a. E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. A-Line Scrubber	CL_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY
4. B-Line Bleach Plant		
a. E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. B-Line Scrubber	Cl_2	1.0 lbs/hr, 4.38 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

5. R8/R10 ClO_2 Generator: 37.4 TPD
Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

6. Methanol Storage Tank: 21,880 gallons - horizontal fixed roof
VOC — Not Applicable (for PSD tracking purposes: 2.2 TPY projected potential emissions)

NOTE:
1. Natural gas usage only in the No. 6 PB.
3. Hours of operation at 8760 per year.
3. Maximum heat input:
   a. No. 6 PB: 533 MMBtu/hr.
   b. Lime kiln: 165 MMBtu/hr.
4. Steam production:
   a. No. 6 PB: 385,000 pounds per hour.
5. Pollutant basis: #6 PB and Lime Kiln-Mud Dryer
   a. NOx: BACT
   b. CO: BACT
   c. PM/PM_{10}: #6 PB: AP-42 Emission Factors, Table 1.4-1
      LK-MD: vendor guarantee of 0.037 gr/dscf
   d. VOC: BACT
6. The maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight.

The following table will present the initial property line acceptable ambient concentrations and their averaging times for chloroform, chlorine, and chlorine dioxide:

Table B

Chemical	Acceptable Ambient Conc.	Averaging Time
1. Chloroform	0.043 ug/m^3	annual
2. Chlorine	15.0 ug/m^3 (5 ppb)	8-hour
	3.57 ug/m^3 (1.2 ppb)	24-hour

Table B cont.:

3. Chlorine Dioxide	3.0	ug/m^3 (1 ppb)	8-hour
	0.71	ug/m^3 (0.24 ppb)	24-hour

Note:

1. Since chloroform is a carcinogen with an EPA unit risk value (a measure of its carcinogenic potency) and the facility will continuously emit this chemical, the initial acceptable ambient concentration is based on providing protection from the long-term exposure to chloroform. The level of protection, that corresponds to a one-in-a-million increased risk of developing cancer from continuous exposure to chloroform, is calculated by dividing 1.0E-6 by 2.3E-5 (the unit risk factor for chloroform). The resulting quotient (0.043 ug/m^3) is the initial acceptable ambient concentration. Since the health concern is for long-term exposure (and the unit risk factor reflects a 70-year exposure), the averaging time should be on an annual basis.

2. Chlorine is not a carcinogen, but has an occupational exposure level (TLV) of 0.5 ppm (1.5 mg/m^3). The initial acceptable ambient concentration is based on providing two orders of magnitude below the occupational level. The two orders of magnitude represent protection for the differences between healthy workers and the more sensitive public, and the public's potential exposure to multiple chemicals, which may exert synergistic effects, or may produce exposures through other environmental media.

   The first ambient guideline is based on an 8-hour average concentration, as is the occupational exposure level. An additional protection factor which takes into account the public's continuous exposure, compared to a worker's exposure, which ceases in 8 hours, is provided by the longer-term 24-hour guideline. For the 24-hour guideline, the 8-hour guideline is divided by 4.2, which is the ratio between a 168-hour week of public exposure to a continuous emission and a worker's exposure to 40 hours of the toxic. The 24-hour guideline does not need to be used for batch operations or processes which operate for less than 8 hours. If a process can pass the 8-hour ambient guideline and does not operate more than 8 hours, then its average ambient concentration for 24 hours will be well below the 24-hour guideline.

3. The initial acceptable ambient concentration for chlorine dioxide* is derived by the same methodology as was used for chlorine. The occupational exposure level is 0.3 mg/m^3 (0.1 ppm). Dividing the TLV by 100 gives the 8-hour acceptable

ambient concentration, and dividing the TLV by 420 gives the 24-hour concentration.

* Facility representatives indicated that chlorine dioxide is very reactive and rapidly breaks down to chlorine in the atmosphere. Therefore, an acceptable ambient concentration guideline may not be appropriate for chlorine dioxide.

4. Testing will be required to verify the emissions from all sources.

B. Air Quality Impact Analysis

1. Introduction

The proposed No.6 Power Boiler and the modification of the Lime Kiln-Mud Dryer will emit three pollutants in PSD-significant amounts. These pollutants include the criteria pollutants carbon monoxide (CO), nitrogen oxides (NOx), and ozone (O3) (as volatile organic compounds). (see Table 1)

The air quality impact analysis required by the PSD regulations for these pollutants includes:
* An analysis of existing air quality;
* A PSD increment analysis (for NO2);
* An Ambient Air Quality Standards (AAQS) analysis;
* An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality impacts; and,
* A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The PSD increment and AAQS analysis depends on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed mill modification, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment. A discussion of the modeling methodology and required analysis follows.

2. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review.

An exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined by air quality modeling, is less than a pollutant-specific "de minimus" concentration.

The predicted ambient impact of the the proposed project for those pollutants subject to the PSD review is listed in Table 2.

The predicted maximum impacts for CO and NO2 are less than their respective de minimus impact levels. Therefore, no additional monitoring is required for these pollutants.

Preconstruction monitoring review is not required for ozone concentrations either, because the maximum potential VOC emissions from the proposed plant are less than 100 TPY.

However, a background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department for use in the ambient air quality analysis. This value was based on data from sites in Jacksonville and Tarpon Springs both about equally distant from Champion. There were no quality assured NO_2 monitoring sites in the Pensacola area.

3. Modeling Methodology

The modeling analysis included both screening and refined EPA-approved models. Screening models were used to determine the "worst case" loaded conditions associated with the No.6 Power Boiler and to evaluate the No.6 Power Boiler and Lime Kiln-Mud Dryer impacts due to CO emissions. The EPA-approved Industrial Source Complex Long-Term (ISCLT2) dispersion model was used to evaluate NO_2 impacts. All recommended EPA default options were used. Direction-specific downwash parameters were used because the stacks were less than the GEP stack height.

Meteorological data used in the modeling consisted of five years (1985-1989) of hourly surface and upper air meteorological data taken at Pensacola, Florida. These data were input into the National Climatic Data Center (NCDC) stability array (STAR) preprocessor program for use as input to the ISCLT2 model. The STAR program converts the hourly data into the joint frequency of occurrence of wind direction, wind speed, and atmospheric stability. The STAR program can produce monthly, seasonal and annual stability arrays of input into ISCLT2.

The highest predicted yearly impact from the proposed NOx emissions was compared with the standards.

4. Modeling Results

The applicant performed screening modeling to determine the "worst case" load conditions for the proposed boiler. The worst case ambient impacts were predicted to occur during the 100% load condition. Based on the results above, all refined modeling included the 100% load emission parameters and emission rates for the No.6 Power Boiler.

The Screening model was also used to demonstrate that the CO impacts from the No.6 Power Boiler and the modification to the Lime Kiln were below the 1-hour and 8-hour significance levels of 2,000 ug/m3 and 500 ug/m3, respectively. The maximum combined impact from these two sources was 413.7 ug/m3 on a 1-hour basis. The 8-hour impact was 289.6 ug/m3. Therefore, since the proposed mill modification will not result in a significant ambient CO air quality impact, no further air quality modeling for CO is required. The proposed facility is located in a Class II area. The applicant evaluated the potential increases in ambient ground-level concentrations associated with the project and determined that the maximum projected ambient concentration increase would be greater than the PSD significant level for NO_2, thus requiring the applicant to perform a full impact analysis for NO_2. The significant impact area was determined to be 2.4 km and an emissions inventory for NOx sources was developed for the Champion mill and other major sources.

A combination of polar coordinate receptors and rectangular coordinate receptors was established for the ISCLT2 modeling. The polar grid was centered on the location of the No.5 Boiler stack. The following downwind receptor rings for every 10 degrees of arc from 0 degrees to 360 degrees were included: 4250m, 4500m, 4750m, 5000m, 6000m, 7000m, 8000m, and 10,000m. Due to the narrow boundary of Champion's property, an extensive network of discrete receptors along the boundary was used to supplement the polar grid. Since the polar receptor grid was centered on the No.5 Boiler, additional discrete receptors were required to adequately fill in the area between the property and the start of the grid. These additional receptors included points at 100m spacing out to 1000m and 250m spacing from 1000m to 4500m where the full polar grid started. Receptors were also placed at approximately 100m intervals along the perimeter of the facility boundary.

Atmospheric dispersion modeling, as previously described, was performed to quantify the amount of PSD increment consumed. The modeling results are summarized in Table 3. Based on these modeling results, the impacts from the proposed facility will not violate any of the Class II increments.

No PSD Class I increment analysis was done since the project is located more than 160 km from the nearest Class I area.

For the pollutants subject to an AAQS review, the total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The "background" concentrations are taken from areas that are much more industrialized than the proposed facilities location. Therefore, these background values are considered to be conservative. A background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department based on the data from sites in Jacksonville and Tarpon Springs.

Given existing air quality in the area of the proposed facility, emissions from the proposed facility are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are summarized in Table 4.

There is currently no acceptable method to model VOCs for ozone formation. Consequently, the control of the VOC emissions are addressed in the BACT review.

Chlorine, chlorine dioxide, and chloroform do not have an AAQS. However, for sources with quantifiable emission rates for these pollutants, a modeling analysis was conducted and the results compared to the Department's current draft air toxics reference concentrations. Table 5 summarizes the results of this analysis. The predicted concentrations for each of these pollutants are less than their respective reference concentrations.

5. Additional Impacts Analysis

a. Impacts on Soils and Vegetation

The maximum ground-level concentration predicted to occur for each pollutant as a result of the proposed project, including a background concentration, will be below the applicable AAQS including the national secondary standards developed to protect public welfare-related values. As such, this project is not expected to have a harmful impact on soils and vegetation.

b. Impact on Visibility

The mill modifications are estimated to result in a decrease in annual particulate matter emissions and an increase of less than 28 tons of SO2. Hence, it is not anticipated that any perceptible reduction in visibility will occur due to the emission of primary or secondary aerosols by the proposed mill modification. And the ambient ground level concentration of nitrogen oxides (in the form of NO_2) is anticipated to decrease due to the shutdown and removal of the No.1 and No.2 Power Boilers. Hence, visibility impairment should not occur.

c. Growth-Related Air Quality Impacts

The proposed facility is not expected to significantly change employment, population, housing or commercial or industrial development in the area to the extent that an air quality impact will result.

IV. CONCLUSION

Based on the information provided by Champion International Corporation, the Department has reasonable assurance that the proposed mill modification, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapters 17-210 thru 17-297 of the Florida Administrative Code.

#41755

No. 41755

STATE OF FLORIDA

FIGURE 2-3: CONSENT ORDER AIR PERMITTING PLAN - MILL LAYOUT

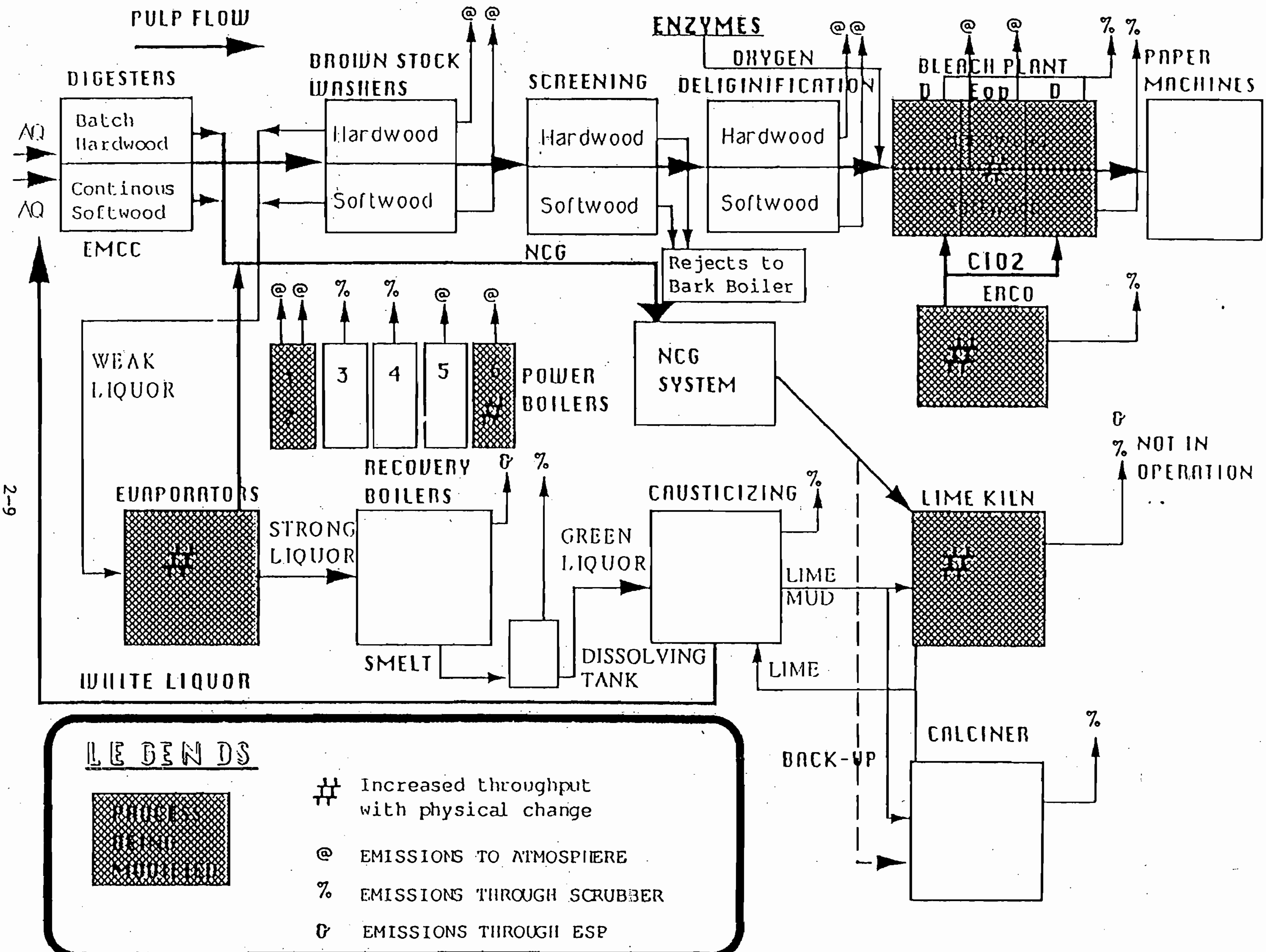
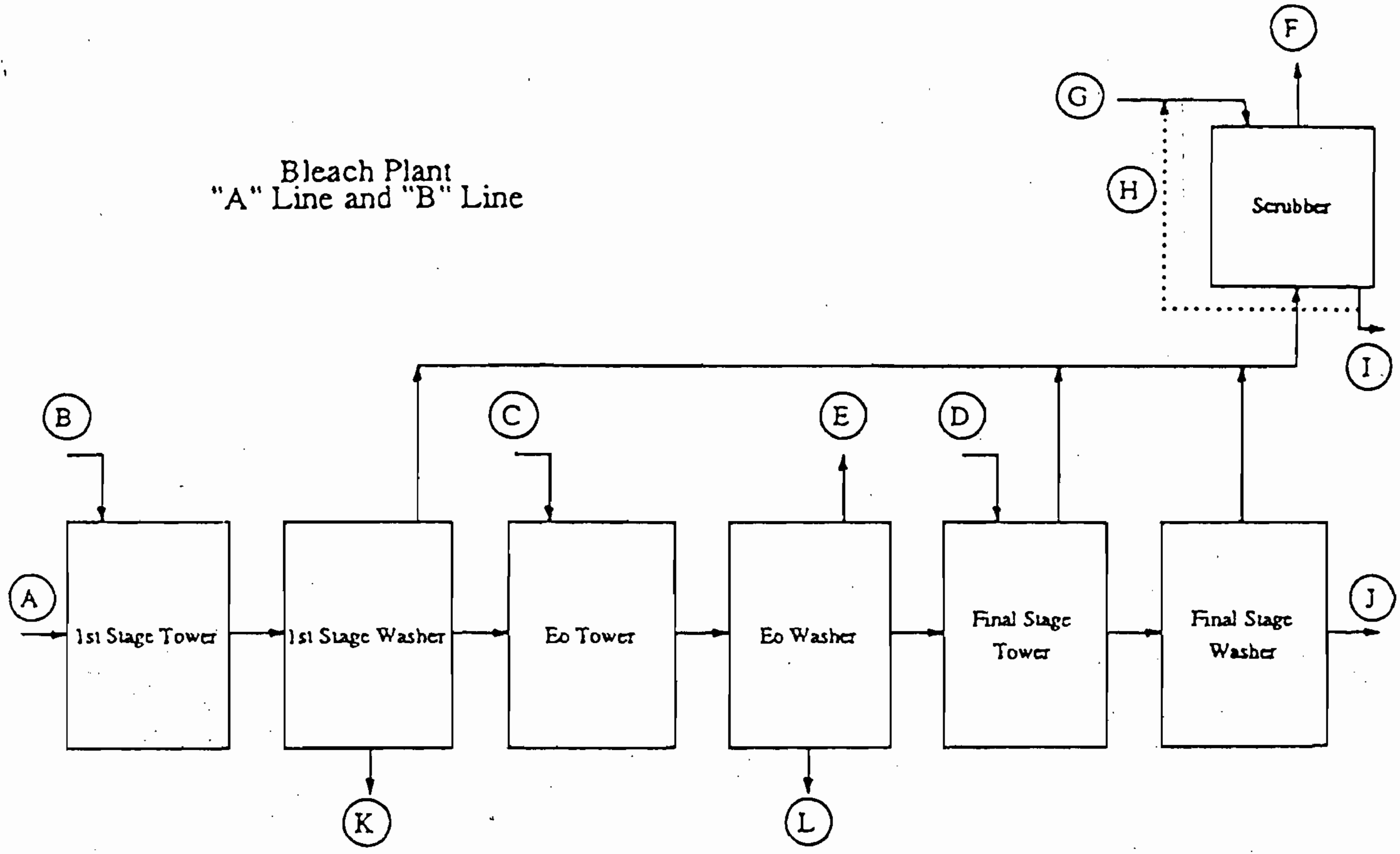


Figure 1

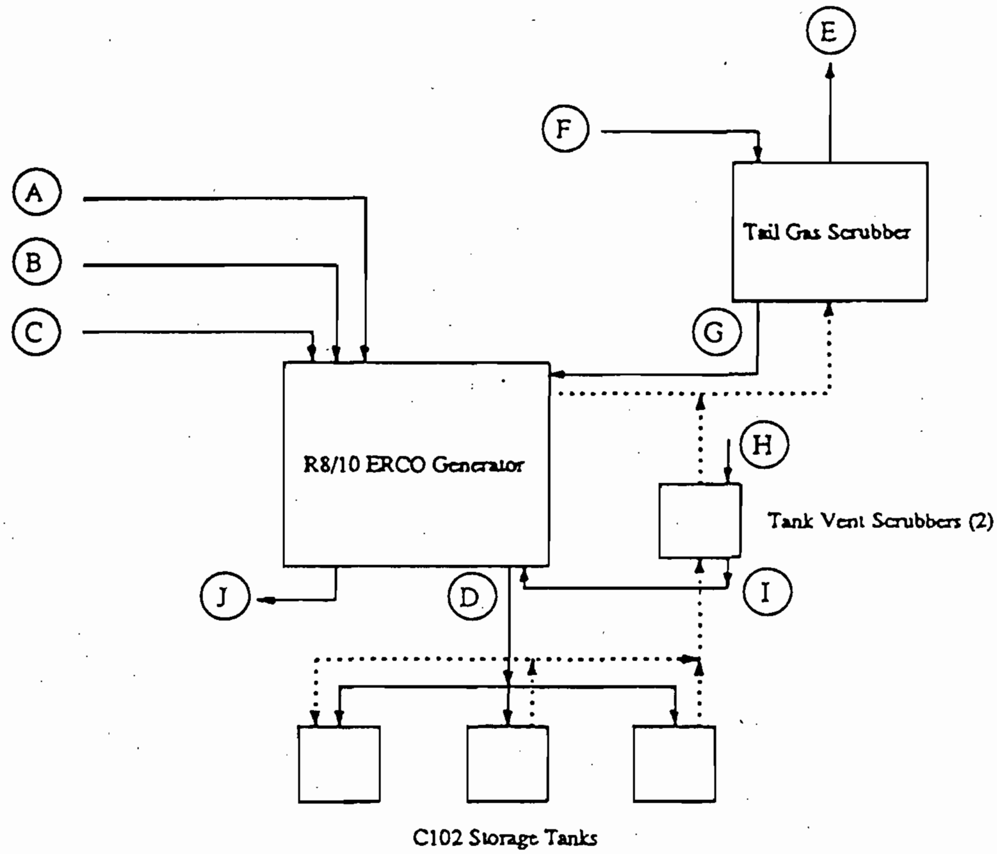


		"A" Line	"B" Line
A	Unbleached Pulp	910.8 ADT/D	851.3 ADT/D
B	CLO2	10.7 T/D	6.3 T/D
C	Peroxide	3.3 T/D	3.1 T/D
D	CLO2	8.2 T/D	5.0 T/D
E	Eo Washer Vent Gas	13,812 ACFM	8,227 ACFM
F	Scrubber Vent Gas	10,200 ACFM	7,350 ACFM
G	Scrubber Makeup Flow	1.1 GPM	.2 GPM
H	Scrubber Recirculation	225 GPM	190 GPM
I	Scrubber Blowdown	2 GPM	1 GPM
J	Bleached Pulp	888 ADT/D	830 ADT/D
K	Acidic Effluent	3.5 MGD	3.5 MGD
L	Alkaline Effluent	2.3 MGD	2.3 MGD

Process Flow Diagram 4
Bleach Plant

Chmp04-D19

Figure 2

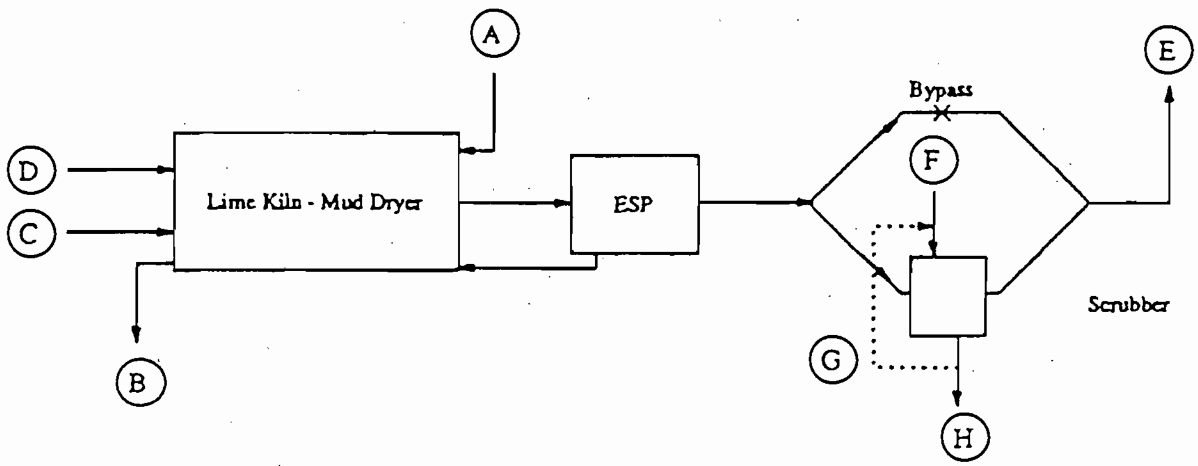


A	Methanol	5.6 T/D
B	Sulfuric Acid	29.6 T/D
C	Sodium Chlorate	61.3 T/D
D	Chlorine Dioxide	37.4 T/D
E	Stack Effluent	1,321.0 ACFM
F	Makeup White Liquor to Scrubber	<1.0 GPM
G	Scrubber Discharge	1.0 GPM
H	Water to Tank Vent Scrubbers	79.1 GPM
I	Tank Vent Scrubber Discharge	79.1 GPM
J	Saltcake Generation	33.6 T/D

Process Flow Diagram 3
Chlorine Dioxide Generator

Chmp03-D19

Figure 3

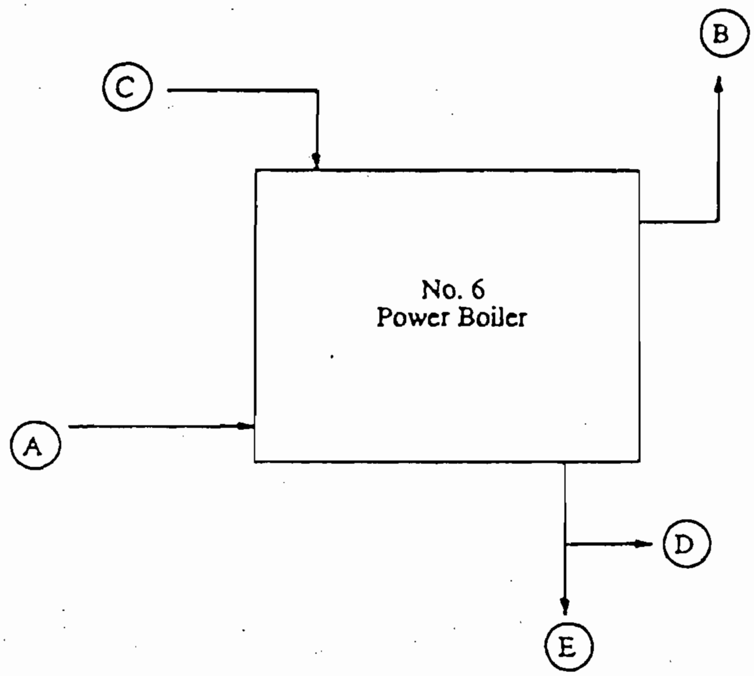


A	Lime Mud	893 T/D
B	Product Lime	500 T/D
C	Fuel - Natural Gas - No. 6 Oil	144,231 MCFH 1,000 GPH
D	NCGs	358 lb/hr *
E	Stack Effluent	57,208 ACFM
F	Scrubber Makeup	25 GPM
G	Scrubber Recirculation	1,700 GPM
H	Scrubber Blowdown	5 GPM

* Based on 1,718 ADBT/D

Process Flow Diagram 2
Lime Kiln - Mud Dryer

Cmp02-D19



A	Natural Gas	533 MCFH
B	Stack Effluent	161,000 ACFM
C	Feed Water	6,667 lb/min
D	Steam	384 KPPH
E	Blow Down	266.7 lb/min

Process Flow Diagram 1
No. 6 Power Boiler

Cmp01-D19

Table 1: Siginificant and Net Emission Rates (Tons per Year)

Pollutant	Significant Emission Rate	Proposed Net Emissions	Applicable Pollutant (Yes/No)
CO	100	189	Yes
NO_x	40	138.8	Yes
SO_2	40	28.2	No
PM	25	-1.3	No
PM10	15	-1.3	No
O_3 (VOC)	40	85.5	Yes
TRS	10	-1.9	No

Table 2. Maximum Air Quality Impacts for Comparison to the Significant and De Minimus Ambient Levels.

Pollutant	Avg. Time	Predicted Impact (ug/m_3)	Significant Imapct Level (ug/m_3)	De Minimus Level (ug/m_3)
CO	1-hour	413.7	2000.0	N/A
	8-hour	289.6	500.0	575.0
NO_2	Annual	2.4	1.0	14.0
VOC	Annual	85.5 TPY	N/A	100 TPY

Table 3. PSD Class II Increment Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Allowable Increment (ug/m^3)
NO_2	Annual	2.4	25

Table 4. Ambient Air Quality Impact

Pollutant and Averaging Time	Major Sources Imapct (ug/m^3)	Background Conc. (ug/m^3)	Total Impact (ug/m^3)	Florida AAQS (ug/m^3)
NO_2 (Annual)	42.0	22.5	64.5	100

Table 5. Air Toxics Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Air Toxics Reference Conc. (ug/m^3)
Chloroform	Annual	0.026	0.043
Chorine Dioxide	Annual	0.198	0.20
Chlorine	Annual	0.0384	0.40

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

PERMITTEE:

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

Permit Number: AC 17-223343
PSD-FL-200
Expiration Date: Dec. 31, 1995
County: Escambia
Latitude/Longitude: 30°36'30"N
87°19'13"W
Project: Mill Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297 and 17-4; and, 40 CFR (July, 1991 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the permitting of a mill modification in concert with the mill's wastewater Consent Order, to include the construction of a new natural gas fired No. 6 Power Boiler (PB), the surrendering of the operation permits for the existing Nos. 1 and 2 Power Boilers, modification to both the A and B Bleach Plants, construction of a new methanol storage tank, modification of the No. 2 Multiple Effect Evaporator set by installing new effects, and modification of the Lime Kiln's mud handling system. The UTM coordinates of the existing facility are Zone 17, 469.0 km East and 3386.0 km North.

The Standard Industrial Codes are:

- o Major Group No. 26 - Paper and Allied Products
- o Industry Group No. 2611 - Pulp Mills

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

Attachments to be Incorporated:

1. Application to Construct/Modify Air Pollution Sources, DER Form 17-1.202(1), received December 21, 1992.
2. Technical Evaluation and Preliminary Determination dated February 25, 1993.
3. Comments received on March 4, 1993, in a meeting.
4. Comment received March 8, 1993, via FAX.
5. Revised Technical Evaluation & Preliminary Determination dated March 8, 1993.

GENERAL CONDITIONS:

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

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

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however,

GENERAL CONDITIONS:

the permittee does not waive any other rights granted by F.S. or Department rules.

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

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

13. The permittee shall comply with the following:

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

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

    c. Records of monitoring information shall include:

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

14. This permit constitutes compliance with:
    a. New Source Performance Standards (NSPS), 40 CFR 60, Subparts Db and Kb;
    b. Prevention of Significant Deterioration; and,
    c. Best Available Control Technology (BACT).

GENERAL CONDITIONS:

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

SPECIFIC CONDITIONS:

A. No. 6 Power Boiler (PB)

1. The No. 6 PB may operate continuously (i.e., 8760 hrs/yr).

2. The No. 6 PB is permitted to fire natural gas only, with a maximum heat input of 533 MMBtu per hour, yielding a maximum steam product of 385,000 lbs/hr (2-hour average).

3. The No. 6 PB will be an ABB/CE boiler.

4. The Source Classification Code (SCC) is:

1-02-006-01 Ext. Combustion Boiler-Industrial 10^6 $ft.^3$ Burned

5. The No. 6 PB is subject to all applicable standards of 40 CFR 60, Subpart Db (July, 1991 version).

6. The No. 6 PB is subject to all applicable standards of F.A.C. Rule 17-296.405(2).

7. The No. 6 PB's pollutant emissions shall not exceed:

NOx*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
VOC*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity

* 24-hour average

8. Any required compliance testing shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.

SPECIFIC CONDITIONS:

b) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.
f) Upon initial start-up, testing shall be conducted for NO_X, CO, VOC, and VE.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

9. Emission monitoring for nitrogen oxides shall be in accordance with 40 CFR 48b (July, 1991 version).

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.46b (July, 1991 version).

B. <u>Lime Kiln - Mud Dryer System</u> (LK-MDS)

1. Operation permit No. AO 17-181738 is incorporated by reference except for the following changes and/or additions:

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media;

d. after construction/modification is completed, Champion will develop a testing protocol which includes a proposed test schedule to establish scrubber operating parameters and monitoring methods to meet the applicqble SO_2 and TRS limits for the LK-MDS.

e. the test protocol will be submitted to the Department's Northwest District office prior to conducting the test program; and,

f. the maximum allowable operating rate of lime product (90% CaO) will be increased from 13.67 to 20.83 tons per hour.

SPECIFIC CONDITIONS:

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx*	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

* 24-hour average
** 12-hour average

Note: o Maximum of 500 tons/day lime product (90% CaO);
o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm.

h. while firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C, Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

SPECIFIC CONDITIONS:

i. while firing natural gas, initial and subsequent compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C, Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used.
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

C. <u>Chlorine Dioxide (ClO_2) Generator</u>

1. Operation permit No. AO 17-219596 is incorporated by reference except for the following changes and/or additions:

a. the existing chlorine gas handling system will be eliminated;

b. the generating process will be modified from a R3H process to a R8/R10 process, which will use methanol, sulfuric acid, and sodium chlorate to generate ClO_2;

c. the maximum allowable operating rate will be increased from 16 tons/day ClO_2 to 37.4 tons/day;

d. a third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers;

e. the ClO_2 storage tanks will vent to the existing two ClO_2 storage tank chilled water scrubbers;

SPECIFIC CONDITIONS:

f. the existing two ClO_2 storage tank scrubbers will be vented to the tail gas scrubber, which will be modified by adding an additional 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide and sodium sulfide);

g. a new 21,880 gallon methanol storage tank and handling system will be installed and is subject to all applicable standards pursuant to 40 CFR 60, Subpart Kb (July, 1991 version); for PSD tracking purposes, the projected potential VOC emissions are 2.2 TPY; also, the tank will be nitrogen blanketed and equipped with a conservation vent;

SCC: 4-07-008-15	Meth. Tank-Breathing Loss	10^3 gals. storage cap.
4-07-008-16	Meth. Tank-Working Loss	10^3 gals. storage cap.

h. the existing salt unloading and storage system will be shut down and dismantled;

i. the pollutant emissions shall not exceed:

R8/R10 ClO_2 Generator: 37.4 TPD
Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

j. initial compliance testing on the Tail Gas Scrubber for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

D. <u>A and B Bleach Plant Lines</u>

1. Operation permit No. AO 17-219600 is incorporated by reference except for the following changes and/or additions:

a. both lines may operate continuously (i.e., 8760 hrs/yr);

b. the bleaching sequence will be changed from CED to DED;

c. a storage and handling system for the enzyme xylanase may be installed;

d. a storage and handling system for hydrogen peroxide will be installed;

SPECIFIC CONDITIONS:

e. the existing chlorine gas handling system will be eliminated;

f. the pollutant emissions shall not exceed:

1) A-Line Bleach Plant: 888 air dried tons per day, maximum

a) E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) A-Line Scrubber	CL_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

2) B-Line Bleach Plant: 830 air dried tons per day, maximum

a) E_O Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) B-Line Scrubber	Cl_2	1.0 lb/hr, 4.38 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

3) A-Line and B-Line Bleach Plants: average 1500 air dried tons per calendar day, maximum combined total

h. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

i. after construction/modification is completed, initial compliance testing on the Bleach Plant Scrubbers (A-Line and B-Line) and E_O Washers for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

E. Nos. 1 and 2 Multiple Effect Evaporator (MEE) Sets, Batch and Continuous Digester Systems, and Foul Condensate Steam Stripper System

1. Operation permit No. AO 17-212422 is incorporated by reference except for the following changes and/or additions:

SPECIFIC CONDITIONS:

a. the No. 2 MEE set will be modified to include the addition of new effects, which will be vented to the non-condensible gas (NCG) handling system, which will increase the allowable maximum operating rate from 97,000 to 181,000 lbs/hr dry BLS (black liquor solids) and determined by measuring solids and flow into the system; however, the following operational scenarios are applicable to both of the Nos. 1 and 2 MEE sets:

   1) when the Nos. 1 and 2 MEE sets are operated simultaneously, the maximum operating rate shall be 278,000 lbs/hr as a total combined input to them (24-hour average) and determined by measuring solids and flow into the systems;

   2) when only one MEE set is in operation, the maximum operating rate shall be 181,000 lbs/hr dry BLS and determined by measuring solids and flow into the system (24-hour average); and,

   3) actual total annual dry BLS from the Nos. 1 and 2 MEE sets, as determined by measuring solids and flow into the systems, shall not exceed the average for the years 1991 and 1992 (see AORs).

b. a storage and handling system may be installed for water-transported anthraquinone, an organic catalyst, which may be used in both the batch and continuous digester systems; both systems vent to the NCG handling system; and,

c. an additional foul condensate steam stripper will be installed and will be vented to the lime kiln or calciner for incineration.

F. <u>General</u>

1. The facility shall be in compliance with all applicable standards/limitations of F.A.C. Rules 17-210 thru 297, 17-4, and 40 CFR (July, 1991 version).

2. The permittee is subject to the applicable provisions of F.A.C. Rules 17-4.130: Plant Operation-Problems; 17-210.650: Circumvention; and, 17-210.700: Excess Emissions.

3. Objectionable odors shall not be allowed off plant property in accordance with F.A.C. Rule 17-296.320(2).

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

4. The Department's Northwest District office shall be notified in writing at least 15 days prior to source testing pursuant to F.A.C. Rule 17-297.340. Written reports of the tests shall be submitted to the Department's Northwest District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450.

5. Any change in the method of operation, raw materials, equipment, operating hours, etc., pursuant to F.A.C. Rule 17-212.200, Definitions-Modification, the permittee shall submit an application and the appropriate processing fee to the Department's Bureau of Air Regulation (BAR) office.

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

7. An application for an operation permit must be submitted to the Department's Northwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this ______ day
of ______________, 1993

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

____
Virginia B. Wetherell
Secretary

Best Available Control Technology (BACT) Determination
Champion International Corporation
Escambia County

PSD-FL-200

The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr [385,000 lbs/hr steam (2-hour average)] and the modification of the existing lime kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order.

The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired to be as follows:

Pollutant	Emissions (TPY)	PSD Significant Emission Rate (TPY)
NO_x	138.8	40
SO_2	28.2	40
PM/PM_{10}	-1.3	25/15
CO	189.0	100
VOC	85.5	40
TRS	-1.9	10

Florida Administrative Code (F.A.C.) Rule 17-212.400(2)(f) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

December 21, 1992

BACT Determination Requested by the Applicant

Source	Pollutant	Determination
#6 Power Boiler	NO_x*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control

Lime Kiln-Mud Dryer	NOx*	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
		Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY
	VOCs*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

* 24-hour average

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-212, Stationary Sources - Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, than the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- o Combustion Products (e.g., particulates). Controlled generally by efficient combustion of clean fuels.
- o Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- o Acid Gases (e.g., NOx). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc,), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion/Incomplete Combustion Products

The projected emissions of carbon monoxide and volatile organic compounds from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

CO and VOCs:

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, the limits requested are considered reasonable as BACT.

Acid Gas Products

The projected emissions of nitrogen oxides from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

NOX:

For NOx, the proposed BACT limits for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer System are within the range of similar sources in the BACT/LAER clearinghouse data base.

For the No. 6 Power Boiler, there have been limited cases of SCR impositions, but the cost evaluation of such technology is prohibitive for this project. Costs and process parameters rule out the use of other technologies (i.e., SNCR and FGDN). The proposal to use Coen low-NOx burners together with flue gas recirculation to the combustion zone for minimizing NOx emissions is considered as BACT. However, available space will be made for the potential retrofit of a control system to control NOx.

For the Lime Kiln-Mud Dryer, the application of SCR, SNCR, or FGDN, have never been applied to a lime kiln system due to process variables. Therefore, the proposal to use good operational practices and proper combustion, along with the proposed emission limitations, is considered BACT.

Adverse Environmental Impact Analysis

The predominant adverse environmental impacts associated with the potential use of add-on control technology (SCR, SNCR or FGDN) are the emissions of other pollutants (i.e., ammonia, urea, hazardous waste from catalysts, etc.) used in the process for NOx control. Although the use of add-on controls do have some positive environmental benefits, the disadvantages may outweigh the benefits provided by reducing NO_x emissions.

From the evaluation of natural gas combustion, toxics are projected to be emitted in very small amounts. Although the emissions of toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber system, the amount of emission reductions would not warrent the added expense. Consequently, the Department does not believe that the BACT determination would be affected by the emissions of the toxic polutants associated with the firing of natural gas.

BACT Determination by DER

NOx Control

For the No. 6 Power Boiler, the information that the applicant presented indicates that the incremental cost of controlling NOx is high compared to the guidelines. Based on the information presented by the applicant and the evaluation conducted, the Department believes that the use of add-on controls NOx control is not justifiable as BACT. Therefore, the Department will accept the Coen low-NOx burners together with flue gas recirculation to the combustion zone as NOx control when firing natural gas.

For the Lime Kiln-Mud Dryer, there has not been an application of NOx add-on controls for this type of source contained in the data base. Therefore, there will not be any add-on controls required for NOx for this source.

CO and VOC Control

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, there will not be any add-on controls required for CO or VOCs for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer.

The BACT limits for the proposed modification of the Champion International Corporation's facility are thereby established as follows:

Source	Pollutant	Emission Standard/Limitation
#6 Power Boiler	NO_x*	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx*	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
	VOCs*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

* 24-hour average

Note: The maximum sulfur content of the #6 fuel oil is 1.0%, by weight.

Details of the Analysis May be Obtained by Contacting:

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

Recommended by:	Approved by:
______________________	______________________
C. H. Fancy, P.E., Chief Bureau of Air Regulation	Virginia B. Wetherell, Secretary Dept. of Environmental Regulation
______________________ 1993 Date	______________________ 1993 Date

Attachment 1

(Available Upon Request)

Attachment 2

(Available Upon Request)

Attachment 3

FACSIMILE TRANSMITTAL

TO:	BRUCE MITCHELL
COMPANY	FLORIDA DER
FAX NUMBER	(904) 922-6979
W. O. NUMBER	
FROM	KYLE MOORE
COMPANY	CHAMPION
TELEPHONE NO	(215) 430-7218
FAX NO.	(215) 430-7401
DATE	3 MARCH 1993
NO. OF PAGES (including cover)	13

If you do not receive all of the pages, please call back as soon as possible. Thank you.

MESSAGE:

Modifications to the "Technical Evaluation and Preliminary Determination" dated 25 February 1993.

RECEIVED
MAR 4 1993
Division of Air Resources Management

Page 2

"The project will include the installation of storage and ..."
"It will be used in both the batch digester system and ..."

Modify to Read:

> *The project may include the installation of storage and ...*
> *It may be used in both the batch digester system and ...*

Page 4

"This will be accomplished by the addition of two new evaporator effects to the Existing No. 2 MEE System."

Modify to Read:

> *This will be accomplished by the addition of new evaporator effects to the existing No. 2 MEE System*

Page 5

"A minimum PH of 8 will be maintained."

Modify to Read:

> *Champion is committed to conducting a test program to determine the scrubber operating conditions required to meet the applicable SO_2 and TRS emission Limits. Appropriate process and/or emissions monitoring parameters will be established during the test program.*

"The new boiler will provide 350,000 pounds per hour of steam product."

Modify to Read:

> *The new boiler will provide a maximum of 385,000 pounds per hour (two hour average) of steam product.*

Page 7

Table A includes "Allowable Emission Standards/Limitations"

Modify Table as noted below:

1. *No. 6 Power Boiler: Maximum 533 MMBtu/hr heat input*

NO_x*	*(No change to limits)*
CO*	"
PM/PM_{10}	"
SO_2*	"
VOC*	"
VE	"

* *24-hour average*

2. *Lime Kiln - Mud Dryer*

NO_x*	*(No change to limits)*
PM/PM_{10}*	"
CO*	"
VOC*	"
TRS**	"
SO_2*	"
VE	"

* *24-hour average*
** *12-hour average*

3. *A-Line Bleach Plant*

a.	E_o *Washer*	*(No change to limits)*
b.	*A-Line Scrubber*	"

4. *B-Line Bleach Plant*

   a. *E_o Washer* — *(No change to limits)*

   b. *B-Line Scrubber* — *Cl_2 1.0 lb/hr 4.38 TPY*

      ClO_2 (No change to limits)

      $CHCl_3$ "

5. *R-8/R-10 ClO_2 Generator: 37.4 TPD*

   (No other changes)

6. *(No changes)*

Note:

1 *(No change)*
2 *"*
3 *Maximum heat input*

   a) (No changes)
   b) Lime Kiln 165 MMBtu/hr

4 *Steam Production:*
   a) No. 6 PB: 385,000 pounds per hour (two hour average)

5 *a) (No Change)*
   b) (No Change)
   c) PM/PM10: #6 PB:AP-42 Emission Factor Table 1.4-1
   LK-MD: Vendor Guarantee of 0.037 gr/dscf @ 10% O_2
   d) VOC: BACT

6 *The maximum sulfur content of No. 6 fuel oil is 2.5%, by weight*

(No other changes)

Page 13

"Chlorine, chlorine dioxide, and chloroform do not have an AAQS. However, these pollutants were modeled and the results were compared to the Department's air toxics reference concentrations. Table 5 summarizes the results of this analysis. The predicted concentrations for each of these pollutants is less than their respective reference concentrations."

Modify to Read:

> *Chlorine, chlorine dioxide, and chloroform do not have an AAQS. However, for sources with quantifiable emissions rates for these pollutants a modeling analysis was conducted and the results compared to the Department's current draft air toxics reference concentrations. Table 5 summarizes the results of this analysis. The predicted concentrations for each of these pollutants is less than their respective reference concentrations.*

Page 19

Table 1: Significant and Net Emission Rates (tons per year)

Change: *SO_2 proposed net emissions from 27.4 to 28.2.*

Specific Conditions:

[Add the following specific condition]

Operating and emission limits contained in the "PSD Permit applications for proposed Pulp Mill Modifications" submitted in December 1992, supersede any limits contained in permits issued previously by the department for existing sources.

Modify to Read:

A. *No. 6 Power Boiler PB*

1 *(No change)*

2 *The No. 6 PB is permitted to fire natural gas only, with a maximum heat input of 533 MMBtu per hour, yielding a maximum steam product of 385,000 lb/hr (two-hour average)*

3 *(No change)*

4 "

5 "

6 "

7 *The No. 6 PB's pollutant emission shall not exceed:*

NO_x*	*(No change to limits)*
CO*	"
PM/PM_{10}	"
SO_2	"
VOC*	"
VE	"

* *24-hour average*

8 *Any required testing shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):*

a) *(No change)*

b) *EPA Method 7D or 7E for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generator*

c) *(No change)*

d) "

e) "

f) *Upon initial start-up testing shall be conducted for NO_x, CO, VOC, and VE.*

Note: *(No change)*

<u>Page 6 of 11</u>

B. *Lime Kiln - Mud dryer System (LK-MDS)*

c. *the pollutant emission from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media.*

d. *After construction/modification is completed Champion will develop a testing protocol which includes a proposed test schedule to establish scrubber operating parameters and monitoring methods to meet the applicable SO_2 and TRS limits for the LK-MDS.*

e. *the test protocol will be submitted to the department for review and approval prior to conducting the test program.*

f. *the maximum allowable operating rate of lime product (90% CaO) will be increased from 13.67 to 20.83 tons per hour.*

f. The pollutant emission from the LK-MDS shall not exceed:

NO_x*	(No change to limits)
PM/PM_{10}*	"
CO*	"
VOC*	"
TRS**	"
SO_2*	"
VE	"

* 24-hour average
** 12-hour average

Note:
- *(No change)*
- *Maximum sulfur content of the NO. 6 Fuel oil is 2.5%, by weight.*
- *Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm.*

g. *While firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):*

1) (No change)

2) EPA Method 7D or 7E for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generator

3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources; EPA Method 6C, Determination of Sulfur Dioxide Emissions From Stationary Sources may alternatively be used;

4) (No change)

5) "

6) "

Note: (No change)

h. *While firing Natural Gas, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):*

1) *(No change)*

2) *EPA Method 7D or 7E for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generator*

3) *EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources; EPA Method 6C, Determination of Sulfur Dioxide Emissions From Stationary Sources may alternatively be used;*

4) *(No change)*

5) "

6) "

Note: (No change)

<u>Page 8 of 11</u>

"1. Operation permit No. AC 17-219596 is incorporated by reference except for the following changes and/or additions:"

Modify to Read:

1. Operation permit No. AO 17-219596 is incorporated by reference except for the following changes and/or additions:

<u>Page 9 of 11</u>

Modify to Read:

i. *the pollutant emission shall not exceed:*

R8/R10 ClO_2 generator: 37.4 TPD
(No other changes)

Delete all of "j" as written and insert new condition "j" as follows:

j. *Initial compliance testing on the Tail Gas Scrubber for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.*

D. *A and B Bleach Plant Lines*

1. *a* *(No change)*
b *"*
c *a storage and handling system for the enzyme xylanase* ***may*** *be installed.*
d *(No change)*
e *"*
f *The pollutant emissions shall not exceed:*

1) *A-Line Bleach Plant*

E_o Washer	*(No change in emission rate)*
A-Line Scrubber	*(No change in emission rates)*

2) *B-Line Bleach Plant*

E_o Washer	*(No change in emission rate)*		
B-Line Scrubber	*Cl_2*	*1.0 lb/hr*	*4.38 TPY*
	ClO_2	*(No change in emission rate)*	
	$CHCl_3$	*"*	

h) *(No change)*

1) *(No change)*
2) *proposed sampling procedures/methods and analysis for determining $CHCl_3$* ~~*; and*~~
3) *(No change)*

Note: *(No change)*

[Add the specific condition]

i) *After construction/modification is completed, initial compliance testing on the Bleach Plant Scrubbers (A-Line and B-Line) and E_o Washers for chlorine and chlorine dioxide will be conducted using NCASI (EPA Modified Method 6) test protocols.*

E *(No change)*

1. *(No change)*

Modify to read:

a) *The No. 2 MEE's will be modified to include the addition of new effects, which will be vented to the non-condensable gas (NCG) handling system.*

b) *A storage and handling system <u>may</u> be installed for water <u>transported</u> anthraquinone, an organic catalyst, which will be used in both the batch and continuous digester systems; both systems sent to the NCG handling system; and,*

<u>Page 11 of 11</u>

"Written reports of the tests shall be submitted to the Department's Northeast District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450."

Modify to read:

Written reports of the tests shall be submitted to the Department's Northwest District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450.

Modifications to Best Available Conrol Technology (BACT) Determination

Page 1

"The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr (350,000 lbs/hr steam) and the modification of the existing Lime Kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order."

Modify to read:

> *The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr (385,000 lbs/hr steam (2-hour average)) and the modification of the existing Lime Kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order.*

Modify Pollutant Emissions Table as follows:

SO_2	*28.2 TPY*

Modify BACT Table as follows:

#6 Power Boiler	*NO_x**	*(No change in emission limits)*
	*CO**	"
	*VOCs**	"
Lime Kiln-Mud Dryer	*NO_x**	*(No change in emission limits)*
	*CO**	"
	*VOCs**	"

* *24-hour average*

Page 5

Modify Table as follows:

#6 Power Boiler	*NO_x**	*(No change in emission limits)*
	*CO**	"
	*VOCs**	"
Lime Kiln-Mud Dryer	*NO_x**	*(No change in emission limits)*
	*CO**	"
	*VOCs**	"

Note: *the Maximum Sulfur Content of the #6 Fuel oil is 2.5% by weight.*

* *24-hour average*

File Copy

Best Available Copy

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET 1 of [redacted]1

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

RECEIVED
MAR 4 1993
Division of Air Resources Management

Current Evaporator Production Limits (From existing NCG permit A017-212422):

No. 1 MEE – Maximum operating rate of 181 KLbs/Hr - Dry BLS ~~measure~~ determined by measuring solids and flow into the system.

No. 2 MEE – Maximum operating rate of 97 KLbs/Hr - Dry BLS determined by measuring solids and flow into the system –

Proposed Maximum Operating Rates:

- When the No. 1 and No. 2 MEE sets are operated simultaneously the maximum operating rate shall be 278 KLbs/Hr as a total combined input to the MEE sets. (24 Hr. avg.)

181K
+97K
278K

- When only one [redacted] MEE set is in operation the maximum operating rate shall be 181 KLbs/Hr - Dry BLS. (24 Hr. avg.)

- Actual BLS total from the Nos. 1 and 2 MEEs shall not increase ~~from the~~ previous years of operations [illegible] based on the [illegible] two years of [illegible]

above the average for the years 1991 and 1992.

Attachment 4

Printing and Writing Papers
375 Muscogee Road
P. O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

FACSIMILE COVER SHEET

Please deliver the following pages:

TO: BRUCE MITCHELL FROM: KYLE MOORE

LOCATION: TALLAHASSEE LOCATION: PENSACOLA, FL

FAX NO: 904-922-6979

Total number of pages including cover sheet is 2.

OPERATOR: __________

DATE: __________

TIME: __________

If you do not receive all pages, or if there is transmission problem, please call (904) 968-2121, Ext. 4253.

Facsimile No: (904) 968-3068

PROPOSED LANGUAGE UNDER "NEW MAXIMUM OPERATING RATES:"

3rd CONDITION - MODIFY TO READ

ACTUAL BLS TOTALS FROM THE No. 1 AND No. 2 MEE'S SHALL NOT INCREASE ABOVE A 2 YEAR AVERAGE DETERMINED FROM THE PREVIOUS 5 YEARS FROM THE DATE OF MODIFICATION OF NO. 2 MEE.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

JAN 20 1993

4APT-AE

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

RE: Champion International Corporation (PSD-FL-200)

Dear Mr. Fancy:

This is to acknowledge receipt the application for a Prevention of Significant Deterioration (PSD) permit by the above referenced facility by letter dated December 21, 1992. The proposed project includes the construction of a new gas-fired power boiler, the modification of the existing lime kiln, and the modification of the existing bleach lines. The project will be subject to PSD review for the emissions of NO_x, CO, and VOC.

As discussed between Mr. Bruce Mitchell of your staff and Mr. Gregg Worley of my staff on January 15, 1993, we have reviewed the package as requested and have no adverse comments. If you have any questions or comments, please contact Mr. Gregg Worley of my staff at (404) 347-5014.

Sincerely yours,

for Gregg M. Worley

Brian L. Beals, Chief
Source Evaluation Unit
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

B. Mitchell
C. Holladay
E. Middleswart NW Dist.
J. Bunyak, NPS
J. Cole, OHF&C
J. Glunn

RECEIVED

JAN 25 1993

Division of Air
Resources Management

Meeting @ DER

Champion International Corp.

PSD - FL - 200

Bruce Mitchell	FDER/DARM/BAR	904-488-1344
KYLE MOORE	CHAMPION	904-968-4253
John Barone	WESTON	215 430-7218
Clove Holladay	FDER/DARM/BAR	904-488-1344
Steve Webb	Champion	904-968-2121 x2498
Willie Tims, Jr.	Champion	904-968-4256

TABLE D-2

CHAMPION PENSACOLA MILL
Future Chloroform Emission Rates
(100% ClO_2 Substitution)

SOURCE	EMISSION FACTOR (#/ADT)	EMISSION RATE* (lbs/yr)	EMISSION RATE* (lbs/hr)	% OF GENERATION RATE**
A-line Cl_2 Scrubber	.0054	2956.5	0.3375	27
A-line E_o Washer	.0006	328.5	0.0375	3
B-line Cl_2 Scrubber	.0054	2956.5	0.3375	27
B-line E_o Washer	.0006	328.5	0.0375	3
A + B-line Wastewater	.008	4380.0	0.50	40
Total	0.02	10,950	1.25	100

} 60% - Air Stream

} - Wastewater

* Based on 1500 ADT/day and applicable emission factor.

** Based on existing facility splits for: air vs. wastewater; scrubber vs. E_o washer; softwood vs. hardwood.

CH237A.TAB

TABLE 3-6
CHAMPION
PENSACOLA, FLA

SUMMARY OF FUTURE MAXIMUM ANNUAL EMISSIONS

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#6 POWER BOILER	140.07 tons	2.17 tons	233.45 tons	11.67 tons	23.35 tons	NA
LIME KILN MUDDRYER	215.93 tons	28.43 tons	29.57 tons	47.74 tons	107.31 tons	6.39 tons
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	NA	1.48 tons	NA
LINE A- E_o WASHER(1)	NA	NA	NA	NA	0.16 tons	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	NA	1.48 tons	NA
LINE B- E_o WASHER(2)	NA	NA	NA	NA	0.16 tons	NA
TOTAL	356.01 tons	30.60 tons	263.02 tons	59.41 tons	133.94 tons	6.39 tons

(1) Softwood
(2) Hardwood

TABLE C-4
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE EMISSIONS

JULY 1991 - JUNE 1992

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	43.85 tons	0.41 tons	43.85 tons	2.19 tons	11.67 tons	NA
#2 POWER BOILER	134.23 tons	0.30 tons	31.96 tons	1.60 tons	8.58 tons	NA
LIME KILN	64.36 tons	1.79 tons	5.81 tons	58.13 tons	1.70 tons	8.39 tons
LINE A- Cl_2 SCRUBBER(1) (3)	NA	NA	NA	NA	10.74 tons	NA
LINE A- E_o WASHER(1) (3)	NA	NA	NA	NA	1.16 tons	NA
LINE B- Cl_2 SCRUBBER(2) (4)	NA	NA	NA	NA	15.40 tons	NA
LINE B- E_o WASHER(2) (4)	NA	NA	NA	NA	2.05 tons	NA
TOTAL	242.44 tons	2.49 tons	81.62 tons	61.92 tons	51.31 tons	8.39 tons

(1) Softwood
(2) Hardwood
(3) VOC emission rates are based on the lb/ADTP emission factor and actual softwood pulp (ADTP) production.
(4) VOC emission rates are based on the lb/ADTP emission factor and actual hardwood pulp (ADTP) production.

TABLE 3-2
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE ANNUAL EMISSIONS VS FUTURE MAXIMUM ANNUAL EMISSIONS

(tons/yr)

SOURCE	NO_x			SO_2			CO		
	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE
#6 POWER BOILER	NA	140.07	140.07	NA	2.17	2.17	NA	233.45	233.45
LIME KILN MUDDRYER(3)	63.46	215.93	152.48	1.76	28.43	26.67	5.73	29.57	23.83
#1 POWER BOILER	40.57	NA	-40.57	0.38	NA	-0.38	40.57	NA	-40.57
#2 POWER BOILER	113.20	NA	-113.20	0.25	NA	-0.25	26.95	NA	-26.95
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE A- E_o WASHER(1)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE B- E_o WASHER(2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTALS	**217.23**	**356.01**	**138.78**	**2.39**	**30.60**	**28.21**	**73.26**	**263.02**	**189.76**

SOURCE	PM/PM_{10}			VOC			TRS		
	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE
#6 POWER BOILER	NA	11.67	11.67	NA	23.35	23.35	NA	NA	NA
LIME KILN MUDDRYER(3)	57.32	47.74	-9.58	1.68	107.31	105.63	8.27	6.39	-1.88
#1 POWER BOILER	2.03	NA	-2.03	10.84	NA	-10.84	NA	NA	NA
#2 POWER BOILER	1.35	NA	-1.35	6.72	NA	-6.72	NA	NA	NA
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	10.72	1.48	-9.24	NA	NA	NA
LINE A- E_o WASHER(1)	NA	NA	NA	1.16	0.16	-1.00	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	15.30	1.48	-13.82	NA	NA	NA
LINE B- E_o WASHER(2)	NA	NA	NA	2.04	0.16	-1.88	NA	NA	NA
TOTALS	**60.69**	**59.41**	**-1.28**	**48.45**	**133.94**	**85.49**	**8.27**	**6.39**	**-1.88**

(1) Softwood
(2) Hardwood
(3) 95% control efficiency is assumed for the future case SO_2 condition.

17-Dec-92 G:\..\CHAMPEN\NO_RECOV\BASEFUT2

TABLE 3-1

CHAMPION - PENSACOLA
SUMMARY OF AFFECTED SOURCES

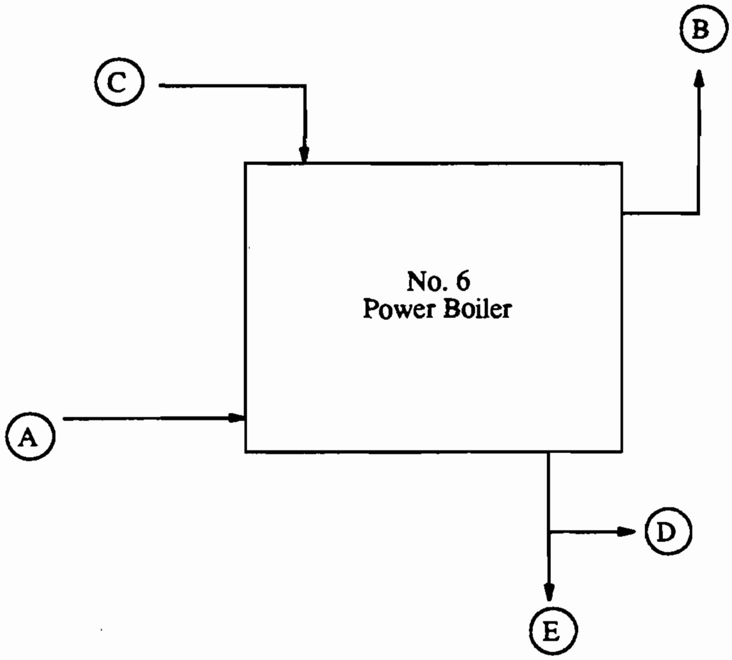
BASELINE SOURCES	
	No. 1 Power Boiler
	No. 2 Power Boiler
	Lime Kiln
A-Line	Softwood Bleach Plant Scrubber Softwood Bleach Plant E_o Washer
B-Line	Hardwood Bleach Plant Scrubber Hardwood Bleach Plant E_o Washer
FUTURE SOURCES	
	No. 6 Power Boiler
	Lime Kiln-Mud Dryer
A-Line	Softwood Bleach Plant Scrubber Softwood Bleach Plant E_o Washer
B-Line	Hardwood Bleach Plant Scrubber Hardwood Bleach Plant E_o Washer

TABLE C-3
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE EMISSIONS

JULY 1990 - JUNE 1991

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	37.29 tons	0.35 tons	37.29 tons	1.86 tons	10.00 tons	NA
#2 POWER BOILER	92.17 tons	0.20 tons	21.95 tons	1.10 tons	4.85 tons	NA
LIME KILN	62.56 tons	1.74 tons	5.65 tons	56.50 tons	1.65 tons	8.15 tons
LINE A- Cl_2 SCRUBBER(1) (3)	NA	NA	NA	NA	10.70 tons	NA
LINE A- E_o WASHER(1) (3)	NA	NA	NA	NA	1.16 tons	NA
LINE B- Cl_2 SCRUBBER(2) (4)	NA	NA	NA	NA	15.20 tons	NA
LINE B- E_o WASHER(2) (4)	NA	NA	NA	NA	2.03 tons	NA
TOTAL	192.02 tons	2.29 tons	64.89 tons	59.47 tons	45.60 tons	8.15 tons

(1) Softwood
(2) Hardwood
(3) VOC emission rates are based on the lb/ADTP emission factor and actual softwood pulp (ADTP) production.
(4) VOC emission rates are based on the lb/ADTP emission factor and actual hardwood pulp (ADTP) production.



A	Natural Gas	533 MCFH
B	Stack Effluent	161,000 ACFM
C	Feed Water	6,667 lb/min
D	Steam	384 KPPH
E	Blow Down	266.7 lb/min

Process Flow Diagram 1
No. 6 Power Boiler

Chmp01-D19

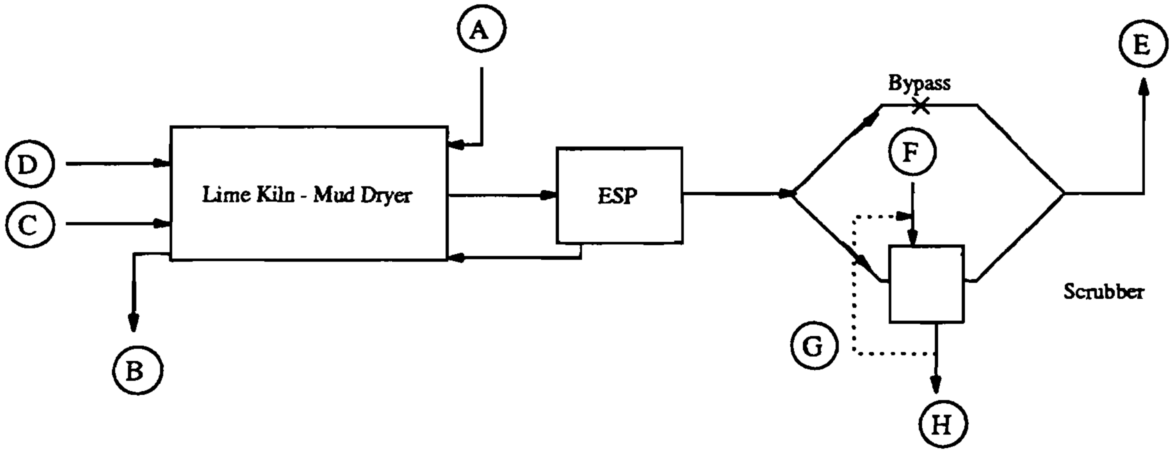
TABLE 4-1

PSD POLLUTANT SIGNIFICANCE LEVELS[1]

POLLUTANT	PSD SIGNIFICANT INCREASE LEVEL (ton/yr)	PROPOSED NET EMISSION RATE CHANGES (ton/yr)[2]	CHAMPION'S PROPOSED CHANGES SIGNIFICANT (yes/no)
PM_{10}	15	-1.3	no
Total Suspended Particulate	25	-1.3	no
Sulfur Dioxide	40	27.4	no
Nitrogen Oxides	40	138.8	yes
Volatile Organic Compound	40	85.5	yes
Carbon Monoxide	100	189.8	yes
Total Reduced Sulfur Compounds	10	-1.9	no

1 From EPA PSD regulations.

2 The proposed emission rate changes are based upon the addition of the No. 6 Power Boiler, modification of the Lime Kiln-Mud Dryer and the deletion of the No. 1 Power Boiler, and No. 2 Power Boilers.

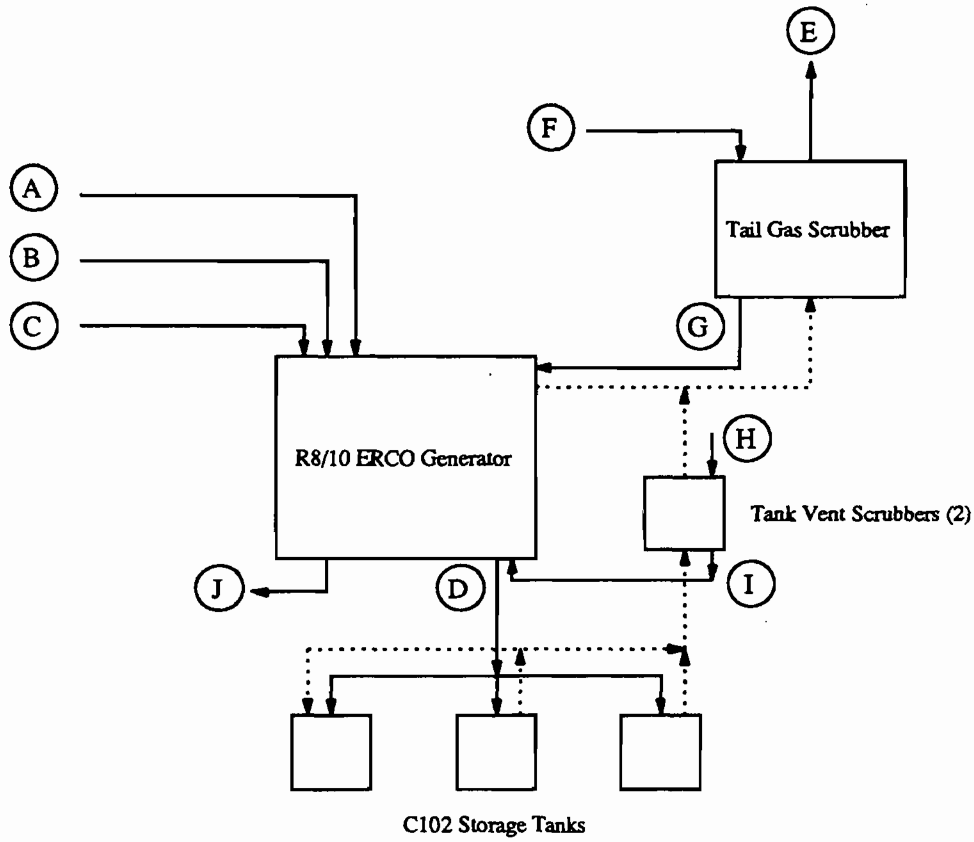


A	Lime Mud	893 T/D
B	Product Lime	500 T/D
C	Fuel - Natural Gas - No. 6 Oil	144.231 MCFH 1,000 GPH
D	NCGs	358 lb/hr *
E	Stack Effluent	57,208 ACFM
F	Scrubber Makeup	25 GPM
G	Scrubber Recirculation	1,700 GPM
H	Scrubber Blowdown	5 GPM

* Based on 1,718 ADBT/D

Process Flow Diagram 2
Lime Kiln - Mud Dryer

Chmp02-D19



A	Methanol	5.6 T/D
B	Sulfuric Acid	29.6 T/D
C	Sodium Chlorate	61.3 T/D
D	Chlorine Dioxide	37.4 T/D
E	Stack Effluent	1,321.0 ACFM
F	Makeup White Liquor to Scrubber	<1.0 GPM
G	Scrubber Discharge	1.0 GPM
H	Water to Tank Vent Scrubbers	79.1 GPM
I	Tank Vent Scrubber Discharge	79.1 GPM
J	Saltcake Generation	33.6 T/D

Process Flow Diagram 3
Chlorine Dioxide Generator

Chmp03-D19

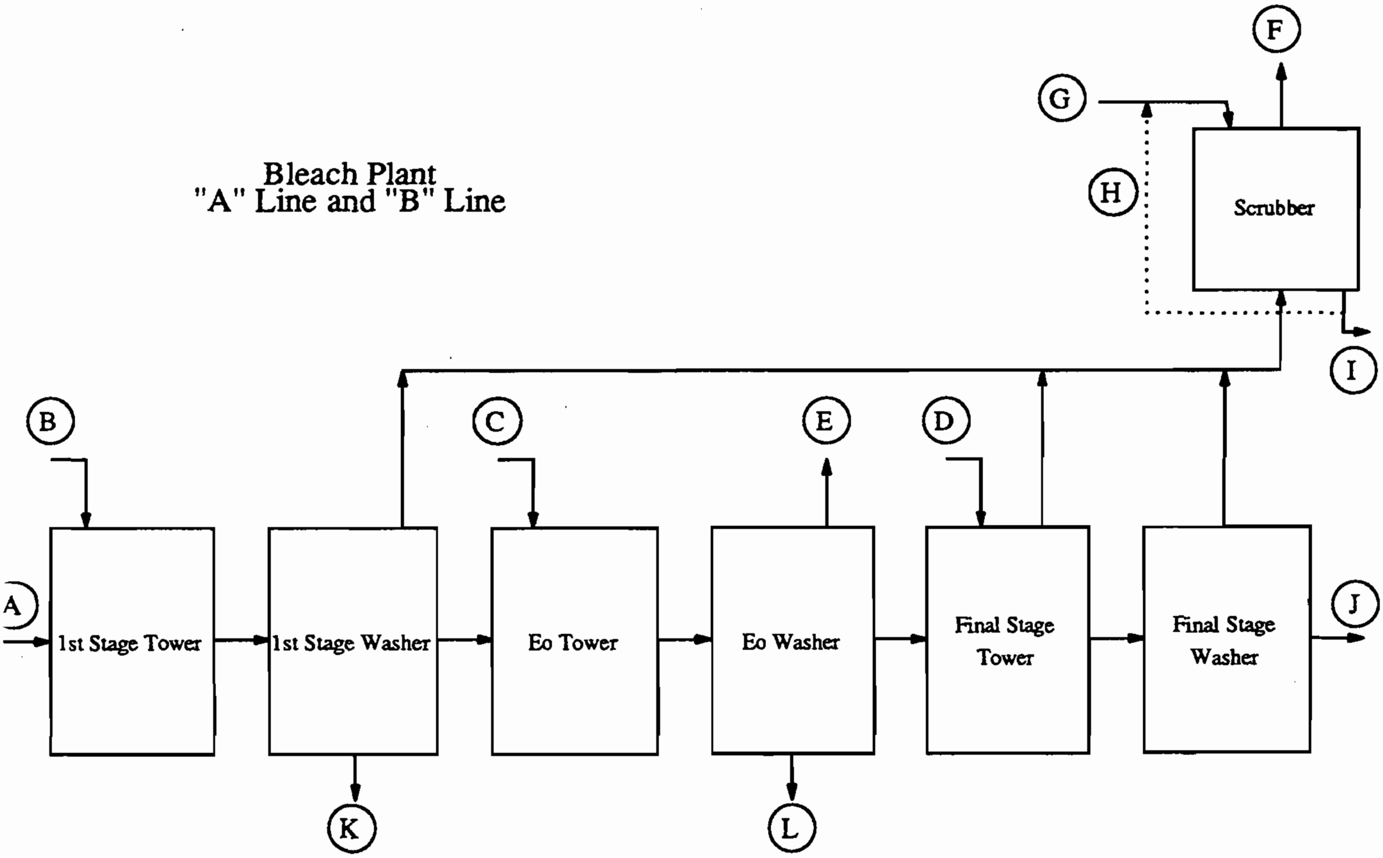
TABLE D-1

CHAMPION PENSACOLA MILL
BASELINE CHLOROFORM EMISSION RATES

A Line - Line 2 -	softwood, permit limits:	800 ADT/day Annual Average 888 ADT/day 24-hr Average
B Line - Line 1 -	hardwood, permit limits:	600 ADT/day Annual Average 792 ADT/day 24-hr Average

I. GAS PHASE

SOURCE	EMISSION FACTOR (lb/ADTP)*	EMISSION RATES			
		AVERAGE		MAXIMUM	
		(lb/hr)	(g/sec)	(lb/hr)	(g/sec)
A - Cl_2 Scrubber	0.083	2.77	0.349	3.07	0.387
A - E_o Washer	0.009	0.300	0.038	0.333	0.042
B - Cl_2 Scrubber	0.120	3.00	0.378	3.96	0.499
B - E_o Washer	0.016	0.400	0.050	0.528	0.067



		"A" Line	"B" Line
A	Unbleached Pulp	910.8 ADT/D	851.3 ADT/D
B	CLO2	10.7 T/D	6.3 T/D
C	Peroxide	3.3 T/D	3.1 T/D
D	CLO2	8.2 T/D	5.0 T/D
E	Eo Washer Vent Gas	13,812 ACFM	8,227 ACFM
F	Scrubber Vent Gas	10,200 ACFM	7,350 ACFM
G	Scrubber Makeup Flow	1.1 GPM	.2 GPM
H	Scrubber Recirculation	225 GPM	190 GPM
I	Scrubber Blowdown	2 GPM	1 GPM
J	Bleached Pulp	888 ADT/D	830 ADT/D
K	Acidic Effluent	3.5 MGD	3.5 MGD
L	Alkaline Effluent	2.3 MGD	2.3 MGD

Process Flow Diagram 4
Bleach Plant

Chmp04-D19

TABLE 3-5
CHAMPION
PENSACOLA, FLA
SUMMARY OF EMISSION FACTORS AND HOURLY EMISSION RATES

FUTURE MAXIMUM ANNUAL EMISSIONS

SOURCE	NO_x		SO_2		CO	
	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)
#6 POWER BOILER	0.06 lb/MMBtu	32.0	0.00093 lb/MMBtu	0.50	0.1 lb/MMBtu	53.3
LIME KILN MUDDRYER	49.3 lb/hr	49.3	6.49 lb/hr	6.49	6.75 lb/hr	6.75
LINE A- Cl_2 SCRUBBER(1) (3)	NA	NA	NA	NA	NA	NA
LINE A- E_0 WASHER(1) (3)	NA	NA	NA	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2) (4)	NA	NA	NA	NA	NA	NA
LINE B- E_0 WASHER(2) (4)	NA	NA	NA	NA	NA	NA

SOURCE	PM/PM_{10}		VOC		TRS	
	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)
#6 POWER BOILER	0.005 lb/MMBtu	2.67	0.01 lb/MMBtu	5.33	NA	NA
LIME KILN MUDDRYER	10.9 lb/hr	10.9	24.5 lb/hr	24.5	1.46 lb/hr	1.46
LINE A- Cl_2 SCRUBBER(1) (3)	NA	NA	0.3375 lb/hr	0.3375	NA	NA
LINE A- E_0 WASHER(1) (3)	NA	NA	0.0375 lb/hr	0.0375	NA	NA
LINE B- Cl_2 SCRUBBER(2) (4)	NA	NA	0.3375 lb/hr	0.3375	NA	NA
LINE B- E_0 WASHER(2) (4)	NA	NA	0.0375 lb/hr	0.0375	NA	NA

(1) Softwood
(2) Hardwood
(3) The VOC emission factor is based on 750 ADTP/day (softwood) and pulp production 24 hr/day.
(4) The VOC emission factor is based on 750 ADTP/day (hardwood) and pulp production 24 hr/day.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 21, 1992

Mr. Richard E. Grusnick, Chief
Air Division
Alabama Dept. of Environmental Management
State Capitol
Montgomery, AL 36130

Dear Mr. Grusnick:

RE: Champion International Corp.
Pulp Mill Modifications
Escambia County, PSD-FL-200

The Department has received the above referenced PSD application package. Please review this package and forward your comments to the Department's Bureau of Air Regulation by January 15, 1993. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Bruce Mitchell or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G. Adams

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

CHF/pa

Enclosures

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 21, 1992

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Dear Ms. Harper:

RE: Chamption International Corp.
Pulp Mill Modifications
Escambia County, PSD-FL-200

The Department has received the above referenced PSD application package. Please review this package and forward your comments to the Department's Bureau of Air Regulation by January 15, 1993. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Bruce Mitchell or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G. Adams

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

CHF/pa

Enclosures

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 21, 1992

Mr. Brian Mitchell, Acting Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
P. O. Box 25287
Denver, CO 80225

Dear Mr. Mitchell:

RE: Champion International Corp.
Pulp Mill Modifications
Escambia County, PSD-FL-200

The Department has received the above referenced PSD application package. Please review this package and forward your comments to the Department's Bureau of Air Regulation by January 15, 1993. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Bruce Mitchell or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G. Adams

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

CHF/pa

Enclosures

Meeting @ DER (Rm 354) @ Champion Int.

12-15-92

Bruce Mitchell	FDER/DARM/BAR	904-488-1344
Cleve Holladay	FDER/DARM/BAR	"
KYLE MOORE	CHAMPION	904-968-4253
Steve Webb	"	904-968-2121 x2498
PAUL JOHNSON	CHAMPION	904 968-2121
Charles Ayer	Champion	203-358-7117
JOHN EGAN	WESTON	215-430-7263

P 360 185 708

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

Sent to	F. Doug Owenby
Street and No.	Champion Int'l Corp
P.O., State and ZIP Code	Cantonment, Fl
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	2-26-93 PSD-FI-200

PS Form **3800**, June 1991

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

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
F. Doug Owenby, VP, OM
Champion Int'l Corp
375 Muscogee Rd
Cantonment, Fl 32533

4a. Article Number
P 360 185 708

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

7. Date of Delivery
01 MAR 93

5. Signature (Addressee)

6. Signature (Agent)
Rebecca Suckenlust

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

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ★U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

February 25, 1993

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. F. Doug Owenby
Vice President/Operations Manager
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

Dear Mr. Owenby:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permits to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers.

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

Sincerely,

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

CHF/BM/rbm

Attachments

c: E. Middleswart, NWD
D. Smith, P.E., CE
J. Harper, EPA
J. Bunyak, NPS
J. Braswell, Esq., DER
G. Golson, ADEM
K. Moore, CIC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of
Applications for Permit by:

DER File Nos. AC 17-223343
PSD-FL-200
Escambia County

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533
_______________________________/

INTENT TO ISSUE

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

The applicant, Champion International Corporation, applied on December 21, 1992, to the Department of Environmental Regulation for permits to be allowed to make modifications to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. The existing pulp mill is located at 375 Muscogee Road, Cantonment, Escambia County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S., and Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be the one with significant circulation in the area that may be affected by the permitting action. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (904-488-1344), within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

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

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

The Petition shall contain the following information;

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

cc: E. Middleswart, NWD
D. Smith, P.E., CE
J. Harper, EPA
J. Bunyak, NPS
J. Braswell, Esq., DER
G. Golson, ADEM
K. Moore, CIC

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 2-26-93 to the listed persons.

Clerk Stamp

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

Kim Tober — Clerk

2-26-93 — Date

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

Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. o. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

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

Department of Environmental Regulation
Northwest District
160 Government Center
Penscaola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

Champion International Corporation
Escambia County, Florida

Permit Numbers: AC 17-223343
PSD-FL-200

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

February 25, 1993

I. Application

A. Applicant

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

B. Project Description and Location

The applicant proposes to modify the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. Also, the applicant stated that this activity will not result in a mill production increase, thereby eliminating the need to address actual emissions from other mill sources (source annual operation reports will be used to verify).

The existing facility is located in Escambia County, Florida. The UTM coordinates are Zone 17, 469.0 km East and 3,385.8 km North.

C. Process and Controls

1. General

The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips (see Figure 2-3). After the wood chips have been cooked with an alkaline liquor in the batch digesters (hard wood) and the continuous digester (soft wood) and washed, the pulp is screened to separate rejects. The pulp is then further delignified in separate oxygen delignification reactors, washed, and sent to the A and B Bleach Plants, where it is reacted with various chemicals in a sequence for purification, brightening and viscosity control. Chemicals are added in retention towers, and reactants are removed in washers. After being bleached, the pulp is dried on the Nos. 3 and 5 Paper Machines and finished for customer specifications. Market pulp is dried on a pulp drying machine as bales or rolls for final sale.

2. Chemical Cooking

Improved delignification in the cooking processes is proposed for the soft wood chips, which are cooked in the continuous digester, by an extended modified continuous cooking. By adding cooking liquor at different stages and using different cooking conditions, the proposed process is expected to produce a pulp which is easier to wash and, therefore, improving lignin extraction. The continuous digester system is a sealed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln: primary; calciner: backup) for control. No increase in throughput should occur due to the proposed changes to the continuous digester system.

The project will include the installation of storage and handling equipment for anthraquinone (AQ), which is water soluble; and, therefore, Champion proposes to utilize a system designed for transporting and storing water-soluble anthraquinone. AQ is an organic catalyst which accelerates and increases the selectivity of the wood cooking chemicals in the delignification of the pulp fiber. It will be used in both the batch digester system and the continuous digester system for the purpose of reducing the organic loading, the color, and the conductivity in the bleach plant effluent.

It is believed that emissions from the digesters should not change following implementation of these new methods. Since feed rate to the digesters will not change, the material flow rate from the digesters to the brown stock washers will also be unchanged. No net change in black liquor solids to the recovery boilers is anticipated.

As is the continuous digester system, the batch digester system is a closed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln or calciner) for control.

3. O_2 Delignification

The washed brown pulp from the cooking processes goes through further delignification in O_2 reactors on each line (i.e., soft wood and hard wood). If the proposed improvements in the digester cooking processes occur, then less fiber may be wasted, which could result in an increase in the fiber processed through the O_2 delignification systems. Since there could also be reduced levels of lignin in the brown pulp, the actual emissions from the pre- and post-O_2 washers and the O_2 blow tank are not expected to change, even if fiber throughput increases.

4. A and B Bleach Plants

The existing A and B Bleach Plants are identical and use a three stage bleaching sequence commonly referred to as CED (C: a chlorination stage with chlorine dioxide added; E: an oxidative caustic extraction stage; and, D: a final chlorine dioxide bleaching stage). The final bleaching sequence will be referred to as DED (see Figure 1).

The chlorine dioxide (ClO_2) is manufactured on site in a chemical generator employing the R3H process, which reacts salt, sulfuric acid, hydrochloric acid, and sodium chlorate to form a chlorine dioxide/chlorine gas mixture that is absorbed in chilled water and stored in storage tanks for use by both plants.

There are five vent sources associated with the ClO_2 generator, which includes a tail gas scrubber using a sodium hydroxide media to control ClO_2, two ClO_2 storage tanks using chilled water scrubbers to control ClO_2, and two salt unloading/pneumatic transfer systems using separate water spray towers to control particulate emissions.

The proposal will eliminate the existing chlorine gas handling system, add a hydrogen peroxide handling system, add a methanol storage tank, and modify the ClO_2 generator. In addition, enzymes (i.e., xylanase) may be added to the high density storage tanks between the oxygen delignification systems and the bleach plants.

The mill will eliminate the use of molecular chlorine as a bleaching agent, and the first stage of each plant will be 100% ClO_2, which will require a modification to the existing ClO_2 generator. The generator will be modified to an R8/R10 process (see Figure 2), which uses methanol, sulfuric acid, and sodium chlorate to generate ClO_2. The modified reactor's capacity will be increased from 16 tons per day to 37.4 tons per day of ClO_2. A third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers.

The storage tank scrubbers will continue to vent the existing two tanks and will also vent the new storage tank. The exhaust from the two tank vent scrubbers will be directed to the tail gas scrubber. The tail gas scrubber will be modified by installing an extra 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide plus sodium sulfide).

A hydrogen peroxide storage and handling system will be installed. Hydrogen peroxide is an oxidizing agent that works optimally in alkaline conditions and is typically applied to the pulp in a 50% solution. The peroxide is applied in the oxidative extraction stage and is completely reacted. There are no emissions associated with the use of hydrogen peroxide.

The proposal to use the enzyme, xylanase, as a bleach boosting technique is not completely proven. By adding the enzyme prior to pulp bleaching, it is hoped that it will modify the chemical structure to make subsequent bleach stages more efficient and resulting in fewer non-desirable by-products, improved process yields, and significant reductions in ClO_2 required to bleach pulp. Installation of enzyme storage and handling facilities will be

required. Since enzymes are water soluble, there will be no air emissions associated with these systems.

A new 21,880 gallon methanol storage tank will be installed. The tank will be nitrogen blanketed and equipped with a conservation vent.

The existing salt unloading and handling system will be shut down and dismantled.

The existing bleach plant scrubbers are equally effective for Cl_2 and ClO_2 removal, and the scrubber systems have adequate capacity for the expected emissions. Therefore, no changes are planned for these scrubber systems.

5. Evaporators

Additional loading (i.e., ~ 50%) is expected on the No. 2 Multiple Effect Evaporator (MEE) system by the processing of reclaimed sewer effluent. This will be accomplished by the addition of two new evaporator effects to the existing No. 2 MEE system. Although the color and B.O.D. reclaimed represents a significant portion of the wastewater load, the associated solids contribution to the chemical recovery system is insignificant. Therefore, the recovery boilers and associated equipment are not impacted.

6. Foul Condensate Stripper System

An upgrade of the existing contaminated condensate stripper and the installation of an additional steam stripper is planned . With added stripper capacity, initial estimates have shown that the mill effluent B.O.D. load to the wastewater treatment plant could be reduced by as much as 15%. Since a steam stripper directly reduces volatile organic compounds (VOCs) released from the digester steam after the cooking of wood chips, this will decrease the amount of VOCs previously released to the wastewater treatment system. The existing emissions, as well as the new emissions, from the condensate stripper system will be collected and transported to an incinerator (i.e., lime kiln) for control.

7. Lime Kiln-Mud Dryer

The lime kiln and calciner cannot process all of the lime mud produced by the causticizing system, thus discharging the excess mud to the sewer in a weak wash solution. This sewered lime mud with settled mill sludge is collected and landfilled from decanting basins, with the resulting weak wash alkaline solution requiring neutralization using CO_2 injection. The alkaline solution does increase mill effluent conductivity.

The proposal will add a lime mud dryer system (see Figure 3) in order to eliminate the sewering of the excess lime mud in weak wash solution from the causticizing process, reduce landfilling requirements, and reduce conductivity by about 20%.

The upgrade will increase the capacity to 500 tons of CaO per day. A new multifield electrostatic precipitator will be installed between the lime kiln and the existing caustic scrubber will be modified to provide SO_2 scrubbing capability (the packed column will utilize recirculating NaOH as the scrubbing medium). A minimum pH of 8.0 will be maintained.

A slight increase in non-condensible gases (i.e., total reduced sulfur compounds) will be burned in the lime kiln, resulting in an increase in SO_2 emissions. These SO_2 emissions will be subjected to the lime mud in the lime kiln and a caustic scrubber system. Projected emissions are not significant. A performance test will be required to substantiate this.

8. New No. 6 Power Boiler

Added steam capacity will be required to support the proposed process modifications. The specific added steam demand will come from an increase in evaporation and contaminated condensate stripping capacity, black liquor heaters, the cooking modifications, and bleach plant load reduction technologies.

The new No. 6 Power Boiler will be permitted to fire only natural gas as a fuel, with a maximum heat input of 533 MMBtu/hr. The new boiler will permit the retirement of the existing Nos. 1 and 2 Power Boilers. The new boiler will provide 350,000 pounds per hour of steam product.

D. The Standard Industrial Codes are:

Major Group No. 26 - Paper and Allied Products
Industry Group No. 2611 - Pulp Mills

II. Rule Applicability

The proposed project is subject to preconstruction review in accordance with Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4; and, the 40 CFR (July, 1991 version).

The application package was deemed complete on January 20, 1993.

The plant is located in an area designated as attainment for all pollutants in accordance with F.A.C. Rule 17-275.400.

The existing mill is a major emitting facility in accordance with F.A.C. Rule 17-212.200, Definitions, for the pollutants particulate matter (PM/PM10), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), TRS, and volatile organic compounds (VOCs).

The proposed mill modification will result in a net significant increase for the pollutants NOx, CO and VOCs (see Tables 1 & 2), thus requiring new source review for Prevention of Significant Deterioration (PSD) in accordance with F.A.C. Rule 17-212.400. This review consists of a determination of Best Available Control Technology (BACT) pursuant to F.A.C. Rule 17-212.410 and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The proposed new sources and modified sources shall be in compliance with all applicable provisions of F.A.C. Chapters 17-210 thru 17-297 and 17-4; and, the 40 CFR (July, 1991 version). The proposed source shall be in compliance with all applicable provisions of F.A.C. Rules 17-210.650: Circumvention; 17-210.700: Excess Emissions; 17-296.800: Standards of Performance for New Stationary Sources (NSPS); 17-297: Stationary Point Source Emission Test Procedures; and, 17-4.130: Plant Operation-Problems.

This proposed new No. 6 Power Boiler shall be in compliance with the NSPS for Industrial Steam Generating Units, 40 CFR 60, Subpart Db, and BACT.

The new methanol storage tank shall be in compliance with the NSPS for Storage Vessels for Petroleum Liquids, 40 CFR 60, Subpart Kb.

As a first tier level of review, the pollutants chlorine, chlorine dioxide, and chloroform, were evaluated with considerations given to carcinogenicity and toxicity using risk assessment guidelines. Through these considerations, initial property line acceptable ambient concentrations were established for each pollutant along with the appropriate averaging times.

Since neither State nor Federal ambient standards for chlorine, chlorine dioxide, and chloroform have yet been adopted, post-modification performance tests will be required to quantify the emissions, which might result in additional rule evaluation requirements.

III. Emission Limitations and Impact Analysis

A. Emission Limitations

The proposed project is subject to emission limitations for the pollutants NOx, SO2, CO, VOC, TRS, and PM/PM10. Applicable visible emission (VE) standards will also be imposed. The following table will reflect the allowable emission standards/limitations:

Table A

Source	Pollutant	Allowable Emission Standard/Limitation	
1. No. 6 Power Boiler: maximum 533 MMBtu/hr heat input			
	NOx	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)	
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)	
	PM/PM_{10}	2.67 lbs/hr, 11.7 TPY	
	SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)	
	VOC	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)	
	VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity	
2. Lime Kiln-Mud Dryer System: maximum 500 TPD CaO; 34,383 dscfm			
	NOx	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)	
	PM/PM_{10}	10.9 lbs/hr, 47.7 TPY	
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)	
	VOC	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)	
	TRS	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)	
	SO_2	6.49 lbs/hr, 28.4 TPY	
	VE	< 20% opacity	
3. A-Line Bleach Plant			
a. E_o Washer		$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. Tail Gas Scrubber		CL_2	1.45 lbs/hr, 6.4 TPY
		ClO_2	0.45 lb/hr, 2.0 TPY
		$CHCl_3$	0.34 lb/hr, 1.5 TPY
4. B-Line Bleach Plant			
a. E_o Washer		$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. Tail Gas Scrubber		Cl_2	1.45 lbs/hr, 6.4 TPY
		ClO_2	0.45 lb/hr, 2.0 TPY
		$CHCl_3$	0.34 lb/hr, 1.5 TPY

Table A cont.

5. R8/R10 ClO_2 Generator: 37.6 TPD
   Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

6. Methanol Storage Tank: 21,880 gallons - horizontal fixed roof

VOC	Not Applicable (for PSD tracking purposes: 2.2 TPY projected potential emissions)

NOTE:
1. Natural gas usage only in the No. 6 PB.
3. Hours of operation at 8760 per year.
3. Maximum heat input:
   a. No. 6 PB: 533 MMBtu/hr.
   b. Lime kiln: 150 MMBtu/hr.
4. Steam production:
   a. No. 6 PB: 350,000 pounds per hour.
5. Pollutant basis: #6 PB and Lime Kiln-Mud Dryer
   a. NOx: BACT
   b. CO: BACT
   c. PM/PM_{10}: #6 PB: vendor guarantee of 0.037 gr/dscf
      LK-MD: AP-42 Emission Factors, Table 1.4-1
   d. VOC: BACT (basis: 750 ADTP/day each hard and soft wood)
6. The maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight.

The following table will present the initial property line acceptable ambient concentrations and their averaging times for chloroform, chlorine, and chlorine dioxide:

Table B

Chemical	Acceptable Ambient Conc.	Averaging Time
1. Chloroform	0.043 ug/m^3	annual
2. Chlorine	15.0 ug/m^3 (5 ppb)	8-hour
	3.57 ug/m^3 (1.2 ppb)	24-hour
3. Chlorine Dioxide	3.0 ug/m^3 (1 ppb)	8-hour
	0.71 ug/m^3 (0.24 ppb)	24-hour

Note:

1. Since chloroform is a carcinogen with an EPA unit risk value (a measure of its carcinogenic potency) and the facility will continuously emit this chemical, the initial acceptable ambient concentration is based on providing protection from the long-term exposure to chloroform. The level of protection, that corresponds to a one-in-a-million increased risk of developing cancer from continuous exposure to chloroform, is

calculated by dividing 1.0E-6 by 2.3E-5 (the unit risk factor for chloroform). The resulting quotient (0.043 ug/m^3) is the initial acceptable ambient concentration. Since the health concern is for long-term exposure (and the unit risk factor reflects a 70-year exposure), the averaging time should be on an annual basis.

2. Chlorine is not a carcinogen, but has an occupational exposure level (TLV) of 0.5 ppm (1.5 mg/m^3). The initial acceptable ambient concentration is based on providing two orders of magnitude below the occupational level. The two orders of magnitude represent protection for the differences between healthy workers and the more sensitive public, and the public's potential exposure to multiple chemicals, which may exert synergistic effects, or may produce exposures through other environmental media.

   The first ambient guideline is based on an 8-hour average concentration, as is the occupational exposure level. An additional protection factor which takes into account the public's continuous exposure, compared to a worker's exposure, which ceases in 8 hours, is provided by the longer-term 24-hour guideline. For the 24-hour guideline, the 8-hour guideline is divided by 4.2, which is the ratio between a 168-hour week of public exposure to a continuous emission and a worker's exposure to 40 hours of the toxic. The 24-hour guideline does not need to be used for batch operations or processes which operate for less than 8 hours. If a process can pass the 8-hour ambient guideline and does not operate more than 8 hours, then its average ambient concentration for 24 hours will be well below the 24-hour guideline.

3. The initial acceptable ambient concentration for chlorine dioxide* is derived by the same methodology as was used for chlorine. The occupational exposure level is 0.3 mg/m^3 (0.1 ppm). Dividing the TLV by 100 gives the 8-hour acceptable ambient concentration, and dividing the TLV by 420 gives the 24-hour concentration.

* Facility representatives indicated that chlorine dioxide is very reactive and rapidly breaks down to chlorine in the atmosphere. Therefore, an acceptable ambient concentration guideline may not be appropriate for chlorine dioxide.

4. Testing will be required to verify the emissions from all sources.

B. Air Quality Impact Analysis

1. Introduction

The proposed No.6 Power Boiler and the modification of the Lime Kiln-Mud Dryer will emit three pollutants in PSD-significant amounts. These pollutants include the criteria pollutants carbon monoxide (CO), nitrogen oxides (NOx), and ozone (O3) (as volatile organic compounds). (see Table 1)

The air quality impact analysis required by the PSD regulations for these pollutants includes:

* An analysis of existing air quality;
* A PSD increment analysis (for NO2);
* An Ambient Air Quality Standards (AAQS) analysis;
* An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality impacts; and,
* A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The PSD increment and AAQS analysis depends on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed mill modification, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment. A discussion of the modeling methodology and required analysis follows.

2. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review.

An exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined by air quality modeling, is less than a pollutant-specific "de minimus" concentration.

The predicted ambient impact of the the proposed project for those pollutants subject to the PSD review is listed in Table 2.

The predicted maximum impacts for CO and NO2 are less than their respective de minimus impact levels. Therefore, no additional monitoring is required for these pollutants.

Preconstruction monitoring review is not required for ozone concentrations either, because the maximum potential VOC emissions from the proposed plant are less than 100 TPY.

However, a background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department for use in the ambient air quality analysis. This value was based on data from sites in

Jacksonville and Tarpon Springs both about equally distant from Champion. There were no quality assured NO_2 monitoring sites in the Pensacola area.

3. Modeling Methodology

The modeling analysis included both screening and refined EPA-approved models. Screening models were used to determine the "worst case" loaded conditions associated with the No.6 Power Boiler and to evaluate the No.6 Power Boiler and Lime Kiln-Mud Dryer impacts due to CO emissions. The EPA-approved Industrial Source Complex Long-Term (ISCLT2) dispersion model was used to evaluate NO_2 impacts. All recommended EPA default options were used. Direction-specific downwash parameters were used because the stacks were less than the GEP stack height.

Meteorological data used in the modeling consisted of five years (1985-1989) of hourly surface and upper air meteorological data taken at Pensacola, Florida. These data were input into the National Climatic Data Center (NCDC) stability array (STAR) preprocessor program for use as input to the ISCLT2 model. The STAR program converts the hourly data into the joint frequency of occurrence of wind direction, wind speed, and atmospheric stability. The STAR program can produce monthly, seasonal and annual stability arrays of input into ISCLT2.

The highest predicted yearly impact from the proposed NOx emissions was compared with the standards.

4. Modeling Results

The applicant performed screening modeling to determine the "worst case" load conditions for the proposed boiler. The worst case ambient impacts were predicted to occur during the 100% load condition. Based on the results above, all refined modeling included the 100% load emission parameters and emission rates for the No.6 Power Boiler.

The Screening model was also used to demonstrate that the CO impacts from the No.6 Power Boiler and the modification to the Lime Kiln were below the 1-hour and 8-hour significance levels of 2,000 ug/m3 and 500 ug/m3, respectively. The maximum combined impact from these two sources was 413.7 ug/m3 on a 1-hour basis. The 8-hour impact was 289.6 ug/m3. Therefore, since the proposed mill modification will not result in a significant ambient CO air quality impact, no further air quality modeling for CO is required. The proposed facility is located in a Class II area. The applicant evaluated the potential increases in ambient ground-level concentrations associated with the project and determined that the maximum projected ambient concentration increase would be greater than the PSD significant level for NO_2, thus requiring the applicant to perform a full impact analysis for NO_2. The significant impact area was determined to be 2.4 km and an emissions inventory for NOx sources was developed for the Champion mill and other major sources.

A combination of polar coordinate receptors and rectangular coordinate receptors was established for the ISCLT2 modeling. The polar grid was centered on the location of the No.5 Boiler stack. The following downwind receptor rings for every 10 degrees of arc from 0 degrees to 360 degrees were included: 4250m, 4500m, 4750m, 5000m, 6000m, 7000m, 8000m, and 10,000m. Due to the narrow boundary of Champion's property, an extensive network of discrete receptors along the boundary was used to supplement the polar grid. Since the polar receptor grid was centered on the No.5 Boiler, additional discrete receptors were required to adequately fill in the area between the property and the start of the grid. These additional receptors included points at 100m spacing out to 1000m and 250m spacing from 1000m to 4500m where the full polar grid started. Receptors were also placed at approximately 100m intervals along the perimeter of the facility boundary.

Atmospheric dispersion modeling, as previously described, was performed to quantify the amount of PSD increment consumed. The modeling results are summarized in Table 3. Based on these modeling results, the impacts from the proposed facility will not violate any of the Class II increments.

No PSD Class I increment analysis was done since the project is located more than 160 km from the nearest Class I area.

For the pollutants subject to an AAQS review, the total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The "background" concentrations are taken from areas that are much more industrialized than the proposed facilities location. Therefore, these background values are considered to be conservative. A background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department based on the data from sites in Jacksonville and Tarpon Springs.

Given existing air quality in the area of the proposed facility, emissions from the proposed facility are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are summarized in Table 4.

There is currently no acceptable method to model VOCs for ozone formation. Consequently, the control of the VOC emissions are addressed in the BACT review.

Chlorine, chlorine dioxides, and chloroform do not have an AAQS. However, these pollutants were modeled and the results were compared to the Department's air toxics reference concentrations. Table 5 summarizes the results of this analysis. The predicted concentrations for each of these pollutants is less than their respective reference concentrations.

5. Additional Impacts Analysis

a. Impacts on Soils and Vegetation

The maximum ground-level concentration predicted to occur for each pollutant as a result of the proposed project, including a background concentration, will be below the applicable AAQS including the national secondary standards developed to protect public welfare-related values. As such, this project is not expected to have a harmful impact on soils and vegetation.

b. Impact on Visibility

The mill modifications are estimated to result in a decrease in annual particulate matter emissions and an increase of less than 28 tons of SO2. Hence, it is not anticipated that any perceptible reduction in visibility will occur due to the emission of primary or secondary aerosols by the proposed mill modification. And the ambient ground level concentration of nitrogen oxides (in the form of NO_2) is anticipated to decrease due to the shutdown and removal of the No.1 and No.2 Power Boilers. Hence, visibility impairment should not occur.

c. Growth-Related Air Quality Impacts

The proposed facility is not expected to significantly change employment, population, housing or commercial or industrial development in the area to the extent that an air quality impact will result.

IV. CONCLUSION

Based on the information provided by Champion International Corporation, the Department has reasonable assurance that the proposed mill modification, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapters 17-210 thru 17-297 of the Florida Administrative Code.

#41755

PRESTON LEWIS
CERTIFICATE No. 41755
STATE OF FLORIDA

FIGURE 2-3: CONSENT ORDER AIR PERMITTING PLAN - MILL LAYOUT

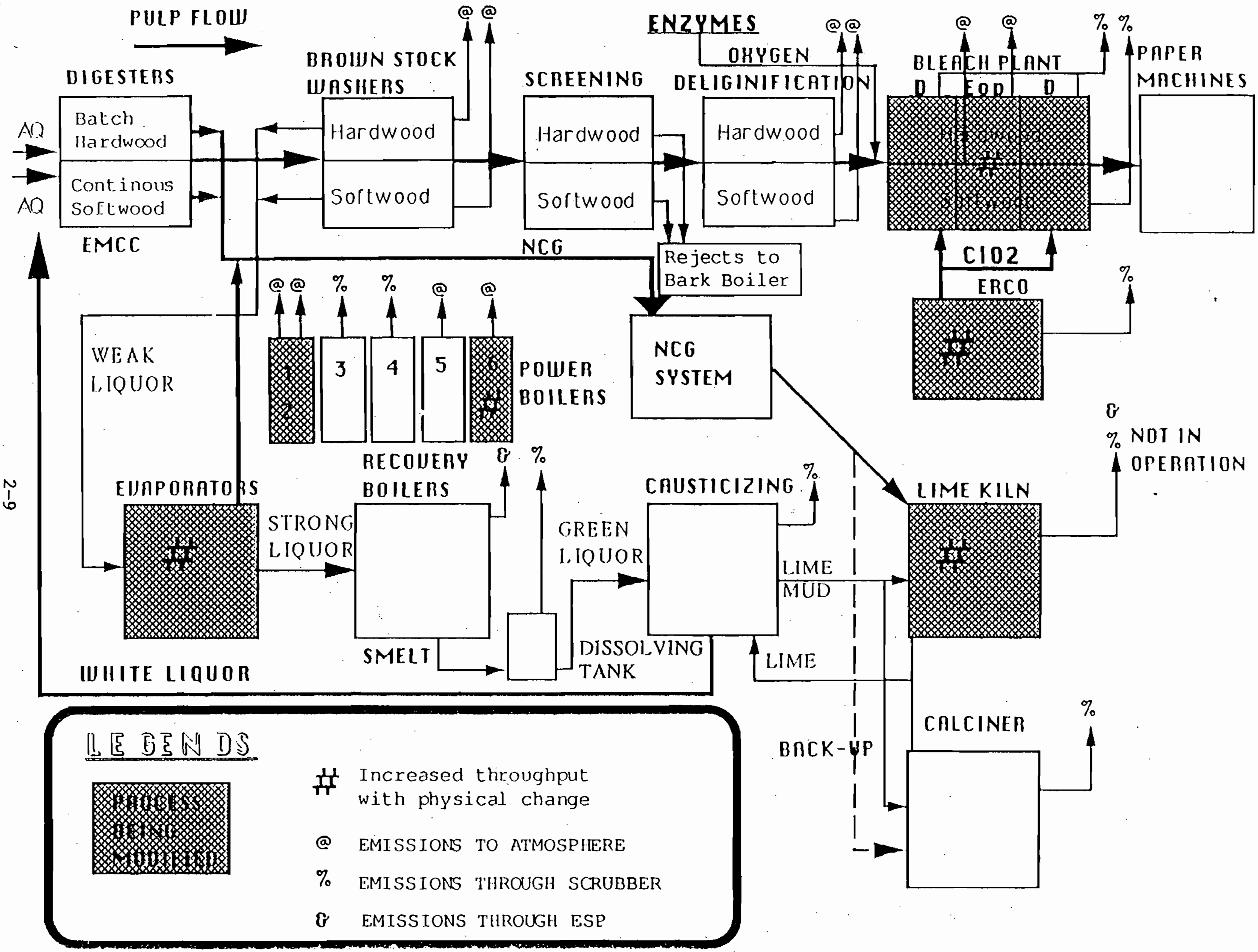
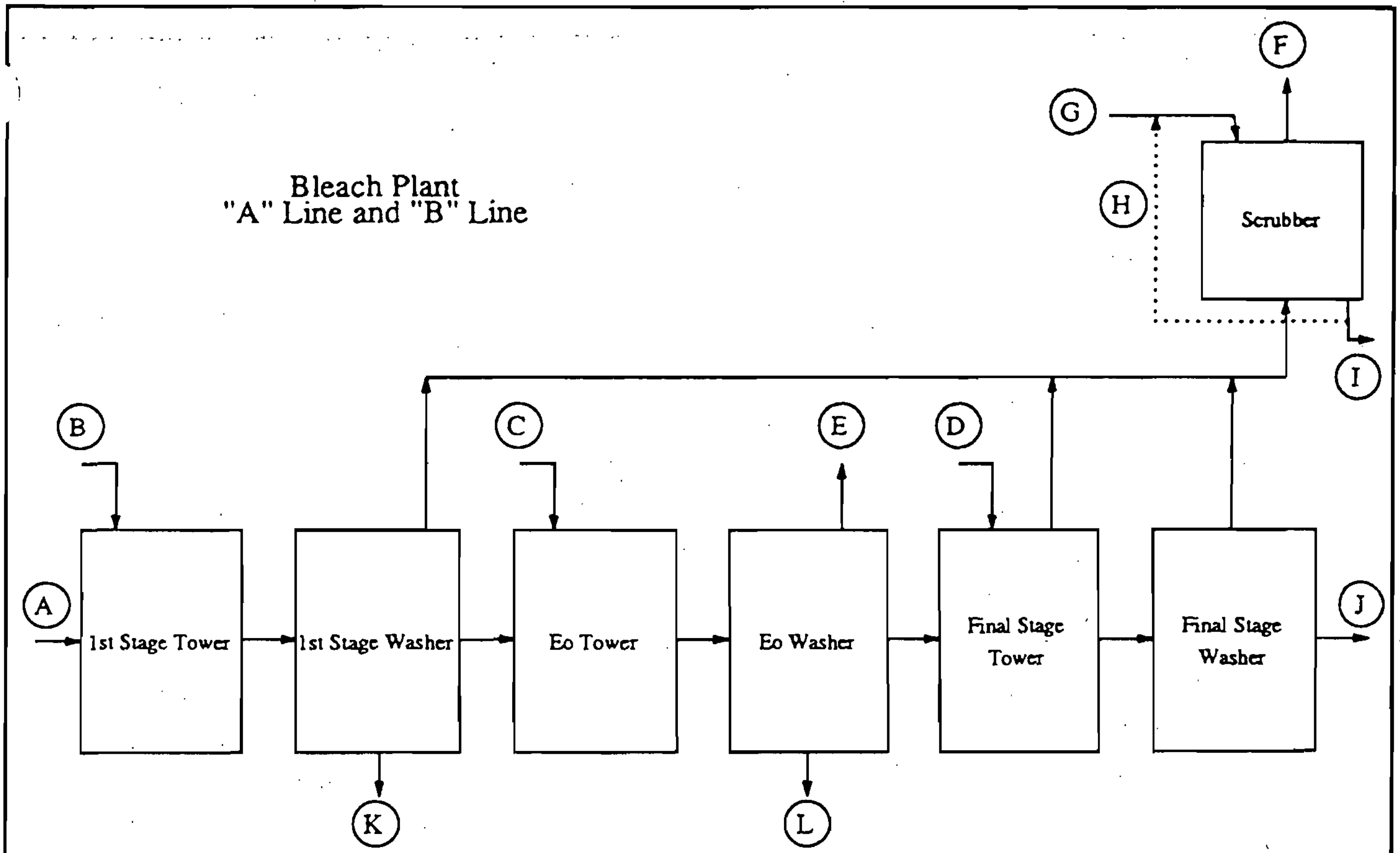


Figure 1

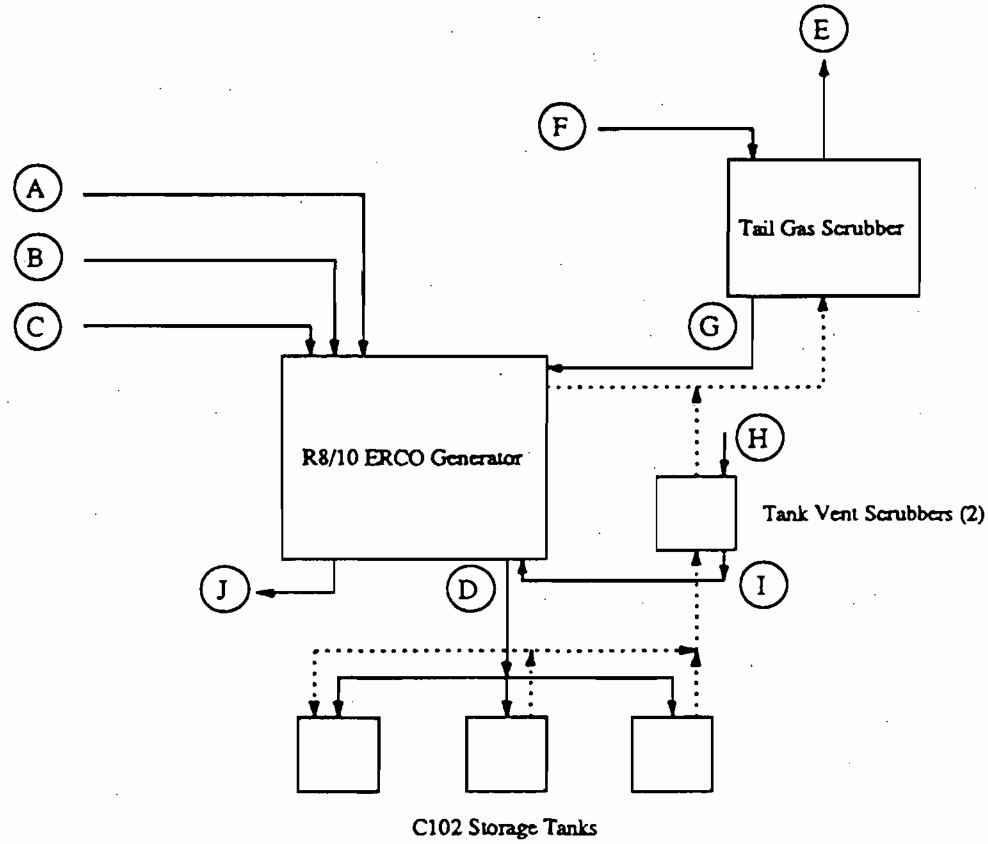


		"A" Line	"B" Line
A	Unbleached Pulp	910.8 ADT/D	851.3 ADT/D
B	CLO2	10.7 T/D	6.3 T/D
C	Peroxide	3.3 T/D	3.1 T/D
D	CLO2	8.2 T/D	5.0 T/D
E	Eo Washer Vent Gas	13,812 ACFM	8,227 ACFM
F	Scrubber Vent Gas	10,200 ACFM	7,350 ACFM
G	Scrubber Makeup Flow	1.1 GPM	.2 GPM
H	Scrubber Recirculation	225 GPM	190 GPM
I	Scrubber Blowdown	2 GPM	1 GPM
J	Bleached Pulp	888 ADT/D	830 ADT/D
K	Acidic Effluent	3.5 MGD	3.5 MGD
L	Alkaline Effluent	2.3 MGD	2.3 MGD

Process Flow Diagram 4
Bleach Plant

Chmp04-D19

Figure 2

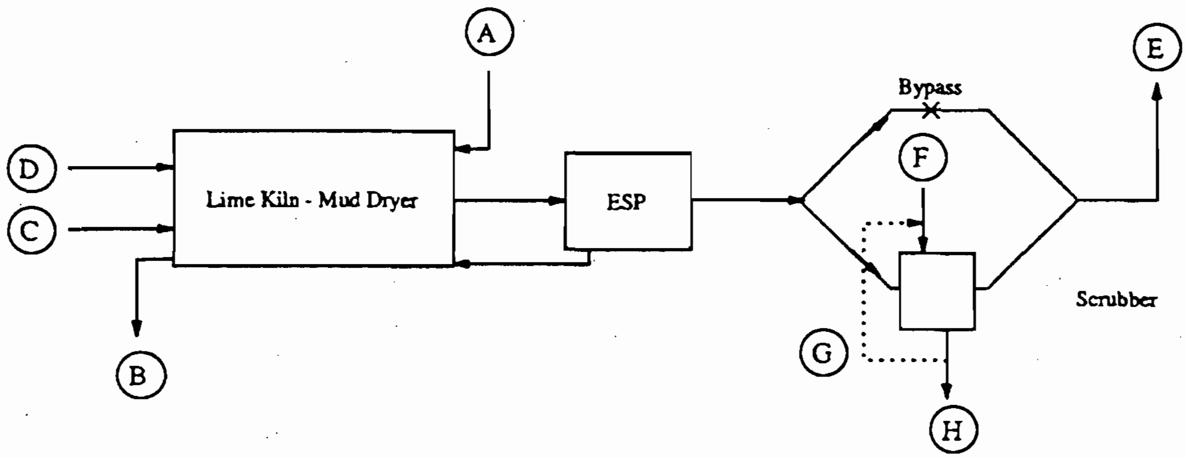


A	Methanol	5.6 T/D
B	Sulfuric Acid	29.6 T/D
C	Sodium Chlorate	61.3 T/D
D	Chlorine Dioxide	37.4 T/D
E	Stack Effluent	1,321.0 ACFM
F	Makeup White Liquor to Scrubber	<1.0 GPM
G	Scrubber Discharge	1.0 GPM
H	Water to Tank Vent Scrubbers	79.1 GPM
I	Tank Vent Scrubber Discharge	79.1 GPM
J	Saltcake Generation	33.6 T/D

Process Flow Diagram 3
Chlorine Dioxide Generator

Chmp03-D19

Figure 3



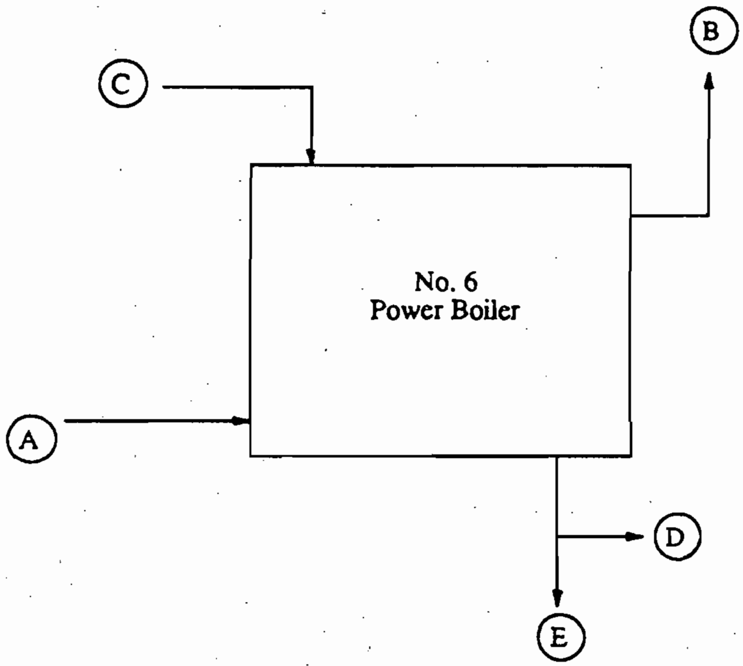
A	Lime Mud	893 T/D
B	Product Lime	500 T/D
C	Fuel - Natural Gas - No. 6 Oil	144.231 MCFH 1,000 GPH
D	NCGs	358 lb/hr *
E	Stack Effluent	57,208 ACFM
F	Scrubber Makeup	25 GPM
G	Scrubber Recirculation	1,700 GPM
H	Scrubber Blowdown	5 GPM

* Based on 1,718 ADBT/D

Process Flow Diagram 2
Lime Kiln - Mud Dryer

Chmp02-D19

Figure 4



A	Natural Gas	533 MCFH
B	Stack Effluent	161,000 ACFM
C	Feed Water	6,667 lb/min
D	Steam	384 KPPH
E	Blow Down	266.7 lb/min

Process Flow Diagram 1
No. 6 Power Boiler

Chmp01-D19

Table 1: Siginificant and Net Emission Rates (Tons per Year)

Pollutant	Significant Emission Rate	Proposed Net Emissions	Applicable Pollutant (Yes/No)
CO	100	189	Yes
NO_x	40	138.8	Yes
SO_2	40	27.4	No
PM	25	-1.3	No
PM10	15	-1.3	No
O_3 (VOC)	40	85.5	Yes
TRS	10	-1.9	No

Table 2. Maximum Air Quality Impacts for Comparison to the Significant and De Minimus Ambient Levels.

Pollutant	Avg. Time	Predicted Impact (ug/m_3)	Significant Imapct Level ($üg/m_3$)	De Minimus Level (ug/m_3)
CO	1-hour	413.7	2000.0	N/A
	8-hour	289.6	500.0	575.0
NO_2	Annual	2.4	1.0	14.0
VOC	Annual	85.5 TPY	N/A	100 TPY

Table 3. PSD Class II Increment Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Allowable Increment (ug/m^3)
NO_2	Annual	2.4	25

Table 4. Ambient Air Quality Impact

Pollutant and Averaging Time	Major Sources Imapct (ug/m^3)	Background Conc. (ug/m^3)	Total Impact (ug/m^3)	Florida AAQS (ug/m^3)
NO_2 (Annual)	42.0	22.5	64.5	100

Table 5. Air Toxics Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Air Toxics Reference Conc. (ug/m^3)
Chloroform	Annual	0.026	0.043
Chorine Dioxide	Annual	0.198	0.20
Chlorine	Annual	0.0384	0.40

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

PERMITTEE:

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

Permit Number: AC 17-223343
PSD-FL-200
Expiration Date: Dec. 31, 1995
County: Escambia
Latitude/Longitude: 30°36'30"N
87°19'13"W
Project: Mill Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297 and 17-4; and, 40 CFR (July, 1991 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the permitting of a mill modification in concert with the mill's wastewater Consent Order, to include the construction of a new natural gas fired No. 6 Power Boiler (PB), the surrendering of the operation permits for the existing Nos. 1 and 2 Power Boilers, modification to both the A and B Bleach Plants, construction of a new methanol storage tank, and modification of the Lime Kiln's mud handling system. The UTM coordinates of the existing facility are Zone 17, 469.0 km East and 3386.0 km North.

The Standard Industrial Codes are:

- o Major Group No. 26 - Paper and Allied Products
- o Industry Group No. 2611 - Pulp Mills

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

Attachments to be Incorporated:

1. Application to Construct/Modify Air Pollution Sources, DER Form 17-1.202(1), received December 21, 1992.
2. Technical Evaluation and Preliminary Determination dated February 25, 1993.

GENERAL CONDITIONS:

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

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

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however,

GENERAL CONDITIONS:

the permittee does not waive any other rights granted by F.S. or Department rules.

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

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

13. The permittee shall comply with the following:

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

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

   c. Records of monitoring information shall include:

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

14. This permit constitutes compliance with:
   a. New Source Performance Standards (NSPS), 40 CFR 60, Subparts Db and Kb;
   b. Prevention of Significant Deterioration; and,
   c. Best Available Control Technology (BACT).

GENERAL CONDITIONS:

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

SPECIFIC CONDITIONS:

A. No. 6 Power Boiler (PB)

1. The No. 6 PB may operate continuously (i.e., 8760 hrs/yr).

2. The No. 6 PB is permitted to fire natural gas only, with a maximum heat input of 533 MMBtu per hour, yielding a maximum steam product of 350,000 lbs/hr.

3. The No. 6 PB will be an ABB/CE boiler.

4. The Source Classification Code is:

1-02-006-01 Ext. Combustion Boiler-Industrial 10^6 $ft.^3$ Burned

5. The No. 6 PB is subject to all applicable standards of 40 CFR 60, Subpart Db (July, 1991 version).

6. The No. 6 PB is subject to all applicable standards of F.A.C. Rule 17-296.405(2).

7. The No. 6 PB's pollutant emissions shall not exceed:

NOx	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
VOC	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity

8. The initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.

SPECIFIC CONDITIONS:

b) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

9. Emission monitoring for nitrogen oxides shall be in accordance with 40 CFR 48b (July, 1991 version).

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.46b (July, 1991 version).

B. <u>Lime Kiln - Mud Dryer System</u> (LK-MDS)

1. Operation permit No. AO 17-181738 is incorporated by reference except for the following changes and/or additions:

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media; there will be no bypass of the wet scrubber system allowed except for emergency or malfunction, which is a reportable activity;

d. the wet scrubber slurry shall be maintained at a minimum pH of 8.0 and the unit shall be equipped with a continuous pH monitor/ recorder system; records shall be maintained for a minimum two year period;

e. the maximum allowable operating rate of CaO (lime) produced will be increased from 13.67 to 20.83 tons per hour;

SPECIFIC CONDITIONS:

f. the pollutant emissions from the LK-MDS shall not exceed:

NOx	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

Note:
- o Maximum of 500 tons/day CaO product;
- o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
- o Volumetric flow rate @ 34,383 dscfm.

g. while firing No. 2 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

h. while firing natural gas, initial compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.

SPECIFIC CONDITIONS:

3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

C. Chlorine Dioxide (ClO_2) Generator

1. Operation permit No. AC 17-219596 is incorporated by reference except for the following changes and/or additions:

a. the existing chlorine gas handling system will be eliminated;

b. the generating process will be modified from a R3H process to a R8/R10 process, which will use methanol, sulfuric acid, and sodium chlorate to generate ClO_2;

c. the maximum allowable operating rate will be increased from 16 tons/day ClO_2 to 37.4 tons/day;

d. a third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers;

e. the ClO_2 storage tanks will vent to the existing two ClO_2 storage tank chilled water scrubbers;

f. the existing two ClO_2 storage tank scrubbers will be vented to the tail gas scrubber, which will be modified by adding an additional 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide and sodium sulfide);

g. a new 21,880 gallon methanol storage tank and handling system will be installed and is subject to all applicable standards pursuant to 40 CFR 60, Subpart Kb (July, 1991 version); for PSD tracking purposes, the projected potential VOC emissions are 2.2 TPY; also, the tank will be nitrogen blanketed and equipped with a conservation vent;

SCC: 4-07-008-15	Meth. Tank-Breathing Loss	10^3 gals. storage cap.
4-07-008-16	Meth. Tank-Working Loss	10^3 gals. storage cap.

SPECIFIC CONDITIONS:

h. the existing salt unloading and storage system will be shut down and dismantled;

i. the pollutant emissions shall not exceed:

R8/R10 ClO_2 Generator: 37.6 TPD
Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

j. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining Cl_2, ClO_2, and $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

D. A and B Bleach Plant Lines

1. Operation permit No. AO 17-219600 is incorporated by reference except for the following changes and/or additions:

a. both lines may operate continuously (i.e., 8760 hrs/yr);

b. the bleaching sequence will be changed from CED to DED;

c. a storage and handling system for the enzyme xylanase will be installed;

d. a storage and handling system for hydrogen peroxide will be installed;

e. the existing chlorine gas handling system will be eliminated;

f. the pollutant emissions shall not exceed:

1) A-Line Bleach Plant

a) E_O Washer Vent	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) Tail Gas Scrubber	CL_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

SPECIFIC CONDITIONS:

2) B-Line Bleach Plant

a) E_o Washer Vent	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) Tail Gas Scrubber	Cl_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

h. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining Cl_2, ClO_2, and $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

E. No. 2 Multiple Effect Evaporators (MEEs), Batch and Continuous Digester Systems, and Foul Condensate Steam Stripper System

1. Operation permit No. AO 17-212422 is incorporated by reference except for the following changes and/or additions:

a. the No. 2 MEEs will be modified to include the addition of two new effects, which will be vented to the non-condensible gas (NCG) handling system.

b. a storage and handling system will be installed for water-soluble anthraquinone, an organic catalyst, which will be used in both the batch and continuous digester systems; both systems vent to the NCG handling system; and,

c. an additional foul condensate steam stripper will be installed and will be vented to the lime kiln or calciner for incineration.

F. General

1. The facility shall be in compliance with all applicable standards/limitations of F.A.C. Rules 17-210 thru 297, 17-4, and 40 CFR (July, 1991 version).

2. The permittee is subject to the applicable provisions of F.A.C. Rules 17-4.130: Plant Operation-Problems; 17-210.650: Circumvention; and, 17-210.700: Excess Emissions.

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200

Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

3. Objectionable odors shall not be allowed off plant property in accordance with F.A.C. Rule 17-296.320(2).

4. The Department's Northwest District office shall be notified in writing at least 15 days prior to source testing pursuant to F.A.C. Rule 17-297.340. Written reports of the tests shall be submitted to the Department's Northeast District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450.

5. Any change in the method of operation, raw materials, equipment, operating hours, etc., pursuant to F.A.C. Rule 17-212.200, Definitions-Modification, the permittee shall submit an application and the appropriate processing fee to the Department's Bureau of Air Regulation (BAR) office.

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

7. An application for an operation permit must be submitted to the Department's Northwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this ______ day
of ______________, 1993

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

____
Virginia B. Wetherell
Secretary

Best Available Control Technology (BACT) Determination
Champion International Corporoation
Escambia County

PSD-FL-200

The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr (350,000 lbs/hr steam) and the modification of the existing lime kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order.

The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired to be as follows:

Pollutant	Emissions (TPY)	PSD Significant Emission Rate (TPY)
NO_x	138.8	40
SO_2	27.4	40
PM/PM10	-1.3	25/15
CO	189.0	100
VOC	85.5	40
TRS	-1.9	10

Florida Administrative Code (F.A.C.) Rule 17-212.400(2)(f) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

December 21, 1992

BACT Determination Requested by the Applicant

Source	Pollutant	Determination
#6 Power Boiler	NO_x	0.06 lb/MMBtu (32.0 lbs/hr,140.1 TPY)
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY
	VOCs	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-212, Stationary Sources - Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, than the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- Combustion Products (e.g., particulates). Controlled generally by efficient combustion of clean fuels.

- Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.

- Acid Gases (e.g., NOx). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc,), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion/Incomplete Combustion Products

The projected emissions of carbon monoxide and volatile organic compounds from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

CO and VOCs:

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, the limits requested are considered reasonable as BACT.

Acid Gas Products

The projected emissions of nitrogen oxides from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

NOX:

For NOx, the proposed BACT limits for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer System are within the range of similar sources in the BACT/LAER clearinghouse data base.

For the No. 6 Power Boiler, there have been limited cases of SCR impositions, but the cost evaluation of such technology is prohibitive for this project. Costs and process parameters rule out the use of other technologies (i.e., SNCR and FGDN). The proposal to use Coen low-NOx burners together with flue gas recirculation to the combustion zone for minimizing NOx emissions is considered as BACT. However, available space will be made for the potential retrofit of a control system to control NOx.

For the Lime Kiln-Mud Dryer, the application of SCR, SNCR, or FGDN, have never been applied to a lime kiln system due to process variables. Therefore, the proposal to use good operational practices and proper combustion, along with the proposed emission limitations, is considered BACT.

Adverse Environmental Impact Analysis

The predominant adverse environmental impacts associated with the potential use of add-on control technology (SCR, SNCR or FGDN) are the emissions of other pollutants (i.e., ammonia, urea, hazardous waste from catalysts, etc.) used in the process for NOx control. Although the use of add-on controls do have some positive environmental benefits, the disadvantages may outweigh the benefits provided by reducing NO_x emissions.

From the evaluation of natural gas combustion, toxics are projected to be emitted in very small amounts. Although the emissions of toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber system, the amount of emission reductions would not warrent the added expense. Consequently, the Department does not believe that the BACT determination would be affected by the emissions of the toxic polutants associated with the firing of natural gas.

BACT Determination by DER

NOx Control

For the No. 6 Power Boiler, the information that the applicant presented indicates that the incremental cost of controlling NOx is high compared to the guidelines. Based on the information presented by the applicant and the evaluation conducted, the Department believes that the use of add-on controls NOx control is not justifiable as BACT. Therefore, the Department will accept the Coen low-NOx burners together with flue gas recirculation to the combustion zone as NOx control when firing natural gas.

For the Lime Kiln-Mud Dryer, there has not been an application of NOx add-on controls for this type of source contained in the data base. Therefore, there will not be any add-on controls required for NOx for this source.

CO and VOC Control

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, there will not be any add-on controls required for CO or VOCs for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer.

The BACT limits for the proposed modification of the Champion International Corporation's facility are thereby established as follows:

Source	Pollutant	Emission Standard/Limitation
#6 Power Boiler	NO_x	0.06 lb/MMBtu (32.0 lbs/hr,140.1 TPY)
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY
	VOCs	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

Note: The maximum sulfur content of the #6 fuel oil is 1.0%, by weight.

Details of the Analysis May be Obtained by Contacting:

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

Recommended by:

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

____________________ 1993
Date

Approved by:

____
Virginia B. Wetherell, Secretary
Dept. of Environmental Regulation

____________________ 1993
Date

Attachments

Available Upon Request

PM
3-29-93
Atlanta, Ga

File Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

4APT-AEB

RECEIVED

APR 01 1993

Division of Air
Resources Management

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

RE: Champion International Corporation (PSD-FL-200)

Dear Mr. Fancy:

This is to acknowledge receipt of your preliminary determination and draft Prevention of Significant Deterioration (PSD) permit for the above referenced facility by letter dated February 25, 1993. The proposed project includes the construction of a new gas-fired power boiler, the modification of the existing lime kiln, and the modification of the existing bleach lines. The project is subject to PSD review for the emissions of NO_x, CO, and VOC.

We have reviewed the package as requested and have no adverse comments. If you have any questions or comments, please contact Mr. Gregg Worley of my staff at (404) 347-5014.

Sincerely yours,

Brian L. Beals, Chief
Source Evaluation Unit
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: E. Middleswart, NWD
J. Bunyak, NPS
T. Cole, OHF&C
G. Golson, ADEM
K. Moore, CLC
CHF/Bruce Mitchell

4-9-93 RBL

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Florida Department of Environmental Regulation

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

Lawton Chiles, Governor — Virginia B. Wetherell, Secretary

FAX TRANSMITTAL SHEET

TO: Kyle Moore

DATE: 3-10-93 PHONE: 904-968-3068

TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE: 2

FROM: Champion

DIVISION OF AIR RESOURCES MANAGEMENT

COMMENTS: Page 7 of 12; Permit PSD-FL-200

AC 17-223343

Sorry for the omission!

RBL

PHONE: 904-488-1344 FAX NUMBER: 904/922-6979

If there are any problems with this fax transmittal, please call the above phone number.

MESSAGE CONFIRMATION MAR-10-'93 WED 17:52

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NO.	DATE	ST. TIME	TOTAL TIME	ID	DEPT CODE	OK	NG
754	03-10	17:51	00°01'22	9049683068		02	00

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx*	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

* 24-hour average
** 12-hour average

Note: o Maximum of 500 tons/day lime product (90% CaO);
o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm.

h. while firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C, Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Virginia B. Wetherell, Secretary

FAX TRANSMITTAL SHEET

TO: Bill Straub

DATE: 3/10/93

PHONE: 215-344-3661
FAX: 215-430-7401

TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE: 2

FROM: Weston

DIVISION OF AIR RESOURCES MANAGEMENT

COMMENTS: Page 7 of 12: Permit PSD-FL-200
AC 17-223343

Sorry for the omission!
RGH

PHONE: 904-488-1344

FAX NUMBER: 904/922-6979

If there are any problems with this fax transmittal, please call the above phone number.

MESSAGE CONFIRMATION

MAR-10-'93 WED 17:50

TERM ID: DIV OF AIR RES MGMT P-9999

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NO.	DATE	ST.TIME	TOTAL TIME	ID	DEPT CODE	OK	NG
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SPECIFIC CONDITIONS:

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx^*	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO^*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC^*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS^{**}	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

* 24-hour average
** 12-hour average

Note:
- o Maximum of 500 tons/day lime product (90% CaO);
- o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
- o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm.

h. while firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
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5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

WESTON
MANAGERS DESIGNERS/CONSULTANTS
1 WESTON WAY
WEST CHESTER, PA 19380-1449
PHONE: 215-692-3030
FAX: 215-430-3124

8 March 1993

Mr. Bruce Mitchell
Florida DER, Division of Air Resources Management
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Work Order No. 02246-056-001

Re: Champion International- Pensacola Mill

Dear Mr. Mitchell:

Per your request to Kyle Moore at Champion International's Pensacola Mill, enclosed is a copy of the NCASI Technical Bulletin which discusses the test method (EPA Modified Method 6) for chlorine, chlorine dioxide, and chloroform. Also enclosed is the quality assurance document which pertains to this sampling procedure. Champion proposed to use this method for determining emissions from the applicable sources identified in the pending PSD permit application.

This information is being submitted by Weston on behalf of Champion. This submittal is supporting documentation for Champion's Mill Modification Project (permit number AC 17-223343). Should you have any questions, please contact Kyle Moore of Champion at (904) 968-2121 or John Barone of Weston at (215) 430-7218.

Very truly yours,

ROY F. WESTON, INC.

William V. Straub

William V. Straub
Assistant Engineer II

wvs

Enclosures

cc:		
	Kyle Moore	Champion
	John Egan	Weston
	John Barone	Weston

ATC 41B

ncasi technical bulletin

NATIONAL COUNCIL OF THE PAPER INDUSTRY FOR AIR AND STREAM IMPROVEMENT, INC., 260 MADISON AVENUE, NEW YORK, N.Y. 10016

OPTIMIZATION AND EVALUATION OF AN IMPINGER CAPTURE METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE IN PULP BLEACH PLANT VENTS

TECHNICAL BULLETIN NO. 520

APRIL 1987

NATIONAL COUNCIL OF THE PAPER INDUSTRY FOR AIR AND STREAM IMPROVEMENT, INC.
260 MADISON AVE. NEW YORK, N.Y. 10016 (212) 532-9000

April 1, 1987

Russell O. Blosser
Technical Director
(212) 532 9001

TECHNICAL BULLETIN NO. 520

OPTIMIZATION AND EVALUATION OF AN IMPINGER CAPTURE METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE IN PULP BLEACH PLANT VENTS

The evaluation and, where necessary, the development and evaluation, of analysis methods for substances of environmental and/or regulatory concern, has been a component of many NCASI studies. The measurement of concentrations of chlorine and chlorine dioxide in pulp bleach plant vent gases is a requirement of an ongoing NCASI study of non criteria pollutant emissions and emission control strategies, and it is a requirement of many mill programs addressing bleach plant emissions and control device effectiveness. Yet, techniques for measuring chlorine and chlorine dioxide in these vent gases either have not been developed (e.g., continuous instrumental monitoring methods), or they have not been evaluated (e.g., impinger capture grab sampling method).

This report describes results of an NCASI study of an impinger capture dual pH potassium iodide method for measuring chlorine and chlorine dioxide in bleach plant vent gases. Although the technique is in wide use for this purpose, its performance apparently has never been evaluated. This study showed that pH buffering of the capture solution was necessary to avoid the formation of falsely high chlorine levels. Other features of the performance of the method were evaluated, and a method for removing a sulfur dioxide interference was developed.

The studies reported in this bulletin were carried out at the NCASI Southern Regional Center in Gainesville, Florida. The work was performed by Michael D. Marks and Steven W. Jett, both research technical associates, under the direction of Robert P. Fisher, Investigative Programs Manager. Dr. Fisher also prepared the report upon which this bulletin is based. Persons with questions on this bulletin should contact Dr. Fisher at P.O. Box 14483, Gainesville, FL 32604 or telephone (904-377-4708), or this office.

Yours very truly,

Russell O. Blosser

Russell O. Blosser
Technical Director

ROB:mh
Attach.

TABLE OF CONTENTS

into the sample port and start a stopwatch. End the sampling (stop the watch) after 30 minutes, or after the color in the second impinger turns from pale yellow to a deeper straw color. After sampling, remove the probe from the vent, and with the probe tip elevated above the impingers, add ca. 5 mL deionized water to the probe so that this drains into the first impinger. Combine the contents of the impingers in a 100 mL beaker, and titrate with sodium thiosulfate solution (0.100 N or less concentrated, depending upon the quantity of iodine being titrated). Record the volume of titrant to the first endpoint (T_N, mL). Add 5 mL of 10 percent sulfuric acid solution, and continue the titration to the second endpoint. Record the total volume of titrant required to go through the first and to the second endpoint (T_A, mL).

To calculate moles of chlorine and moles of chlorine dioxide captured employ the formulas:

$$EqI_2N = (T_N)(10^{-3})(\bar{N})$$

$$EqI_2A = (T_A)(10^{-3})(\bar{N})$$

$$ClO_2 \text{ moles} = 1/4\ EqI_2A - 1/4\ EqI_2N$$

$$Cl_2 \text{ moles} = 1/8\ (5\ EqI_2N - EqI_2A),$$

where EqI_2N and EqI_2A are equivalents of iodine determined in the neutral and (total) acid titrations, respectively, and $\bar{N}$ is the normality of the sodium thiosulfate solution. Calculate gas phase concentrations of ClO_2 and Cl_2 employing standard EPA calculations. Assume gas phase water saturation in most vents.

NCASI is conducting a study of bleach plant emissions of Cl_2 and ClO_2, in order to (a) document uncontrolled emission levels,[2] (b) examine the relationship of process operation variables to emission levels, and (c) determine the effectiveness of in place control devices. This activity has required the examination of methods for measuring chlorine and chlorine dioxide emissions.

II ANALYSIS METHOD STUDIES

A. Method Background

Gas phase chlorine and chlorine dioxide may be captured in neutral potassium iodide solution in impingers in an extractive sampling system. Because of the dependence of the reactivity of chlorine dioxide with iodide upon solution pH, the post-sampling determination of iodine formed at neutral and acidic pH permits the quantitative measurement of both chlorine and chlorine dioxide:

$$\text{Neutral pH:}\quad Cl_2 + 2I^- \rightarrow I_2 + 2Cl^- \qquad (1)$$

$$ClO_2 + I^- \rightarrow 1/2\ I_2 + ClO_2^- \qquad (2)$$

$$\text{Acid pH:}\quad ClO_2^- + 4H_3O^+ + 4I^- \rightarrow 2I_2 + 6H_2O + Cl^- \qquad (3)$$

Standard sampling practice within the industry has been to use two impingers in series, each containing 2 percent unbuffered potassium iodide, to sample at a rate of from 1 to 5 L/min, and to collect a sample over a period of from 5 to 30 minutes (using shorter sampling times if the color in the second impinger turns from straw yellow to orange). After sampling, the contents of the impingers are combined and titrated with 0.1 N sodium thiosulfate solution. After the first endpoint, the solution is acidified with sulfuric acid solution, and the titration is continued to the second endpoint. Algebraic manipulation of equations (1) through (3) permits the calculation of gas phase concentrations of Cl_2 and ClO_2 on the basis of the neutral and total acid titration equivalents.

The origin of this test is not widely known, but the method has been formalized by the Canadian Pulp and Paper Association. CPPA Standard J.14P(4) includes methods for analyzing ClO_2 production plant liquors, plus generator gas ClO_2 concentrations in the system after the generator and before the cold water absorption tower. These gas phase concentrations are much higher than those encountered in process vents. To the knowledge of NCASI staff, this method had not been evaluated for the determination of lower Cl_2 and ClO_2 concentrations, prior to this NCASI study.

APPENDIX A

METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE GASEOUS EMISSIONS

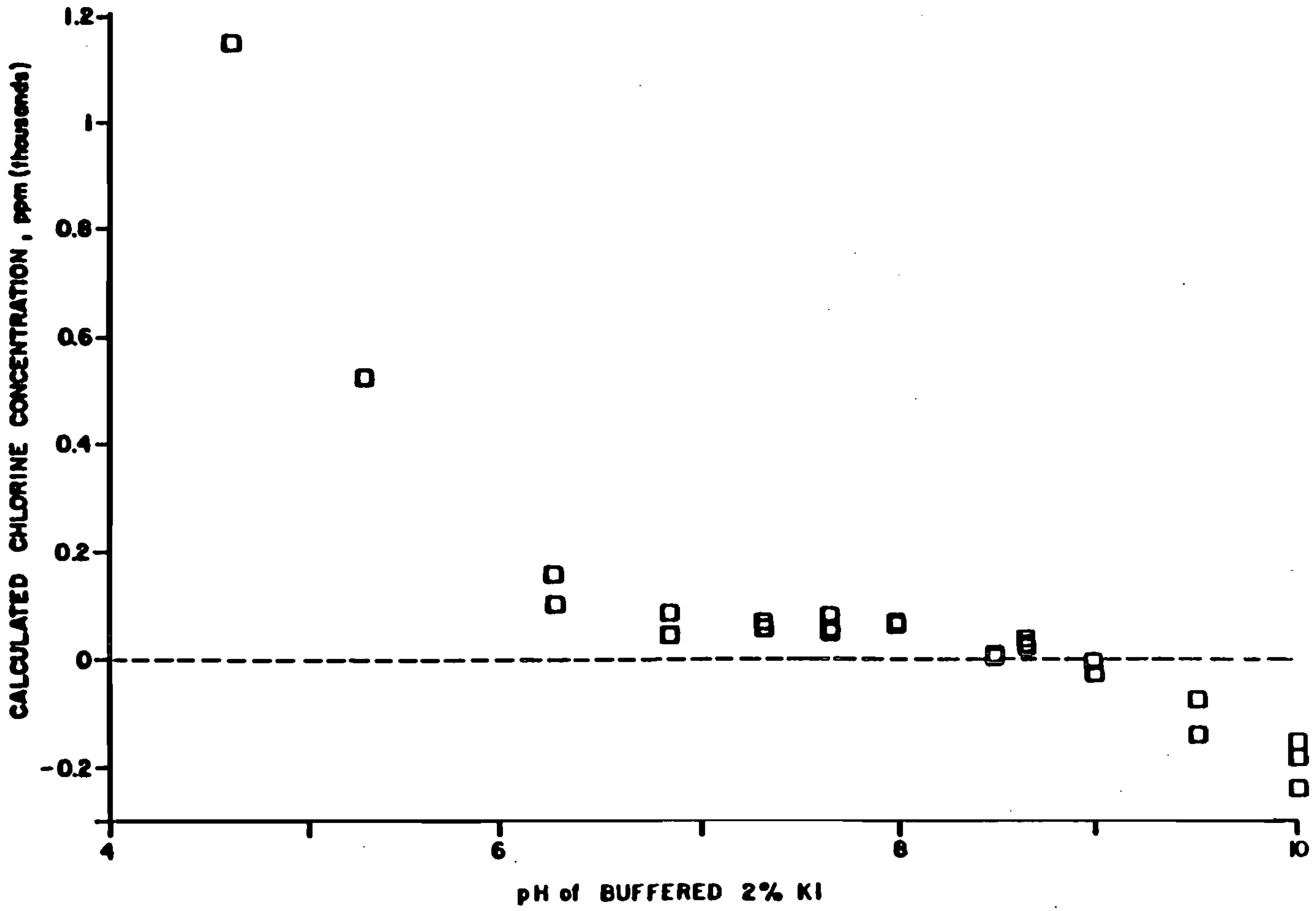


FIGURE 1 EFFECT OF CAPTURE SOLUTION pH ON CALCULATED CHLORINE CONCENTRAT

this gas through an impinger containing aqueous 0.1 percent sulfamic acid to remove chlorine, then blending this gas with humidified air to produced the desired concentration of ClO_2 (determined by analysis using the method of Appendix A). The results of tests at 500 ppm and at 4000 ppm ClO_2, shown in Figure 2, clearly illustrate the effect of pH and of ClO_2 concentration upon artifact chlorine formation.

Experiments were also conducted at a pulp bleach plant in which a sampling manifold, fabricated from FEP and PFA Teflon, was employed, which permitted collection of four samples simultaneously, employing trains as described in Appendix A. Each impinger pair contained two percent KI solution, buffered essentially as per the Appendix A formula, but buffered at pH values of 6.4, 7.5, 8.5, and 9.5. Samples were withdrawn from a chlorine dioxide bleaching tower vent over a period of time such that normal variations in bleaching conditions produced variations in chlorine and chlorine dioxide gaseous emission concentrations. The data of Figure 3 were collected, and these data support the hypothesis.

In order to demonstrate the combined effect on recovery and precision of buffered versus unbuffered sampling, an experiment was performed in which a Tedlar bag containing a gas sample drawn from a chlorine dioxide bleaching tower vent was sampled via the method of Appendix A, using a manifold which permitted collection of six simultaneous samples. The experiment was conducted with three sets of impingers containing unbuffered 2 percent KI, and three sets containing pH 7.5 buffered 2 percent KI, and was repeated once to obtain 12 tests. Results are indicated in Figure 4. The average concentrations of chlorine and chlorine dioxide obtained using the unbuffered system were 354 and 1400 ppm, with standard deviations of 63 and 71 ppm, respectively. The average Cl_2 and ClO_2 concentrations obtained employing buffered sampling were 228 and 1440 ppm, with standard deviations of 25 and 22 ppm, respectively.

On the basis of the information obtained in these experiments, it was concluded that use of an iodide solution buffered between pH 7.0 and 7.5 would minimize the formation of "phantom" chlorine due apparently to the reaction of chlorite with iodide at low pH values, but would not cause losses in apparently valid finite chlorine concentrations. Such losses appear at high pH values (e.g., greater than pH 8), and may be due to the reaction of iodine with base to form hypoiodite. The selection of pH 7.0 as the buffer pH of choice was based upon the apparent equivalence of recoveries at pH 7.0 and at 7.5, plus the knowledge that the buffering capacity of a given concentration of a dihydrogen phosphate buffer is greater at pH 7.0 than at pH 7.5.

(2) Precision of the pH Buffered Method - Laboratory generated mixtures of chlorine and chlorine dioxide at three different analyte concentrations were analyzed by testing six simultaneously withdrawn samples from each mixture by the method

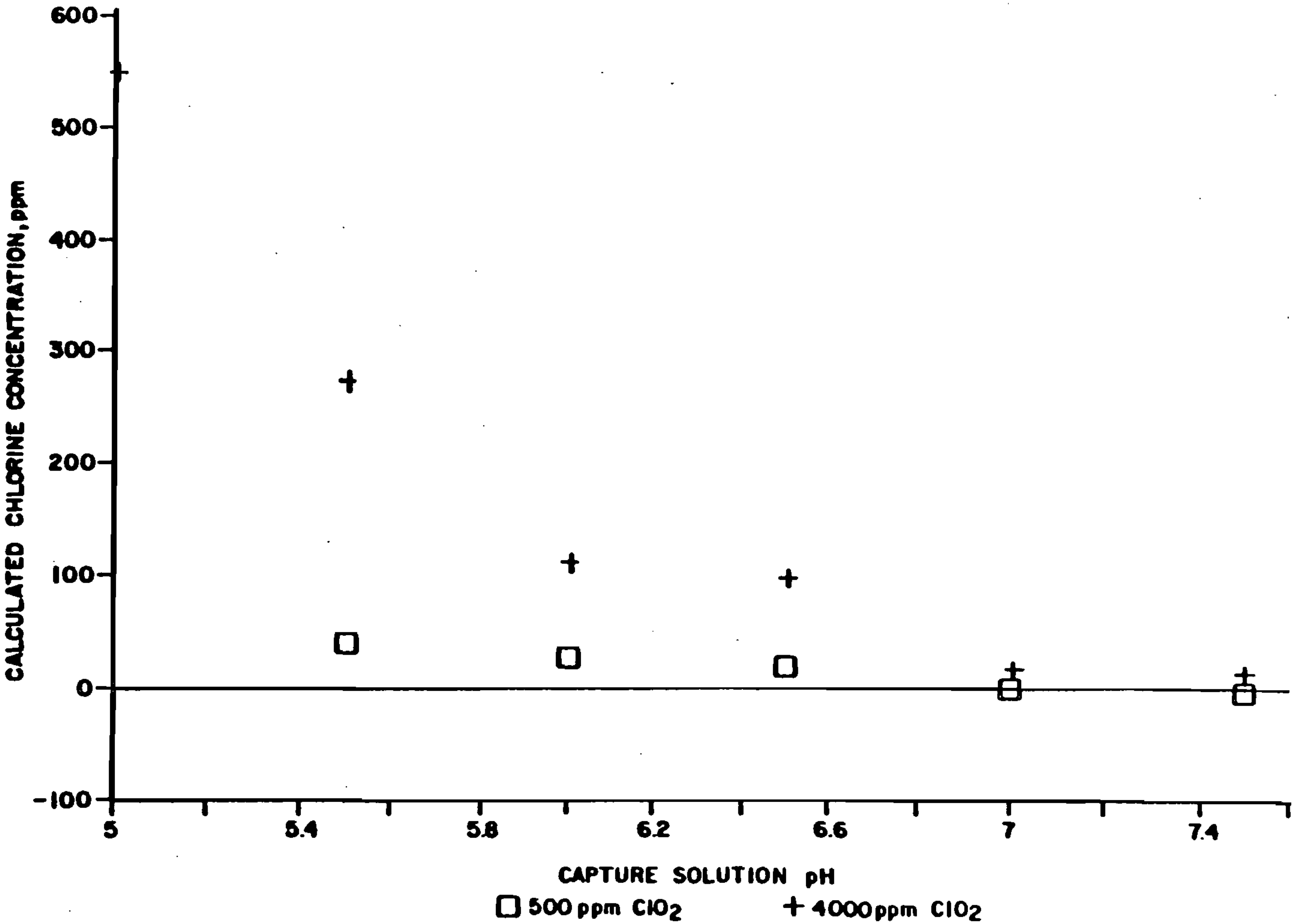


FIGURE 2 EFFECT OF CHLORINE DIOXIDE CONCENTRATION AND pH ON CALCULATED CHLORINE CONCENTRATION - LABORATORY TESTING

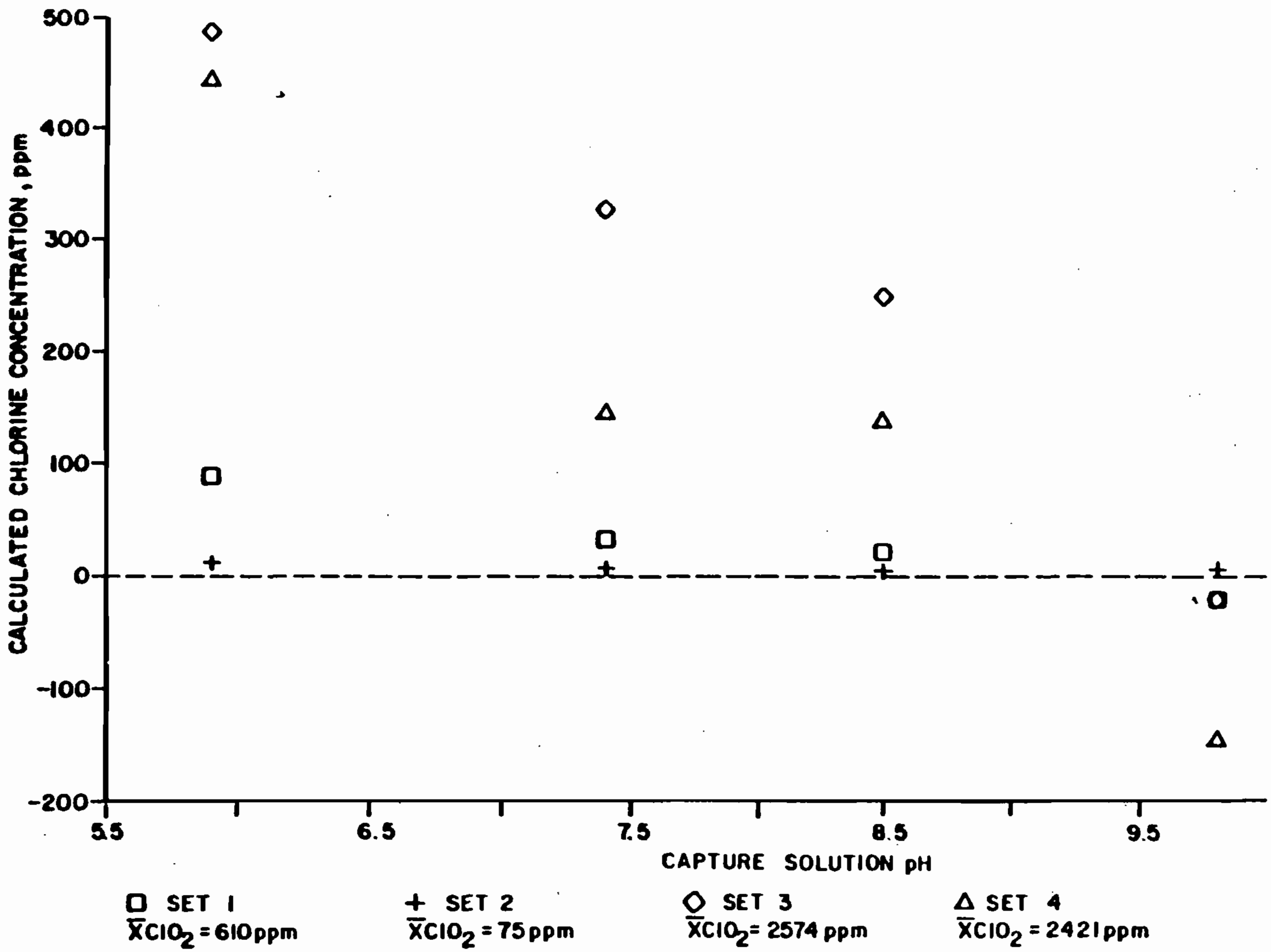


FIGURE 3 EFFECT OF CHLORINE DIOXIDE CONCENTRATION AND pH ON CALCULATED CHLORINE CONCENTRATION - FIELD TESTING

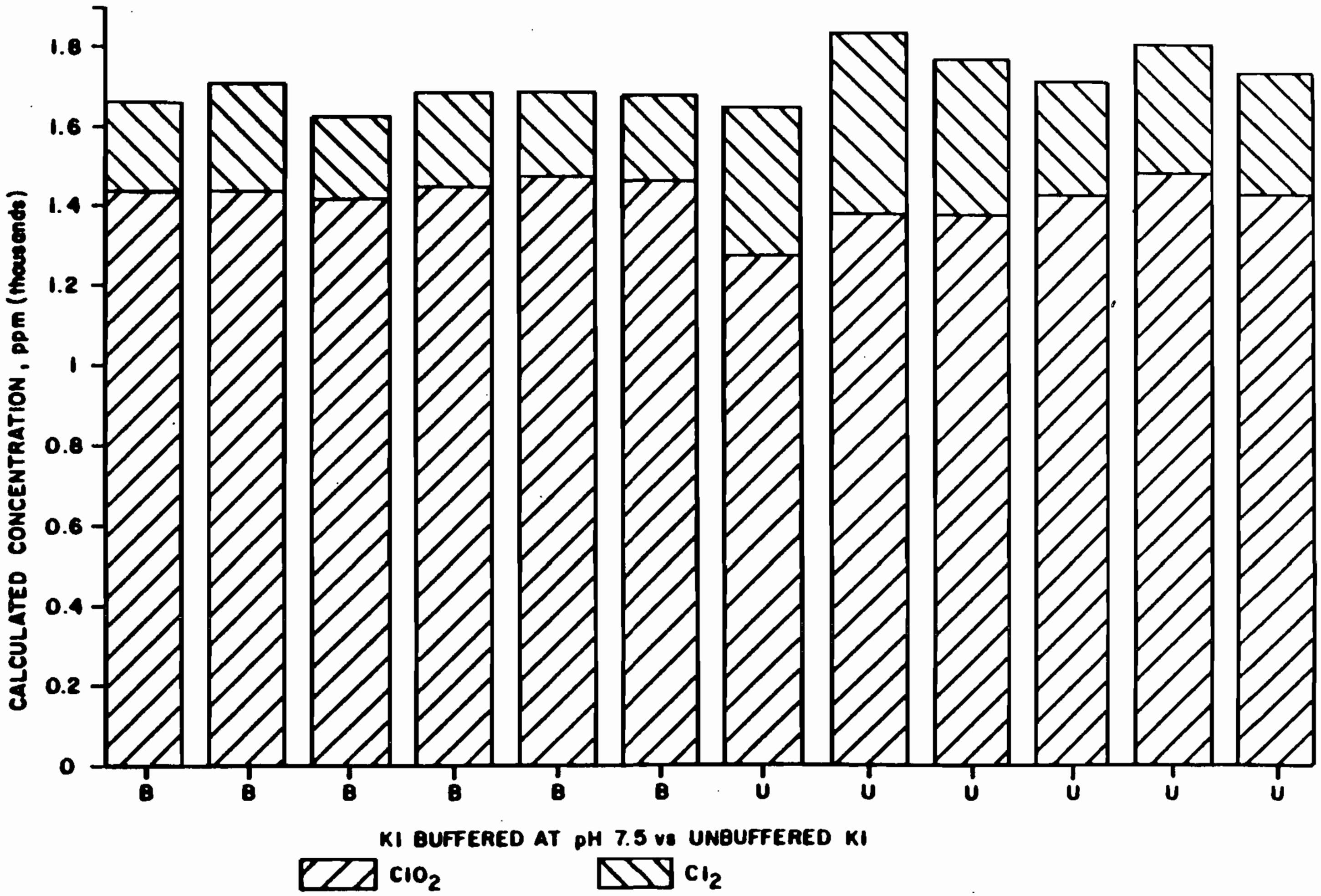


FIGURE 4 EFFECT OF BUFFERED (B) VS. UNBUFFERED (U) pH CAPTURE SOLUTIONS ON CALCULATED CHLORINE AND CHLORINE DIOXIDE CONCENTRATIONS

of Appendix A. Results are indicated in Figure 5. For the range of concentrations examined, relative standard deviation values were all less than 6 percent.

(3) Effect of Potassium Iodide Concentration - Although the concentration of potassium iodide (KI) to be employed in impinger sampling of gaseous oxidants is generally specified as 2 percent, sampling of high concentrations of gaseous Cl_2 and ClO_2 with midget impingers can deplete 2 percent KI with as little as 15 minutes of sampling at 200 mL/min. Because of this, higher concentrations of KI have been proposed for use in bleach plant vent sampling. Two sets of six simultaneous samples were taken at a pulp bleach plant from a combined EHD seal tank vent. In each set, three of the samples were taken in 10 percent KI and three were taken in 2 percent KI. Both capture solutions were buffered at a pH of 7.0. In set one the average measured Cl_2 was 3.4 percent higher, and the average measured ClO_2 was 7.7 percent lower in the 10 percent KI than in the 2 percent KI. In set two the average Cl_2 was 4.0 percent higher, and the average ClO_2 was 7.9 percent lower in the 10 percent KI capture solution. A laboratory experiment was designed to elucidate this effect.

A chlorine dioxide test gas at ca. 210 ppm was generated and scrubbed of chlorine in the manner described above. Two sets of six simultaneous samples were taken, with each set consisting of a 2 percent, 5 percent, 7 percent, 10 percent, 12 percent, and a 15 percent solution of buffered KI. Figure 6 illustrates the results of that experiment, and indicates that chlorine and chlorine dioxide should be sampled with KI capture solutions of less than 5 percent strength.

(4) Effect of Temperature - Because some field use of potassium iodide impinger sampling has been conducted with the impingers immersed in a water ice bath, an experiment was conducted to identify any advantage to reduced temperature sampling. In the laboratory, two sets of six simultaneous samples were taken from a Tedlar bag containing roughly equal concentrations of chlorine and chlorine dioxide. In each set, three impinger pairs were immersed in ice and three pairs were used at ambient temperature (approximately 24°C). Analyses were performed by the method of Appendix A. The results, indicated in Table 1, show that iced 2 percent buffered KI is no more effective at capturing chlorine and chlorine dioxide than is 2 percent buffered KI maintained at 24°C.

III DEVELOPMENT AND EVALUATION OF A CHEMICALLY REACTIVE FILTER FOR REMOVING SULFUR DIOXIDE

A. Background

The sampling of bleach plant vents by both grab sampling and continuous sampling methods is in some cases complicated by the

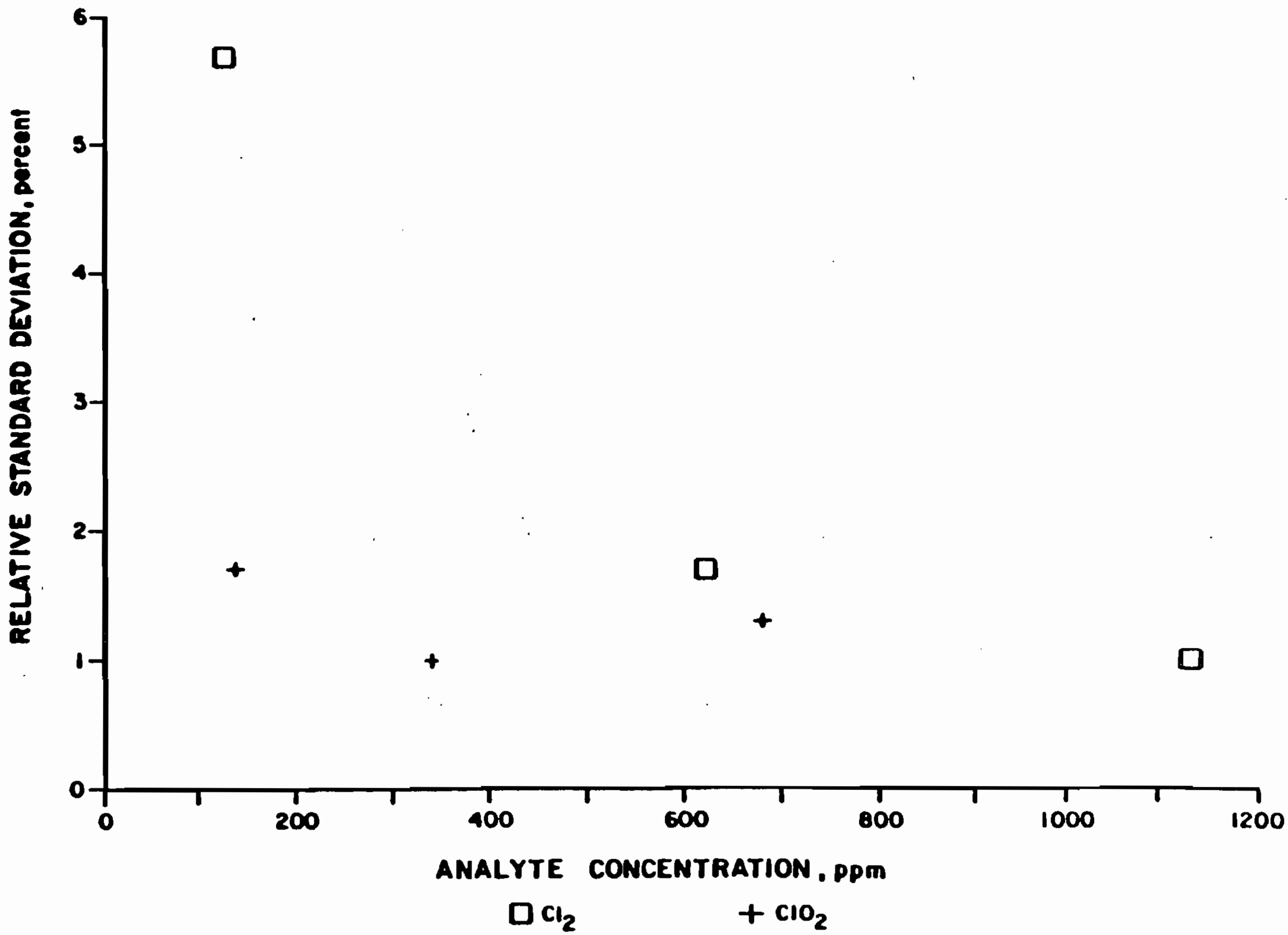


FIGURE 5 PRECISION OF CHLORINE AND CHLORINE DIOXIDE MIXTURE ANALYSES EMPLOYING pH 7.0 BUFFERED CAPTURE SOLUTIONS

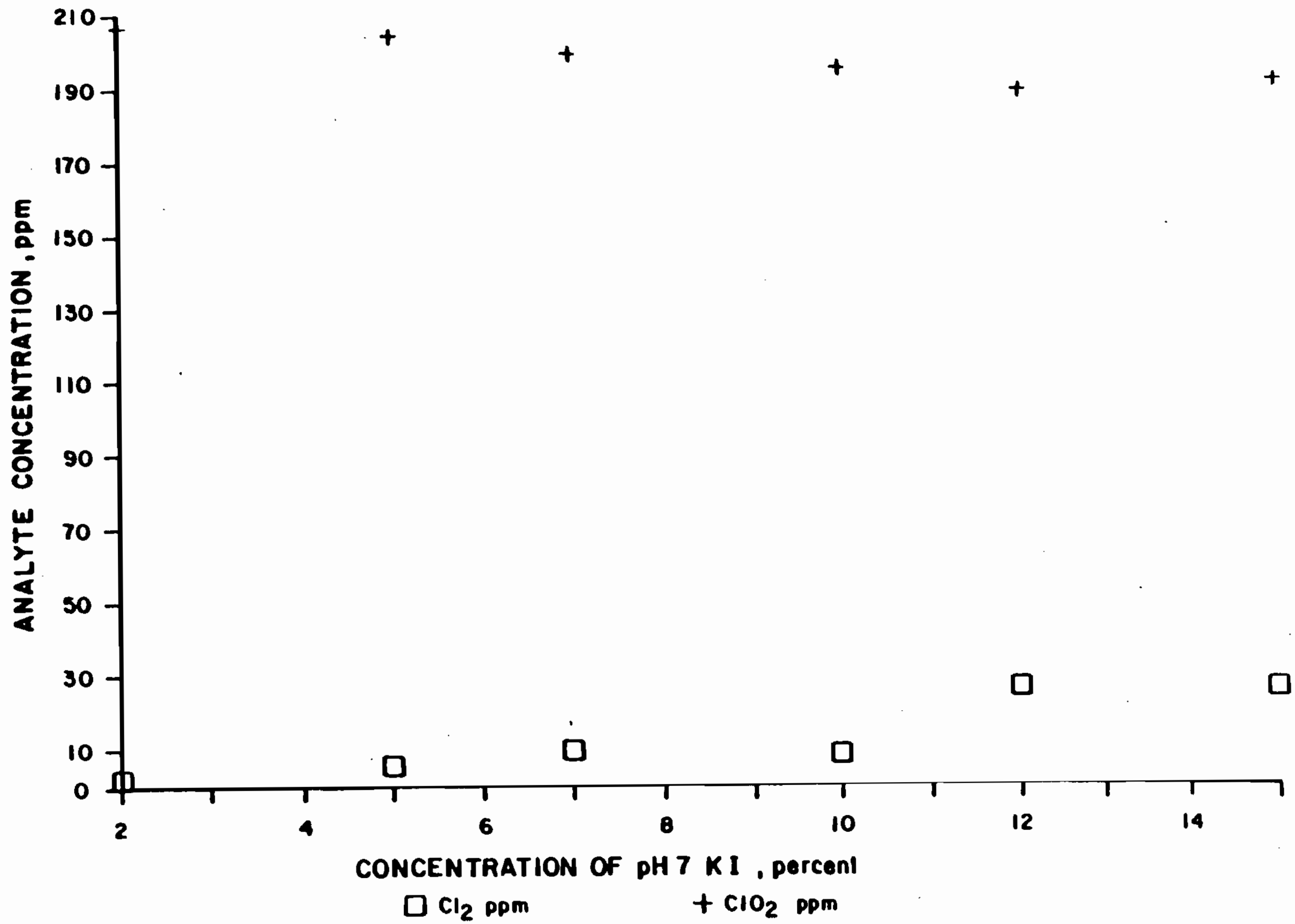


FIGURE 6 EFFECT OF POTASSIUM IODIDE CONCENTRATION ON APPARENT ANALYTE CONCENTRATION, ClO_2 ONLY SAMPLED

TABLE 1 COMPARISON OF RESULTS OF ICED AND UNICED IMPINGER SAMPLING OF GAS MIXTURES OF CHLORINE AND CHLORINE DIOXIDE

SET 1 (n = 3)		SET 2 (n = 3)	
Iced	Uniced	Iced	Uniced
$\bar{x}$ ClO_2 = 600 ppm	$\bar{x}$ ClO_2 = 594 ppm	$\bar{x}$ ClO_2 = 598 ppm	$\bar{x}$ ClO_2 = 596 ppm
RSD = 2.1%	RSD = 0.74%	RSD = 1.5%	RSD = 2.3%
$\bar{x}$ Cl_2 = 720 ppm	$\bar{x}$ Cl_2 = 726 ppm	$\bar{x}$ Cl_2 = 755 ppm	$\bar{x}$ Cl_2 = 755 ppm
RSD = 1.0%	RSD = 1.0%	RSD = 1.7%	RSD = 1.7%

presence of sulfur dioxide (SO_2) in the gas being sampled. SO_2 is an interferent to the dual pH potassium iodide method (it reduces formed iodine to iodide) and to most instrumental methods for chlorine and chlorine dioxide. SO_2 is employed at some bleach plants as an antichlor for reducing oxidant residuals after bleaching, and it is also employed in some control devices for reducing chlorine and chlorine dioxide.

A method for removing the sulfur dioxide interference from workplace atmospheres being sampled for chlorine and chlorine dioxide was reported in NCASI Technical Bulletin No. 412 (5). This method is based upon the passage of gases to be analyzed through a glass fiber filter previously soaked in a solution of chromium trioxide and sulfuric acid, prior to their being analyzed for chlorine and chlorine dioxide. This technique was shown to provide adequate removal of sulfur dioxide at a ca. 5 ppm inlet concentration, and to provide adequate passage of Cl_2 and ClO_2 at 1 and 0.1 ppm inlet concentrations, respectively. SO_2 removal was found to be effective only when the filters were moist, however.

Because the concentrations of SO_2 of concern in bleach plant vent testing may be much higher than those encountered in workplace atmosphere testing, experiments were conducted to test at higher concentrations of SO_2 the efficiency of SO_2 removal of one form of the SO_2 chemical filters evaluated in the study reported in Technical Bulletin No. 412 (5). Significant breakthrough of SO_2 was observed, consequently a modification of the filter with greater capacity was constructed and tested. This testing showed adequate removal of SO_2, after which experiments the ability of the modified filter to pass Cl_2 and ClO_2 was studied. These experiments are discussed in the following sections.

B. Sulfur Dioxide Removal Experiments

A single chromium trioxide/sulfuric acid impregnated glass fiber filter was prepared according to the method of Appendix B, and installed in a ca. ½ in od x 8 in long FEP Teflon tube, forming a chemical filter similar to the Mast SO_2 filter of Figure 1 of Technical Bulletin No. 412 (5). The filter was moistened prior to testing, and inspection afterwards revealed that it had remained moist. The All-Teflon equipment illustrated in Figure 7 was assembled, and the ITT Barton Model 411 SO_2 analyzer was calibrated with cylinder gas SO_2 in nitrogen, which concentration was verified by analysis with a permeation tube calibrated gas chromatograph with a flame photometric detector. SO_2 (in nitrogen) at 500 ppm and 1.2 L/min was passed through the filter. Breakthrough to ca. 50 ppm SO_2 occurred in less than 2 minutes. This was not acceptable performance, consequently a larger capacity filter was constructed as described in Appendix B. This filter is illustrated in Figure 8.

The larger capacity filter was tested for SO_2 removal in two experiments, again employing the equipment indicated in Figure 7. The filter was moistened as described in Appendix B, and it

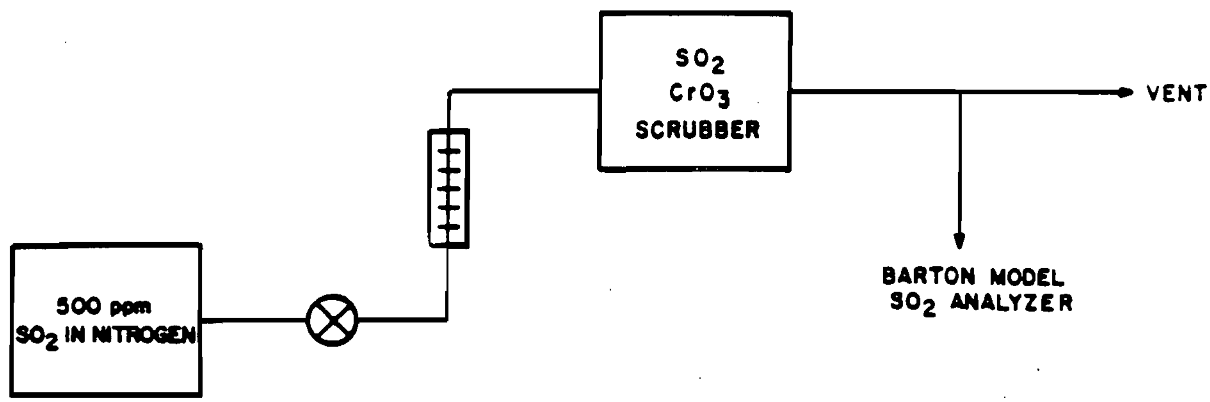


FIGURE 7 SCHEMATIC OF TEST APPARATUS EMPLOYED FOR SO_2 REACTIVE FILTER BREAKTHROUGH STUDIES

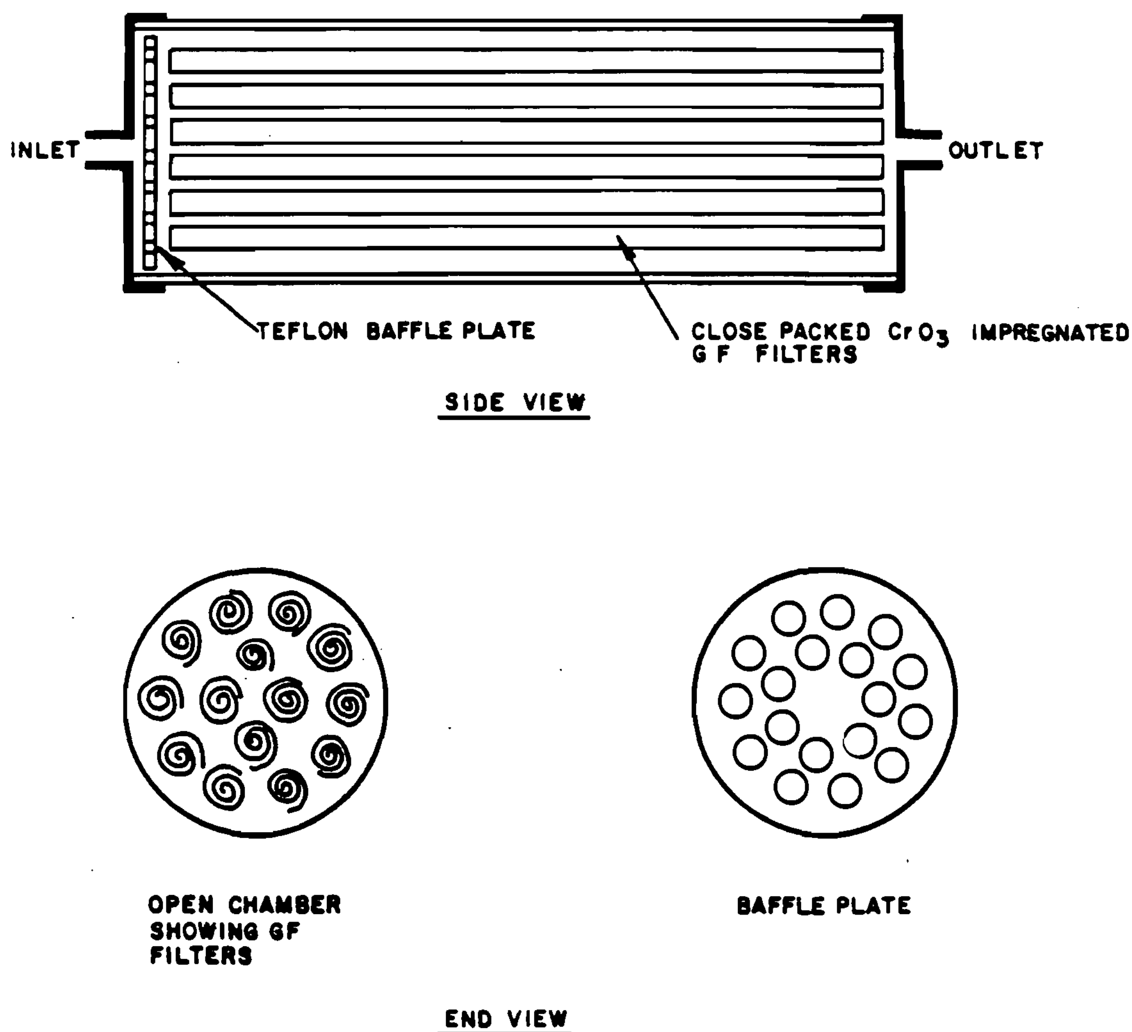


FIGURE 8 DIAGRAM OF REACTIVE FILTER DESCRIBED IN APPENDIX B

remained moist throughout the experiments. SO_2 at 500 ppm in nitrogen was passed through the filter at 1.2 L/min. This represented an extreme in terms of testing the ability of the filter to remove SO_2, in that (1) air-oxygen oxidation of SO_2 sorbed to the filter would be minimal in the nitrogen atmosphere, and (2) this represented the highest sampling rate which would be employed for bleach plant vent sampling, and lower rates should result in longer retention times within the filter, hence longer times to breakthrough.

Both experiments indicated no detectable breakthrough (less than 1 ppm SO_2) for four hours. Results from one of the experiments are plotted in Figure 9. This was taken to indicate that the filter assembly of Figure 8/Appendix B is suitable for removing the SO_2 interference in bleach plant vent sampling.

C. Chlorine and Chlorine Dioxide Recovery Experiments

Several factors were considered in designing the Cl_2 and ClO_2 recovery experiments. First, it was postulated that the ability of the reactive filter to pass Cl_2 and ClO_2 could be altered by the presence of SO_2, either in terms of (1) gas phase reactions of SO_2 with Cl_2 and ClO_2, and/or (2) reaction products of SO_2 and CrO_3 reacting with Cl_2 and ClO_2 in a gas/liquid or gas/solid reaction. The former point was not investigated (one function of an SO_2 removal device installed as near the analyte source as practical in an extractive system is to reduce the possibility of gas phase reactions of SO_2 with analyte in the sampling line). The second point was included in the studies of Cl_2 and ClO_2 recovery by pre-exposing the filters undergoing testing to SO_2 just prior to commencing the recovery studies.

A second factor important to Cl_2 and ClO_2 recoveries concerns the possibility that there may exist reactive sites within the filter which will attenuate Cl_2 and ClO_2, but which may be filled by purging the filter with gas to be analyzed prior to beginning an actual analysis. Pre-purging was included in many of the recovery experiments conducted in this study.

Also expected to affect recoveries of Cl_2 and ClO_2 through the reactive filters are the flow rates of the Cl_2 and ClO_2 containing gases, and the gas phase concentrations of Cl_2 and ClO_2. NCASI bleach plant studies require sampling at 1 and 0.2 L/min, and recoveries at these flow rates were investigated. The concentrations of Cl_2 and ClO_2 studied for the majority of the experiments were fixed at ca. 20 ppm, so as to provide a difficult but realistic test of the ability of the filter to pass Cl_2 and ClO_2.

The recovery experiments were conducted employing the equipment indicated in Figure 10. All materials coming into contact with Cl_2, ClO_2, and SO_2 were FEP, TFE, or PFA Teflon. Results of these experiments are presented in Table 2.

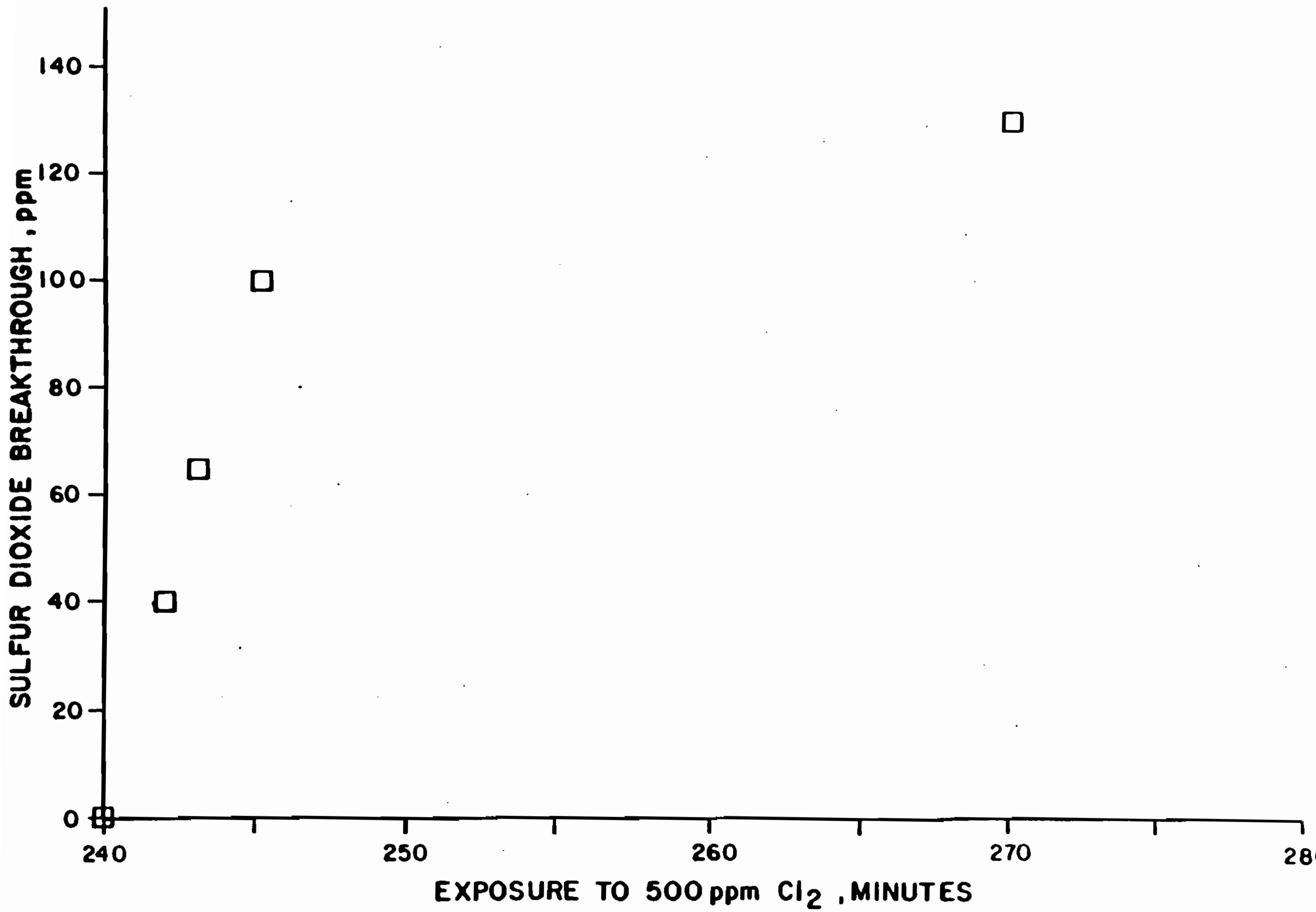


FIGURE 9 RESULTS OF REACTIVE FILTER SO_2 BREAKTHROUGH EXPERIMENT

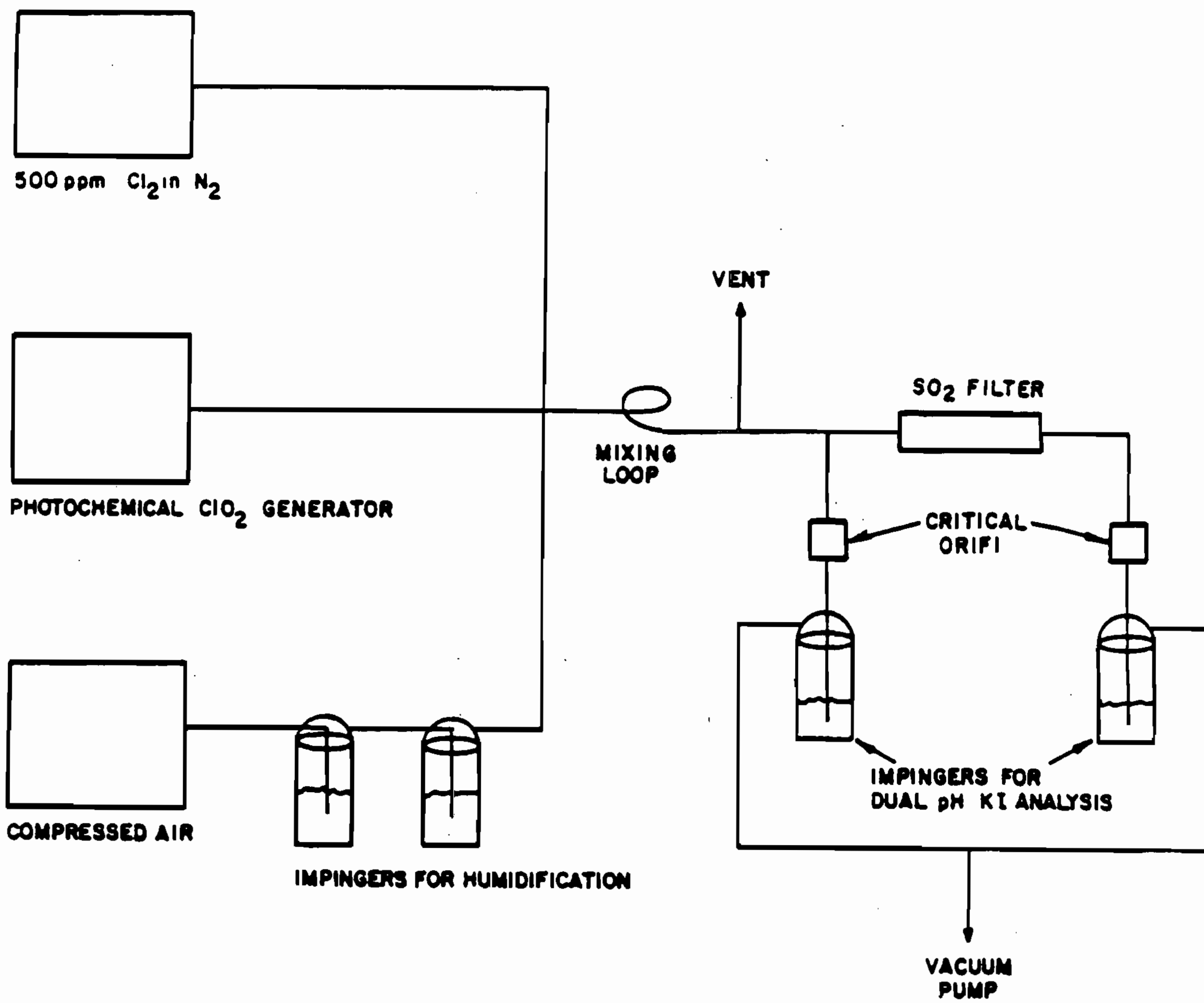


FIGURE 10 SCHEMATIC OF APPARATUS EMPLOYED FOR REACTIVE FILTER Cl_2 AND ClO_2 RECOVERY EXPERIMENTS

TABLE 2 RESULTS OF LABORATORY DETERMINATION OF CHLORINE AND CHLORINE DIOXIDE RECOVERIES THROUGH CHEMICAL FILTERS FOR SO_2 REMOVAL

GAS FLOW RATE, L/MIN	TOTAL GAS VOLUME, L	TIME EXPOSED TO 500 PPM SO_2 AT 1.3 L/MIN	INITIAL Cl_2 PPM	INITIAL ClO_2 PPM	Cl_2 RECOVERY, PERCENT	ClO_2 RECOVERY, PERCENT	PRE-ANALYSIS FILTER PURGE TIME, MIN
1	2	3 hrs	32	-	91	-	No Purge
1	3	3 hrs	61	-	89	-	No Purge
1	3	3 hrs	108	-	88	-	No Purge
1	1	3 hrs	271	-	86	-	No Purge
1	1	3 hrs	272	-	98	-	1
1	8	3 hrs	-	8.6	-	73	1
1	9.5	3 hrs	-	19.4	-	69	1
1	7	3 hrs	-	19.6	-	94	1
1	7	3 hrs	-	19.6	-	96	1
1	13	0	-	20.6	-	83	1
1	10	0	-	21.8	-	88	1
1	10	0	-	21.9	-	86	1
1	10	0	29.4	22.1	95	84	1
1	10	0	27.1	22.3	99	86	1
1	10.5	1 hr	24.2	22.7	96	84	1
1	10	1 hr	23.9	22.2	96	86	1
1	10	2 hrs	27.9	20.8	96	83	1
1	10	2 hrs	27.3	21	96	81	1
1	10	3 hrs	25.8	20.5	93	82	1
1	10	3 hrs	25.1	21	96	84	1
1	10	3.5 hrs	30.1	21.6	95	84	1
1	10	3.5 hrs	32.2	20.7	99	84	1
0.2	4	3.5 hrs	29.3	21.6	99	57	2
0.2	4	3.5 hrs	30.1	21.3	103	57	5
0.2	4	3.5 hrs	22.9	20.3	96	61	2

Referring to the data of Table 2, the following conclusions are important:

(1) Chlorine recoveries were acceptable (86 to 103 percent) under all conditions of the testing;

(2) Chlorine dioxide recoveries were dependent upon the rate of gas flow through the filter, with low recoveries observed at 0.2 L/min, with no improvement effected by increasing the pre-analysis purge time;

(3) Exposure of the filters to SO_2 prior to conducting the recovery experiments did not influence the recovery values obtained; and

(4) In the laboratory tests of recoveries of a mixture of an average of 25 ppm Cl_2 and 22 ppm ClO_2, the recovery of Cl_2 through the high capacity filter averaged 96 percent (2 percent RSD), and the recovery of ClO_2 through the high capacity filter averaged 84 percent (2 percent RSD). Gas flow rates in these tests were 1 L/min.

IV ONGOING STUDIES

As this is written, experimental work is ongoing by NCASI addressing the measurement of chlorine and chlorine dioxide in bleach plant vents via instrumental, continuous methods. One study includes modification and testing of a commercially available high concentration electrochemical sensor based chlorine monitor (Delta Model 964, Delta Xertex, Hauppage NY). A second study involves testing of a commerically available ultraviolet absorption based instrument for measuring gas phase ClO_2 (Mooney Analytical Systems, Burlington MA). Results of this work will be reported in the near future.

V CONCLUSION

(1) The buffered dual pH potassium iodide impinger capture method showed good precision upon analysis of gaseous chlorine and chlorine dioxide mixtures. Buffering at pH 7.0 appeared to reduce the chance of obtaining falsely high chlorine concentrations in the presence of high concentrations of chlorine dioxide. A procedure for employing this method is printed in Appendix A.

(2) A method for removing the sulfur dioxide interference from this and other extractive sampling methods for Cl_2 and ClO_2 was developed. Its performance in removing sulfur dioxide was shown to be acceptable. Its performance in passing chlorine and chlorine dioxide was shown to be dependent upon the rate of gas flow, so that higher flow rates (e.g., 1 L/min) should be employed, rather than lower flow rates (e.g., 0.2 L/min).

VI LITERATURE REFERENCES

(1) American Conference of Governmental Industrial Hygienists (ACGIH), Documentation of the Threshold Limit Values, 4th ed., ACGIH, Cincinnati. 1980, pp. 80-81

(2) G. Y. Pan, J. J. Renard, and J. F. DeGraw, "Scrubbing Chlorine Dioxide from Bleach Plant Waste Gases," Tappi Journal, 66 (7): p. 55 (1983).

(3) N. Manley, "Control of Chlorine and Chlorine Dioxide Emissions," Proceedings of the 1985 NCASI Northeast Regional Meeting, Special Report No. 86-01, NCASI, New York, pp. 124-34 (1986).

(4) "Chlorine Dioxide Plant Analyses," Canadian Pulp and Paper Association Standard J.14P, May, 1984.

(5) "A Laboratory Investigation of Techniques for Instrumentally Measuring Chlorine and Chlorine Dioxide in the Pulp Bleaching Area Workplace," Technical Bulletin No. 412, NCASI, New York (1983).

APPENDIX A

METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE GASEOUS EMISSIONS

APPENDIX A

METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE GASEOUS EMISSIONS

This method is based upon extractive sampling using midget impingers, sampling at a low sampling rate, ca. 200 mL/min. Greater sampling rates may be used with larger impingers. The sampling train includes a sample probe and withdrawal line which is an appropriate length, e.g., 3 m of 0.64 cm (0.25 in) od FEP Teflon tubing. This is connected at one end via either Galtek (Chaska, MN) 0.64 cm unions or short pieces of silicone tubing to a tapered stem 30 mL capacity midget impinger with 0.64 cm od inlet and outlet tubulatures (Southern Scientific, Micanopy, FL). Two identical impingers are connected in series behind the first. The third impinger contains silica gel as a dessicant, and its outlet tubulature is connected to the flow control/prime mover equipment.

Two methods may be employed for low flow rate sampling flow control. One method utilizes a dessicant column and a critical orifice downstream of the second impinger, followed by a vacuum pump capable of providing ca. 64 cm (25 in) of mercury vacuum. The orifice is calibrated prior to use, the vacuum at which critical flow is achieved is noted, and in use the high vacuum side of the orifice is always maintained at at least 13 cm (5 in) of mercury vacuum greater than this value. The flow rate at the probe tip is measured before and after sampling with a bubble tube flow meter, as impingers or other restrictive devices upstream of the critical orifice will cause the system flow rate to change from the value obtained during calibration with atmospheric pressure at the orifice inlet.

A second means of controlling flow during low flow rate sampling is to utilize EPA Method 25 evacuated sampling tanks to draw the sample and, via pre- and post-sampling pressure measurements, to measure its volume.

The first two impingers each contain 20 mL of potassium iodide (KI) solution, buffered with potassium dihydrogen phosphate (KH_2PO_4) and sodium hydroxide (NaOH), as follows:

Dissolve 20 g KI in ca. 900 mL deionized water
Add 50 mL of 1 M KH_2PO_4
Add 30 mL of 1 M NaOH

Measure pH of solution electrometrically and add 1 M NaOH to bring pH to between 6.95 and 7.05.

When sampling, measure the temperature and pressure in the vent being sampled. Assuming critical orifice flow controls, activate the sample draw equipment and measure the sampling flow rate at the probe tip with a bubble tube flow meter. Insert the probe

into the sample port and start a stopwatch. End the sampling (stop the watch) after 30 minutes, or after the color in the second impinger turns from pale yellow to a deeper straw color. After sampling, remove the probe from the vent, and with the probe tip elevated above the impingers, add ca. 5 mL deionized water to the probe so that this drains into the first impinger. Combine the contents of the impingers in a 100 mL beaker, and titrate with sodium thiosulfate solution (0.100 N or less concentrated, depending upon the quantity of iodine being titrated). Record the volume of titrant to the first endpoint (T_N, mL). Add 5 mL of 10 percent sulfuric acid solution, and continue the titration to the second endpoint. Record the total volume of titrant required to go through the first and to the second endpoint (T_A, mL).

To calculate moles of chlorine and moles of chlorine dioxide captured employ the formulas:

$$EqI_2N = (T_N)(10^{-3})(\bar{N})$$

$$EqI_2A = (T_A)(10^{-3})(\bar{N})$$

$$ClO_2 \text{ moles} = 1/4\ EqI_2A - 1/4\ EqI_2N$$

$$Cl_2 \text{ moles} = 1/8\ (5\ EqI_2N - EqI_2A),$$

where EqI_2N and EqI_2A are equivalents of iodine determined in the neutral and (total) acid titrations, respectively, and $\bar{N}$ is the normality of the sodium thiosulfate solution. Calculate gas phase concentrations of ClO_2 and Cl_2 employing standard EPA calculations. Assume gas phase water saturation in most vents.

APPENDIX B

PREPARATION OF CHEMICAL FILTERS FOR REMOVAL OF SULFUR DIOXIDE

APPENDIX B

PREPARATION OF CHEMICAL FILTERS FOR REMOVAL OF SULFUR DIOXIDE

PROCEDURE:

1. To prepare 75 mL chromium trioxide solution, add 3.5 mL concentrated H_2SO_4 and 12.5 g CrO_3 to 71.5 mL H_2O.

2. Roll the 12.5 cm glass fiber filters as tightly as possible and dip into the CrO_3 solution. Use gloves and work in an exhaust hood.

3. Place the filters in a drying oven for one hour at 90°C.

4. Assemble the Teflon chamber as shown in Figure 8 of the text. Open the chamber from the end opposite the baffle plant and place the dried filters in the chamber parallel to the bore. The filters should be packed as tight as possible without crushing.

5. Moisten the filters by holding the canister with the open end up and adding 15 to 20 mL H_2O drop by drop at several points on the exposed cross section. Leave in this position for approximately one hour so that the water can be uniformly absorbed in the filter material, and add a few drops more at the end of this time if not completely saturated.

6. Replace the endcap and tighten securely.

MATERIALS:

1. Whatman 12.5 cm glass microfiber filters 934-AH. (Fisher Scientific catalog no. 1827-125)

2. PFA Teflon chamber, 12 cm long, 5 cm diameter. (Galtek Corp., Chaska, MN)

3. Teflon baffle plate, 2 mm thick, 4.5 cm diameter, locally fabricated.

4. Concentrated sulfuric acid.

5. Chromium trioxide (CrO_3), Reagent ACS. (EM Science, Gibbston, NJ)

QUALITY ASSURANCE AND MEASUREMENT OF CHLOROFORM, CHLORINE, AND CHLORINE DIOXIDE RELEASES FROM BLEACH PLANTS

SEPTEMBER 1990

TABLE OF CONTENTS

PROGRAM FOR SAMPLING BLEACH PLANT CHLOROFORM, CHLORINE, AND CHLORINE DIOXIDE EMISSIONS

I INTRODUCTION

NCASI member company representatives in Alabama requested that NCASI staff assemble this program to use as guidance for determining where, when, and how many samples should be collected during testing of bleach plant releases of chloroform, chlorine, and chlorine dioxide. In addition to the sampling information, this program describes the bleach plant operating information that should be collected concurrently with the samples.

II SAMPLE COLLECTION FREQUENCY

A minimum of six samples must be collected from every vent and effluent source. Two samples per day should be collected from each source with a minimum of four hours between each sample for three days. The three sampling days for each source do not have to be concurrent. All of the sources do not have to be sampled on the same days.

III VENT GAS SAMPLING LOCATIONS

Sampling for chloroform emissions must be conducted in each bleach plant vent. Locations where measurements of chloroform from pulp bleach plant vents are needed to determine total releases can be visualized in a much-simplified diagram (Figure 1). Direct gas phase emissions may be contained in each stage's tower, washer hood, and seal tank vent. A CEHD bleach plant which does not provide for common venting could thus have 4 x 3 = 12 emission points which would require testing in a bleach plant emission survey. At facilities that have the individual vents ducted together for oxidant scrubbing or some other purpose, the number of vent sampling locations may be reduced significantly. In the simplest situation, all of the bleach vents would be ducted together, thus requiring only one vent sample to be collected.

Sampling for chlorine and chlorine dioxide emissions must be conducted in all bleach plant vents except those containing only extraction stage vent gases.

To calculate mass emissions from the vents, the vent temperature, velocity, moisture content (usually saturated), diameter, pressure, and ambient temperature must be recorded.

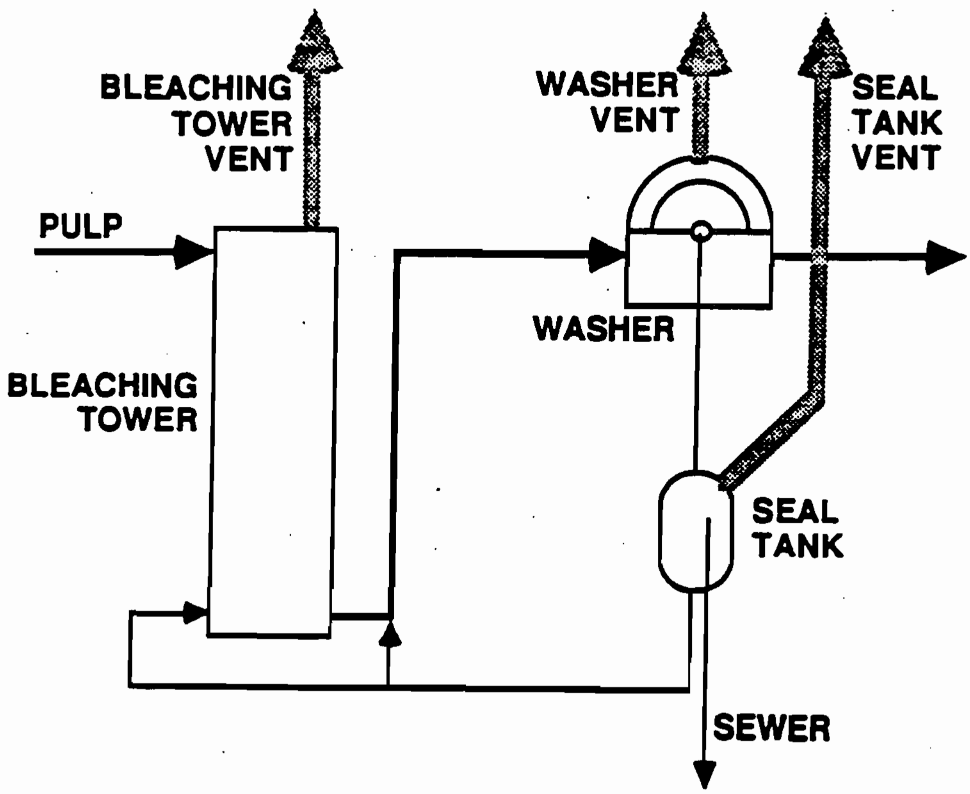


FIGURE 1 TYPICAL VENTING FROM A BLEACHING STAGE

IV LIQUID EFFLUENT SAMPLING

A. Locations to Sample

In addition to the vent gas samples, the bleach plant discharges to effluent treatment must be collected to analyze for chloroform. The bleach plant discharges may be sampled at any point before they reach a tank or channel open to the atmosphere. In the simplest situation, either the combined bleach plant effluent or whole mill effluent could be sampled from an enclosed sewer.

In the next most simple case, samples of the bleach plant alkaline and acid sewers could be collected separately from pipes or enclosed sewers. At some bleach plants, only the first (chlorination) and second (extraction) stage seal tanks overflow to the sewer. In this case, samples of these filtrates would be representative of the bleach plant alkaline and acid sewers. In the most difficult situation where none of the filtrates could be sampled together before they are exposed to the atmosphere, samples of each individual filtrate would have to be collected.

The mass releases of chloroform with the bleach plant effluent must be calculated. Depending on where the liquid samples are collected, e.g., from sewers or filtrate tanks, either the sewer flows must be known from flow measurement or the seal tank filtrate overflows must be calculated via a bleach plant water balance.

B. Sample pH Adjustment

It is known that the chloroform concentration of acidic bleach plant effluents increases when the pH is increased upon mixing with alkaline mill effluent streams. Thus, to obtain the most accurate measurement of the amount of chloroform released to effluent treatment, samples of acidic bleach plant discharges should be adjusted to pH 7 before analysis. Whole mill effluent samples need not have their pH adjusted even if the natural pH is less than 7 since the bleach plant discharges in the whole mill effluent have reached the highest pH that they will encounter.

V PROCESS INFORMATION

Concurrent with sample collection, the values of the following process operating parameters should be collected.

- Brownstock Kappa or K No.
- CE Kappa or K No.
- Pulp Production Rate
- Product Brightness
- Chemical Application Rates (in all stages)
- Tower Temperatures
- Tower pH Values
- Tower Retention Times
- Residuals in Chlorination and Hypochlorite Stages
- Water Reuse Practices

METHOD FOR MEASUREMENT OF CHLOROFORM IN BLEACH PLANT VENT EMISSIONS

I INTRODUCTION

The method discussed here is very similar to the solid sorbent method reported in NCASI Technical Bulletin No. 531, "Development, Evaluation, and Protocol of Methods for Source Sampling and Analysis for Chloroform in the Presence of Chlorine and Chlorine Dioxide." Several changes have been made to decouple the method for chloroform from the method for chlorine and chlorine dioxide. These changes make the chloroform method much easier to use and allow the sampling train to be constructed entirely glass-free. Additional validation studies on the changed method have been conducted and the results are reported herein. These studies addressed the bias and precision of the method as suggested by a draft EPA protocol for method validation (EPA Contract No. 69-02-4550, Work Assignment 300, June 1990). The method was found to be acceptable by the draft standards.

II METHOD DESCRIPTION

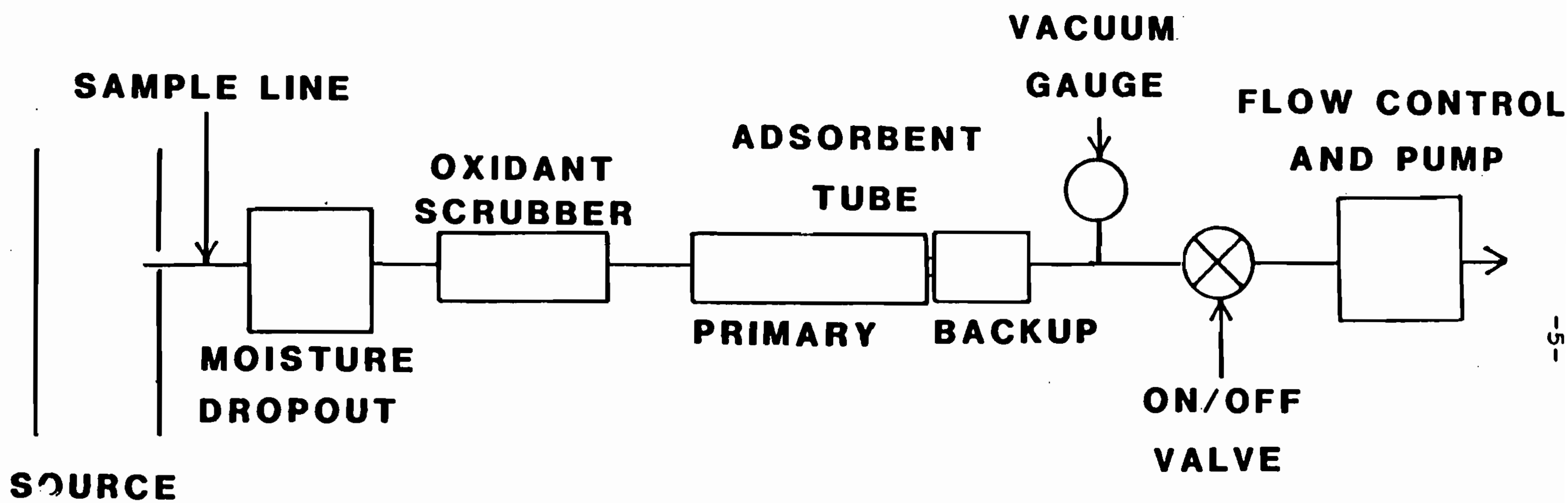
A. Sampling Apparatus

Figure 1 shows a block drawing of the sampling train. The major components of the sampling train are a sampling line, an ambient temperature moisture dropout bottle, a scrubber for removing chlorine and chlorine dioxide from the stack gas, a sorbent tube for capturing the chloroform from the gas stream, and finally apparatus for drawing a constant gas flow through the sample train.

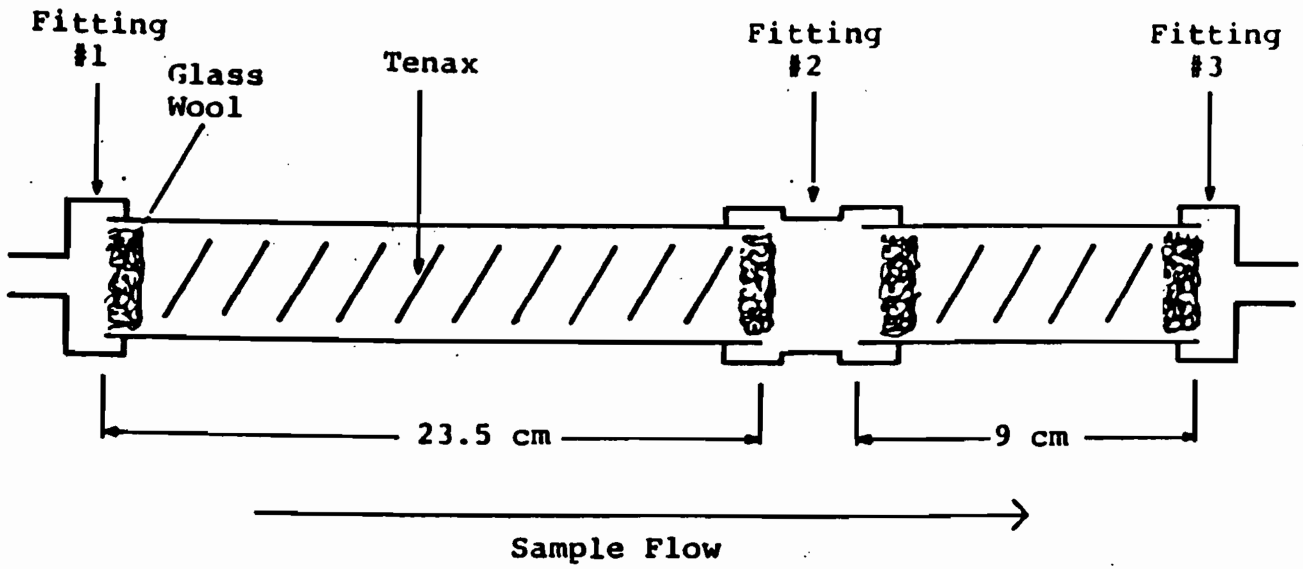
The sample line is composed of ¼ inch O.D. Teflon tubing which is also used to connect the various components of the sampling train. The dropout bottle is a 4 oz. Teflon transfer container with ¼ inch Teflon compression fittings. The oxidant scrubber is physically similar to the primary sorbent tube shown in Figure 2, except it is packed with solid sodium thiosulfate crystals ($Na_2S_2O_3 \cdot 5H_2O$) instead of Tenax sorbent and it has ½ inch to ¼ inch reducing compression tube fittings on both ends. The scrubber tube must be repacked when the crystals have melted significantly or turned yellow for more than one-half the length of the tube.

Two sorbent tubes are used in series so that any breakthrough from the front tube will be detected from the analysis of the backup tube. As shown in Figure 2, adsorbent tube housings were prepared entirely from ½ inch O.D. Teflon tubing and fittings. The primary side is 23.5 cm long; whereas

FIGURE 1   NCASI SOUTHERN REGIONAL CENTER SAMPLING TRAIN FOR CHLOROFORM IN BLEACH PLANT VENTS



<u>FIGURE 2</u> <u>ADSORBENT TUBE CONSTRUCTION</u>



the secondary side is 9 cm long. Fittings nos. 1 and 3 are ½ inch to ¼ inch reducing unions, fitting no. 2 is a ½ inch union. When the sorbent traps are not in use a ¼ inch cap is simply placed on each end, whereas during sampling the ¼ inch cap is replaced with a ¼ inch Teflon compression nut. A glass wool plug is used at each end of both the primary and secondary traps to retain the adsorbent. The primary end is packed with ca. 2.1 g Tenax TA 60/80 mesh adsorbent; whereas the secondary side is packed with ca. 0.7 g of this material. The tubes are numbered by etching with a vibration engraver. The primary and secondary parts of each tube are given the same number for convenience. Following the sorbent tubes are a vacuum gauge and a shutoff valve which are used in the leak check procedure.

The final components of the sampling train are a pump and flow control device capable of maintaining a constant sampling flow rate of ca. 170 mL/min. One example of appropriate apparatus for drawing the sample is a critical orifice followed by a vacuum pump; a procedure for using this particular scheme is discussed in NCASI Technical Bulletin No. 531.

B. <u>Sampling Procedure</u>

The method should not be used at ambient temperatures above 40°C for two reasons: the sodium thiosulfate crystals will begin to melt and the possibility of breakthrough from the primary Tenax tube increases. After the sampling train is assembled, it must be leak checked. Following the leak test, the flow rate into the end of the sample line (170 ±20 mL/min) is checked. The flow rate is checked again at the conclusion of the sampling period. The procedure for leak testing, flow rate testing, and sampling is listed below.

(1) With the adsorbent tube in place, start the vacuum pump (on/off valve in on position).

(2) Plug the end of the probe (a ¼ inch Teflon compression nut with a male Teflon plug is recommended).

(3) Allow the pressure to drop so that vacuum gauge no. 1 reads a minimum of 15 in. Hg vacuum.

(4) Turn the on/off valve to the off position.

(5) If the vacuum does not rise more than 1 in. Hg on the vacuum gauge in 2 minutes, then the leak test is successful.

(6) To release the vacuum in the system, remove the plug on the end of the probe.

(7) With the sample line out of the vent to be sampled, measure the flow rate into the sample probe with an appropriate device. The flow must be 170 ±20 mL/min.

(8) Turn the valve off.

(9) Insert the sample line into the source and turn on the valve to begin sample collection.

(10) At the completion of the 20 minute sampling period, remove the sample line from the stack and recheck the sampling flow rate. This flow rate must be within ±5 percent of the presampling flow rate.

(11) After the post sampling flow rate check, place a charcoal scrubber on the end of the sample line and continue to draw ambient air through the sampling train for 2 minutes. This procedure allows the sample gas remaining in the dead space ahead of the sorbent tube to be drawn through the tube. Charcoal sorbent tubes used for workplace sampling have been found to make good ambient air scrubbers for use during the post sampling dead space purge.

(12) Remove the sorbent tube from the system, cap it, and store at 4°C until extraction (maximum storage time 7 days).

(13) An example form for recording sampling information is shown in Figure 3.

C. Hexane Extraction

The procedure for performing the hexane extraction of the sorbent tubes is listed below.

(1) Set up an elevated hexane reservoir with a ca. 4 ft long by ¼ inch O.D. Teflon line attached to the exit of the reservoir via a short piece of silicone tubing. A 2 L separatory funnel is suggested.

(2) Disassemble the adsorbent tube at the ¼ inch Teflon union and attach the primary side (long side) of the tube to the ¼ inch Teflon line.

(3) With the open end of the adsorbent tube pointed up, turn on the hexane and allow the adsorbent tube to fill. The adsorbent tube is inverted to avoid the possibility of hexane channelling through the adsorbent.

(4) Just before the hexane reaches the top of the tube (¼ inch), turn the stopcock off.

(5) Carefully invert the tube over a glass funnel placed in a 100 mL volumetric flask.

(6) Turn stopcock on and carefully rinse the end of the sorbent tube and funnel with hexane from a Teflon wash bottle.

(7) Allow the volumetric flask to fill to near the top, turn off

FIGURE 3 EXAMPLE FORM FOR RECORDING SAMPLING INFORMATION

CHLOROFORM SOURCE SAMPLING FIELD DATA SHEET

Company:____________________ **Location:**____________________

Name of Sampler(s):____________________ **Date:**________________

Source Description:____

Adsorbent Tube Number:____________________

Ambient Temperature:____________________

LEAK TEST

	Time		Vaccum	
Start	______		______	Minimum 15 in. Hg
Stop	______		______	
Difference	______	Minimum 2 min.	______	Maximum 1 in. Hg

RUN

	Time	Flow Rate, mL/min
Start	______	______
Stop	______	______

Rotometer I.D.: ____________________________

the stopcock and add hexane from the wash bottle until the volumetric flask is filled to the mark.

(8) After mixing the volumetric flask contents by inverting several times, an aliquot of the sample may be poured into a glass sample vial with a Teflon-faced septum. The sample vial should be filled to the top before sealing.

(9) Repeat steps (2) through (8) with the secondary end of the adsorbent tube. The procedure is identical for the primary and secondary ends of the tube, with the exception that the secondary end is eluted with only 25 mL of hexane; therefore, a 25 mL volumetric flask is used in place of the 100 mL volumetric flask in steps 5 through 7.

D. Tube Cleanup

After extraction, the tubes are connected one at a time to a low pressure source of prepurified nitrogen to remove the liquid hexane from the tubes. The tubes are reassembled and then placed uncapped in an oven at approximately 180°C and left overnight. After baking, the tubes are removed from the oven one at a time and while still hot are again connected to the low pressure nitrogen source. The nitrogen is allowed to flow through the tube before it is capped. The tube is then ready for reuse.

E. List of Vendors

The following is a list of vendors and part numbers used by NCASI for the acquisition of components for sampling train construction, sorbent tube extraction, and gas calibration.

LIST OF VENDORS

VENDOR	PART DESCRIPTION	PART NO.
KNF Neuberger, Inc. P. O. Box 4060 Princeton, NJ 08543 609/799-4350	Pump	20 STP29A-AT
Savillex Corporation 5325 Highway 101 Minnetonka, MN 55343 612/935-4100	Teflon Moisture Dropout Containers, 180 mL	0104-4-2
Galtek Corporation Jonathan Industrial Center Chaska, MN 55318 612/448-6717	Teflon Tubing and Fittings	
	¼" Heavy Walled FEP Tubing	ET250-030

LIST OF VENDORS (Cont'd)

VENDOR	PART DESCRIPTION	PART NO.
Galtek (cont'd)	½" Heavy Walled FEP Tubing	ET500-062
	½" FEP Union	SU 8N
	½" to ¼" Reducing Union	SU 8-4N
	1/4" Tube to 1/8" NPT Reducer (Fits in KNF Pump Inlet & Outlet)	C4-2N
Jax Valve & Fitting Co. 3633 Southside Blvd. Jacksonville, FL 32245 904/642-2093	Brass Fittings & Valves	
	¼" Tube Ball Valve	B-4354
	Female Branch Tee	B-400-3-4TTF
VWR Scientific 1230 Kennestone Circle Marietta, GA 30066-0117 404/423-1354	Vacuum Gauge 0-30 in Hg	31749-006
Alltech Associates, Inc. 2051 Waukegan Road Deerfield, IL 60015 800/255-8324	Tenax TA Porous Polymer 60/80 mesh	049161
Baxter Healthcare Corp. Scientific Products Div. 1430 Waukegan Road McGaw Park, IL 60085-6787 312/689-8410 800/241-2022 (Atlanta)	Hexane, THM Grade, <1 ppb THM	215-235 DK
VWR Scientific 1230 Kennestone Circle Marietta, GA 30066-0017 404/423-1354 800/392-3338 (Dallas)	Hexane, Baker "Capillary Analyzed" (less pure than THM grade) but can be used for samples well above detection limit (with a reagent blank)	JT9126-2

LIST OF VENDORS (Cont'd)

VENDOR	PART DESCRIPTION	PART NO.
Scott Specialty Gases Route 611 Plumsteadville, PA 18949 215/766-8861	Chloroform-in-Air Cylinder Gases	

III VALIDATION TESTING

As referenced in the introduction, the method was tested for precision and bias as suggested by the Draft EPA Protocol for method validation. The results of bias and precision testing as per the protocol are summarized in Tables 1 and 2, respectively.

Table 1 summarizes the results of bias testing. The bias testing is performed by simultaneous sampling with four trains, two of which are dynamically spiked with a chloroform-in-air gas of known concentration. Spike recovery is calculated by comparing the results obtained from the two spiked trains to the two unspiked trains. The protocol specifies that the test be conducted at low, mid-range, and high chloroform concentrations. In this testing, the spike recoveries at the mid-range (59.6 ppm) and the high (320 ppm) concentrations were good at 98 percent and 106 percent, respectively. The chloroform concentration of the source gas used for the low range testing was about a factor of ten too high to obtain accurate quantitation of the spike recovery. Low range bias testing is currently being performed on a lower chloroform concentration source.

Table 2 summarizes the results of precision testing. The protocol specifies that three runs with four replicates be conducted on the same source. The overall method precision is calculated by pooling the relative standard deviations from the three runs. For single instead of replicate sample collection, the draft EPA protocol states that the relative standard deviation (RSD) of the method should be ≤15 percent. The highest percent RSD of the three sets is 1.9 percent which is excellent by these standards.

In summary, from the data currently at hand, this method is performing very well relative to bias and precision, as per the standards of the draft EPA protocol.

TABLE 1 CHLOROFORM SOURCE SAMPLING BIAS TESTING VIA DRAFT EPA PROTOCOL. NCASI SOLID SORBENT METHOD WITH SODIUM THIOSULFATE CRYSTAL OXIDANT SCRUBBER INSTEAD OF KI IMPINGERS. 160 mL/min SAMPLING FLOW RATE, 20 MINUTE SAMPLING PERIOD

	CHLOROFORM, ppm							SPIKE RECOVERY, PERCENT
		Unspiked			Spiked			
SOURCE	Spike Level	Duplicate 1	Duplicate 2	Average	Duplicate 1	Duplicate 2	Average	
D Washer Hood	0.83	5.00	5.10	5.05	6.02	6.06	6.04	121*
E Washer Hood	59.6	12.1	12.2	12.2	72.1	68.8	70.5	98
E Washer Hood	320	13.7	14.1	13.9	352	352	352	106

*Source chloroform concentration was too high for accurate determination of spike recovery.

TABLE 2 CHLOROFORM SOURCE SAMPLING PRECISION TESTING VIA EPA DRAFT PROTOCOL. H WASHER HOOD

	CHLOROFORM, ppm		
REPLICATE ID	Set 1	Set 2	Set 3
A	22.3	91.3	81.2
B	22.7	91.3	81.5
C	23.0	94.8	82.7
D	23.1	93.6	81.9
Average	22.7	92.8	81.8
Standard Deviation	0.36	1.74	0.65
Relative Standard Deviation, Percent	1.6	1.9	0.8

QUALITY ASSURANCE FOR THE MEASUREMENT OF CHLOROFORM EMISSIONS FROM BLEACH PLANT VENTS VIA SOLID SORBENT ADSORPTION

I INTRODUCTION

A quality control check procedure for solid sorbent methods for measuring chloroform in pulp bleach plant vents was requested by NCASI member company representatives. The resulting check method is an uncomplicated test which uses cylinders of chloroform in air or nitrogen as challenge gases. It allows mill staff or their contractors a means of checking the accuracy of their methodology.

Quality control testing should be carried out in two areas of method use: in-laboratory and in-field testing carried out prior to bleach plant vent analysis. The chloroform recovery method discussed here may be used identically for both areas.

Cylinder gas for in-laboratory testing must be provided by the contractor.

For the particular purpose for which this protocol was assembled, i.e., bleach plant vent testing by companies in Alabama, Research Triangle Institute (RTI) has agreed to provide cylinder gases to the mills, which they may utilize in their own testing or in contractor testing.

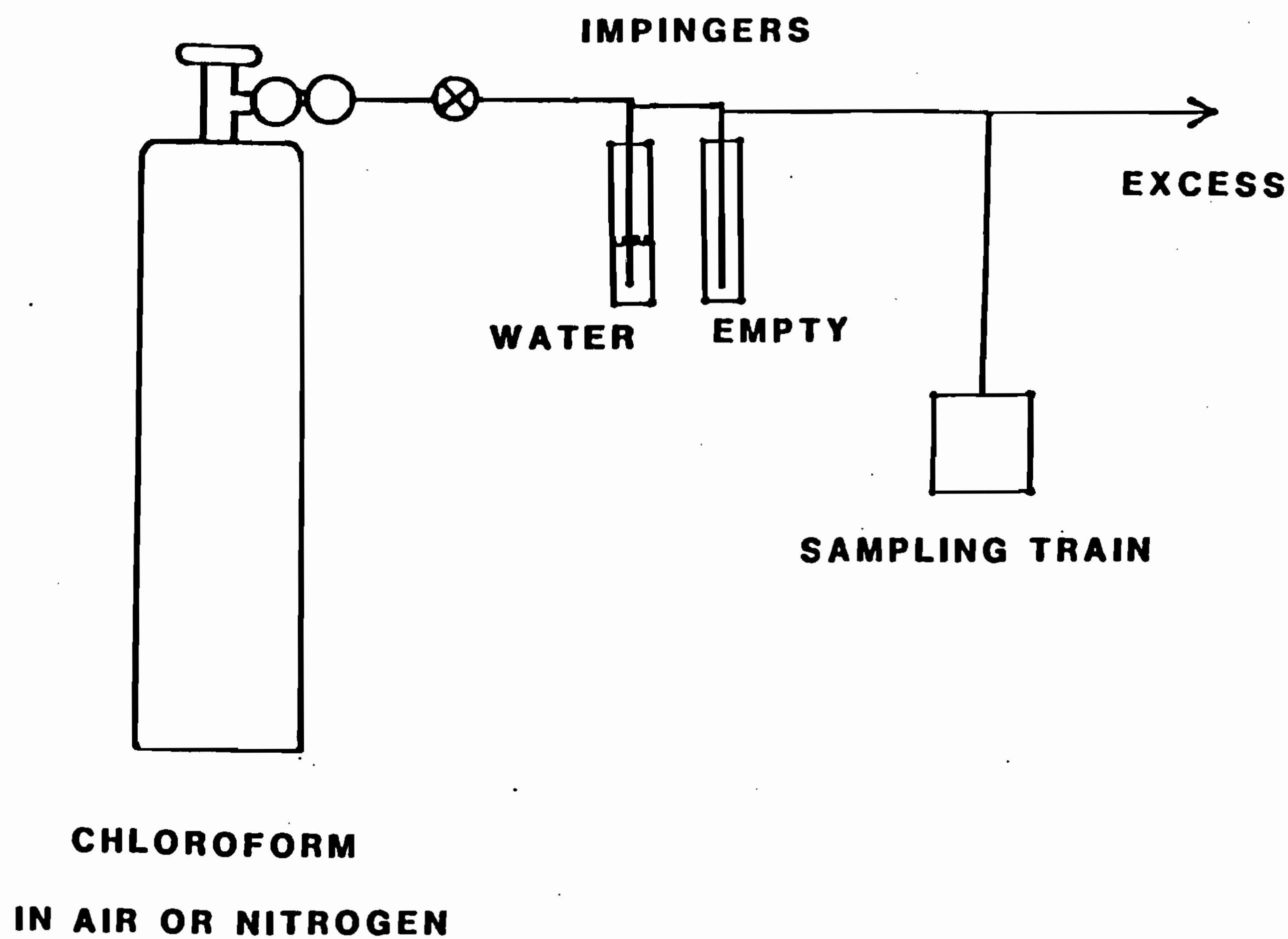
II LABORATORY DEMONSTRATION OF ABILITY

The laboratory must demonstrate its ability to accurately measure the chloroform concentration of laboratory-generated challenge gases. This is a one time demonstration.

The sorbent tubes used for sampling must have a primary and a backup section that are analyzed separately so that it will be known if chloroform breaks through the front section. If the amount of chloroform on the backup section is greater than 10 percent of the total collected, then the sample is voided.

As shown in Figure 1, to prepare challenge gases, a cylinder gas of chloroform in air or nitrogen of the appropriate concentration is passed through a midget impinger containing ca. 20 mL of water to humidify the gas stream. The gas flow rate through the impinger should be ca. 400 mL/min for a method that uses a 200 mL/min sampling flow rate. An empty impinger follows the water containing impinger to collect any liquid water that may leave with the gas stream from the first impinger. The sampling train is connected to a tee in the line exiting the

FIGURE 1 AUDIT GAS PREPARATION



second impinger. The gas stream should be allowed to pass through the impingers for five minutes before starting sampling to allow the water in the impinger to become saturated with chloroform.

The three chloroform concentrations used to prepare the challenge gases must be within ±25 percent of 0.5, 50, and 300 ppm. From three replicates at each concentration, the percent relative standard deviation must be no greater than 10 percent and the average recovery at each concentration must be 100 ±15 percent.

III FIELD QUALITY ASSURANCE

During each field sampling episode, the samplers must collect duplicate samples of low and high chloroform concentration audit gases. The field audit gas is prepared from cylinders in the same manner as for the laboratory tests. The low and high chloroform concentration audit gases will be in the ranges of 0.5 ppm to 10 ppm and 100 ppm to 300 ppm, respectively. The actual concentration of the audit gases will be unknown to the samplers. All sampling procedures and specifications such as sampling flow rate and sampling period must be the same in the field and laboratory tests. The difference between the results of duplicates must be no greater than 10 percent as defined by the following equation:

$$\text{difference, percent} = \left(\frac{|\text{duplicate 1} - \text{duplicate 2}|}{\text{average}}\right) \times 100$$

The average value of each set of duplicates must be within ±15 percent of the true value.

METHODS FOR COLLECTION OF BLEACH PLANT EFFLUENT SAMPLES FOR CHLOROFORM ANALYSIS

I INTRODUCTION

There are several inherent problems associated with obtaining an accurate sample from bleach plant filtrate streams and enclosed sewers for chloroform analysis. Chloroform is a volatile compound, and these sources are often hot and/or under pressure. Consequently, obtaining a sample without suffering significant chloroform loss to the atmosphere is not necessarily a straightforward process. Two methods of sample collection are presented here: one for pressurized and one for unpressurized filtrate and sewer pipes.

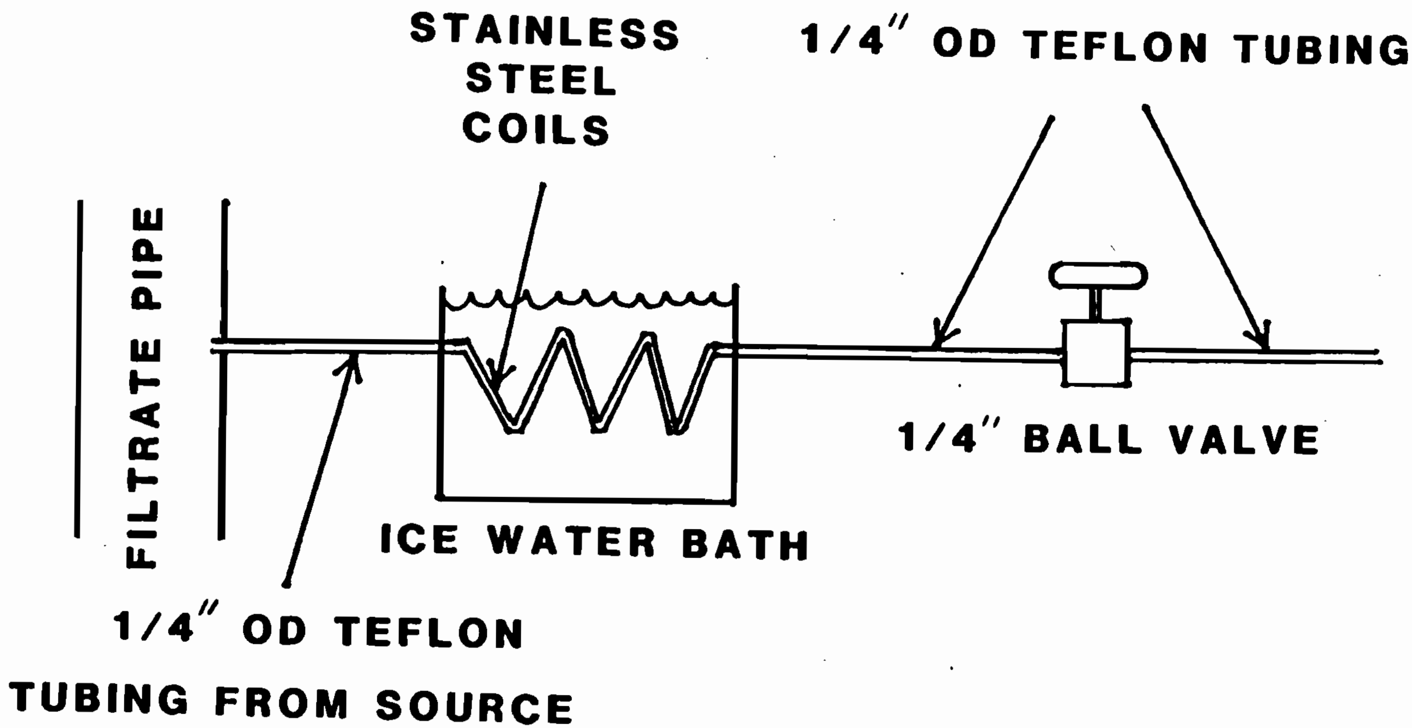
II PRESSURIZED FILTRATE AND SEWER PIPES

This method requires a valve outlet on the pipe of interest to be reduced to 1/4" Swagelok®. The basic scheme of this method involves removing a small stream from the filtrate pipe, cooling it under pressure, and filling a sample vial with the cooled stream. Figure 1 details the construction of the sampling system. The 1/4" ball valve is used to provide a slow flow of filtrate out of the system (ca. 0.5 L/min to 1 L/min). The temperature of the liquid leaving the system must be less than 20°C. Sample vials are filled with the tube inserted all of the way to the bottom of the vial; once the vial is overflowing, the tube is removed, the vial is topped off with the filtrate, ca. 0.2 g of sodium thiosulfate crystals ($Na_2S_2O_3 \cdot 5H_2O$) are added to the vial, and finally the vial is capped with as little headspace as possible. The samples must be stored at 4°C until they are analyzed. If the sample will require pH adjustment, then 125 mL bottles should be used for sample collection. For samples that will not be pH adjusted, 40 mL vials are adequate.

III UNPRESSURIZED FILTRATE AND SEWER PIPES

The procedure for the collection of samples from unpressurized sources is very similar to the procedure for pressurized sources. The only difference is that a peristaltic pump must be used to supply the sample to the cooling coils shown in Figure 2. A stainless steel sample line or a weighted Teflon line is inserted into the filtrate or sewer stream and connected to the pump. In NCASI studies a hand operated pump was used. The tubing going into and coming out of the pump must be Teflon. The only place that silicone tubing may be used is in the pump body.

FIGURE 1 SAMPLING PRESSURIZED FILTRATE AND SEWER PIPES



LIQUID SAMPLE pH ADJUSTMENT AND HEXANE EXTRACTION

I PROCEDURE WITHOUT pH ADJUSTMENT

The sample must be extracted with an equal volume of hexane before proceeding with the gas chromatographic (GC) analysis. The sample temperature must be less than 10°C when the vial is opened and during the sample withdrawal. The extraction procedure involves inserting a needle, that is attached to a 5 mL glass and Teflon syringe (Gastight®), into the sample vial and withdrawing a 5 mL aliquot of the liquid. The liquid sample is then injected through the septum into a previously sealed septum vial that contains an equal volume of hexane. The vial is well shaken, the aqueous and hexane phases are allowed to separate, aliquots of the hexane phase are withdrawn from the vial, and injected into the gas chromatograph (GC) with electron capture detection (ECD). If the extracted sample will be stored before analysis, then a syringe is used to remove the aqueous phase from the bottom of the septum vial and a new Teflon-lined septum is placed on the vial before it is stored.

II PROCEDURE WITH pH ADJUSTMENT

When the sample pH must be adjusted the following procedure is used:

(1) Place 5.0 mL chilled aliquots via syringe into two sealed, empty 30 mL crimp-top vials with Teflon-lined septa. Two vials are prepared because one may be used as a duplicate or as a backup in the event of an unsatisfactory end pH.

(2) In a 100-150 mL beaker, titrate 25 mL sample with 1 percent dipotassium phosphate (10 g/L K_2HPO_4) to pH 7.0 while stirring.

(3) Via syringe, add an appropriate quantity of dipotassium phosphate (amount of 1 percent K_2HPO_4 used above ÷ 5) to the sample aliquot in the vial and shake. Allow to stand for 5 minutes.

(4) Add 5 mL hexane via syringe to vial, shake vigorously, and allow the aqueous and hexane phases to separate.

(5) Remove lower aqueous layer with syringe (vial may need to be inverted) and test pH of same. If end pH is not within pH 6.5-7.5, check calculations and repeat.

(6) Recap vial with new septa for storage prior to analysis to prevent contamination or leakage.

QUALITY ASSURANCE FOR THE MEASUREMENT OF CHLOROFORM IN BLEACH PLANT EFFLUENTS AND MILL SEWERS

I INTRODUCTION

A quality control procedure for measuring chloroform in bleach plant effluents and mill sewers was requested by NCASI member company representatives. There are two elements to this quality control program: a laboratory demonstration of ability and analysis of unknown samples along with those collected in the field.

For the particular purpose for which this protocol was assembled, i.e., bleach plant effluent testing by NCASI member companies in Alabama, the NCASI Southern Regional Center will provide quality control check samples to be analyzed with the field samples. The individual laboratories or contractors must provide check samples for the laboratory demonstration of ability to accurately analyze for chloroform. Since some samples will need to be adjusted to pH 7 before analysis, all quality control check samples will be acidified and must be adjusted to pH 7.0 ±0.5 before analysis.

II LABORATORY DEMONSTRATION OF ABILITY

The initial laboratory demonstration of ability requires that check samples of several known chloroform concentrations are prepared and run through the pH adjustment and analysis procedures. Check samples are prepared in triplicate at chloroform concentrations of 0.2 and 20 ppm. The check samples are prepared by acidifying water with HCl to a pH in the range of 1.5 to 2.0. Six sample bottles (125 mL with Teflon seals) are filled with the acidified water. The sample bottles are then spiked via a 25 mL syringe with a quantity of chloroform in methanol solution not to exceed 25 mL. The volume of the bottles must be accurately measured to determine the exact spike volume. For example, if the bottle volume is exactly 125 mL, then 16.9 μL of 1:1000 (by volume) chloroform in methanol solution could be used for the preparation of 0.2 ppm check samples and 16.9 μL of 1:10 (by volume) chloroform in methanol solution could be used for the preparation of the 20 ppm check samples. The needle is inserted all of its length into the bottle to inject the spike. Immediately after adding the spike the bottles are sealed and then chilled to 4°C before analysis.

Samples of the acidified water and methanol used to prepare the check samples must be analyzed along with the check samples. The chloroform concentrations of the blank acidified water and methanol must be less than 0.01 ppm and 10 ppm, respectively.

The pH of the check samples after adjustment must be between 6.5 and 7.5. The relative standard deviation of the measured chloroform concentration of each triplicate set of check samples must be less than 10 percent, and the average value must be within ±15 percent of the spike concentration.

III FIELD QUALITY ASSURANCE

Two quality control check samples with the chloroform concentrations unknown to the contractor or laboratory must be analyzed with each set of field samples. The check samples should be analyzed, and the results compared to the true values before proceeding with the analysis of the mill samples. These samples will be provided to the mills by the NCASI Southern Regional Center. These samples will be acidified and must be put through the pH adjustment and analysis procedures. One of the samples will have a low chloroform concentration (0.1 ppm to 1 ppm); the other sample will have a high chloroform concentration (10 ppm to 30 ppm). The measured pH of the samples after adjustment must be in the range of 6.5 to 7.5. The measured chloroform concentration of each sample must be within ±15 percent of the true concentration.

ANALYSIS METHOD FOR CHLOROFORM IN HEXANE EXTRACTS

This method is used for the analysis of the hexane extracts from air and liquid sampling. The analysis is performed on a gas chromatograph (GC) with electron capture detection. The GC operating conditions are as follows:

Carrier Gas: Ar 90%/Methane 10% at 6 mL/min

Temperature Program:

Step 1: 30°C for 1 min; then 5°C/min to 60°C
Step 2: 70°C/min to 145°C for 30 sec

Retention Time: about 6.5 min

Injector Temperature: 200°C

Detector Temperature: ECD 300°C

Column: J and W DB-624 30 m x 0.53 mm

METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE GASEOUS EMISSIONS

This method is based upon extractive sampling using midget impingers, sampling at a low sampling rate, ca. 200 mL/min. Greater sampling rates may be used with larger impingers. The sampling train includes a sample probe and withdrawal line which is an appropriate length, e.g., 3 m of 0.64 cm (0.25 in) od FEP Teflon tubing. This is connected at one end via either Galtek (Chaska, MN) 0.64 cm unions or short pieces of silicone tubing to a tapered stem 30 mL capacity midget impinger with 0.64 cm od inlet and outlet tubulatures (Southern Scientific, Micanopy, FL). Two identical impingers are connected in series behind the first. The third impinger contains silica gel as a dessicant, and its outlet tubulature is connected to the flow control/prime mover equipment.

Two methods may be employed for low flow rate sampling flow control. One method utilizes a dessicant column and a critical orifice downstream of the second impinger, followed by a vacuum pump capable of providing ca. 64 cm (25 in) of mercury vacuum. The orifice is calibrated prior to use, the vacuum at which critical flow is achieved is noted, and in use the high vacuum side of the orifice is always maintained at at least 13 cm (5 in) of mercury vacuum greater than this value. The flow rate at the probe tip is measured before and after sampling with a bubble tube flow meter, as impingers or other restrictive devices upstream of the critical orifice will cause the system flow rate to change from the value obtained during calibration with atmospheric pressure at the orifice inlet.

A second means of controlling flow during low flow rate sampling is to utilize EPA Method 25 evacuated sampling tanks to draw the sample and, via pre- and post-sampling pressure measurements, to measure its volume.

The first two impingers each contain 20 mL of potassium iodide (KI) solution, buffered with potassium dihydrogen phosphate (KH_2PO_4) and sodium hydroxide (NaOH), as follows:

Dissolve 20 g KI in ca. 900 mL deionized water
Add 50 mL of 1 M KH_2PO_4
Add 30 mL of 1 M NaOH

Measure pH of solution electrometrically and add 1 M NaOH to bring pH to between 6.95 and 7.05.

When sampling, measure the temperature and pressure in the vent being sampled. Assuming critical orifice flow controls, activate the sample draw equipment and measure the sampling flow rate at the probe tip with a bubble tube flow meter. Insert the probe

into the sample port and start a stopwatch. End the sampling (stop the watch) after 30 minutes, or after the color in the second impinger turns from pale yellow to a deeper straw color. After sampling, remove the probe from the vent, and with the probe tip elevated above the impingers, add ca. 5 mL deionized water to the probe so that this drains into the first impinger. Combine the contents of the impingers in a 100 mL beaker, and titrate with sodium thiosulfate solution (0.100 N or less concentrated, depending upon the quantity of iodine being titrated). Record the volume of titrant to the first endpoint (T_N, mL). Add 5 mL of 10 percent sulfuric acid solution, and continue the titration to the second endpoint. Record the total volume of titrant required to go through the first and to the second endpoint (T_A, mL).

To calculate moles of chlorine and moles of chlorine dioxide captured employ the formulas:

$$EqI_2N = (T_N)(10^{-3})(\bar{N})$$

$$EqI_2A = (T_A)(10^{-3})(\bar{N})$$

$$ClO_2 \text{ moles} = 1/4\ EqI_2A - 1/4\ EqI_2N$$

$$Cl_2 \text{ moles} = 1/8\ (5\ EqI_2N - EqI_2A),$$

where EqI_2N and EqI_2A are equivalents of iodine determined in the neutral and (total) acid titrations, respectively, and $\bar{N}$ is the normality of the sodium thiosulfate solution. Calculate gas phase concentrations of ClO_2 and Cl_2 employing standard EPA calculations. Assume gas phase water saturation in most vents.

VALIDATION OF THE METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE IN BLEACH PLANT VENTS

The method was tested for precision and bias as suggested by the Draft EPA Protocol for method validation (EPA Contract No. 69-02-4550, Work Assignment 300, June 1990). The results of bias and precision testing as per the protocol are summarized in Tables 1 and 2, respectively.

Table 1 summarizes the results of bias testing. The bias testing is performed by simultaneous sampling with four trains, two of which are spiked prior to sampling with 2 mL of potassium iodate solution. Spike recovery is calculated by comparing the results obtained from the two spiked trains to the two unspiked trains. The protocol specifies that the test be conducted at low, mid-range, and high spike concentrations. In this testing, the spike recoveries at the low, mid-range, and high concentrations were good, with spike recoveries of 102, 100, and 101 percent, respectively. The average bias was +1 percent which compares very well to the draft EPA guidance of a maximum of ±5 percent bias.

Table 2 summarizes the results of precision testing. The protocol specifies that three runs with four replicates be conducted on the same source. If the precision data are homogenous, the overall method precision is calculated by pooling the relative standard deviations from the three runs. If the data are not homogenous, the highest standard deviation is used as the precision of the method. In this case the precision data were not homogenous, so the precision of the method is the highest standard deviations which were 14.5 percent for chlorine and 1.4 percent for chlorine dioxide. These numbers fall into the category of the EPA protocol which says that if the relative standard deviation is ≤15 percent then a single sampling train is sufficient for the measurement.

In summary, this method is performing very well relative to bias and precision, as per the standards of the draft EPA protocol.

TABLE 1 BIAS TESTING OF SOURCE CHLORINE AND CHLORINE DIOXIDE MEASUREMENT METHOD

SOURCE	SPIKE LEVEL, EQ.	UNSPIKED SAMPLES Neutral Eq.	Acid Eq.	Cl_2, ppm	ClO_2, ppm	SPIKED SAMPLE ACID EQ.	SPIKE RECOVERY, PERCENT
E Washer Hood	0.00560	0	0	0	0	0.00569	102
#1 CEHD Seal Tank Vent	0.05600	0.01277	0.04862	10.1	47.8	0.10460	100
#2 CEHD Seal Tank Vent	0.5600	0.12472	0.35404	460	783	0.91689	101

TABLE 2 PRECISION TESTING OF SOURCE CHLORINE AND CHLORINE DIOXIDE MEASUREMENT METHOD

REPLICATE ID	CHLORINE, ppm			CHLORINE DIOXIDE, ppm		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
A	56.5	18.4	29.8	179	90.2	91.5
B	40.3	14.0	29.1	182	90.9	90.3
C	46.6	16.5	23.7	181	92.0	93.1
D	52.6	15.6	26.4	185	89.9	92.4
Mean	49.0	16.1	27.3	182	90.8	91.8
Standard Deviation	7.1	1.84	2.78	2.50	0.93	1.21
Relative Standard Deviation, Percent	14.5	11.4	10.2	1.4	1.0	1.3

FIELD AND LABORATORY QUALITY CONTROL CHECK METHODS FOR USE WITH THE IODOMETRIC METHOD FOR MEASURING CHLORINE AND CHLORINE DIOXIDE IN PULP BLEACH PLANT VENTS

I INTRODUCTION

A quality control check procedure for the iodometric method for measuring chlorine and/or chlorine dioxide in pulp bleach plant vents was requested by NCASI member company representatives. The resulting check method is an uncomplicated test which uses weighed potassium iodate in a known quantity, and utilizes the same reagents as the method for chlorine and chlorine dioxide vent sampling as described in NCASI Technical Bulletin No. 520 (1). It allows mill staff or their contractors a means of checking their methodology and reagent integrity.

Quality control testing should be carried out in two areas of method use: in-laboratory and in-field testing carried out prior to bleach plant vent analysis. The potassium iodate recovery method discussed here may be used identically for both areas. Because potassium iodate releases iodine only upon acidification, direct recovery calculations (e.g., as ppm ClO_2) cannot be made: instead, the number of equivalents of iodine measured is the quantity determined.

In-laboratory testing conducted prior to bleach plant vent analyses may utilize potassium iodate recovery check samples prepared by a mill laboratory, or by a contractor. For the particular purpose for which this protocol was assembled, i.e., bleach plant vent testing by NCASI member companies in Alabama, the Southern Regional Center of NCASI will provide potassium iodate field recovery check samples to the mills, which they may utilize in their own testing, or in contractor testing. When used for the latter, it is suggested that the concentration of the iodate solution remain unknown to the contractor prior to testing.

II SUMMARY OF QUALITY CONTROL CHECK PROCEDURE

The procedure for vent gas chlorine and chlorine dioxide analyses described in NCASI Technical Bulletin No. 520 employs sample collection in two midget impingers containing neutral, buffered potassium iodide solution. After sample collection, the contents of the impingers are combined and titrated with standard sodium thiosulfate solution to a colorless endpoint. After recording the volume of titrant to this first endpoint, the solution being analyzed is acidified with sulfuric acid solution, and the titration is continued to a second endpoint indicated by a colorless solution. (Starch solution may be employed to detect the second endpoint.) The total titer (volume to first plus second endpoints) is recorded.

The equations employed to calculate moles of chlorine and moles of chlorine dioxide captured and titrated are as follows:

$$EqI_2N = (T_N)(10^{-3})(\overline{N})$$

$$EqI_2A = (T_A)(10^{-3})(\overline{N})$$

$$ClO_2 \text{ moles} = \tfrac{1}{4}EqI_2A - \tfrac{1}{4}EqI_2N$$

$$Cl_2 \text{ moles} = 1/8(5EqI_2N - EqI_2A),$$

where T_N and T_A are the volumes of thiosulfate of normality $\overline{N}$ required to reach the first and second (total) endpoints, respectively; and EqI_2A and EqI_2N are the number of equivalents of iodine titrated at acid (total acid and neutral titer) and neutral pH. For example, considering a dry vent and conditions such that 1 mole of gas = 24.0 L, collecting a gas sample for 30 minutes at 0.200 L/min, with T_N = 1.25 mL and T_A = 6.25 mL of 0.010 N sodium thiosulfate solution,

$$EqI_2N = (1.25)(10^{-3})(10^{-2}) = 1.25 \times 10^{-5}$$

$$EqI_2A = (6.25)(10^{-3})(10^{-2}) = 6.25 \times 10^{-5}$$

$$ClO_2 \text{ moles} = \tfrac{1}{4}(6.25 \times 10^{-5}) - \tfrac{1}{4}(1.25 \times 10^{-5}) = 1.25 \times 10^{-5}$$

$$Cl_2 \text{ moles} = 1/8[5(1.25 \times 10^{-5}) - 6.25 \times 10^{-5}] = 0$$

$$\text{ppm } ClO_2 = \frac{(1.25 \times 10^{-5} \text{ moles})(24 \text{ L/mole}) \times 10^{6}}{(0.200 \text{ L/min})(30 \text{ min})} = 50$$

Employing this example to illustrate the quality control check procedure, a sampling train is assembled, and an aliquot of 2.0 mL of 0.028 N potassium iodate solution is added to the first impinger. The impinger contents are combined and acidified, and the total acid titer is recorded, in this example 5.5 mL of 0.010 N sodium thiosulfate solution. Recovery of the check standard is

$$\frac{(5.5)(10^{-3})(10^{-2})}{(2.0)(10^{-3})(2.8 \times 10^{-2})} \times 100 = 98\%.$$

It should be pointed out that the total number of acid equivalents measured in the recovery check (5.5×10^{-5}), is similar to the total number of acid equivalents measured in the analyses of the vent gas (6.25×10^{-5}). If possible, recovery check samples should be used which contain the same order of magnitude of equivalents as the acid titer of the analyses to be carried out.

III PREPARATION AND ANALYSIS OF THE QUALITY CONTROL CHECK SAMPLE

The potassium iodate check sample is prepared and analyzed as follows:

Reagent Preparation

0.280 N Potassium Iodate - Dissolve 1.00 g KIO_3, which has been dried at 103 ± 2°C for one hour, in 100 mL deionized H_2O. For field evaluation, take aliquots of this reagent, which can be stored in clean polypropylene bottles for one week.

Buffered Potassium Iodide - Dissolve 20 g potassium iodide in ca. 900 mL deionized water. Add 50 mL of 1 M potassium dihydrogen phosphate (1 M KH_2PO_4 = 13.6 g/100 mL) and 30 mL of 1 M sodium hydroxide (1 M NaOH = 4.0 g/100 mL). Measure pH and add 1 M NaOH to bring the pH to between 6.95 and 7.05.

0.100 N Sodium Thiosulfate - Normality may vary slightly, but must be standardized and recorded. Standardize as per Standard Methods, 17th ed., p. 4-49.

Starch Solution - Make a paste of ca. 5 g soluble starch and a few mL deionized water and grind as with a mortar and pestle. Add this to ca. 500 mL hot deionized water, and mix well. Cool before using.

10 percent sulfuric acid, by volume. (Add acid to water.)

Analysis Procedure Example

Add a 10.0 mL 0.280 N KIO_3 aliquot to 50 mL buffered KI in a 150 mL beaker. Rinse the KIO_3 container with a small amount of water and add to the beaker, to make sure it has all been transferred. Add 5 mL 10 percent H_2SO_4, and titrate with 0.1 N sodium thiosulfate while stirring until the dark orange color turns medium yellow. Add a few mL of the starch solution, and slowly continue titrating until the blue color disappears. Solve the following equation:

(L titrant)(normality of titrant) = equivalents in QC sample titrated.

The result should be 2.80 x 10^{-3} equivalents.

Analysis Results

In laboratory trials, 27.90, 27.95, and 27.95 mL of 0.0999 N $Na_2S_2O_3$ were used to titrate a 10.0 mL aliquot of 0.280 N KIO_3, for an average of 2.79 x 10^{-3} equivalents, which is 99.7 percent of the predicted recovery. In three trials in which the aliquots were stored five days in polypropylene bottles, the results were 28.0, 28.0, and 27.95 mL of 0.0999 N thiosulfate, an average of 2.795 x 10^{-3} equivalents, which is 99.8 percent recovery.

IV RECOVERY OF THE CHECK SAMPLE

Until more extensive field recovery data are available, acceptable recovery of the check sample should be 100 ±10 percent.

V REFERENCE

(1) "Optimization and Evaluation of an Impinger Capture Method for Measuring Chlorine and Chlorine Dioxide in Pulp Bleach Plant Vents," NCASI Technical Bulletin No. 520, NCASI, 260 Madison Avenue, New York, NY 10016 (April, 1987).

APPENDIX A

METHOD FOR UTILIZING THE CHLORINE AND CHLORINE DIOXIDE RECOVERY CHECK SAMPLE

Refer to Section II of this report for an example of the use of the recovery check sample.

Bleach plant vent gas sampling and analysis for chlorine and chlorine dioxide shall be conducted according to the method of NCASI Technical Bulletin No. 520. One analysis of the vent gas sample shall be conducted prior to the recovery demonstration to ascertain the approximate concentration of the vent gases. The total acid equivalents of the sample shall be determined under the conditions of sampling flow rate and time to be employed, and this information shall be provided to the mill's quality control representative responsible for providing the recovery check sample to the testing personnel.

The sampling train is assembled, and the recovery check sample is added to the potassium iodide solution in the first impinger in the train. The impinger contents are combined in the prescribed manner and analyzed by titration with sodium thiosulfate solution. The sample train contents containing the recovery check sample are acidified and titrated at acid pH only.

Calculate recovery of the check sample according to the following:

$$\frac{(\text{mL acid titer})(10^{-3})(\text{normality thiosulfate})}{(\text{mL QC check sample})(10^{-3})(\text{normality QC check sample})} \times 100$$

The BACT limits for the proposed modification of the Champion International Corporation's facility are thereby established as follows:

Source	Pollutant	Emission Standard/Limitation
#6 Power Boiler	NO_x*	0.06 lb/MMBtu (32.0 lbs/hr,140.1 TPY)
	CO*	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs*	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx*	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
	VOCs*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

* 24-hour average

Note: The maximum sulfur content of the #6 fuel oil is 1.0%, by weight.

Details of the Analysis May be Obtained by Contacting:

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

Recommended by:

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

3/28 1994
Date

Approved by:

Virginia B. Wetherell
Virginia B. Wetherell, Secretary
Dept. of Environmental Protection

3-31 1994
Date

Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

RECEIVED
DEC 18 1995
BUREAU OF AIR REGULATION

DECEMBER 14, 1995

H. James Spahr
Environmental Engineer
Champion International Corp.
Post Office Box 87
Cantonment, Florida 32533-0087

Dear Mr. Spahr:

This is a response to your 12/11 letter requesting two minor changes to Permit Number AC17-223343 that was issued by the Department to cover the construction of a steam generating power boiler and a lime kiln/mud dryer system.

Your first request was that the fuels specified for the lime kiln/mud dryer system be changed to include a No. 4 recycled fuel oil that is currently being used to fire the recovery boilers and the lime calciner. It is our understanding that fuel oil is only used as a back-up fuel for natural gas in case there is a natural gas curtailment due to adverse weather conditions. Also, your letter stipulated that the No. 4 fuel oil blend contains some on-spec recycled oil.

Your second request relates to the concern that the permit contains references for two averaging periods for determining compliance with nitrogen oxides (NOx) standards. Your request was that you be permitted to meet only the requirements of the more stringent averaging period in order to simplify record keeping. This would eliminate the calculating of a 30-day rolling average and require that you maintain only the more stringent 24-hour average of hourly NOx levels.

Your requests are reasonable and are granted. The use of No. 4 fuel oil would essentially replace No. 6 fuel oil as specified by the permit and would be expected to reduce emissions to the atmosphere. In addition, it has been the Department's position to encourage the proper use of recycled on-spec fuel oil. In the interest of paperwork reduction it is also the Department's position to eliminate redundant record keeping.

All other specific conditions of this permit remain unchanged.

This letter shall be attached to and made a part of Permit Number AC 17-223343.

Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:emc
cc: Clair Fancy, DEP Division of Air Resources Management

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

December 7, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. H. James Spahr
Environmental Engineer
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533 - 0087

Dear Mr. Spahr:

RE: Extension of Permit No. AC 17-223343 (PSD-FL-200)

This letter is in response to your November 21, 1995, request for extension of the referenced permit.

Rule 62-213.420(1)(a)4, Florida Administrative Code (as revised on October 11, 1995), extends the expiration date of all air construction permits for Title V sources that expire between September 1, 1995, and November 1, 1996. The expiration date of the referenced permit is extended to June 15, 1996, by this rule. No other action is required by the Department or the permittee to extend this construction permit.

If you have any questions on this matter, please call Willard Hanks at (904) 488-1344.

Sincerely,

A. A. Linero
Administrator
New Source Review Section

CF/wh/t

cc: E. Middleswart, NWD

Fold at line over top of envelope to the

Is your RETURN ADDRESS completed on the reverse side?

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I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
H. James Spahr, Env Eng
Champion Int'l Corp
P O Box 87
Cantonment, Fl
32533-0087

4a. Article Number
Z 127 632 588

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

CANTONMENT FL 32533 USPS DEC 11 1995

7. Date of Delivery

5. Signature (Addressee)
X

6. Signature (Agent)
R. Retna

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

PS Form **3811**, December 1991 ★U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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UNITED STATES POSTAL SERVICE

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Sent to H James Spahr	
Street and No. Champion Int'l	
P.O., State and ZIP Code Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12-7-95 AC17-223343 PSD-FI-200	

PS Form **3800**, March 1993

Best Available Copy

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

December 7, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. H. James Spahr
Environmental Engineer
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533 - 0087

Dear Mr. Spahr:

RE: Modification of Permit No. AC 17-223343, PSD-FL-200
Kiln-Mud Dryer/No. 6 Power Boiler

The Department acknowledges receipt of your November 21 letter withdrawing the request to modify the referenced permits. This withdrawal is accepted and the Department has ceased processing this request. Should Champion International Corporation choose to burn No. 4 fuel oil in the kiln-mud dryer or chose to report the nitrogen oxides emissions in a different manner than is required by the referenced permits, a new request for modification will need to be submitted to this office.

If you have any questions on this matter, please call Willard Hanks at (904) 488-1344.

Sincerely,

A. A. Linero
Administrator
New Source Review Section

CHF/wh/t

cc: E. Middleswart, NWD
J. Harper, EPA
J. Bunyak, NPS

Fold at line over top of envelope

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- Complete items 3, and 4a & b.
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I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
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Consult postmaster for fee.

3. Article Addressed to:
H James Spahr, Env Eng
Champion Int'l Corp
PO Box 87
Cantonment, Fl 32533-0087

4a. Article Number
Z 127 632 589

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

7. Date of Delivery
DEC 14 1995
CANTONMENT

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

5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, December 1991 ★U.S. GPO: 1993—352-714 DOMESTIC RETURN RECEIPT

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Do not use for International Mail
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Sent to H James Spahr	
Street and No. Champion Int'l	
P.O., State and ZIP Code Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12-7-95 AC 17-223343 PSD-FI-200	

PS Form 3800, March 1993

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

BEST AVAILABLE COPY

RECEIVED
NOV 28 1995
BUREAU OF
AIR REGULATION

Clair
11/27
11/28 ~~AL~~
pls handle
Clair

Champion
Champion International Corporation

~~Willard~~

November 21, 1995

Howard Rhodes
Director, Division of Air Programs
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Rhodes:

Champion International Corporation's Pensacola Mill is currently undertaking a major mill modification project as a part of the mill's Wastewater Consent Order. This project is permitted under air construction permit AC 17-223343, PSD-FL-200. The expiration date of this permit is December 31, 1995. Champion anticipates that this project will not reach completion by December 31, 1995.

Champion requests an extension of the expiration date for permit AC 17-223343, PSD-FL-200 to coincide with the date of submittal for the Pensacola Mill's Title V Permit Application. At that time the Pensacola Mill will be required to comply with the conditions specified in the Title V Permit Application. Until that time the mill would continue to operate within the conditions specified in the air construction permit, AC 17-223343, PSD-FL-200. This would preclude the need to write an interim air operating permit for the affected sources for the time period between the expiration date of the air construction permit and submission of the Title V Permit Application.

In order to comply with specific condition F.7. of the air construction permit, Champion will submit certification of construction completion and the required compliance test reports. Submission of a Title V Permit Application would constitute proper application for an operation permit.

Champion believes this arrangement will simplify the transition process from air construction permit to air operating permit for the affected sources. Your timely response to this request is appreciated. If you have any questions or concerns please contact me at (904) 968-2121 x3833.

Sincerely

H. James Spahr

H. James Spahr
Environmental Engineer

RECEIVED
NOV 27 1995
DIVISION OF AIR
RESOURCES MANAGEMENT

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

~~Willard~~

RECEIVED

28 1995

BUREAU OF
AIR REGULATION

Clair
11/27

11/28 AL
pls note they have withdrawn request that we said needs public notice
Clair

Champion
Champion International Corporation

November 21, 1995

Howard Rhodes
Director, Division of Air Programs
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Notice of Intent to Issue Permit Amendment, Permit No. AC 17-223343, PSD-FL-200, Lime Kiln/Mud Dryer & No. 6 Power Boiler

Dear Mr. Rhodes:

With this letter, Champion International Corporation withdraws its request for modifications to Air Construction Permit No. AC 17-223343, PSD-FL-200 as requested in separate letters dated June 13, 1995 and June 27,1995 and as proposed by FDEP in the Notice of Intent to Issue dated 8/29/95.

If you have any questions or comments please contact me at (904) 968-2121 x3833. Thank you for your timely response to this action.

Sincerely,

H. James Spahr

H. James Spahr
Environmental Engineer

Cc: Joe Deschene
Phil Ferguson
Kyle Moore
Janet Price
Willie Tims
Steve Webb
E00.D01
E09.E23

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NOV 27 1995

DIVISION OF AIR
RESOURCES MANAGEMENT

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 25, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. H. James Spahr, Environmental Engineer
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533

Dear Mr. Spahr:

Re: Modification of Permit No. AC 17-223343, PSD-FL-200
Kiln-Mud, Dryer/No. 6 Power Boiler

Enclosed is an Intent to Issue, a public notice for the modification of the referenced permits, and a draft of the letter modifying the permit's continuous emissions monitoring requirement and authorizing the burning of No. 4 fuel oil (containing on-spec used oil) in the kiln-mud dryer at your Kraft pulp mill located in Cantonment, Escambia County, Florida.

You must publish the Public Notice one time in a newspaper having circulation in Escambia County. The approval of the modification of this permit is contingent on the resolution of any response to the public notice by persons whose substantial interest are affected by the proposed changes.

If you have any questions, please call Willard Hanks at (904) 488-1344 or send your written comments to Mr. A. A. Linero, P.E., at the above address.

Sincerely,

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

CHF/wh/t

Enclosure

cc: E. Middleswart, NWD
J. Harper, EPA
J. Bunyak, NPS

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

Consult postmaster for fee.

3. Article Addressed to:
Mr. H James Spahr, EE
Champion Int'l Corp
P.O. Box 87
Cantonment, Fl
32533

4a. Article Number
Z 392 979 036

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

7. Date of Delivery
8-31-95

5. Signature (Addressee)
Pat Dunn

6. Signature (Agent)
Champion

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

PS Form 3811, December 1991 ★U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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

UNITED STATES POSTAL SERVICE

Sent to H. James Spahr	
Street and No. Champion Int'l	
P.O., State and ZIP Code Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 8-29-95 AC17-223343 PSD-Fl-200	

PS Form 3800, March 1993

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit Amendment

DEP File Nos. AC17-223343
PSD-FL-200
Escambia County

Mr. H. James Spahr, Environmental Engineer
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533-0087

______________________________/

INTENT TO ISSUE

The Department of Environmental Protection gives notice of its intent to issue a construction permit modification (copy attached) for the proposed project as detailed in the application/request specified above and for the reasons stated below.

The applicant, Champion International Corporation, applied on June 13 and June 23, 1995, to the Department of Environmental Protection for a modification to their air construction permit for the Kraft pulp mill located in Cantonment, Escambia County, Florida. The modification will specify that the nitrogen oxides continuous emissions monitoring data is to be reported on an 24-hour average basis instead of a 30-day rolling average and authorize the burning of No. 4 fuel oil (containing on-spec used oil) in the lime mud dryer.

The modification is not subject to the Prevention of Significant Deterioration (PSD) Review and does not require a Best Available Control Technology (BACT) determination.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a permit amendment is required for the proposed change.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit Amendment. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit amendment.

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

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

The Petition shall contain the following information;

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **INTENT TO ISSUE PERMIT MODIFICATION** all copies were mailed by certified mail before the close of business on 8-29-95 to the listed persons.

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

Clerk 8-29-95
Date

Copies furnished to:

E. Middleswart, NWD
J. Harper, EPA
J. Bunyak, NPS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT

PSD-FL-200
AC17-223343

The Department of Environmental Protection gives notice of its intent to issue a modification for construction permit Nos. AC17-223343 and PSD-FL-200 to Champion International Corporation for their Kraft pulp mill located in Cantonment, Escambia County, Florida. The modification will specify that the nitrogen oxides continuous emissions monitoring data for the No. 6 Power Boiler is to be reported on a 24-hour average basis instead of a 30-day rolling average and that No. 4 fuel oil (containing on-spec used oil) may be burned in the kiln- mud dryer.

The modification is not subject to the Prevention of Significant Deterioration (PSD) regulation which would require a Best Available Control Technology (BACT) determination.

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

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

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

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Northeast District
160 Governmental Center
Pensacola, Florida 32501-5794

Any person may send written comments on the proposed action to Administrator, New Source Review Section, at the Department's Tallahassee address. All comments received within 14 days of the publication of this notice will be considered in the Department's final determination.

September XX, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. H. James Spahr, Environmental Engineer
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533-0087

Dear Mr. Spahr:

Re: Modification of Permit No. AC 17-223343, PSD-FL-200
Kiln-Mud Dryer/No. 6 Power Boiler

The Department has reviewed your June 27 letter requesting a modification to the referenced permit for the nitrogen oxides testing and reporting requirements for the No. 6 power boiler and Mr. Steve Webb's June 13 letter requesting a modification for the fuel limitations for the kiln mud dryer. The request is to allow the nitrogen oxides continuous emissions monitoring data to be reported on a 24-hour average basis instead of a 30-day rolling average and to authorize the burning of No. 4 fuel oil (containing on-spec used oil) in the lime mud dryer.

The Department has reasonable assurance that the No. 6 Power Boiler is in compliance with the new source performance standard NOx emissions limitation of 0.10 lbs/MMBtu, 30-day rolling average, if it is continuously meeting the Department's Best Available Control Technology (BACT) standard of 0.06 lbs/MMBtu, 24-hour average. Burning No. 4 fuel oil containing on-specification used oil with a maximum of 1.0 percent sulfur by weight and less than 2 ppm polychlorobiphenyls (PCB), provided all restrictions in Chapter 62-210, F.A.C., and 40 CFR 279 are met, will be in compliance with the state regulations. Additional permit conditions are required to confirm compliance with these requirements.

The permit is modified as follows:

<u>From</u>

A. <u>No. 6 Power Boiler (PB)</u>

8. Any required compliance testing shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
b) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.
f) Upon initial start-up, testing shall be conducted for NOx, CO, VOC, and VE.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

9. Emission monitoring for nitrogen oxides shall be in accordance with 40 CFR 60.48b (July 1991 version).

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.46b (July 1991 version).

B. <u>Lime Kiln - Mud Dryer System</u> (LK-MDS)

1. Operation permit No. AO17-181738 is incorporated by reference except for the following changes and/or additions.

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media;

d. after construction/modification is completed Champion will develop a testing protocol which includes a proposed test schedule to establish scrubber operating parameters and monitoring methods to meet the applicable SO_2 and TRS limits for the LK-MDS.

e. the test protocol will be submitted to the Department's Northwest District office prior to conducting the test program; and,

f. the maximum allowable operating rate of lime product (90% CaO) will be increased from 13.67 to 20.83 tons per hours.

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx*	No. 6 fuel oil:	200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural gas:	175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY	
CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)	
VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)	
TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)	
SO_2	6.49 lbs/hr, 28.4 TPY	
VE	< 20% opacity	

* 24-hour average
** 12-hour average

Note:
- o Maximum of 500 tons/day lime product (90% CaO);
- o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and
- o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm

h. while firing No. 6 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version).

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

i. while firing natural gas, initial and subsequent compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

TO

A. No. 6 Power Boiler (PB)

8. **Except as noted in Specific Condition No. 9,** any required compliance testing **and continuous emissions monitor quality assurance** and **certification testing required pursuant to 40 CFR 60, Appendix F**, shall be conducted using the following test methods in accordance with F.A.C. Rule 62-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
b) EPA Method **7, 7A,** or 7E for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.

e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.
f) Upon initial start-up, testing shall be conducted for NOx, CO, VOC, and VE.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 62-297.620.

9. Emission **compliance and** monitoring determination for nitrogen oxides shall be in accordance with **40 CFR 60.46b(e) (continuous emission monitor data used to determine compliance with the NOx standard)** and 40 CFR 60.48b (July 1991 version) **except that emissions compliance/exceedances shall be based on a 24-hour time period. Demonstrating compliance with the NOx standard of 0.06 lbs/MMBtu, 24-hour averaging, precludes the need to show compliance with the new source performance standard of 0.10 lbs/MMBtu, 30-day rolling average.**

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.49b (July 1991 version) **except that emissions/ exceedances shall be based on a 24-hour time period. The 24-hour average nitrogen oxides emission rates (lbs/MMBtu) shall be calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rate for the proceding 24-hour. The steam generating unit operating days when the calculated 24-hour average nitrogen oxides emission rate exceeded 0.06 lbs/MMBtu shall be identified and the reason for the excess emissions as well as the corrective action taken shall be reported to the Department Northwest District office.**

B. <u>Lime Kiln - Mud Dryer System</u> (LK-MDS)

1. Operation permit No. AO17-181738 is incorporated by reference except for the following changes and/or additions.

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media;

d. after construction/modification is completed Champion will develop a testing protocol which includes a proposed test schedule to establish scrubber operating parameters and monitoring methods to meet the applicable SO_2 and TRS limits for the LK-MDS.

e. the test protocol will be submitted to the Department's Northwest District office prior to conducting the test program; and,

f. the maximum allowable operating rate of lime product (90% CaO) will be increased from 13.67 to 20.83 tons per hours.

g. the pollutant emissions from the LK-MDS shall not exceed:

NOx*	**No. 4 & 6 fuel oils:**	200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural gas:	175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY	
CO*	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)	
VOC*	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)	
TRS**	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)	
SO_2	6.49 lbs/hr, 28.4 TPY	
VE	< 20% opacity	

* 24-hour average
** 12-hour average

Note:
- o Maximum of 500 tons/day lime product (90% CaO);
- o Maximum sulfur content of the **Nos. 4 & 6** Fuel **Oils** are 1.0%, by weight; and
- o Concentration limits and allowable pound per hour emission rates are based on a maximum design volumetric flowrate of 34,383 dscfm

h. while firing fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 62-297 and 40 CFR 60, Appendix A (July 1991 version).

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.

3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 62-297.620.

i. while firing natural gas, initial and subsequent compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7D or 7E, for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources; or, EPA Method 6C Determination of Sulfur Dioxide Emissions from Stationary Sources, may be used;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 62-297.620.

j. In order to be considered on-specification, the used oil shall meet the following specifications [40 CFR 279, Subpart B]:

1) Arsenic shall not exceed 5.0 ppm;
2) Cadmium shall not exceed 2.0 ppm;
3) Chromium shall not exceed 10.0 ppm
4) Lead shall not exceed 100.0 ppm;
5) Total halogens shall not exceed 1,000 ppm;
6) Flash point shall not be less than 100.0 degrees F

Off-site generated used oil shall meet the above specifications prior to deliver to the facility.

k. Used oil containing a PCB concentration of 2 or more ppm shall not be burned in this source. Used oil shall not be blended to meet this requirement. On-specification used oil with a PCB concentration of less than 2 ppm shall be burned only at normal source operating temperatures; it shall not be burned during periods of startup or shutdown.

Prior to burning used oil with a PCB concentration of less than 2 ppm, provide the marketer with a one time written notice certifying that the used oil will be burned in a qualified combustion device (40 CFR 279.61 and 40 CFR 260.10).
[40 CFR 761 Subparts A, B, and D]

l. In order to document compliance with the above requirements:

1) Each batch of used oil to be burned shall be sampled and analyzed* for the following:

Constituent/Property	Unit	Test Method
Cadmium	ppm	EPA SW-846 (3040-7130)
Arsenic	ppm	EPA SW-846 (3050-7061)
Chomium	ppm	EPA SW-846 (3040-7190)
Lead	ppm	EPA SW-846 (3040-7420)
Total Halogens	ppm	ASTM E442
PCB**	ppm	EPA SW-846 (3665-8080)
Sulfur	%	ASTM D129-64, D1552-83, D2622-87 or D1266-87
Flash Point	°F	ASTM D93
Heat of Combustion	Btu/gal	D287
Density	lbs/gal	

*Certified analytical results from the fuel oil supplier or sampling/analysis by the permittee.

**A claim that used oil does not contain quantifiable levels (2 ppm or greater) or PCBs must be documented by analysis or other information. The first person making the claim that the used oil does not contain PCBs is responsible for furnishing the documentation. The documentation can be tests, personal or special knowledge of the source and composition of the used oil or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

A copy of this letter shall be attached to the referenced air construction permit and shall become a part of that permit.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/wh/t

Enclosure: Champion letters dated June 13, 1995
and June 27, 1995

cc: E. Middleswart, NWD
J. Harper, EPA
J. Bunyak, NPS

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

H. James Spahr
Champion International Corp.
PO Box 87
Cantonment, FL 32533-0087

June 27, 1995

Mr. Clair Fancy, P.E.
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

A new gas fired, steam generating power boiler, the # 6 Power Boiler, has been constructed at Champion International Corporation's Pensacola Mill as part of the consent order project. This boiler is permitted under permit number AC 17-223343, PSD-FL-200. Construction of this boiler commenced on 27 March 1995. Initial startup of the boiler was on 16 June 1995.

We have a concern about the compliance and performance test methods and emission monitoring requirements for NO_x for this boiler. Specific condition A.5. of the construction permit states:

> "The No.6 PB is subject to all applicable standards of 40 CFR 60, Subpart Db"

Within this subpart §60.46b(e)(1) states:

> "For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period."

Also within this subpart, §60.49b(g)(3) and (g)(4) state:

> "Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:...
>
> ...The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days" and
>
> "Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken..."

The NO_x emission standard under §60.44b(a) for this boiler is 0.1 lb./MMBtu and §60.44b(i) states:

"...compliance with the emission limits under this section is determined on a 30-day rolling average basis."

However, Specific Condition A.7. of the construction permit states:

"The No. 6 PB's pollutant emissions shall not exceed:

NO_x* 0.06 lb/MMBtu...

...* 24-hour average"

This limit is based on a BACT determination and is more stringent both in emission rate and averaging period than the subpart Db limits. Therefore we request that we be permitted to use a 24 hour average emission rate calculated as the average of all hourly emissions data recorded by the monitoring system during the 24 hour test period for our initial performance test in lieu of the requirements under §60.46b(e)(1). We also request that we be permitted to maintain records of:

the 24 hour average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 24 hours and

identification of the steam generating unit operating days when the calculated 24 hour average nitrogen oxides emission rates are in excess of 0.06 lb/MMBtu, with the reasons for such excess emissions as well as a description of corrective actions taken,

in lieu of the requirements of §60.49b(g)(3) and (g)(4).

If you have any questions or comments concerning these requests please contact me. The deadline for performance testing for this boiler is not far off so a timely response to this request would be greatly appreciated. Thank you.

Sincerely,

H. James Spahr
Environmental Engineer

Cc: Charles Ayer
Kyle Moore
Willie Tims
Steve Webb
E09.E24

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

RECEIVED
JUN 19 1995
Bureau of
Air Regulation

Mr. Bruce Mitchell
State of Florida
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

June 13, 1995

Mr. Mitchell,

By this letter, Champion International would like to request a minor change affecting the lime kiln-mud dryer system being constructed under permit AC17-223343.

In part B of the specific conditions, items g and h refer to the firing of No. 6 fuel oil. We would like to expand this to include No. 4 fuel oil. The No. 4 fuel oil is an on specification recycled oil that contains less than one percent sulfur, typically 0.5%. The No. 4 oil is a blended oil specified for use in burners requiring No. 6 fuel oil. Permit limits applicable when firing No. 6 fuel oil will still be adhered to when firing the No. 4 fuel oil. A copy of the oil specifications is attached for your review.

Your timely response is greatly appreciated.

Sincerely,

Steve Webb

Steve Webb

SW/tmc

Standard Specifications for FUEL OILS Produced by:

PENSACOLA POLLUTION CONTROL INC.

NO. 4 RECYCLED FUEL OIL: An On Specification blend of lube oils, hydraulic oils and turbine oils blended for use in burners requireing No.2 thru No. 6 fuel oils.

Viscosity	/ Flashpiont	/ ash%	/ sulphur% /	B.T.U. per gal
NO.4: (45) (125)	190deg/f	.08	.50	144,310

On Specification fuel oil shall not exceed the specification set forth in 40 CFR part 266.44.

ANSENIC	5 ppm max.
CADMIUM	2 ppm max.
CHROMIUM	10 ppm max
LEAD	100 ppm max
FLASH POINT	100 deg/F MIN.
TOTAL HALOGENS	1,000 ppm max.
P.C.B.'s	2 ppm max.

Off Specification fuel oil may exceed any of the above parameters and may be subject to 40 CFR 266."118/.

Department of Environmental Protection

FLORIDA

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florid-

Virginia B. Wetherell
Secretary

June 20, 1995

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Steve Webb
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533-0087

Dear Mr. Webb:

The Bureau of Air Regulation received your June 13, 1995, request to modify a permit issued to Champion International Corporation. Before we can begin processing your request, we will need a $250 processing fee for the permit modification. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

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

CHF/kw

cc: Bruce Mitchell

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy

FROM: Al Linero *aa Lin 8/25*

DATE: August 25, 1995

SUBJ: Modification of Permit
Champion International Corporation

Attached is an Intent to Issue, Public Notice, and letter modifying a permit (draft). The modification will allow Champion International Corporation of Cantonment, Florida, to report the nitrogen oxides (NOx) continuous emissions monitoring data on a 24-hour average basis instead of the 30-day rolling average specific in the new source performance standard (NSPS). The modification will also allow the burning of No. 4 fuel oil (contains "on-spec" used oil) in the kiln-mud dryer.

The 24-hour NOx standard in the Department's BACT is more restrictive than the NSPS. There is no change in the allowable heat input or emissions caused by No. 4 fuel oil being burned in the kiln mud dryer. The standard requirements from 40 CFR 279, Subpart B pertaining to on-spec used oil have been incorporated into the permit.

AAL/wh/t

attachments

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

1 ~~Kinari~~
~~2 Kim~~
No need to cc: Bruce any more since this is not his area anymore. CL

June 20, 1995

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Steve Webb
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533-0087

Dear Mr. Webb:

The Bureau of Air Regulation received your June 13, 1995, request to modify a permit issued to Champion International Corporation. Before we can begin processing your request, we will need a $250 processing fee for the permit modification. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

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

CHF/kw

cc: Bruce Mitchell

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

RECEIVED
JUN 19 1995
Bureau of
Air Regulation

Mr. Bruce Mitchell
State of Florida
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

June 13, 1995

Mr. Mitchell,

By this letter, Champion International would like to request a minor change affecting the lime kiln-mud dryer system being constructed under permit AC17-223343.

In part B of the specific conditions, items g and h refer to the firing of No. 6 fuel oil. We would like to expand this to include No. 4 fuel oil. The No. 4 fuel oil is an on specification recycled oil that contains less than one percent sulfur, typically 0.5%. The No. 4 oil is a blended oil specified for use in burners requiring No. 6 fuel oil. Permit limits applicable when firing No. 6 fuel oil will still be adhered to when firing the No. 4 fuel oil. A copy of the oil specifications is attached for your review.

Your timely response is greatly appreciated.

Sincereiy,

Steve Webb

Steve Webb

SW/tmc

Standard Specifications for FUEL OILS Produced by:

PENSACOLA POLLUTION CONTROL INC.

NO. 4 RECYCLED FUEL OIL: An On Specification blend of lube oils, hydraulic oils and turbine oils blended for use in burners requireing No.2 thru No. 6 fuel oils.

Viscosity	/ Flashpiont	/ ash%	/ sulphur% /	B.T.U. per gal
NO.4: (45) (125)	190deg/f	.08	.50	144,310

On Specification fuel oil shall not exceed the specification set forth in 40 CFR part 266.44.

ANSENIC	5 ppm max.
CADMIUM	2 ppm max.
CHROMIUM	10 ppm max
LEAD	100 ppm max
FLASH POINT	100 deg/F MIN.
TOTAL HALOGENS	1,000 ppm max.
P.C.B.'s	2 ppm max.

Off Specification fuel oil may exceed any of the above parameters and may be subject to 40 CFR 266."118/.

---

rec'd 12-15-92

Champion International Corp.
Post Office Box 87
Contonment, Florida 32533

December 15, 1992

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

Dear Mr. Mitchell:

Please find attached the revised process description for Champion's Pensacola facility. This description was changed to reflect a refinement of the information used for the facility material balances for the proposed consent order process changes. The original process description included an unrealistic estimate in regards to softwood and hardwood delignification. The planned process changes to the softwood and hardwood pulping lines will improve delignification and decrease fiber degradation. As a result, these changes in the pulping processes will not result in measurable increases in black liquor solids. Consequently there will be no change in recovery furnace throughput.

The recovery furnaces currently utilize direct steam injection heaters for preheating concentrated black liquor. These heaters require extensive maintenance and are currently in a condition which presents a danger to operations. These heaters will be replaced by indirect heaters. These indirect heaters will allow for a safer and more stable recovery furnace operation.

Sincerely,

Kyle Moore

Kyle Moore
Environmental Supervisor

Attachment

DRAFT

SECTION 2

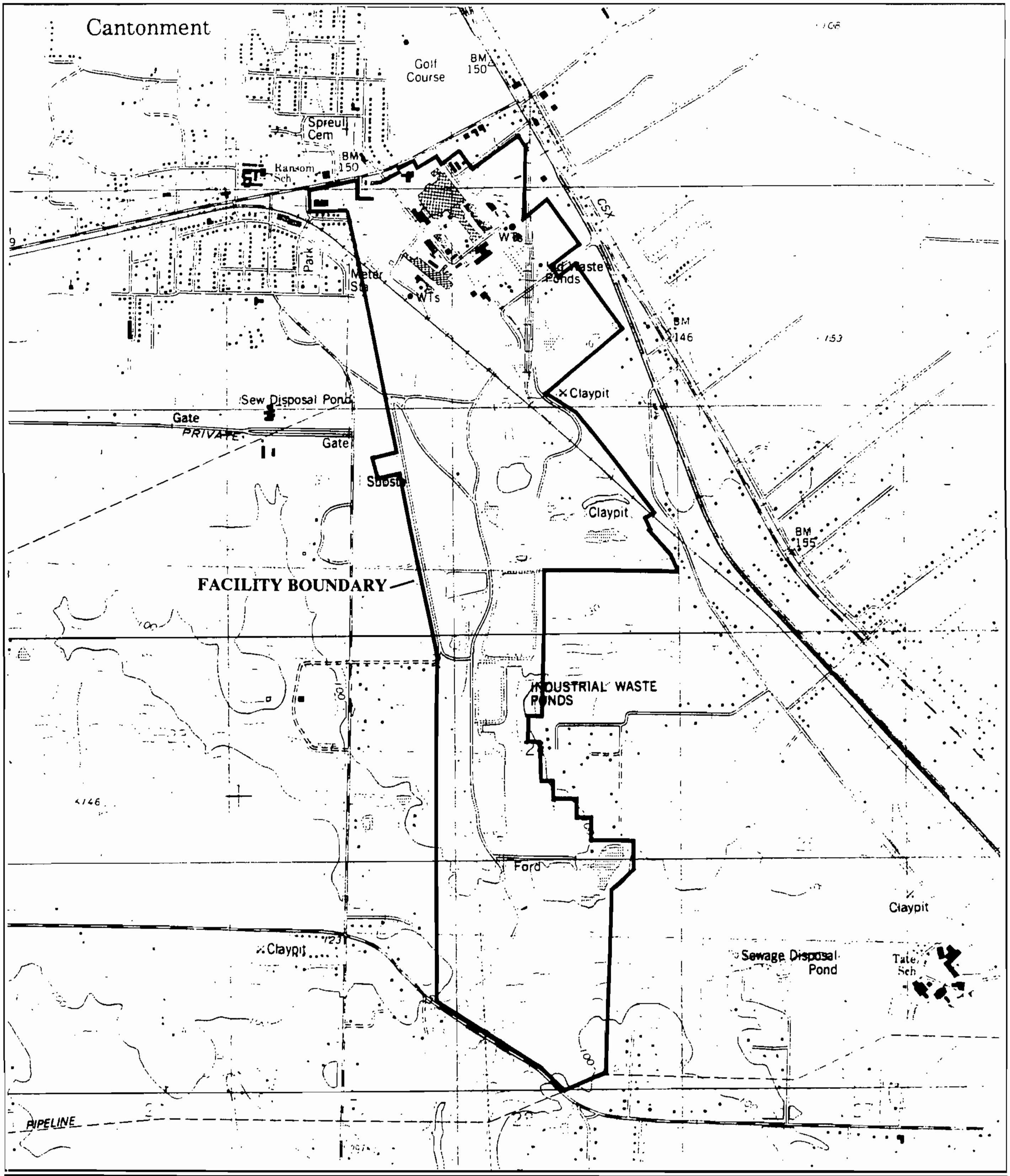
DESCRIPTION OF EXISTING MILL AND PROPOSED MODIFICATION

2.1 INTRODUCTION

The CHAMPION Pensacola Mill is located in Escambia County, Florida, near the town of Cantonment. Figure 2-1 is a site location map showing the proximity of the facility to the town of Cantonment. The land area around the site is relatively flat terrain and would be classified as a rural land use pattern based on EPA's classification scheme. The air quality in the area has been designated as attainment or unclassifiable for all ambient air quality standards.

CHAMPION's existing pulp mill has been in operation since 1941. Major mill expansion projects were completed in 1981 and 1986. The 1986 expansion resulted in a complete conversion to production of bleached kraft fine paper. The existing facilities were permitted by the Florida Department of Environmental Regulation (DER) in 1985. In 1991 a PSD Permit application was submitted to Florida DER for a new package gas-fired boiler. The CHAMPION Pensacola Mill is currently permitted for 1400 air-dried, bleached tons of pulp per calendar day.

The existing bleached kraft pulp mill includes wood preparation and storage, coal/wood fuel handling and storage, batch digesters, a continuous digester, brown stock washing, oxygen delignification, pulp bleaching facilities, recovery furnaces, power boilers, black liquor evaporators, smelt dissolving tanks, a Lime Kiln and calciner, recausticizing facility, and tall oil and turpentine byproducts facilities. Figure 2-2 presents a plot plan of the facility identifying the location of major emission points.



NORTH

0 1000 2000 4000

SCALE IN FEET

SOURCE: BASE MAP ADAPTED FROM USGS 7.5 MINUTE SERIES, CANTONMENT, FLA. QUADRANGLE, 1978, PHOTOREVISED 1987.

CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY
CANTONMENT, ESCAMBIA COUNTY
FLORIDA

FIGURE 2-1
LOCATION MAP OF THE PENSACOLA FACILITY

2.2 MILL CONSENT ORDER

The Pensacola Mill is currently operating under a water permit consent order from the Florida DER. Compliance with water quality standards must be attained by December 1994 to meet the schedule contained in the consent agreements. The proposed mill modifications, contained in this air permit application, involve process changes aimed at reducing wastewater loads or minimizing waste load constituents to CHAMPION's treatment system in order to meet the requirements of the consent order.

It is important to point out that the proposed modification would not be undertaken if not for the consent order. The changes are not aimed at increasing mill production, nor are they intended to increase throughput on individual units other than to handle additional materials generated as a result of the wastewater load reduction program. However, the modifications will increase pulp production through the bleach plant due to minimization of fiber losses and fiber degradation. The expected bleached pulp production which will result from the modifications is 1555 tons per day, annual average. The maximum daily bleached pulp production rate is 1718 tons (see Process Flow Diagram 4 attachehd to the bleach plant permit application).

The proposed program can be characterized as follows:

- Modifications to the bleach plant operations to reduce effluent load to the wastewater treatment facilities.

- Process modifications to improve delignification in the pulping operation, and reduce bleach chemical requirements.

- Process modifications to minimize spills and leaks.

- Process modifications to reduce sewering of high concentration waste streams.

A description of the existing mill processes and the proposed modification to these processes follows.

2.3 EXISTING PROCESS DESCRIPTION

An even mix of hardwood and softwood pulp is produced from wood furnished by on-site and satellite chip mills. The wood chips are stored and screened in separate hardwood and softwood storage yards. The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips. Softwood pulp is produced in a continuous digester, washed by a two-stage atmospheric diffusion washer, separated from wood knots by a disc knotter, and screened to separate rejects. Hardwood chips are cooked in twelve conventional direct steam batch digesters and discharged into two blow tanks common to all twelve digesters. The hardwood brown pulp is separated from wood knots by vibratory knotters and washed by two parallel lines of drum-type brown stock washers, and then screened to separate rejects. The softwood and hardwood pulps are further delignified in separate oxygen delignification reactors. After oxygen delignification, the hardwood and softwood pulps are further washed and bleached in a three-stage bleach plant. The hardwood and softwood bleach plants are identical and include:

- A chlorination stage with chlorine dioxide added;
- An oxidative caustic extraction stage; and
- A final chlorine dioxide bleaching stage.

The chlorine dioxide is generated on site in a unit designed to produce sixteen tons per day. Liquid chlorine, caustic soda, and liquid oxygen are all delivered to the site by rail or truck prior to use in the process. The chlorine and oxygen are vaporized prior to use.

The organic or lignin laden filtrates (black liquor) from the pulping, oxygen delignification, and washing processes are concentrated through two sets of evaporators. The No. 1 Evaporator Set mainly processes black liquor from the softwood pulp mill, while the No. 2 Evaporator Set processes hardwood black liquor. The black liquor is concentrated to about 65% solids and burned in two identical Babcock and Wilcox recovery furnaces (No. 1 and No. 2). The recovery furnaces produce steam for energy generation and heat for the pulp and paper making processes. The molten inorganic ash (smelt) from the recovery furnaces is dissolved in water to make green liquor which is then reprocessed into reusable cooking chemicals in the mill's causticizing plant. The causticizing process combines lime with the green liquor in a slaker reactor to produce a sodium hydroxide and sodium sulfide solution (white liquor), which is the principle wood chip cooking chemical. A by-product from the slaking reaction is calcium carbonate or lime mud. The lime mud is washed and then reburned in an Allis Chalmers type rotary kiln, and a Dorr-Oliver type fluidized bed calciner to produce reusable lime for the slaking reaction.

The mill utilizes five power boilers to produce steam for energy generation and provide heat for the pulping and paper making processes. Through cogeneration by utilization of two steam-driven turbines, the mill can produce nearly all of the electricity and steam required to run the mill operations. Power Boiler Nos. 1, 2, and 5 are natural gas fired. Power Boiler No. 3 is coal fired with natural gas as an alternate fuel. No. 4 Power Boiler is coal and bark fired with natural gas as an alternate fuel.

Product paper is produced from the pulp on two paper machines. Copy paper is produced on the No. 5 Paper Machine and is cut, sized, and packaged in a side processing plant for final sale. The paper produced on the No. 3 Paper Machine is shipped in either sheet or roll form to final customers. Market pulp is dried on a pulp drying machine as bales or rolls for final sale.

The mill utilizes sump systems in selected areas which are activated by conductivity to reclaim process losses into collection tanks. The reclaimed losses are reintroduced into the chemical recovery process. Distributed process control systems are used in nearly all the major process areas to improve process stability and control.

2.4 EXISTING MILL AIR SOURCES

The Pensacola Mill currently operates a total of twenty-nine (29) air sources which are covered by twenty-one (21) DER air permits. Table 2-1 is a summary list of the sources, the source ID number, and the permit number under which the source operates. The majority of the mill sources will not be impacted by the proposed consent order modifications. The sources which will be affected by the project include some sources which will be physically modified and will experience throughput increases, and other sources which will not be modified but will experience throughput increases.

The sources impacted by the project fall within three main areas of the mill pulping process as follows:

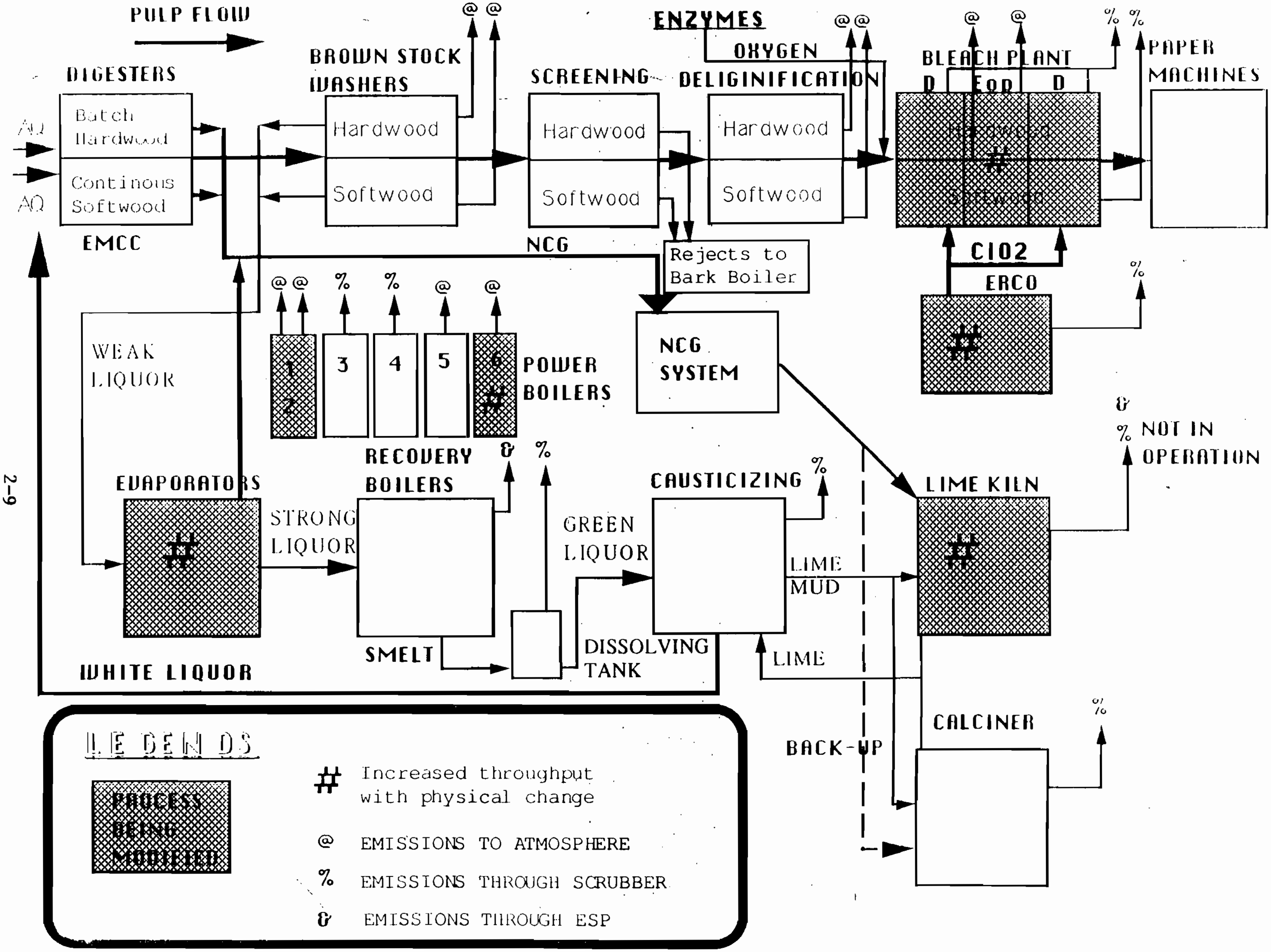
- Chemical cooking
- O_2 delignification and bleaching
- Chemical recovery and power generation

The existing sources in each area which will be affected by the project are depicted in Figure 2-3 and are discussed below.

TABLE 2-1
CHAMPION INTERNATIONAL CORPORATION - PENSACOLA MILL
FLORIDA DER AIR PERMITS

SOURCE	PERMIT #	SOURCE ID #
Wooodyard	AO17170657	10PEN1700 4252 & 58
Kamyr Digesters	AO17212422	10PEN1700 4254
Kamyr Diffusion Washer	AO17212422	10PEN1700 4254
Condensate Stripper	AO17212422	10PEN1700 4254
Batch Digesters	AO17212422	10PEN1700 4253
Brown Stock Washers	AO17212422	10PEN1700 4253
A Line 0_2 Delignification	AO17142570	10PEN1700 4250
B Line 0_2 Delignification	AO17142570	10PEN1700 4251
A Line Bleach Plant	AO17142570	10PEN1700 4250
B Line Bleach Plant	AO17142570	10PEN1700 4251
Salt Unloading	AO17142572	10PEN1700 4256 & 57
Chlorine Dioxide Generator	AO17142566	10PEN1700 4247, 48, & 49
Multiple Effect Evaporators	AO17212422	10PEN1700 4255
No. 1 Recovery Furnace	AO17181730	10PEN1700 4230
No. 1 Smelt Dissolving Tank	AO17181734	10PEN1700 4232
No. 2 Recovery Furnace	AO17181732	10PEN1700 4229
No. 2 Smelt Dissolving Tank	AO17181735	10PEN1700 4238
Lime Slaker	AO17137615	10PEN1700 4246
Lime Kiln	AO17181738	10PEN1700 4228
Fluo-Solids Unit (Calciner)	AO17151541	10PEN1700 4236
Tall Oil Plant	AO17181741	10PEN1700 4201
No. 1 Power Boiler	AO17181726	10PEN1700 4224
No. 2 Power Boiler	AO17181727	10PEN1700 4214
No. 3 Power Boiler	AO17146028	10PEN1700 4233
No. 4 Power Boiler	AO17145038	10PEN1700 4237
No. 5 Power Boiler	AO17203050	10PEN1700 4202
Coal Crushing and Handling	AO17143517	10PEN1700 4239 & 40
P5 Dry Additives	AO17213490	10PEN1700 4245
P5 Starch	AO17213492	10PEN1700 4244

FIGURE 2-3: CONSENT ORDER AIR PERMITTING PLAN - MILL LAYOUT



Chemical Cooking

The air emission sources in the chemical cooking area include the digesters, the brown stock washers, and the non-condensible gas (NCG) system. The digester systems on both the hardwood and softwood lines are closed systems which vent off-gases to the NCG system. Condensate from the cooking process is stripped to remove as much of the organic fraction as possible, and the off-gas from the condensate stripper is also vented to the NCG system. The NCG system itself vents to either the Lime Kiln or the lime calciner. The Lime Kiln is used as the primary control device for incinerating the NCGs with the calciner serving as backup.

The other sources in the cooking area include the diffusion washer on the softwood line and the brown stock washers on the hardwood line. The washers on both lines vent directly to the atmosphere.

O_2 Delignification and Bleaching

The washed brown stock from the cooking processes are further delignified using oxygen in separate O_2 reactors on each line. The O_2 delignification systems on each line are identical and include three vents each, as follows:

- The pre-O_2 decker washer vent
- The O_2 blow tank vent
- The post-O_2 washer vent

Following O_2 delignification, the pulp is processed through the bleaching system. The existing Pensacola bleaching operations are similar for each line and include the following sources:

- Cl/ClO_2 scrubber - This scrubber uses white liquor to control the emissions from the chlorination stage and chlorine dioxide stage of the existing bleaching sequence.

- E_o tower and washer vents - These sources are direct atmospheric vents from the oxidative extraction stages of the existing bleaching sequence.

ClO_2 for the existing mill bleaching sequence is generated on site in an ERCO R3H generator. The unit uses salt, sulfuric acid, and sodium chlorate to generate ClO_2 and Cl_2. The current bleaching sequence includes chlorine and chlorine dioxide in the first stage, an oxygen extractive stage, and chlorine dioxide in the final stage (C_DE_OD). There are five vent sources associated with the ClO_2 generator as follows:

- One tail gas scrubber - This scrubber uses sodium hydroxide to control Cl_2 and ClO_2 from the generator.

- Two ClO_2 storage tanks controlled by chilled water scrubbers.

- Two salt unloading/pneumatic transfer systems controlled by separate water spray towers.

Chemical Recovery and Power Generation Operations

The chemical recovery and power generation area includes the process equipment associated with recovering the cooking chemicals and the power boilers which generate the necessary process steam. Each of the sources affected by the proposed project are detailed below.

- *Multiple Effect Evaporators* - The evaporators are used to concentrate the weak black liquor prior to firing in the recovery furnaces. The off-gas from the evaporators is vented into the NCG system previously described and is ultimately combusted in the Lime Kiln or calciner.

- *Lime Kiln* - The Lime Kiln is used to calcine lime mud from the slaking process in the chemical recovery area. The kiln is permitted to burn natural gas and fuel oil. It is rated to produce up to 328 tons of CaO per day. It also serves as the primary control device for the NCGs generated in the pulping process. Particulate emissions from the kiln are controlled by a venturi scrubber and mist separator.

- *No. 1 Power Boiler* - This boiler is a natural gas-fired boiler originally rated to produce 140,000 pounds of steam per hour and having a derated heat input of 175mm BTU per hour.

- *No. 2 Power Boiler* - This boiler is a natural gas-fired boiler originally rated to produce 140,000 pounds of steam per hour and having a derated heat input of 170mm BTU per hour.

2.5 MODIFIED AND NEW AIR SOURCES

The project will affect the various air sources outlined in Section 2.4 on a source-specific basis. The following information is intended to provide details on the changes which each of the existing affected sources will experience, and also to provide information on the proposed new No. 6 Power Boiler which will replace the No. 1 and No. 2 Power Boilers as part of the project. The information is presented based upon the production area groupings previously identified in Section 2.4.

Chemical Cooking

Improved delignification in the cooking processes will play a role in reducing the wastewater treatment load. CHAMPION has identified two potential changes to be made to the digester processes to improve delignification, including:

- Extended modified continuous cooking (EMCC)
- Anthraquinone cooking (AQ)

It is important to understand that these are both changes in the cooking process which should not impact air emissions from the system. Therefore, by themselves EMCC and AQ do not require air permitting. Both methods have undergone trial efforts at the Pensacola Mill and process feasibility continues to be evaluated.

EMCC can only be considered in the continuous digester serving the softwood line. It involves changes in feeding the cooking liquor into the digester in stages and different cooking conditions. If successfully implemented, it is expected to produce a pulp which is easier to wash, therefore, improving lignin extraction. While some changes in piping are required for the digester, it is a sealed unit with any emissions ultimately vented directly to the NCG system. No increase in throughput occurs in the digester as a result of EMCC.

Anthraquinone (AQ) is an organic catalyst which accelerates and increases the selectivity of the wood cooking chemicals in the delignification of the pulp fiber. It can potentially be used in both the batch digesters serving the hardwood line and the continuous digester serving the softwood line. The ultimate goal of applying AQ is a reduction in the organic loading, the color, and the conductivity in the bleach plant effluent.

The project will require the installation of storage and handling equipment for AQ. AQ is water soluble and, therefore, CHAMPION proposes to utilize a system designed for transporting and storing water-soluble anthraquinone (SAQ). AQ is not on the Clean Air List of 189 Air Toxics. It is a reportable substance under CERCLA and adequate containment of the storage and unloading facility will be provided.

While both EMCC and AQ are changes in the digester cooking processes, it is believed that there will be no changes resulting in the emissions from the digesters following implementation of these methods. Since feed rate to the digesters will not change, the material flow rate from the digesters to the brown stock washers will also be unchanged. The increase in black liquor solids from improved pulp delignification is offset by a reduction in solids due to improved digester selectivity and fiber preservation. Therefore no net change in liquor solids to recovery is anticipated. Furthermore, air emissions from the brown stock washers should be no different following implementation of the improved cooking methods.

O_2 Delignification and Bleaching

The washed brown pulp from the cooking processes goes through further delignification in O_2 reactors on each line. If these improvements in the digester cooking processes occur, less fiber may be wasted which could result in an increase in the fiber processed through the O_2 delignification systems. Since there could also be reduced levels of lignin in the brown pulp, the emissions from the pre- and post-O_2 washers and the O_2 blow tank are not expected to change as a result of the project, even if fiber throughput increases.

The most significant change in the pulp production process will be the conversion of the existing C_DE_OD bleach plant. This will be accomplished by elimination of the existing modification of the chlorine dioxide generator. In addition, enzymes may be added to the high density storage tanks between the oxygen delignification systems and the bleach plants. Each of these changes is detailed below.

- *Enzyme Bleach Boosting* - Enzyme bleach boosting is a new technique which must still undergo field trials. It involves the application of xylanase enzyme prior to pulp bleaching with the purpose of modifying the chemical structure to make subsequent bleach stages more efficient. The high degree of specificity of action and mild working conditions generally result in fewer non-desirable byproducts. This tends to give a more efficient process and should lead to improved process yields. Significant reductions in chlorine dioxide required to bleach pulp are possible with no significant impact on pulp properties.

  From an environmental viewpoint, enzymes are safe and quite desirable. They are easy to handle, require mild conditions for reaction, are effective in small amounts, biodegradable, and non-toxic. The xylanase enzymes to be used in pulp bleaching are categorized as food grade products.

  The use of enzymes will require the installation of enzyme storage and handling facilities. Since enzymes are water soluble, there will be no air emission associated with this system.

- *Chlorine Dioxide Substitution for Chlorine* - The mill will eliminate the use of molecular chlorine as a bleaching agent, and the first stage of each bleach plant will be 100% chlorine dioxide. This will require a modification of the existing chlorine dioxide generator.

The existing generator is an ERCO R3H which uses salt, sulfuric acid, hydrochloric acid, and sodium chlorate to generate chlorine dioxide and chlorine. The generator will be modified to an R8/R10 process which uses methanol, sulfuric acid, and sodium chlorate to generate chlorine dioxide. The conversion to R8/R10 is necessary to eliminate the chlorine gas byproduct which is currently generated in the R3H process. The modified reactor capacity will be increased from the present 16 tons per day to 37.4 tons per day of chlorine dioxide. A third ClO_2 storage tank will be added and the existing chlorine absorption towers will be converted to chlorine dioxide absorption towers.

The existing storage tank scrubbers will continue to vent the existing two tanks and will also vent the new third tank. The exhaust from the two tank vent scrubbers will be rerouted to the tail gas scrubber. The tail gas scrubber will be modified by installing an extra 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide plus sodium sulfide), as depicted on Process Flow Diagram 3 attached to the application forms.

A new 21,000 gallon methanol storage tank will be installed as part of the project. The tank will be nitrogen blanketed and equipped with a conservation vent.

The existing salt unloading and storage system will be shut down and dismantled.

The existing bleach plant scrubbers are equally effective for chlorine and chlorine dioxide removal, and the scrubber systems have adequate capacity for the expected emissions. Therefore, no change in the bleach plant scrubber system is planned.

- *Peroxide Fortified Oxidative Caustic Extraction* - Hydrogen peroxide is an oxidizing agent that works optimally in alkaline conditions and is typically applied to the pulp in a 50% solution. The peroxide is applied in the oxidative extraction stage. The hydrogen peroxide is a non-specific oxidizer that reacts as readily with the extracted lignin as it does with the pulp. Because of the non-specificity, half of the peroxide decolorizes the extraction filtrate. The other half of the charge increases the brightness of the pulp leaving the extraction stage. Because of the higher brightness achievable, chlorine dioxide charged to either the first stage or the final bleaching stage is reduced.

  The use of hydrogen peroxide will require the installation of a storage and handling system for the chemical. The peroxide will completely react in the extraction tower. There are no air emissions associated with the use of hydrogen peroxide.

Evaporators and Power Generation

Mill improvements aimed at reducing the amount of wastewater generated by minimizing process losses will increase the overall liquid load to the multiple effect evaporators. Due to the increase in load, the evaporators will be upgraded. Other improvements to the existing facility associated with minimizing process losses include upgrading the evaporator foul condensate stripper and modifying the Lime Kiln. Each of the affected air emission sources are discussed below.

- *Evaporation Capacity Upgrade* - Reclaimed process chemicals are processed through the black liquor evaporators. These evaporators are currently at capacity. Any added volume for evaporating reclaimed sewer losses will require added capacity.

With the planned process loss containment project and pulp-mill process changes, it is estimated that a 50% increase in evaporation capacity of the No. 2 set evaporator will be needed. This will be accomplished by the addition of two new evaporator effects.

The primary purpose of this capacity upgrade is to evaporate the water contained in these streams. Although the color and B.O.D. reclaimed represents a significant portion of the waste water load, the associated solids contribution to the chemical recovery system is insignificant. The recovery boilers and associated equipment are not impacted.

- *Evaporator Foul Condensate Stripping Upgrade* - Various volatile organic compounds are released with digester steam after the cooking of wood chips. Some of the volatile compounds or non-condensible gases are piped to the Lime Kiln and burned. The remaining portion is dissolved and carried in the digester steam (contaminated) condensate to a heat recovery system. Condensates from the black liquor evaporation process are also rich in dissolved organic compounds. Most of the organic component in digester steam and evaporator condensates is methanol and other low molecular weight compounds. These compounds produce a very large biochemical oxygen demand on the wastewater treatment facility. The mill currently collects and steam strips most of the more concentrated or "foul" condensates. The liberated volatile organic compounds are then burned with the non-condensible gases in the Lime Kiln. However, a significant BOD load is discharged to the waste treatment plant due to an excess of less contaminated condensates and the lack of stripping capacity.

CHAMPION has evaluated the upgrade of the existing contaminated condensate stripper and the installation of an additional steam stripper. With added stripper capacity, initial estimates have shown that the mill effluent BOD load to the wastewater treatment plant could be reduced by as much as 15%. The evaluation is currently not completed, and the exact configuration has not been determined.

The installation of a stripper will not directly affect air emissions except to the extent these materials are being stripped in the wastewater treatment system. In that regard, a steam stripper will directly reduce the emissions of volatile compounds.

- *Lime Reburning Capacity - Lime Kiln-Mud Dryer Upgrade* - Currently, the Lime Kiln and calciner cannot process all of the lime mud produced by the causticizing process. The difference between the current lime reburning capability and the requirements to produce white liquor for the pulping process is made up with purchased fresh lime. The excess lime mud (calcium carbonate) produced in the causticizing operation is discharged to the sewer in a weak wash solution. The sewered lime mud flows to the waste treatment primary settling basin, is dredged with other mill settled sludge, and pumped to the decanting basins. The combined mud and mill sludge is reclaimed from the decanting basins and hauled to the landfill. The weak wash solution sewered with the lime mud is an alkaline solution that has to be neutralized in the settling basin by carbon dioxide injection. However, the alkaline solution increases the mill effluent conductivity.

An upgraded kiln capacity will supply the total lime requirements eliminating the sewering of lime mud in weak wash solution as part of daily operation. Initial estimates indicate that the required capacity increase will reduce daily landfill by approximately 100 tons and reduce the conductivity by about 20%.

The increase in Lime Kiln capacity will be accomplished by the installation of a lime mud dryer. The upgraded Lime Kiln-Mud Dryer system will be capable of producing up to 500 tons of CaO per day. A new multifield electrostatic precipitator will be added and the existing scrubber will be modified to provide SO_2 scrubbing capability. The separator will be physically modified as a packed column utilizing recirculating NaOH as the scrubbing medium. The scrubber will be used only on an as needed basis to meet the proposed SO_2 emission limits. Figure 2-4 shows a representation of the system.

The fluid bed calciner will not be changed, and the normal throughput will not change.

The amount of lime added to the green liquor in the slaker will not change. The additional reburned lime from the modified Lime Kiln will allow the reduction of purchased fresh lime.

There will be a slight increase in non-condensible gases (NCGs) burned in the Lime Kiln-Mud Dryer. The only impact will be to increase the amount of sulfur dioxide formed in the kiln due to the sulfur in the NCGs. Any increase in sulfur dioxide will be captured within the kiln and/or by the sulfur dioxide scrubber. The increase in sulfur dioxide emissions from the lime kiln-mud dryer is not PSD significant.

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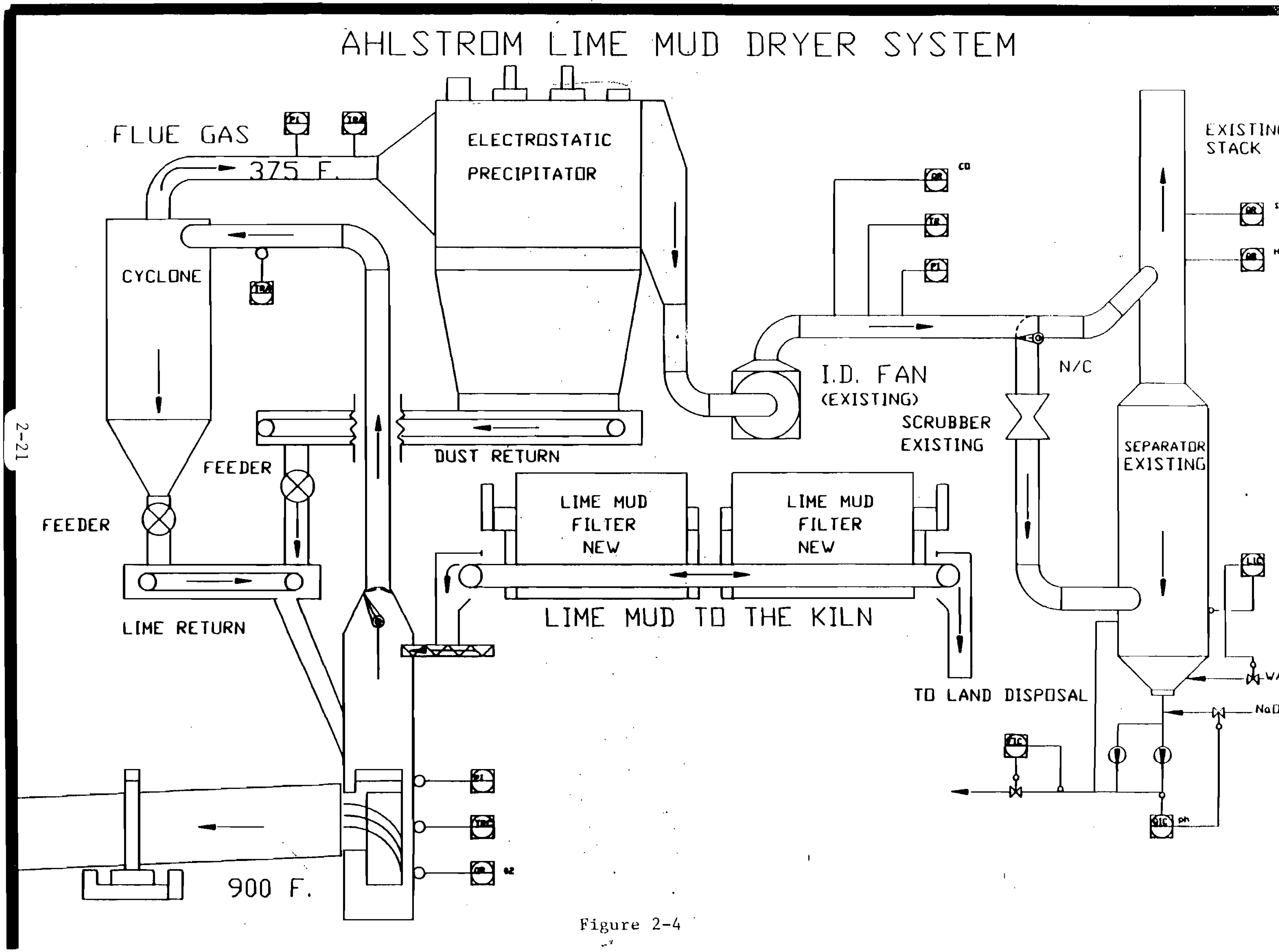

Figure 2-4

- *Steam Capacity Upgrade (No. 6 Package Boiler)* - Added steam capacity will be required to support the process modifications. The specific added steam demand will come from an increase in evaporation and contaminated condensate stripping capacity, black liquor heaters, the cooking modifications, and bleach plant load reduction technologies.

  With the addition of the No. 6 power boiler, CHAMPION will shut down No. 1 and No. 2 power boilers. These boilers, built in the early 50s, are in poor repair and poor efficiency.

  A new high pressure steam boiler to supply 350,000 pounds per hour additional steam load for consent order projects and replacement of the two obsolete power boilers will be installed.

SECTION 3
SUMMARY OF EMISSIONS

3.1 INTRODUCTION

A baseline and proposed future emissions inventory has been developed for the Pensacola mill sources affected by the proposed modifications. A list of the affected sources is included in Table 3-1. The inventory includes baseline emission rates from the existing affected sources and future emission rates for the proposed new and modified sources. A comparison of baseline and future emissions is presented in Table 3-2.

The baseline emission rates have been developed based on the two year period dating from July 1, 1990 through June 30, 1992. The baseline rates were determined using individual source operating information including: fuel use data, process throughput data, actual source operating hours, and continuous emission monitoring (CEM) data where available. For each affected source, emission factors were developed from available emission tests or CEM data or from applicable literature. The factors were then used with the operating data to calculate annual baseline emission rates. Future emissions were projected using vendor data or guarantees, where available.

Presently, there is very limited data available for determining VOC emissions from the Bleach Plant sources. However, a good data base is available for chloroform emissions including testing performed by the National Council of the Paper Industry for Air and Stream Improvement (NCASI) at the mill in 1990. Therefore, as discussed with Florida DER, CHAMPION is using chloroform as a surrogate for total VOC emissions from the Bleach Plant for the purposes of this application.

TABLE 3-1

CHAMPION - PENSACOLA
SUMMARY OF AFFECTED SOURCES

BASELINE SOURCES	
	No. 1 Power Boiler
	No. 2 Power Boiler
	Lime Kiln
A-Line	Softwood Bleach Plant Scrubber
	Softwood Bleach Plant E_o Washer
B-Line	Hardwood Bleach Plant Scrubber
	Hardwood Bleach Plant E_o Washer
FUTURE SOURCES	
	No. 6 Power Boiler
	Lime Kiln-Mud Dryer
A-Line	Softwood Bleach Plant Scrubber
	Softwood Bleach Plant E_o Washer
B-Line	Hardwood Bleach Plant Scrubber
	Hardwood Bleach Plant E_o Washer

CH233F.TAB

TABLE 3-2
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE ANNUAL EMISSIONS VS FUTURE MAXIMUM ANNUAL EMISSIONS

(tons/yr)

SOURCE	NO_x			SO_2			CO		
	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE
#6 POWER BOILER	NA	140.07	140.07	NA	2.17	2.17	NA	233.45	233.45
LIME KILN MUDDRYER(3)	63.46	215.93	152.48	1.76	28.43	26.67	5.73	29.57	23.83
#1 POWER BOILER	40.57	NA	-40.57	0.38	NA	-0.38	40.57	NA	-40.57
#2 POWER BOILER	113.20	NA	-113.20	0.25	NA	-0.25	26.95	NA	-26.95
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE A- E_o WASHER(1)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINE B- E_o WASHER(2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTALS	217.23	356.01	138.78	2.39	30.60	28.21	73.26	263.02	189.76

SOURCE	PM/PM_{10}			VOC			TRS		
	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE	ACTUAL	FUTURE	CHANGE
#6 POWER BOILER	NA	11.67	11.67	NA	23.35	23.35	NA	NA	NA
LIME KILN MUDDRYER(3)	57.32	47.74	-9.58	1.68	165.13	163.45	8.27	6.39	-1.88
#1 POWER BOILER	2.03	NA	-2.03	10.84	NA	-10.84	NA	NA	NA
#2 POWER BOILER	1.35	NA	-1.35	6.72	NA	-6.72	NA	NA	NA
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	10.72	1.48	-9.24	NA	NA	NA
LINE A- E_o WASHER(1)	NA	NA	NA	1.16	0.16	-1.00	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	15.30	1.48	-13.82	NA	NA	NA
LINE B- E_o WASHER(2)	NA	NA	NA	2.04	0.16	-1.88	NA	NA	NA
TOTALS	60.69	59.41	-1.28	48.45	191.76	143.30	8.27	6.39	-1.88

(1) Softwood
(2) Hardwood
(3) 95% control efficiency is assumed for the future case SO_2 condition.

As a result of the proposed modifications, there may be a slight (1-2%) increase in fiber throughput in the oxygen delignification process on each line. However, available VOC emission data is extremely limited for this source. The variability in the available test data suggests that the actual difference between existing and future VOC emissions would likely not be measurable using the available test methods. CHAMPION will commit to testing these sources following the mill modifications to clearly identify future emission rates.

The following sections briefly identify the basis for each emission factor and source in the emissions inventory. The emission factor development calculations and sample emission rate calculations are included in Appendix A. Appendix B includes source test summary data and other information supporting the emission data. Appendix C includes the source operating data, fuel use data, and annual emission summaries for each of the baseline years.

3.2 BASELINE EMISSION RATES

A summary of the emission factors utilized for baseline emissions is presented in Table 3-3. The calculated baseline emission rates for the two year averaging period for the affected sources are presented in Table 3-4.

The following subsections provide a brief source-by-source description of the development of individual emission factors.

3.2.1 No. 1 Power Boiler

The No. 1 Power Boiler has a design heat input rating of 180 MMBtu per hour. The primary fuel fired in the boiler is natural gas. However, the boiler is also equipped to burn No. 6 fuel oil for emergency use. For the baseline period, natural gas was the only fuel fired and emissions are based on natural gas usage for the period. The following information presents the basis for the selected emission factors for each pollutant.

TABLE 3-3
CHAMPION
PENSACOLA, FLA
SUMMARY OF EMISSION FACTORS AND HOURLY EMISSION RATES

BASELINE EMISSIONS

SOURCE	NO_x		SO_2		CO		PM/PM_{10}		VOC		TRS	
	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]	EMISSION FACTOR	HOURLY RATE (lb/hr)[5]
#1 POWER BOILER	0.1 lb/MMBtu	10.11	0.00093 lb/MMBtu	0.09	0.1 lb/MMBtu	10.11	0.005 lb/MMBtu	0.51	2.70 lb/hr	2.7	NA	NA
#2 POWER BOILER	0.42 lb/MMBtu	45.18	0.00093 lb/MMBtu	0.10	0.1 lb/MMBtu	10.76	0.005 lb/MMBtu	0.54	2.68 lb/hr	2.68	NA	NA
LIME KILN	15.5 lb/hr	15.5	0.43 lb/hr	0.43	1.4 lb/hr	1.4	14.0 lb/hr	14	0.41 lb/hr	0.41	2.02 lb/hr	2.02
LINE A - Cl_2 SCRUBBER[1]	NA	NA	NA	NA	NA	NA	NA	NA	0.083 lb/ADTP	2.77 [3]	NA	NA
LINE A - E_o WASHER[1]	NA	NA	NA	NA	NA	NA	NA	NA	0.009 lb/ADTP	0.30 [3]	NA	NA
LINE B - Cl_2 SCRUBBER[2]	NA	NA	NA	NA	NA	NA	NA	NA	0.120 lb/ADTP	3.00 [4]	NA	NA
LINE B - E_o WASHER[2]	NA	NA	NA	NA	NA	NA	NA	NA	0.016 lb/ADTP	0.40 [4]	NA	NA

(1) Softwood
(2) Hardwood
(3) The hourly rate is based on the current annual average permit limit of 800 ADTP/day (softwood) and pulp production 24 hr/day.
(4) The hourly rate is based on the current annual average permit limit of 600 ADTP/day (hardwood) and pulp production 24 hr/day.
(5) The hourly emission rate is an average hourly emission rate for the two year period.

TABLE 3-4
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE EMISSION RATES
JULY 1990 - JUNE 1992
(tons/year)

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	40.57	0.38	40.57	2.03	10.84	NA
#2 POWER BOILER	113.20	0.25	26.95	1.35	6.72	NA
LIME KILN	63.46	1.76	5.73	57.32	1.68	8.27
LINE A- Cl_2 SCRUBBER(1) (3)	NA	NA	NA	NA	10.72	NA
LINE A- E_o WASHER(1) (3)	NA	NA	NA	NA	1.16	NA
LINE B- Cl_2 SCRUBBER(2) (4)	NA	NA	NA	NA	15.30	NA
LINE B- E_o WASHER(2) (4)	NA	NA	NA	NA	2.04	NA
TOTAL	217.23 tons	2.39 tons	73.26 tons	60.69 tons	48.45 tons	8.27 tons

(1) Softwood
(2) Hardwood
(3) VOC emission rates are based on the lb/ADTP emission factor and actual softwood pulp (ADTP) production.
(4) VOC emission rates are based on the lb/ADTP emission factor and actual hardwood pulp (ADTP) production.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based upon the average NO_x mass emission rates and total heat input rates measured during a series of three test runs conducted on 8 February 1991. The NO_x emission factor is 0.10 lb/MMBtu. The baseline NO_x emission rate is 10.11 lb/hr.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based upon the typical sulfur content of the natural gas burned in the No. 1 Power Boiler as supplied by the gas vendor and the assumption of 100% conversion to SO_2. The SO_2 emission factor is 0.00093 lbs/MMBtu. The baseline SO_2 emission rate is 0.09 lb/hr.

- Carbon Monoxide (CO)

  The CO emission factor used is the same emission factor reported in CHAMPION's PSD permit application for the No. 5 Power Boiler submitted in February 1991. This factor was based on testing conducted on CHAMPION's No. 5 Power Boiler on 16-17 May 1989. The CO emission factor is 0.1 lb/MMBtu. The baseline CO emission rate is 10.11 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the AP-42 emission factor for natural gas (Table 1.4-1, utility boiler size). This factor is 5 $lb/10^6$ cf. Assuming a natural gas heating value of 1000 Btu/scf, the PM/PM_{10} emission factor is 0.005 lb/MMBtu. The baseline PM/PM_{10} emission rate is 0.51 lb/hr.

- Volatile Organic Compounds (VOC)

  The VOC emission factor used is based upon the same VOC concentration reported in CHAMPION's PSD permit application for the No. 5 Power Boiler submitted in February 1991. This concentration of 20 ppm (as carbon) was established by testing conducted on 16-17 May 1989 and is used in conjunction with volumetric flow rate data from the NO_x testing on the No. 1 Power Boiler conducted on 8 February 1991. The baseline VOC emission rate is 2.70 lb/hr (as propane).

3.2.2 No. 2 Power Boiler

The No. 2 Power Boiler has a design heat input rating of 220 MMBtu per hour. The primary fuel fired in the boiler is natural gas. However, the boiler is also equipped to burn No. 6 fuel oil for emergency use. For the baseline period, natural gas was the only fuel fired and emissions are based on natural gas usage. The following information presents the basis for the selected emission factors for each pollutant.

- Nitrogen Oxides (NO_x)

The NO_x emission factor is based upon the average NO_x mass emission rates and total heat input rates measured during a series of three test runs conducted on 9 February 1991. The NO_x emission factor is 0.42 lb/MMBtu. The baseline NO_x emission rate is 45.18 lb/hr.

- Sulfur Dioxide (SO_2)

The SO_2 emission factor is based upon the typical sulfur content of the natural gas burned in the No. 2 Power Boiler as supplied by the gas vendor and the assumption of 100% conversion to SO_2. The SO_2 emission factor is .00093 lb/MMBtu. The baseline SO_2 emission rate is 0.10 lb/hr.

- Carbon Monoxide (CO)

The CO emission factor used is the same emission factor reported in CHAMPION's PSD permit application for the No. 5 Power Boiler submitted in February 1991. This factor was based on testing conducted on CHAMPION's No. 5 Power Boiler on 16-17 May 1989. The CO emission factor is 0.1 lb/MMBtu. The baseline CO emission rate is 10.76 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the AP-42 emission factor for natural gas (Table 1.4-1, utility boiler size). This factor is 5 $lb/10^6$ cf of natural gas. Assuming a natural gas heating value of 1000 Btu/scf, the PM/PM_{10} emission factor is 0.005 lb/MMBtu. The baseline PM/PM_{10} emission rate is 0.54 lb/hr.

- Volatile Organic Compounds (VOC)

  The VOC emission factor used is based upon the same VOC concentration reported in CHAMPION's PSD permit application for the No. 5 Power Boiler submitted in February 1991. This concentration of 20 ppm (as carbon) was established by testing conducted 16-17 May 1989 and is used in conjunction with volumetric flow rate data from the NO_x testing on the No. 2 Power Boiler conducted on 9 February 1991. The baseline VOC emission rate is 2.68 lb/hr (as propane).

3.2.3 Lime Kiln

The Pensacola Lime Kiln is rated to produce approximately 328 tons of lime per day. The kiln fires natural gas and has a maximum heat input rate of approximately 123 MMBtu per hour. The kiln is also used to incinerate non-condensible gases (NCG) from the Kraft mill process.

- Nitrogen Oxides (NO_x)

The NO_x emission factor is based on the average of two series of tests conducted on 13 December 1989 and 11-12 April 1990. The baseline NO_x emission rate is 15.5 lb/hr.

- Sulfur Dioxide (SO_2)

The SO_2 emission factor is an average of four series of tests conducted 26 April, 16 May, 13 December 1989 and 11-12 April 1990. The 16 May 1989 test results included in the average only include the test runs during which all NCG streams were ducted to the Lime Kiln. The results included are the most representative of normal kiln operations. The baseline SO_2 emission rate is 0.43 lb/hr.

- Carbon Monoxide (CO)

The CO emission factor is an average of two series of tests conducted on 13 December 1989 and 11-12 April 1990. The baseline CO emission rate is 1.4 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

The PM/PM_{10} emission factor is based on an average of four series of tests conducted 26 April 1989, 12 December 1989, 19 March 1991, and 27 March 1992. The baseline PM/PM_{10} emission rate is 14.0 lb/hr.

- Volatile Organic Compounds (VOC)

  The VOC emission factor is based on an average of two series of tests conducted 13 December 1989 and 11-12 April 1990. The baseline VOC emission rate is 0.41 lb/hr (as propane).

- Total Reduced Sulfur Compounds (TRS)

  The TRS emission factor is based on the 2-year average CEM data and the average gas stream volumetric flow rate from the Lime Kiln particulate testing conducted 19 March 1991 and 27 March 1992. The TRS value is assumed to be 100% H_2S for calculating a mass emission rate. The baseline TRS emission rate is 2.02 lb/hr.

3.2.4 Bleach Plant Sources

As previously discussed, there is very limited data available for determining emissions from the Bleach Plant sources identified in Table 3-1. Data is available, however, for chloroform emissions from these sources including testing by the National Council of the Paper Industry for Air and Stream Improvement (NCASI) at the mill in 1990. The proposed Pensacola Mill Bleach Plant modification entails 100% substitution of chlorine dioxide for molecular chlorine and is predicted to result in a 90% or greater reduction in the chloroform generation rate and subsequent emissions.

EPA is presently developing standard test methods and will be conducting extensive testing to identify and quantify VOC and hazardous air pollutant (HAP) emissions from pulp mill processes including Bleach Plants. This effort is intended to support the development over the next several years of industry MACT standards. However, there is presently no data available which CHAMPION can use to identify either baseline or future VOC emissions from the Pensacola bleaching processes other than the chloroform data. CHAMPION is therefore using chloroform as a surrogate for total VOC emissions from the Bleach Plant for the purposes of this application.

The Bleach Plant sources included in this analysis are the scrubber and the Eo washer for both the A-line (softwood) and B-line (hardwood). The VOC emissions are based on the NCASI testing at the Mill in 1990. A summary of the actual test results are included in Appendix D.

3.2.4.1 A-Line Scrubber

- Volatile Organic Compounds (VOC)

  The VOC emissions factor is 0.083 lb/ADTP. The associated baseline VOC emission rate is 2.77 lb/hr.

3.2.4.2 A-Line E_o Washer

- Volatile Organic Compounds (VOC)

  The VOC emission factor is 0.009 lb/ADTP. This corresponds to a baseline VOC emission rate of 0.30 lb/hr.

3.2.4.3 B-Line Scrubber

- Volatile Organic Compounds (VOC)

  The VOC emission factor is 0.120 lb/ADTP. The baseline VOC emission rate is 3.00 lb/hr.

3.2.4.4 B-Line E_o Washer

- Volatile Organic Compounds (VOC)

  The VOC emission factor is 0.016 lb/ADTP. This corresponds to a baseline VOC emission rate of 0.40 lb/hr.

3.3 FUTURE EMISSION RATES

A summary of the emission factors utilized for calculating future emissions and the projected hourly emission rates are presented in Table 3-5. The calculated annual future emission rates for the affected sources are presented in Table 3-6.

The following subsections provide a brief source-by-source description of the development of individual emission factors.

3.3.1 Lime Kiln-Mud Dryer

The modified Lime Kiln-Mud Dryer is rated to produce 450 tons of lime per day and may be capable of achieving a production rate of up to 500 tons of lime per day. The kiln will fire natural gas or fuel oil and has a maximum heat input rate of 150 MMBtu/hr. The Lime Kiln-Mud Dryer will continue to be used to incinerate NCGs from the kraft mill process in the future. Projected emission rates are based upon the vendor's guaranteed production rate of 450 tons per day. CHAMPION will commmit to meeting the emission limits based upon the rated capacity at peak production rates of up to 500 tons per day.

TABLE 3-5
CHAMPION
PENSACOLA, FLA
SUMMARY OF EMISSION FACTORS AND HOURLY EMISSION RATES

FUTURE MAXIMUM ANNUAL EMISSIONS

SOURCE	NO_x		SO_2		CO	
	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)
#6 POWER BOILER	0.06 lb/MMBtu	32.0	0.00093 lb/MMBtu	0.50	0.1 lb/MMBtu	53.3
LIME KILN MUDDRYER	49.3 lb/hr	49.3	6.49 lb/hr	6.49	6.75 lb/hr	6.75
LINE A- Cl_2 SCRUBBER(1)(3)	NA	NA	NA	NA	NA	NA
LINE A- E_o WASHER(1)(3)	NA	NA	NA	NA	NA	NA
LINE B- Cl_2 SCRUBBER(2)(4)	NA	NA	NA	NA	NA	NA
LINE B- E_o WASHER(2)(4)	NA	NA	NA	NA	NA	NA

SOURCE	PM/PM_{10}		VOC		TRS	
	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)	EMISSION FACTOR	HOURLY RATE (lb/hr)
#6 POWER BOILER	0.005 lb/MMBtu	2.67	0.01 lb/MMBtu	5.33	NA	NA
LIME KILN MUDDRYER	10.9 lb/hr	10.9	37.7 lb/hr	37.7	1.46 lb/hr	1.46
LINE A- Cl_2 SCRUBBER(1)(3)	NA	NA	0.3375 lb/hr	0.3375	NA	NA
LINE A- E_o WASHER(1)(3)	NA	NA	0.0375 lb/hr	0.0375	NA	NA
LINE B- Cl_2 SCRUBBER(2)(4)	NA	NA	0.3375 lb/hr	0.3375	NA	NA
LINE B- E_o WASHER(2)(4)	NA	NA	0.0375 lb/hr	0.0375	NA	NA

(1) Softwood
(2) Hardwood
(3) The VOC emission factor is based on 750 ADTP/day (softwood) and pulp production 24 hr/day.
(4) The VOC emission factor is based on 750 ADTP/day (hardwood) and pulp production 24 hr/day.

TABLE 3-6
CHAMPION
PENSACOLA, FLA

SUMMARY OF FUTURE MAXIMUM ANNUAL EMISSIONS

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#6 POWER BOILER	140.07 tons	2.17 tons	233.45 tons	11.67 tons	23.35 tons	NA
LIME KILN MUDDRYER	215.93 tons	28.43 tons	29.57 tons	47.74 tons	165.13 tons	6.39 tons
LINE A- Cl_2 SCRUBBER(1)	NA	NA	NA	NA	1.48 tons	NA
LINE A- E_o WASHER(1)	NA	NA	NA	NA	0.16 tons	NA
LINE B- Cl_2 SCRUBBER(2)	NA	NA	NA	NA	1.48 tons	NA
LINE B- E_o WASHER(2)	NA	NA	NA	NA	0.16 tons	NA
TOTAL	356.01 tons	30.60 tons	263.02 tons	59.41 tons	191.76 tons	6.39 tons

(1) Softwood
(2) Hardwood

- Nitrogen Oxides (NO_x)

The NO_x emission factor is based on the vendor guarantee of 200 ppm when firing fuel oil. The projected NO_x emission rate is 49.3 lb/hr. When firing natural gas the vendor guarantees 175 ppm or 43.1 lbs/hr of NO_x.

- Sulfur Dioxide (SO_2)

SO_2 emissions from the Lime Kiln-Mud Dryer originate from several sources in the process. These sources include the lime mud which is fed to the kiln and the combustion of both fuel oil and NCG's. When combined the corresponding potential uncontrolled SO_2 emission rate is 130 lb/hr. The lime calcining process has been shown to remove a substantial portion of potential SO_2 emissions. However, CHAMPION is proposing to utilize a caustic scrubber when necessary to meet the proposed SO_2 emission rate. A scrubber SO_2 removal efficiency of 95% has been assumed for calculating the allowable SO_2 emission rate. The proposed SO_2 emission rate based upon the 95% reduction associated with the scrubber is 6.49 lb/hr.

- Carbon Monoxide (CO)

The CO emission factor is based on the vendor guarantee of 45 ppm. The CO emission rate is 6.75 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based upon meeting a grain loading of 0.037 gr/dscf per the vendor guarantee for the new control equipment. The PM/PM_{10} emission rate is 10.90 lb/hr.

- Volatile Organic Compounds (VOC)

  The VOC emission rate is 37.7 lb/hr based on vendor data (160 ppm).

- Total Reduced Sulfur Compounds (TRS)

  The TRS emission factor is based on the vendor guarantee of 8 ppm at 10% O_2. The TRS emission rate is 1.46 lb/hr.

3.3.2 No. 6 Power Boiler

The No. 6 Power Boiler has a design heat input rating of 533 MMBtu/hr. The designated fuel fired in the boiler is natural gas. The emission factors are based upon vendor guarantees except for PM/PM_{10} which is based on AP-42.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based on the vendor guarantee of 0.06 lb/MMBtu. The NO_x emission rate is 32.0 lb/hr.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based on the sulfur content of natural gas (Table 1.4-1, utility size boiler). This factor is .00093 lb/MM Btu of natural gas. Assuming a natural gas heating value of 1000 Btu/scf, the sulfur dioxide emission rate is 0.5 lb/hr.

- Carbon Monoxide (CO)

  The CO emission factor is based on the vendor guarantee of 0.1 lb/MMBtu. The CO emission rate is 53.3 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the AP-42 emission factor for natural gas (Table 1.4-1, Utility Boiler Size). This factor is 5 lb/10^6 cf of natural gas. Assuming a natural gas heating value of 1000 Btu/scf, the PM/PM_{10} emission factor is 0.005 lb/MMBtu. The PM/PM_{10} emission rate is 2.67 lb/hr.

- Volatile Organic Compounds (VOC)

  The VOC emission factor is based on a vendor guarantee of 0.01 lb/MMBtu. The VOC emission rate is 5.33 lb/hr.

3.3.3 Bleach Plant Sources

The total future emission factors are based upon laboratory tests at 100% substitution of chlorine dioxide for molecular chlorine in the Bleach Plant process. These laboratory results were then apportioned between the Bleach Plant sources according to relationships established from the NCASI 1990 test program. A detailed presentation of the methodology used to develop these factors is presented in Appendix D.

3.3.3.1 A-Line Scrubber

- Volatile Organic Compounds (VOC)

  The emission rate is based upon the laboratory test of 100% substitution of chlorine dioxide for molecular chlorine. The VOC emission rate is 0.3375 lb/hr.

3.3.3.2 A-Line E_o Washer

- Volatile Organic Compounds (VOC)

  The emission rate is based upon the laboratory test of 100% substitution of chlorine dioxide for molecular chlorine. The VOC emission rate is 0.0375 lb/hr.

3.3.3.3 B-Line Scrubber

- Volatile Organic Compounds (VOC)

  The emission rate is based upon the laboratory test of 100% substitution of chlorine dioxide for molecular chlorine. The VOC emission rate is 0.3375 lb/hr.

3.3.3.4 B-Line E_o Washer

- Volatile Organic Compounds (VOC)

  The emission rate is based upon the laboratory test of 100% substitution of chlorine dioxide for molecular chlorine. The VOC emission rate is 0.0375 lb/hr.

SECTION 5

DETERMINATION OF BEST AVAILABLE CONTROL TECHNOLOGY

5.1 BEST AVAILABLE CONTROL TECHNOLOGY

The Clean Air Act, as amended in 1977 and 1990, prescribes several technology-based limitations affecting new or modified sources of air pollutant emissions. One such limitation is that of the New Source Performance Standards (NSPS) set by the United States EPA and adopted by the Florida DER. NSPS require that specific categories of new or modified stationary sources meet uniform national standards for specific pollutants based on the degree of emission limitation achievable through utilization of the best demonstrated technology available at the time of their promulgation.

In addition to the technology-specific requirements, as presented in the NSPS, overall facility emissions of criteria pollutants, of significant quantity, from any pollutant source will be regulated under provisions found in the Prevention of Significant Deterioration (PSD) regulation. The PSD regulation requires that the Best Available Control Technology (BACT) be used to control triggering pollutant emissions. BACT is defined in 40 CFR 52.21 (b)(12) as:

> An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In

> no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice, or operation, and shall provide for compliance by means which achieve equivalent results.

Basically, a BACT determination is a case-by-case analysis that addresses the technological question of whether a proposed control technique can be considered BACT for the particular application or whether a more stringent level of emission control should be used. This determination involves an assessment of the availability of applicable technologies capable of sufficiently reducing a specific pollutant emission, as well as weighing the economic, energy, and environmental impacts of using each technology.

The methodology used in this study to determine BACT follows the "top-down" approach previously recommended by the EPA. However, it should be noted that pursuant to a settlement of litigation between EPA and industry trade groups, the "top-down" BACT requirements are not legally enforceable until established by a formal rulemaking procedure (56 F.R. 34202 26, July 1991). The "top-down" BACT contains the following elements:

- Determination of the most stringent control alternatives potentially available.

- Discussion of the technical and economic feasibility of each alternative.

- Assessment of energy and environmental impacts, including toxic and hazardous pollutant impacts, of feasible alternatives.

- Selection of the most stringent control alternative that is technically and economically feasible and that provides the best overall control of all pollutants.

The selected BACT must be at least as stringent as NSPS and State Implementation Plan limits for the source.

This BACT review is presented for each pollutant emitted in amounts that exceed the PSD significance levels. BACT applies to each emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit. Therefore, the BACT analysis for the proposed CHAMPION Pensacola mill modifications considers emission controls for nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from specific sources. A listing of the sources required to undergo a BACT analysis and the PSD affected pollutants is presented below:

- No. 6 Power Boiler
    - Nitrogen Dioxide
    - Carbon Monoxide
    - Volatile Organic Compounds

- Lime Kiln - Mud Dryer
    - Nitrogen Dioxide
    - Carbon Monoxide
    - Volatile Organic Compounds

5.2 BACT ANALYSIS FOR THE NO. 6 POWER BOILER

BACT analyses on the new No. 6 Power Boiler are required for the following PSD affected pollutants: NO_x, CO, and VOC. A review of the BACT/LAER clearinghouse for natural gas fired boilers was conducted and is included in Table 5-1. The clearinghouse entries include boilers with add-on controls as well as boilers utilizing good combustion practice to minimize NO_x, CO and VOC emissions. It is important to note that emissions of these pollutants are interrelated and that combustion modifications which are directed at minimizing one pollutant (e.g., NO_x) can, alternatively, result in an increase in other pollutant emissions (e.g., VOC and/or CO). Therefore, in evaluating BACT for a combustion source without add-on controls, it is important to recognize this relationship and to develop a control strategy that results in a reasonable overall emissions control plan. It is not reasonable to expect that the lowest emission rates reported for each pollutant by any source can be met by the proposed No. 6 Power Boiler.

Based upon the information supplied in the BACT/LAER Clearinghouse and subsequent investigation it appears that none of the listed boilers incorporate add-on controls for CO or VOC. Only one of the sixteen BACT/LAER Clearinghouse entries included in Table 5-1 had add-on controls for nitrogen dioxide emissions (Westinghouse Electric, California). All other sources utilized low NO_x burners and good combustion control to meet the BACT levels identified.

However, in order to follow the "Top Down" BACT analysis procedure, Champion has evaluated add-on controls to determine if such process could be considered BACT for the proposed No. 6 Power Boiler. The applicable technologies are discussed and the cost associated with their application to the proposed No. 6 boiler is included in the following subsections.

TABLE 5-1

BACT/LAER CLEARINGHOUSE
SUMMARY OF NATURAL GAS FIRED BOILERS

FACILITY	DATE PERMIT ISSUED	BOILER HEAT INPUT (MMBtu/hr)	NO_x	CO	VOC
			(LB/MMBtu)		
BAF Energy, CA	10/26/87	150	----[a]	----[a]	----[a]
Hopewell Cogen, VA	07/01/88	197	0.1	0.09	0.005
Kamine Carthage, NY	07/01/88	113	0.10	0.16	0.1
Westinghouse Elect., CA	08/17/88	380	.015[c]	----[a]	----[a]
Kamine South Glens Falls, NY	09/01/88	113	0.10	0.16	0.10
Willamette Ind., Bennettsville, SC	09/29/88	305	0.12 (LAER)	0.04	-----[a]
Boise Cascade, International Falls, MN	05/12/89	#1 373 #2 205	0.05[b] 0.05	0.09 0.09	0.009 0.009
Newsprint South, Genada Ms.	08/08/89 08/08/89	227.4 176.5	0.2 0.2	0.04 0.04	0.0014 0.0014
Dupont, MS	11/28/89	231	0.12	0.065	0.0078
Consolidated Paper, WI	01/26/90	566.5	0.05	0.12	0.0018
Clark County Industrial Council, AR	04/23/90	154.7	0.1	0.04	0.0014
Nekoosa WI Region V	05/09/90	150	0.05	----[a]	-----[a]
Gaylord Cont., Bolyolusa, LA	07/11/90	235	0.12	----[a]	----[a]
Willamette Campti, LA	02/04/91	335	0.12	0.04	0.003
Minn. Corn Processing	06/25/91	178.7	0.125 (24/hr avg.)	----[a]	----[a]
James River, MI	09/17/91	226.7	0.06	0.09	0.025
Champion, Pensacola	NA	533	0.06	0.1	0.01

(a) No data provided for this pollutant.
(b) Visibility impact on Class 1 area.
(c) Lo-NO_x, FGR, SCR

CH233F.TBL

5.2.1 BACT for Nitrogen Oxides

Nitrogen oxides are products of all conventional combustion processes. Nitric oxide (NO) is the predominant form of NO_x emitted by such sources with lesser amounts of nitrogen dioxide (NO_2) and nitrous oxide (N_2O). The NO can further oxidize in the atmosphere to NO_2. The aforementioned nitrogen oxides are referred to collectively as NO_x. The generation of NO_x from fuel combustion is a result of two formation mechanisms. Fuel NO_x is formed by the reaction of chemically bound nitrogen in the fuel and oxygen in the combustion air at high temperature in the combustion zone. Thermal NO_x is produced by the reaction of the molecular nitrogen and oxygen contained in the combustion air at high temperature in the combustion zone. The main factors influencing the NO_x reaction are combustion temperature, residence time within the combustion zone, amount of fuel-bound nitrogen, and oxygen levels present in the combustion zone. Since the No. 6 boiler is fueled with natural gas which is inherently low in fuel-bound nitrogen, only thermal NO_x formation is important.

A number of control techniques have been used to reduce NO_x emissions from combustion processes. Selective catalytic reduction of NO_x by ammonia (NH_3) was identified as the most stringent method of NO_x control for certain combustion processes because of the relatively high removal efficiencies that can be achieved under proper operating conditions. Selective catalytic reduction is an add-on control most commonly used in the United States on gas-fired industrial and utility boilers and combustion turbines. Relatively high NO_x removal efficiencies approaching 90 percent can be obtained with selective catalytic reduction under ideal conditions. Flue gas denitrification (FGDN) is another add-on NO_x control technology that can also approach 90 percent removal efficiency by using a wet scrubbing method.

Selective noncatalytic reduction was the next most stringent control technology identified. It is also an add-on control technology that utilizes ammonia, urea, or other reducing compounds without a catalyst present. Selective noncatalytic reduction is normally capable of attaining NO_x removal efficiencies in the range of 35 to 55 percent.

Combustion modification techniques, such as low NO_x burners, combustion controls, and flue gas recirculation can also be used to reduce NO_x emissions from natural gas firing by limiting thermal NO_x formation. Such techniques limit excess air and reduce peak flame temperatures and are more aptly described as process modifications rather than add-on (post-combustion) controls. The aforementioned technologies are generally capable of reducing NO_x emissions by up to 50 percent compared to a combustion unit without such controls.

5.2.1.1 Selective Catalytic Reduction (SCR)

In the selective catalytic reduction (SCR) process, NO_x is reduced to N_2 and H_2O by ammonia (NH_3) within a temperature range of approximately 540-840°F in the presence of a catalyst, usually a base metal. The lower end of the operating temperature range is feasible when the acid gas impurity level is relatively low. NH_3 has been used as an acceptable reducing agent for NO_x in combustion gases because it selectively reacts with NO_x while other reducing agents such as H_2, CO, and CH_4 also readily react with O_2 in the gases. In a typical configuration, flue gas from the combustion source is passed through a reactor which contains the catalyst bed. Parallel flow catalyst beds may be used in which the combustion exhaust gas flows through channels rather than pores to minimize blinding of the catalyst by particulate matter. Ammonia in vapor phase is injected into the flue gas downstream of the other control equipment that may be required for the particular combustion process for removal of pollutants such as particulate matter and sulfur dioxide. The ammonia is normally injected at a 1:1 molar ratio based upon the NO_x concentration in the flue gas. Major capital equipment for SCR consists of the reactor and catalyst, ammonia storage tanks, and an ammonia injection system using either compressed air or steam as a carrier gas. Because of the toxic characteristics of NH_3, appropriate storage and handling safety features must be provided if anhydrous NH_3 is used. NO_x removal efficiencies approaching 90 percent have been reported when using SCR systems for boiler and gas turbine applications.

Table 5-2 lists the total capital investment for an SCR system based upon information received from Engelhard for treatment of a 13,000 scfm gas stream. Basic equipment cost was then scaled up using the six-tenths factor rule based upon the 105,190 scfm flue gas flow rate from the CHAMPION Power Boiler. Total purchased equipment cost, direct installation costs, and indirect costs were based upon factors given in the U.S. EPA OAQPS Control Cost Manual. Ammonia handling and safety design costs were scaled down from an estimate for a resource recovery facility based upon the facility uncontrolled NO_x emission rates (which are directly proportional to NH_3 consumption rates) and the six-tenths factor rule. Annualized cost information is presented in Table 5-3 based upon direct and indirect operating cost factors given in the OAQPS Control Cost Manual for other types of control equipment. These factors were deemed to be the most appropriate ones to use for SCR system. Operating costs include a cost for natural gas reheat of the boiler exhaust gas from the 350°F discharge temperature to the 540°F lower limit of the SCR operating temperature range. Catalyst replacement cost was based upon a three year life given in the vendor warranty. Cost effectiveness was calculated based upon a NO_x inlet emission rate of 140 tons per year (equivalent to a flue gas concentration of approximately 50 ppmdv) to the SCR system and a vendor estimated removal efficiency of 85.5 percent. A baseline emission rate of 140 tons per year was used (0.06 lb/MM Btu @ 533 MM Btu/hr) since the power boiler is a new unit that is equipped with low NO_x burners and flue gas recirculation.

The calculated cost effectiveness of more than $7,200 per ton of NO_x removed is higher than any guidelines provided by the U.S. EPA.

Table 5-2
Champion- Pensacola Power Boiler
Capital Costs for NOx Control
Engelhard SCR System

Vendor Quote:	1.15	*(A)*		$1,575,519 [a]
Purchased Equipment Cost:				
Control device and auxiliary equipment	1.00	*(A)* [b]		$1,370,000 *(A)*
Instruments and controls	0.10	*(A)*	x 1.5 (for CEM, feedback)[c]	$205,500
Taxes	0.03	*(A)*		$41,100
Freight	0.05	*(A)*		$68,500
Total purchased equipment cost :				$1,685,100 *(B)*
Direct Installation Cost:				
Foundations and supports	0.08	*(B)*		$134,800
Erection and handling	0.14	*(B)*		$235,900
Electrical	0.04	*(B)*		$67,400
Piping	0.02	*(B)*		$33,700
Insulation	0.01	*(B)*		$16,900
Painting	0.01	*(B)*		$16,900
Total direct installation costs:				$505,600
Total direct costs:				$2,190,700
Indirect Costs:				
Engineering and supervision	0.10	*(B)*		$168,500
Construction and field expenses	0.05	*(B)*		$84,300
Construction fee	0.10	*(B)*		$168,500
Startup	0.02	*(B)*		$33,700
Performance test	0.01	*(B)*		$16,900
Contingencies	0.03	*(B)*		$50,600
Total indirect costs:				$522,500
Ammonia Handling & Safety Design Cost [d] =	$300,000 x (0.5 x 140.2 tons/year of NOx / 455.2 tons/year of NOx)^0.6 =			$97,600
Total Installed Capital Costs :				$2,810,800

[a] *Based on a July, 1990 vendor cost estimate ($450,000 for 13,000 scfm) that includes auxiliary equipment, instruments and controls. Six-tenth factor scaleup was used based on 13,000 scfm quote basis vs. 105,190 scfm power boiler flue gas flow rate. The costs are also scaled to present day figures by utilizing the CE cost index. Sept 1992 CE index= 357.1, 1990 CE index= 357.6.*

[b] *Factors in this column taken from U.S. EPA OAQPS Control Cost Manual, EPA 450/3-90-006A, January 1990 for thermal and catalytic incinerators, and carbon adsorbers.*

[c] *Multiplier from Capital and Operating Costs of Selected Air Pollution Control Systems, EPA 450/5-80-002, December 1978 (GARD Manual).*

[d] *Scaled down from cost estimate for the Pennsauken Resource Recovery Project BACT Assessment for Control of NOx Emissions Top-Down Technology Consideration. Ogden Martin Systems of Pennsauken, Inc., Dec.15, 1988, adjusted to current $ and reflecting half (0.5) of the NH3 consumption of Exxon DeNOx.*

Table 5-3
Champion- Pensacola Power Boiler
Annualized Costs for NOx Control
Engelhard SCR System

Cost item	Computation method				Cost, dollars
Direct operating costs					
Operating Labor					
Operator	$15.97 /hr x 3 shifts/day x 0.5 hrs/shift x 365 days/yr				$8,744
Supervision	15% of operator labor cost				$1,312
Maintenance (general)					
Labor	$15.97 /hr x 3 shifts/day x 0.5 hrs/shift x 365 days/yr				$8,744
Materials	100% of maintenance labor				$8,744
Utilities					
Electricity	$0.0420 /kWh	x	287,497 kWh/yr		$12,075
Gas	$3.070 /M ft.^3	x	52,735 M ft^3/yr		$161,897
Ammonia	$350.000 /ton	x	51.8 tons/yr		$18,129
Total Direct Operating Costs (A)	Subtotal of above				$219,600 *(A)*
Indirect operating (fixed) costs					
Overhead	60% of operating and maintenance labor & materials			$27,542	$16,525
Property Tax	1% of total installed capital costs,			$2,810,800	$28,108
Insurance	1% of total installed capital costs,			$2,810,800	$28,108
Administration	2% of total installed capital costs,			$2,810,800	$56,216
Capital Recovery	SCR Unit CRF, 0.1627 x (total installed capital costs - catalyst costs) (catalyst costs = $259,440 x 1.08 (including taxes & freight)) (at 10% interest & 10 years)				$411,844
	Catalyst CRF, 0.4021 x (catalyst costs = $259440) (at 10% interest & 3 years)				$104,325
Total Fixed Costs (B)	Subtotal of above				$645,100 *(B)*
Total Annualized Costs (C)	(A+B)				$864,700 *(C)*

Cost Effectiveness			
	NOx Emissions (TPY)	140.16	
	NOx Removal, %	85.5	
	Cost, $/ton NOx Removed		$7,200

This cost effectiveness value can be compared with EPA's calculated cost effectiveness values associated with the NO_x limitations contained in the NSPS for Industrial Boilers, 40 CFR 60, Subpart Db. These standards promulgated in 1986, considered an incremental cost effectiveness of $4,000/ton unreasonable. Also considered unreasonable was an incremental cost effectiveness of $2,500/ton when switching from residual oil to natural gas. The NSPS for small industrial boilers, subpart Dc,. proposed in 1989, considered a cost of $6,000/ton unreasonable for national NO_x standards.

Hence, based upon the analysis given above, SCR is discounted as BACT for NO_x control on the power boiler.

5.2.1.2 Flue Gas Denitrification (FGDN)

Flue gas denitrification (FGDN) systems use wet scrubbing technology to react absorbed SO_2 with NO_x to form molecular nitrogen and can achieve NO_x removal efficiencies approaching 90 percent. Consequently, FGDN systems are designed for combustion sources that burn relatively high sulfur fuel. However, since the power boiler under consideration is fired with essentially sulfur-free natural gas fuel, there is no source of SO_2 for absorption into the scrubbing liquid. Thus, FGDN is dismissed as BACT for NO_x control on the power boiler because of technical infeasibility.

5.2.1.3 Selective Noncatalytic Reduction (SNCR)

Selective non-catalytic reduction (SNCR) involves ammonia or urea injection, but not in the presence of a catalyst. Two major SNCR systems are commercially available: the Exxon Thermal $DeNO_x$ ammonia injection system and the Nalco Fuel Tech NO_xOUT urea injection system. A third system, the Noell (formerly the Emcotek) Two-Stage $DeNO_x$ urea/methanol injection system, has undergone extensive pilot testing and a full scale demonstration on one MSW incinerator line in Switzerland.

5.2.1.4 Exxon Thermal DeNO$_x$

Exxon Thermal DeNO$_x$ ammonia injection, like SCR, uses the NO$_x$/ammonia reaction to convert NO$_x$ to molecular nitrogen. However, without catalyst use or supplemental hydrogen injection, NO$_x$ reduction reaction temperatures must be tightly controlled between 1,600 and 2,200°F (between 1600 and 1800°F, for higher efficiency). Below 1,600°F and without hydrogen also being injected, ammonia will not fully react, resulting in what is called ammonia breakthrough or slip. If the temperature rises above 1,800°F, a competing reaction begins to predominate:

$$NH_3 + \frac{5}{4} O_2 \longrightarrow NO + \frac{3}{2} H_2O$$

As indicated above, this reaction increases NO emissions. Therefore, the region within the boiler where ammonia is injected must be carefully selected to ensure the optimum reduction reaction temperature will be maintained.

Thermal DeNO$_x$ is an available technology that has been used on gas-fired boilers and gas turbines and commonly achieves NO$_x$ removals up to 50 to 60% within the narrow temperature range noted previously. However, since ammonia is injected at a 2:1 molar ratio based upon the flue gas NO$_x$ concentration, there is generally some "slip" of ammonia which does not react completely and that can potentially cause odors. At the power boiler flue gas flow rate of 105,190 scfm and a "slip" concentration of 20 ppmv, ammonia emissions could amount to 24 tons per year. The potential ammonia "slip" concentration of 20 ppmv is almost one-half the uncontrolled NO$_x$ concentration of 50 ppmv.

Tables 5-4 and 5-5 summarize capital costs and annualized costs respectively, for an Exxon Thermal $DeNO_x$ SNCR system installed on the CHAMPION boiler. It was assumed that the ammonia injection would occur within the boiler configuration at a point where the combustion gases are maintained in a temperature range of 1,600 to 1,800°F. Table 5-4 details the total capital investment for an Exxon Thermal $DeNO_x$ system based upon information given in an Exxon study that evaluates the technology. Basic equipment cost was derived from direct cost information provided by Exxon for treatment of a 77,800 scfm flue gas stream. The Exxon direct cost information was scaled up using the six-tenths factor rule based upon the 105,190 scfm flue gas flow rate from the CHAMPION Power Boiler. Then total purchased equipment cost, direct installation costs, and indirect costs were based upon factors given in the OAQPS Control Cost Manual for other types of control equipment as indicated in Table 5-4. As with the SCR capital cost analysis, anhydrous ammonia handling safety design costs were scaled down from an estimate for a resource recovery facility based upon the facility uncontrolled NO_x emission rates and the six-tenths factor rule.

Annualized cost information is presented in Table 5-5 based upon direct and indirect operating cost factors as suggested in the OAQPS Control Cost Manual. Compressed air was assumed to be the NH_3 carrier gas although steam could also be used. Premised upon a baseline NO_x emission rate of 140 tons per year, cost effectiveness was based on an expected NO_x removal efficiency of 50%. The cost effectiveness for 50% removal efficiency is $5,570 per ton of NO_x removed.

Having accounted for economic and energy considerations in the cost analysis above, it can be seen that Exxon Thermal $DeNO_x$ is not cost effective based upon the same reasoning given in the previous discussion for SCR. Also noteworthy is the fact that this economic analysis represents a "best case" condition. The economic analysis was preformed using the six-tenths factor scaling rule due to a lack of final design data for the proposed power boiler.

Table 5-4
Capital Costs for Exxon Thermal DeNOx
Champion- Pensacola

				Included in Exxon cost	
Volumetric Flow Rate, acfm					161,000
Purchased Equipment Cost:					
Control device and auxillary equipment (tank, vaporizer, etc)		(provided by Exxon)		1.0	$183,200 *(A)*[(a)]
Instruments and controls	0.10 *(A)*	x	1.5 (CEM, feedback)	0.1	$27,500
Taxes	0.03 *(A)*			---	$5,500
Freight	0.08 *(A)*			---	$14,700
Total purchased equipment cost :				1.1 *(A)*	$230,900 *(B)*
Direct Installation Cost:					
Foundations and supports	0.06 *(B)*	(venturi scrubber, incinerator)		0.06 *(B)*	$13,900
Erection and handling	0.40 *(B)*	(absorber)		0.40 *(B)*	$92,400
Electrical	0.04 *(B)*	(incinerator, adsorber)		0.04 *(B)*	$9,200
Piping	0.03 *(B)*	(adsorber, incinerator)		0.03 *(B)*	$6,900
Insulation	0.01 *(B)*	(absorber/adsorber)		0.01 *(B)*	$2,300
Painting	0.01 *(B)*	(absorber/adsorber)		0.01 *(B)*	$2,300
Total direct installation costs:				0.55 *(B)*	$127,000
Total direct costs:					$357,900
Indirect Costs:	$324,300 (per Exxon quote)				$324,300 [(b)]
Engineering and supervision	0.10 (B)	(all except ESP)	Exxon Estimate		-----
Exxon engineering					-----
Construction and field expenses	0.10 *(B)*	(absorber, venturi scrubber)			-----
Construction fee	0.10 *(B)*				-----
Startup	0.01 *(B)*	(absorber, venturi scrubber)			$2,300
Performance test	0.01 *(B)*				$2,300
Contingencies	0.03 *(B)*	x	5 (efficiency guarantee)		-----
Total indirect costs:					$328,900
Total installed capital costs :					$686,800
Exxon Licensing Fee:	(per Exxon quote)				$80,000

[(a)] *Installed equipment cost (euipment + field labor)*[(b)]*: ($192,200 + $120,100*) = 0.55(B) + 1.10(A) = 0.55(1.100(A)) + 1.10(A) = $312,300
solving for A : 312300 /(1.10 x 0.55 + 1.10) = $183,200

[(b)] *These values are scaled up using the six-tenths factor rule..*

Table 5-5
Annualized Costs for Exxon Thermal DeNOx
Champion- Pensacola

Cost item	Computation method			Cost, dollars	
Direct operating costs					
Operating Labor					
Operator	$15.97 /hr x 3 hrs/shift x 3 shifts/day x 365 days/yr			$52,460	
Supervision	15% of operator labor cost			$7,870	
Operating materials	As required, (0.0% of total installed capital costs)			$0	
Maintenance (general)					
Labor	$15.97 /hr x 1 hr/shift x 3 shifts/day x 365 days/yr			$17,490	
Materials	100% of maintenance labor			$17,490	
Replacement parts					
Materials	As required, (2.0% of total installed capital costs)			$13,740	
Labor	100% of replacement materials			$13,740	
Utilities					
Electricity	$0.042 /kWh	x	10,193 kWh/yr	$430	
Steam	$4.130 /M lb	x	11,213 M lb/yr	$46,310	
Ammonia	$350.000 /ton	x	33.1 ton/yr	$11,600	
Total Direct Operating Costs (A)	Subtotal of above				$181,130 (A)
Indirect operating (fixed) costs					
Overhead	60% of operating and maintenance labor and materials,		$95,310	$57,190	
Property Tax	1% of total installed capital costs,		$686,800	$6,870	
Insurance	1% of total installed capital costs,		$686,800	$6,870	
Administration	2% of total installed capital costs,		$686,800	$13,740	
Capital Recovery	CRF, 0.1627 x (total installed capital costs + licensing fee) (at 10% interest and 10 years)			$124,790	
Total Fixed Costs (B)	Subtotal of above				$209,460 (B)
Total Annualized Costs (C)	(A+B)				$390,590 (C)

Tons Of NOx Emitted: *140.2*

Cost Effectiveness At Emission Reduction, $/Ton Of NOx Reduced

50% = *$5,570*

The vendor relayed a serious concern regarding the feasibility of this application on the proposed boiler. This concern is based upon the fact that the inlet loading of 140 tons per year or approximately 50 ppmvd is a very low value and with this low load condition it is extremely difficult to achieve proper mixing. This leads to limited NO_x reduction without increased ammonia injection rates and the associated higher reagent costs. Furthermore, the comparatively low baseline NO_x emission rate of 140 tons per year would yield only a 70 ton per year decrease in NO_x emissions at a removal efficiency of 50 percent while potentially creating 24 tons per year of NH_3 emissions. Therefore, Exxon Thermal DeNO_x is not viable as BACT for the CHAMPION Power Boiler.

5.2.1.5 Nalco Fuel Tech NO_xOut

The Electric Power Research Institute (EPRI) discovered and patented the chemical process of using urea ($CO(NH_2)_2$) to convert nitrogen oxides to nitrogen and water. This process of urea injection has been further developed and is being marketed by Nalco Fuel Tech, Inc. as the NO_xOUT process. In routine applications, liquid urea and proprietary enhancers (oxygenated hydrocarbons) are mixed with water and pumped into the flue gas as an aqueous solution. Atomization at injection nozzles is assisted by auxiliary compressed air or steam, similarly to the Exxon Thermal DeNO_x process. The NO_xOUT process is based on the following chemical reaction:

$$CO(NH_2)_2 + 2\,NO + \frac{1}{2}O_2 \longrightarrow 2N_2 + CO_2 + 2H_2O$$

In the above reaction, one mole of urea is required to react with two moles of NO (i.e., a stoichiometric ratio of 0.5:1). In order to achieve a desired level of removal, greater than stoichiometric quantities of urea must be injected. Manufacturer guidance indicates that a molar ratio of 0.75 - 1 :1 (urea to NO_x) is normally required.

The reaction is temperature dependent. Urea injected alone has a high NO_x reduction activity between 1700 and 1900°F. With process enhancers and adjusted concentrations, the NO_xOUT process is effective from 1500° to 2100°F. Enhancers alone are used between 1000 and 1500°F. A 50% urea solution is typical but solutions as low as 10% may be used. In order to optimize NO_x reduction, different urea and chemical enhancer solutions may be injected at different temperature levels.

The urea (in storage and process piping) must be kept above 70°F to avoid crystallization. Recirculation pumps are also used to prevent crystallization.

NO_xOUT technology is applicable to certain types of stationary combustion equipment. As with Thermal $DeNO_x$, NO_x removal efficiencies will vary depending on the combustion equipment and system configuration. Performance is based on placement of injectors and sufficient mixing of flue gases within the specified temperature range. The NO_xOUT process is generally deemed impractical for application to NO_x sources with large load variations and also to gas turbines.

The capital equipment required for the NO_xOUT process is similar to that required for Exxon Thermal $DeNO_x$ and includes the following:

- Liquid urea storage tank.
- Feed system (pumps, controllers).
- Process monitoring equipment.
- Atomization assist system (steam or air).
- Process piping (pipes, nozzles, mixer).

Tables 5-6 and 5-7 summarize the capital costs and annualized costs respectively, for the NO_xOUT system. It was also assumed for the system that the urea injection would occur within the boiler configuration at a point where the combustion gases are maintained in a

Table 5-6
Capital Costs for NALCO/Fuel Tech NOxOUT
Champion- Pensacola

				Included in Fuel Tech cost	
Volumetric Flow Rate, acfm					161,000
Installed Costs: From NALCO/Fuel Tech -	Equipment & Services & Licensing Fee=		$470,000		
	Installation =		$75,000		
			$545,000		$545,000
Purchased Equipment Cost:					
Control device and auxillary equipment (tank, vaporizer, etc)				1.0	$267,700 *(A)* [a]
Instruments and controls	0.10 *(A)*	x	1.5 (CEM, feedback)	0.1	$40,155
Taxes	0.03 *(A)*			---	$8,000
Freight	0.08 *(A)*			---	$21,400
Total purchased equipment cost :				1.10 *(A)*	$337,255 *(B)*
Direct Installation Cost:					
Foundations and supports	0.06 *(B)*	(venturi scrubber, incinerator)		---	$20,200
Erection and handling	0.40 *(B)*	(absorber)		0.40 *(B)*	$134,900
Electrical	0.04 *(B)*	(incinerator, adsorber)		0.04 *(B)*	$13,500
Piping	0.03 *(B)*	(adsorber, incinerator)		0.03 *(B)*	$10,100
Insulation	0.01 *(B)*	(absorber/adsorber)		0.01 *(B)*	$3,400
Painting	0.01 *(B)*	(absorber/adsorber)		0.01 *(B)*	$3,400
Total direct installation costs:				0.49 *(B)*	$185,500
Total direct costs:				1.49 *(B)*	$522,755
Indirect Costs:					
Engineering and supervision	0.10 *(B)*	(all except ESP)		---	$33,700
Fuel Tech process design	(363800	-	267700)	---	$96,100
Construction and field expenses	0.10 *(B)*	(absorber, venturi scrubber)		---	$33,700
Construction fee	0.10 *(B)*			---	$33,700
Startup	*(per NALCO/Fuel Tech quote)* [b]			---	$31,200
Performance test	0.01 *(B)*			---	$3,400
Contingencies	0.03 *(B)*	x	5 (efficiency guarantee)	---	$50,600
Total indirect costs:				0.00	$282,400
Total installed capital costs :				1.49 (B)	$805,155
NALCO/Fuel Tech Licensing Fee (per NALCO/Fuel Tech estimate) [c]:					*$0*

[a] *Total installed cost minus the start-up and licensing fee* [c]: ($363,800 + $75,000) = 1.49(B) = 1.49(1.100(A)) = $438,800
solving for A : 438800 /(1.100 x 1.49) = $267,700

[b] *These values are scaled up using the six-tenths factor rule..*
[c] *A licensing fee of $75,000 was assumed from a previous cost estimate.*

Table 5-7
Annualized Costs for NALCO/Fuel Tech NOxOUT System
Champion- Pensacola

Cost item	Computation method			Cost, dollars	
Direct operating costs					
Operating Labor					
Operator	$15.97 /hr x 3 workers x 3 working hrs/day x 365 days/yr			$52,460	
Supervision	15% of operator labor cost			$7,870	
Operating materials	As required, (0.0% of total installed capital costs)			$0	
Maintenance (general)					
Labor	$15.97 /hr x 1 workers x 3 working hrs/day x 365 days/yr			$17,490	
Materials	100% of maintenance labor			$17,490	
Replacement parts					
Materials	As required, (2.0% of total installed capital costs)			$16,100	
Labor	100% of replacement materials			$16,100	
Utilities					
Electricity (including comp. air)	0.042 /kWh	x 102,674 kWh/yr		$4,310	
Urea (plus additive A)	0.800 /gal	x 79,144 gal/yr		$63,320	
Total Direct Operating Costs (A)	Subtotal of above				$195,140 (A)
Indirect operating (fixed) costs					
Overhead	80% of operating and maintenance labor and materials,		$95,310	$76,250	
Property Tax	1% of total installed capital costs,		$805,160	$8,050	
Insurance	1% of total installed capital costs,		$805,160	$8,050	
Administration	2% of total installed capital costs,		$805,160	$16,100	
Capital Recovery	CRF, 0.1627 x (total installed capital costs + licensing fee) (at 10% interest and 10 years)			$131,035	
Total Fixed Costs (B)	Subtotal of above				$239,490 (B)
Total Annualized Costs (C)	(A+B)				$434,630 (C)

Tons Of Nox Emitted: *140.2*

Cost Effectiveness At Emission Reduction, $/Ton Of NOx Reduced

50% = *$6,200*

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temperature range of 1700 - 1900°F. Equipment cost was derived from direct cost information provided by Nalco Fuel Tech for treatment of the 105,190 scfm flue gas flow from the CHAMPION Power Boiler. The factors in the OAQPS Control Cost Manual were once again the basis for total purchased equipment cost, direct installation costs, and indirect costs.

Annualized cost information, presented in Table 5-7, is based upon direct and indirect operating cost factors as suggested in the OAQPS Control Cost Manual. The NO_x emission rate of 140 tpy and an expected NO_x removal efficiency of 50% resulted in a cost effectiveness of $6,200 per calculated ton of NO_x removed, slightly higher than that calculated for Exxon Thermal $DeNO_x$.

The economic analysis demonstrates the Nalco Fuel Tech NO_xOUT System is not cost effective based upon similar prior reasoning. In addition NH_3 slip also occurs due to the decomposition of urea. Hence, NO_xOUT is ruled out as BACT for the CHAMPION Power Boiler.

5.2.1.6 Noell Two-Stage $DeNO_x$

Noell has developed and patented the Two-Stage $DeNO_x$ process, which utilizes both urea and methanol injection. Noell's initial pilot studies on a 1 MW crude oil boiler used methanol alone to remove NO_x. The final patent involves injection of both urea and methanol through proprietary nozzle designs. In this design the primary function of the methanol is to reduce ammonia slip and air preheater deposits. Emcotek is currently marketing this technology.

The Two-Stage $DeNO_x$ system utilizes two zones of chemical injection. Bulk granular urea is mixed with water prior to injection in the first zone. Liquid methanol is injected in the second zone. The flowrates of the chemicals to the various injection zones are controlled by a sensor for flue gas temperature (or other surrogate measure determined during pilot/start-up testing).

At the present stage of development, the Noell Two-stage $DeNO_x$ system is not considered to be available control technology or technology transfer that could be installed on the power boiler. Furthermore, if it were available and technically feasible at this juncture, it would likely be even less cost effective than Thermal $DeNO_x$ or NO_xOUT. Hence, Noell Two-Stage $DeNO_x$ is not BACT.

5.2.1.7 Selected NO_x BACT - Combustion Technology

As previously discussed, thermal NO_x formation is related to combustion conditions such as excess air, operating temperature, and residence time. The previously discussed NO_x add-on control technologies remove NO_x after it has been formed. Combustion technology utilizes integral methods of minimizing NO_x formation during the combustion process. Combustion design strategies that limit NO_x emissions include reducing the available oxygen at critical stages in the combustion zone, lowering the peak flame temperature, and reducing the residence time during which nitrogen is oxidized. Burner venders and boiler manufacturers have made substantial improvements in recent years at minimizing NO_x formation through new burner technology and flue gas recirculation methods. In addition, combustion parameters can now be carefully controlled by automatic systems to maintain combustion within the operating range that will minimize NO_x production.

The CHAMPION Power Boiler incorporates combustion design and control to minimize NO_x emissions. The Coen burners together with the integral flue gas recirculation to the combustion zone results in efficient combustion at excess air levels equivalent to 2.0 - 3.0

percent oxygen levels in the flue gas. The combined design and control of the combustion system results in a NO_x emission rate guaranteed by the vendor not to exceed 0.06 lb/MM Btu.

CHAMPION believes that boiler design and combustion control to meet a NO_x emission rate of 0.06 lb/MMBtu represents BACT for NO_x control for the following reasons:

- Low NO_x emissions can be achieved without creating additional adverse impacts such as emissions of ammonia which occur with the previously discussed add-on controls such as SCR and SNCR.

- The projected NO_x emissions represent the low range of recently permitted levels for many other combustion sources. In fact, the proposed NO_x emission rate of 0.06 lb/MMBtu is in line with other natural gas-fired boilers listed in the BACT/LAER Clearinghouse Database.

- There are no available add-on controls which are cost effective.

5.2.2 BACT for Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

As previously noted in Section 5.2, when conducting a BACT analysis for CO and VOC it is imperative to consider the interrelationship of the pollutants most affected by combustion conditions: NO_x, CO, and VOC. Table 5-1 is a summary table of NO_x, CO, and VOC emission limits from the BACT/LAER Clearinghouse for large gas-fired boilers. The table includes CHAMPION's proposed limits for comparison with the other determinations made to date. Based upon the Clearinghouse data it does not appear that any of the listed units incorporate add-on control technology for CO or VOC.

A review of the BACT/LAER summary data supports the concern over the interrelationship of the combustion related contaminants. For all of the units identified in the Clearinghouse only one facility, Boise Cascade in International Falls, Minnesota, has identified lower emission rates for all three pollutants than those proposed for CHAMPION's No. 6 Power Boiler. However the proposed Boise Cascade limits are consistent with and only slightly lower than the limits proposed by CHAMPION for each pollutant.

For all of the other facilities in the Clearinghouse with identified NO_x, CO and VOC limits, those with both lower CO and VOC values had considerably higher NO_x limits. CHAMPION believes, therefore based upon review of Clearinghouse listed sources, that the proposed limits for both CO and VOC in conjunction with good combustion practices and process control to achieve these levels and along with the proposed NO_x level represents BACT for the No.6 Power Boiler.

5.3 BACT FOR THE LIME KILN-MUD DRYER

BACT analyses for the Lime Kiln-Mud Dryer were conducted for the following PSD significant pollutants: NO_x, CO, and VOC.

5.3.1 BACT for Nitrogen Oxides

CHAMPION proceeded with the BACT analysis by determining the applicability of NO_x control systems to Lime Kiln-Mud Dryer operations. Vendors of both SCR and SNCR control systems were contacted.

5.3.1.1 Selective Catalytic Reduction (SCR)

The SCR technology has been previously detailed in Subsection 5.2.1.1. The applicability of SCR to the Lime Kiln-Mud Dryer operations was examined. Due to the nature of the kiln process, catalyst poisoning would be a concern with a Lime Kiln. The catalysts are sensitive to particulate matter and, thus, must follow the particulate controls. As a result, the flue gas stream discharged from a particulate control device would no longer be at the optimal reaction temperature. Therefore, substantial energy costs would be incurred for flue gas reheat prior to NO_x removal. In addition, the catalysts generally suffer degradation in activity from exposure to acid gases. Since the Lime Kiln-Mud Dryer incinerates TRS compounds to form SO_2, this would be another concern. Discussions with catalyst system vendors indicate that, due to the nature of the process and resulting exhaust gas composition, they would not recommend the application of SCR to the Lime Kiln-Mud Dryer. Furthermore, it should be noted that SCR has never been installed on any lime kiln. Therefore, SCR is not considered to be an available NO_x control technology for lime kilns and thus not an available NO_x control technology for CHAMPION's proposed Lime Kiln-Mud Dryer which is a technically more complex process than a typical kraft mill lime kiln.

5.3.1.2 Selective Noncatalytic Reduction (SNCR)

Ammonia Injection

The technology associated with SNCR, usually exemplified by the Exxon Thermal $DeNO_x$ process, involves ammonia injection and has been presented in Subsection 5.2.1.4. Thermal $DeNO_x$ is an available technology that has been used on natural gas, oil-fired boilers and gas turbines. Thermal $DeNO_x$ has never been applied to a lime kiln. The requisite temperatures for the reaction to occur would be located within the kiln. The effect of injection of ammonia on CHAMPION's critical Lime Kiln-Mud Dryer production process has not been investigated. It is likely that formation of ammonium sulfate or bisulfate salts is likely and would result in quality control problems due to contamination of the lime.

Because the effect of this control technique on the Lime Kiln-Mud Dryer process is unknown and the ability to reduce NO_x emissions to a greater degree than existing lime kiln NO_x control techniques is unproven, Thermal $DeNO_x$ is not considered to be an available control technology for CHAMPION's Lime Kiln-Mud Dryer.

Urea Injection

NO_xOUT technology, discussed previously in Subsection 5.2.1.5, is applicable to certain types of stationary combustion equipment. Similarly to Thermal $DeNO_x$, NO_x removal efficiencies will vary depending on the combustion equipment and system configuration. Performance is based on placement of injectors and sufficient mixing of flue gases within the specified temperature range. The NO_xOUT process is generally deemed impractical for application to NO_x sources with large load variations.

As with Thermal $DeNO_x$, the NO_xOUT process has never been applied to a kraft mill lime kiln. The effect on the chemical recovery process occurring within the kiln is unknown and the NO_x removal efficiency is unproven. Therefore, for reasons similar to those presented for Thermal $DeNO_x$, the NO_xOUT process can not be considered BACT for CHAMPION's Lime Kiln-Mud Dryer.

5.3.1.3 Combustion Technology

CHAMPION examined the BACT/LAER Clearinghouse for existing lime kiln determinations. A summary of this information is presented in Table 5-8. Also included in Table 5-8 are CHAMPION'S Proposed Lime Kiln-Mud Dryer limits. CHAMPION proposes a NO_x limit of 49.3 lb/hr based upon a NO_x concentration of 200 ppm at 10% O_2. Based upon the lime production capacity of the unit (up to 500 TPD of lime), CHAMPION believes the proposed NO_x emission rate of 49.3 lb/hr is BACT.

TABLE 5-8
CHAMPION PAPER
PENSACOLA, FLA

BACT/LAER CLEARINGHOUSE
SUMMARY OF LIME KILNS

FACILITY	LOCATION	THROUGHPUT	NO_x	CO	VOC
CHAMPION	COURTLAND, AL	300 TPD CaO	175 ppmv @ 10% O_2, 29 lb/hr	200 ppmv @ 10% O_2, 20.8 lb/hr	31 ppmv @ 10% O_2, 9 lb/hr
ALABAMA RIVER PULP CO	PURDUE HILL AL	465 TPD CaO	100 ppmv @ 10% O_2, 30.1 lb/hr	52 ppmv @ 10% O_2, 9.5 lb/hr	78 ppmv @ 10% O_2
JAMES RIVER	PENNINGTON AL	500 TPD CaO	175 ppmv @ 10% O_2, 56.8 lb/hr	---	---
NEKOOSA PAPERS, INC	ASHDOWN, AR	440 TPD LIME	66.5 lb/hr	55 lb/hr	
WILLAMETTE INDUSTRIES INC	CAMPTI LA	430 TPD CaO, 1740 TADP	51.5 lb/hr, 224 TPY	7 lb/hr, 30.6 TPY	17.2 lb/hr, 75.3 TPY
BOISE CASCADE	RUMFORD, ME	327 TPD PRODUCT	52 lb/hr	39 lb/hr	2 lb/hr
BOISE CASCADE	INTERNATIONAL FALLS, MN	500 TPD	42.5 lb/hr, 220 ppm	23.7 lb/hr, 240 ppm	11.4 lb/hr, 185 ppm
WEYERHAEUSER CO	COLUMBUS, MS	21 TPH	300 ppmv @ 3.6% O_2, 60.9 lb/hr	11 lb/metric TADP, 550 lb/hr	1 lb/T CaO, 21 lb/hr
WILLAMETTE INDUSTRIES	BENNETTSVILLE,SC	220 TPD CaO	35 lb/hr	3.5 lb/hr	8.8 lb/hr
UNION CAMP	SOUTH CAROLINA	265 TPD CaO[3]	0.85 lb/MMBtu	0.1 lb/T ADP	1.6 LB/T CaO
JAMES RIVER	CAMAS, WA[6]	--	234 TPY	1798 TPY	45 TPY
CHAMPION	PENSACOLA, FL	580 TPD CaO	280 ppmv @ 10% O_2, 49.3 lb/hr	45 ppmv @ 10% O_2, 6.75 lb/hr	160 ppm, 37.7 lb/hr

(1) Low sulfur fuel.
(2) Caustic scrubber with 97% efficiency.
(3) Based on #6 oil with 2.5% sulfur.
(4) Process controls
(5) Chemical reaction with lime.
(6) Source was rebuilt and not PSD. Venturi scrubber is applied to the source.

5.3.2 BACT for Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

CHAMPION also performed a BACT/LAER Clearinghouse search for kraft mill lime kiln CO and VOC entries. A summary of this search has been presented in Table 5-8. Comparison of the proposed CHAMPION Lime Kiln-Mud Dryer with the Clearinghouse entries shows CHAMPION's limits to be consistent with previously permitted PSD sources. The Clearinghouse entries present a wide range of limits for both CO and VOC. This can be attributed to different operating conditions and fuel sources at each facility. CHAMPION has examined their potential fuel usage scenarios. CHAMPION's potential Lime Kiln-Mud Dryer combustibles include NCG's, lime mud, and No. 6 fuel oil or natural gas. CHAMPION considered these varying scenarios in the development of the proposed limits. It is important to note that no sources in the BACT/LAER Clearinghouse included add-on controls for CO or VOC emissions from Lime Kilns or Lime Kiln-Mud dryers.

CHAMPION examined the possibilities of applying add-on catalytic oxidation control technology to the Lime Kiln-Mud Dryer as the most stringent technique to control both CO and VOC. Once again, due to the nature of the process, catalyst poisoning would be a potential problem. The catalysts are sensitive to particulate matter and, thus, must follow the particulate control device. As a result, the flue gas stream would no longer be at the optimal reaction temperature - usually ~500°F for CO and ~1000°F for VOC. Therefore, substantial energy costs would be incurred for flue gas reheat prior to CO or VOC removal. Also, acid gases adversely affect the catalysts and can lead to poisoning even if the particulate matter concentration is sufficiently controlled.

An additional consideration regarding catalytic oxidation for control of VOC, is the composition of the VOC in the flue gas. In the case of CHAMPION's Lime Kiln-Mud Dryer, substantially all of the VOC emitted are saturated organic compounds, e.g., organic sulfur compounds and aliphatic compounds. Oxidation catalyst vendors recommend large catalyst volumes and flue gas temperatures in excess of 1,000°F to achieve significant reductions of saturated VOC.

Based on the technical problems associated add-on controls and the fact that no such controls have been applied to similar sources CHAMPION believes that good combustion control and the emission rates proposed represent BACT for the Lime Kiln-Mud Dryer.

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Champion International Corporation

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Division of Air
Resources Management

November 12, 1992

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

Dear Mr. Mitchell:

We appreciated the opportunity to meet with you and the other FDER staff members last Thursday. As we discussed at that meeting, I am leaving Champion for another job in another state. Kyle Moore will be assuming the air permitting coordination responsibility for Champion. I appreciate the professional approach that the Department has taken in previous permitting, and I appreciate your professional objectivity. I have enjoyed working with you over the past several years, and I am confident that with you as the permit engineer, the project can be permitted on time.

During last week's meeting we reviewed with you Champion's proposed approach for obtaining a PSD permit for the necessary mill modifications. Several key issues were raised relative to VOC emissions and you requested that we supply you with available test data. This letter is intended to briefly review these issues and to convey to you the requested data.

Based upon the projected emissions for the mill sources which are to be modified, it appears that the project will be PSD significant for VOC's. The basis for the significant net VOC increase is the comparison of baseline actual to future potential to emit for several of the modified combustion units. However, as we explained to you during the meeting, the mill's bleach plant will also be modified as part of the project. While the oxygen delignification system is not being modified, if the proposed improvements in the digester cooking process prove effective, improved delignification and less fiber degradation could lead to a slight increase (on the order of 1% to 2%) in the fiber processed through the oxygen delignification system.

As we explained to you during the meeting, very limited data is presently available for VOC emissions from these sources. However, for the bleach plant, a good data base is available for chloroform emissions including testing performed by the National Council of the Paper Industry for Air and Stream Improvement (NCASI) at the mill in 1990. The proposed Pensacola mill bleach plant modification entails 100% substitution of chlorine dioxide for molecular chlorine and is predicted to result in a 90% or greater reduction in the chloroform generation rate and subsequent emissions.

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As you are aware, EPA is presently developing standard test methods and will be conducting extensive testing to identify and quantify VOC and hazardous air pollutant (HAP) emissions from pulp mill processes including bleach plants. This effort is intended to support the development over the next several years of industry MACT standards. However, there is presently no data available which Champion can use to comfortably identify either baseline or future VOC emissions from the Pensacola bleaching process other than the chloroform data.

Attachment 1 to this letter includes several summary tables from the NCASI chloroform test report for the 1990 Pensacola test. Table 1 summarizes the average chloroform generation rates under existing conditions on a pounds of chloroform per air dried ton of bleached pulp (ADBTP) basis. The total generation rate at a liquid phase pH of 10.5 amount to approximately 0.4 pounds of chloroform per ADBTP. Tables B-1 and B-2 are the actual summary tables for the gas phase chloroform emissions measured from the softwood and hardwood bleach lines respectively. As discussed at our meeting, Champion proposes to use chloroform as a surrogate for total VOC emissions from the bleach plant for the purposes of this application. Based upon the NCASI data and the predicted decrease in chloroform generation resulting from 100% chlorine dioxide substitution, the overall chloroform emission reduction is predicted to be on the order of 90 tons per year.

For the oxygen delignification process, available VOC emission data is extremely limited. Harmon Engineering conducted test in November 1988 on three of the system vents on both the softwood and hardwood lines. A summary of the results of these tests are included in Attachment 2. The VOC emissions ranged from 0.01 pounds per hour up to 0.84 pounds per hour for individual vents. The U.S. EPA also conducted VOC testing at the mill in April 1992. The draft report is under review and final results will not be available for several months.

Based on the limited available data, a 2% increase in fiber throughput for the oxygen delignification process should result in a minimal increase in VOC emissions. The variability in the available test data suggests that the actual difference in VOC concentration would likely not be measurable using the available test methods.

In light of the variability and uncertainty of the test data, Champion is very concerned about attempting to identify and commit to a projected future VOC emission rate from the oxygen delignification process. Therefore, Champion requests that the FDER consider our PSD permit application to be complete without the inclusion of specific baseline and future VOC emission rates for the oxygen delignification system.

Champion will commit to testing these sources following the mill modifications to clearly identify future emission rates. Champion also understands that FDER will include a reopener clause in the permit if the proposed approach is considered acceptable. We therefore ask that you review the attached data and advise us of your opinion as to the acceptability of the proposed approach. As you are aware, the schedule for our project is driven by the waste water consent order. Therefore, the implications associated with the acceptability of our proposed approach are critical for meeting project schedule deadlines.

We appreciate your attention to these important issues. If you have any question regarding the attached data or require additional information, please contact Kyle Moore at (904) 968-4253, or Steve Webb at (904) 968-2121 extension 2499.

Sincerely,

David T. Arceneaux
Permit Coordinator

DTA:sa

cc: Clair Fancy
John Brown
Charles Ayer
Kyle Moore
Steve Webb

Champion International Corporation - Pensacola Mill
VOC test results - pine oxygen delignification system
Testing preformed by Harmon Engineering Associates, Inc., November 1988

Pine Blowtank Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
run 1	130	<10	15.1	<1400	<1000	13.8	0.08	30.6
run 2	133		16.3			27.5	0.16	
run 3	137		18.1			24.0	0.14	
Fresh water								
run 1	161	<10	33.0	<1400	<1000	149	0.84	30.6
run 2	163		34.6			132	0.74	
run 3	156		29.3			101	0.57	

Pine Filtrate Tank Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
run 1	147	23.5	23.7	1849	1209	12.3	0.08	30.6
run 2	146	23.5	22.7	1843	1223	7.0	0.05	
run 3	148	24.2	24	1901	1237	4.5	0.03	
Fresh water								
run 1	147	14.0	23.5	1100	719	3.4	0.01	30.6
run 2	148	14.0	24.1	1103	714	10.3	0.04	
run 3	149	14.7	24.7	1155	741	5.4	0.02	

Pine Post Oxygen Washer Hood Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
run 1	108	48.9	8.0	13008	11193	5.0	0.32	30.6
run 2	111	40.3	8.9	10709	9069	4.3	0.22	
run 3	136	53.5	17.4	14228	10479	2.8	0.16	
Fresh water								
run 1	127	40.7	14.0	10823	8388	3.9	0.18	30.6
run 2	126	40.1	13.6	10645	8303	2.9	0.14	
run 3	129	42.1	14.7	11182	8567	4.0	0.19	

* Stripped condensate used for water supply

Champion International Corporation - Pensacola Mill
VOC test results - oxygen delignification system
Testing preformed by Harmon Engineering Associates, Inc., November, 1988

Hardwood Blowtank Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
Run 1	173	32.7	43.4	4652	2209	18.7	0.23	24.39
Run 2	172	30.7	42.4	4445	2151	21.0	0.25	
Run 3	171	10.0	41.5	1446	712	11.9	0.05	
Fresh water	154	10.9	27.7	1570	980	7.9	0.05	29.19
Run 1	149	10.8	24.6	1554	1019	20.2	0.12	
Run 2	156	11.6	29.2	1672	1017	2.0	0.01	
Run 3	156	10.3	29.2	1485	904	1.6	0.01	

Hardwood Filtrate Tank Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
Run 1	168	---	38.8	1024	---	36.1	0.21	30.22
Run 2	165		36.2			8.4	0.05	
Run 3	169		39.7			6.5	0.04	
Fresh water								
Run 1	165	---	36.2	1024	---	10.0	0.06	29.19
Run 2	167		37.9			11.9	0.07	
Run 3	171		41.6			11.5	0.07	

Hardwood Post Oxygen Washer Hood Vent

Condition	Temp oF	fps	H20 %	acfm	sdcfm	VOC ppm	VOC lb/hr	Avg. Pulp TPH
Condensate*								
Run 1	129	40.7	14.6	10810	8333	5.4	0.25	24.39
Run 2	129	38.9	14.6	10342	7975	5.1	0.23	
Run 3	129	37.4	16.3	9928	7450	3.6	0.15	
Fresh water	128	41.4	14.5	10998	8474	1.7	0.08	29.19
Run 1	126	40.6	13.6	10797	8436	1.9	0.09	
Run 2	128	42.0	14.3	11153	8617	1.5	0.07	
Run 3	131	41.6	15.5	11044	8370	1.6	0.08	

* Stripped condensate used for water supply

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Champion
Champion International Corporation

DATE 11/17 TIME ______ NO OF PAGES 5

TO: Bruce Mitchell FROM: Kyle Moore

LOCATION: ______ LOCATION: ______

COMMENTS:

FO-1128

Champion
Champion International Corporation

November 12, 1992

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

Dear Mr. Mitchell:

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As we explained to you during the meeting, very limited data is presently available for VOC emissions from these sources. However, for the bleach plant, a good data base is available for chloroform emissions including testing performed by the National Council of the Paper Industry for Air and Stream Improvement (NCASI) at the mill in 1990. The proposed Pensacola mill bleach [illegible]

Meeting Attendance Record

Project: Champion International Corp. Date: 11-5-92

Subject: PSD Permitting

Name	Affiliation / Position	Phone Number
Clair Fancy	FDER/DARM/BAR	904-488-1344
John Brown	"	"
Bruce Mitchell	"	"
Janet Price	Champion International	904 968-2121
KYLE MOORE	"	904 968 4253
Steve Webb	"	904.968.2121
DAVID ARCENEAUX	"	904-968-2121
John BROWN	FDER/DARM/BAR	904 488 1344
John Glunn	FDER/DARM	"
Cleve Holladay	"	"
John Barone	WESTON	215 430-7218
JOHN EGAN	"	" " 7263

Page ____ of ____

AGENDA

CHAMPION MEETING WITH FDER AIR PERMIT STAFF
PENSACOLA MILL CONSENT ORDER
PHASE I - PROCESS MODIFICATIONS
November 5, 1992
ROOM 338

1. Review of Project Description
2. Review of base line data and emissions
3. FDER comments/concerns related to 1 and 2
4. Status of model needs
5. VOC emissions from oxygen delignification and bleach plant
6. Air toxics
7. Status of permit review by FDER
8. Timing of permit submittal

4-5-92

PSD:

NOx, CO, VOC

MEE: enlarge one of the eva
install an add. condensate stripper /or enlarge the existing one -> NCG sys -> kiln

Baseline

PBs - AP-42 EF
rest - actual tests

NG - SO_2 -> supplier

Kiln: 95% cont. factor due to process variables

SO_2
lime mud drier - will accept a SO_2 limit to avoid PSD
RBs - more lignin than the RBs - less than permitted

VOCs

Bleach Plant - RSH -> RS ClO_2 generation
want to use methanol chloroform as a surrogate

EPA

on testing done

Dennis -

O_2 delignation - ↑ pulp due to previous cooking process
knots -> ↑ pulp

1.

WESTON
MANAGERS DESIGNERS/CONSULTANTS
1 WESTON WAY
WEST CHESTER, PA 19380-1499
PHONE: 215-692-3030
FAX: 215-430-3186

5 November 1992

Mr. Cleveland G. Holladay
State of Florida
Department of Environmental Regulations
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Work Order No. 02246-056-001

Dear Mr. Holladay:

In accordance with your request, enclosed are computer disks of meteorologic data for Pensacola, Florida, which will be used in Champion International's air quality modeling analysis. The data includes pre-processed surface and upper air data suitable for use in the ISCST2 model. Also included is a STAR distribution which can be used with the ISCLT2 model.

The following is a listing of the data files contained on the disks:

METFRM.EXE	-	ASCII formatted data for ISCST2
METLPR.EXE	-	Lahey formatted data for ISCST2
METMPR.EXE	-	Microsoft formatted data for ISCST2
METLT.EXE	-	ASCII formatted frequency distribution for ISCLT2

Data are for the period 1985 - 1989. Also included is a data format table listing the parameters and corresponding format.

Please call if you have questions or wish to discuss this information.

Very truly yours,

ROY F. WESTON, INC.

John Barone

John B. Barone, Ph.D.
Technical Director

JBB:ndl

Enclosure

Table 1
Meteorological Data Format

Record 1 (occurs once)		Format
Surface Station		I5
Year		I4
Upper Air Station		I5
Year		I4
Record 2 Through Number of Days	**Units**	**Format**
Year		I4
Month		I2
JDay		F5.0
Stability		I1
Wind Speed	m/sec.	F5.2
Temperature	°K	F4.0
Flow Vector (1)	Degrees	F4.0
Random Flow Vector (1)	Degrees	F4.0
Rural Mixing Height	Meters	F6.0
Urban Mixing Height	Meters	F6.0

(1) Towards which the wind blows.
i.e. If the wind is from 10° the flow vector is 190°
If the wind is from 240° the flow vector is 60°

Printing and Writing Papers
375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

RECEIVED

OCT 15 1992

Division of Air
Resources Management

October 14, 1992

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

Dear Mr. Fancy:

Per your request, Champion would like to pre-submit sections of an air construction permit application. This application address required air impact assessment associated with planned process changes to comply with an effluent consent order with the Department. Champion is submitting these sections ahead of the full application to allow the Department additional time to review the application.

The sections being submitted today include a description of the proposed modifications and a partial summary of existing emissions. Not included in the existing emissions summary are the data from the existing bleach plant. Enclosed are two copies of Section 2 and Section 3 of the application.

Champion intends to submit the bleach plant emissions summary along with the emissions associated with the proposed modification by the end of October. The complete application will be submitted by the middle of November.

If you or your staff have any questions concerning this material, please call me at the mill. My phone number is (904) 968-2121, Extension 2519.

Sincerely,

David T. Arceneaux
Permitting Coordinator

DTA:sa

Enclosures

cc: Ed Middleswart, Northwest District

SECTION 2

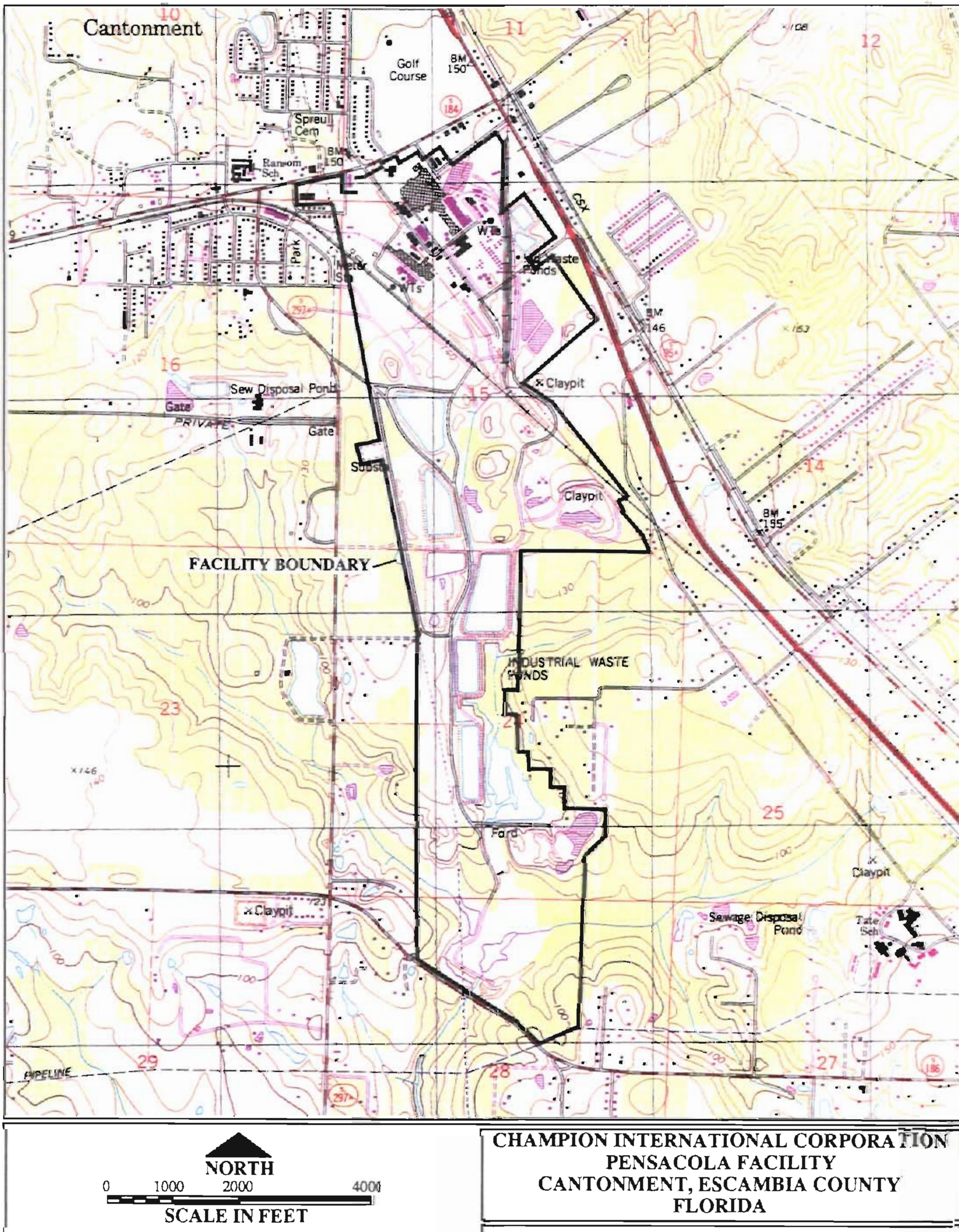
DESCRIPTION OF EXISTING MILL AND PROPOSED MODIFICATION

2.1 INTRODUCTION

The CHAMPION Pensacola Mill is located in Escambia County, Florida, near the town of Cantonment. Figure 2-1 is a site location map showing the proximity of the facility to the town of Cantonment. The land area around the site is relatively flat terrain and would be classified as a rural land use pattern based on EPA's classification scheme. The air quality in the area has been designated as attainment or unclassifiable for all ambient air quality standards.

CHAMPION's existing pulp mill has been in operation since 1941. Major mill expansion projects were completed in 1981 and 1986. The 1986 expansion resulted in a complete conversion to production of bleached kraft fine paper. The existing facilities were permitted by the Florida Department of Environmental Regulation (DER) in 1985. In 1991 a PSD Permit application was submitted to Florida DER for a new package gas-fired boiler. The CHAMPION Pensacola Mill is currently permitted for 1400 air-dried, bleached tons of pulp per calendar day.

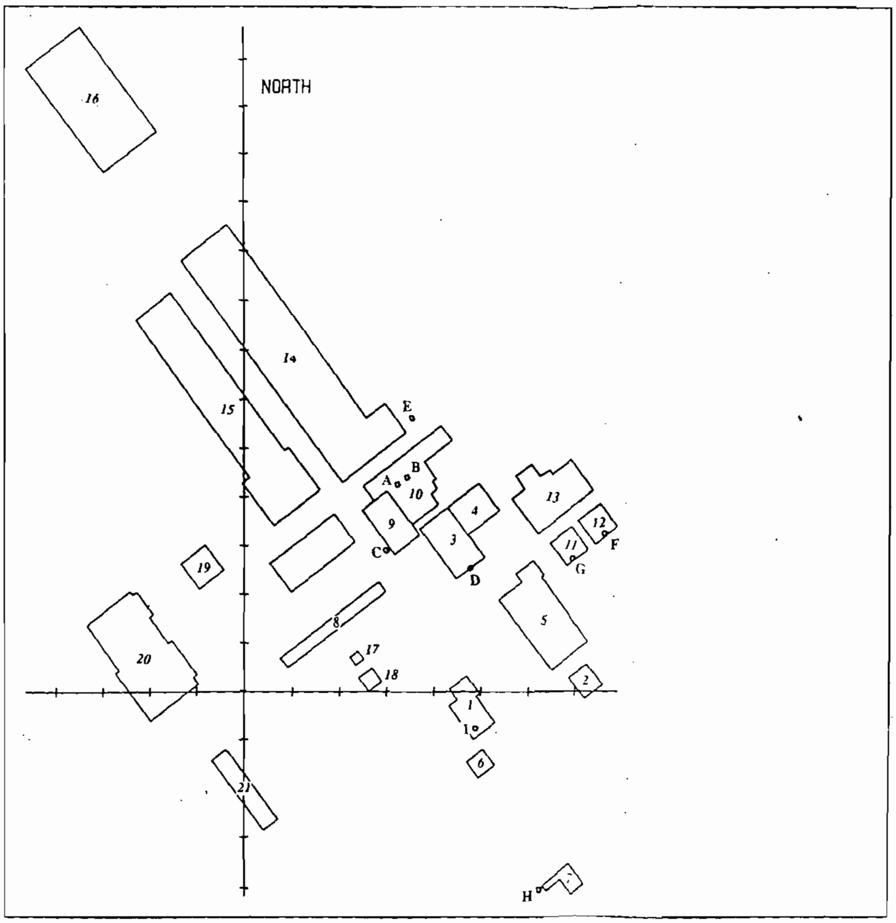
The existing bleached kraft pulp mill includes wood preparation and storage, coal/wood fuel handling and storage, batch digesters, a continuous digester, brown stock washing, oxygen delignification, pulp bleaching facilities, recovery furnaces, power boilers, black liquor evaporators, smelt dissolving tanks, a lime kiln and calciner, recausticizing facility, and tall oil and turpentine byproducts facilities. Figure 2-2 presents a plot plan of the facility identifying the location of major emission points.



SOURCE: BASE MAP ADAPTED FROM USGS 7.5 MINUTE SERIES, CANTONMENT, FLA. QUADRANGLE, 1978, PHOTOREVISED 1987.

CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY
CANTONMENT, ESCAMBIA COUNTY
FLORIDA

FIGURE 2-1
LOCATION MAP OF THE PENSACOLA FACILITY



BUILDING/STRUCTURE

1. - LIME RECOVERY BUILDING
2. - COOLING TOWER
3. - NO. 4 POWER BOILER
4. - TURBINE GENERATOR BUILDING
5. - EVAPORATORS
6. - LIME KILN NORTH
7. - LIME KILN SOUTH
8. - BATCH DIGESTERS
9. - NO. 3 POWER BOILER
10. - NO.1 & 2 BOILER
11. - RECOVERY BOILER PRECIPITATOR 1
12. - RECOVERY BOILER PRECIPITATOR 2
13. - RECOVERY BOILERS
14. - PAPER MACHINE COMPLEX
15. - HIGH BAY STORAGE BUILDING
16. - WAREHOUSE
17. - KAMYR DIGESTER
18. - KAMYR DIFFUSER
19. - NO. 9 H. D. STORAGE
20. - BLEACH PLANT
21. - CHIP SILO

SOURCES:

A. - NO. 1 POWER BOILER STACK
B. - NO. 2 POWER BOILER STACK
C. - NO. 3 POWER BOILER STACK
D. - NO. 4 POWER BOILER STACK
E. - NO. 5 POWER BOILER STACK
F. - RECOVERY BOILER STACK 1
G. - RECOVERY BOILER STACK 2
H. - LIME KILN STACK
I. - CALCINER STACK

NORTH

0 100 200 400
SCALE IN FEET

SOURCE: BASE MAP ADAPTED FROM DRAWINGS SUPPLIED BY CHAMPION

CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY
CANTONMENT, ESCAMBIA COUNTY
FLORIDA

FIGURE 2-2
LOCATION OF STACKS AND PRIMARY BUILDINGS IDENTIFIED FOR SCHULMAN-SCIRE DOWNWASH ANALYSIS

2.2 MILL CONSENT ORDER

The Pensacola Mill is currently operating under a water permit consent order from the Florida DER. Compliance with water quality standards must be attained by 1994 to meet the schedule contained in the consent agreements. The proposed mill modifications, contained in this air permit application, involve process changes aimed at reducing wastewater loads or minimizing waste load constituents to CHAMPION's treatment system in order to meet the requirements of the consent order.

It is important to point out that the proposed modification would not be undertaken if not for the consent order. The changes are not aimed at increasing mill production, nor are they intended to increase throughput on individual units other than to handle additional materials generated as a result of the wastewater load reduction program. However, the modifications will increase pulp production through the bleach plant due to minimization of fiber losses and fiber degradation. While the actual increase in pulp production which will result from the modifications cannot be quantified at this time, it is anticipated to be less than 10%.

The proposed program can be characterized as follows:

- Modifications to the bleach plant operations to reduce effluent load to the wastewater treatment facilities.

- Process modifications to improve delignification, decrease waste and improve chemical recovery.

- Process modifications to minimize spills and leaks.

- Process modifications to reduce sewering of high concentration waste streams.

A description of the existing mill processes and the proposed modification to these processes follows.

2.3 EXISTING PROCESS DESCRIPTION

An even mix of hardwood and softwood pulp is produced from wood furnished by on-site and satellite chip mills. The wood chips are stored and screened in separate hardwood and softwood storage yards. The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips. Softwood pulp is produced in a continuous digester, washed by a two-stage atmospheric diffusion washer, separated from wood knots by a disc knotter, and screened to separate rejects. Hardwood chips are cooked in twelve conventional direct steam batch digesters and discharged into two blow tanks common to all twelve digesters. The hardwood brown pulp is separated from wood knots by vibratory knotters and washed by two parallel lines of drum-type brown stock washers, and then screened to separate rejects. The softwood and hardwood pulps are further delignified in separate oxygen delignification reactors. After oxygen delignification, the hardwood and softwood pulps are further washed and bleached in a three-stage bleach plant. The hardwood and softwood bleach plants are identical and include:

- A chlorination stage with chlorine dioxide added;
- An oxidative caustic extraction stage; and
- A final chlorine dioxide bleaching stage.

The chlorine dioxide is generated on site in a unit designed to produce sixteen tons per day. Liquid chlorine, caustic soda, and liquid oxygen are all delivered to the site by rail or truck prior to use in the process. The chlorine and oxygen are vaporized prior to use.

The organic or lignin laden filtrates (black liquor) from the pulping, oxygen delignification, and washing processes are concentrated through two sets of evaporators. The No. 1 Evaporator Set mainly processes black liquor from the softwood pulp mill, while the No. 2

Evaporator Set processes hardwood black liquor. The black liquor is concentrated to about 65% solids and burned in two identical Babcock and Wilcox recovery furnaces (No. 1 and No. 2). The recovery furnaces produce steam for energy generation and heat for the pulp and paper making processes. The molten inorganic ash (smelt) from the recovery furnaces is dissolved in water to make green liquor which is then reprocessed into reusable cooking chemicals in the mill's causticizing plant. The causticizing process combines lime with the green liquor in a slaker reactor to produce a sodium hydroxide and sodium sulfide solution (white liquor), which is the principle wood chip cooking chemical. A by-product from the slaking reaction is calcium carbonate or lime mud. The lime mud is washed and then reburned in an Allis Chalmers type rotary kiln, and a Dorr-Oliver type fluidized bed calciner to produce reusable lime for the slaking reaction.

The mill utilizes five power boilers to produce steam for energy generation and provide heat for the pulping and paper making processes. Through cogeneration by utilization of two steam-driven turbines, the mill can produce nearly all of the electricity and steam required to run the mill operations. Power Boiler Nos. 1, 2, and 5 are natural gas fired. Power Boiler No. 3 is coal fired with natural gas as an alternate fuel. No. 4 Power Boiler is coal and bark fired with natural gas as an alternate fuel.

Product paper is produced from the pulp on two paper machines. Copy paper is produced on the No. 5 Paper Machine and is cut, sized, and packaged in a side processing plant for final sale. The paper produced on the No. 3 Paper Machine is shipped in either sheet or roll form to final customers. Market pulp is dried on a pulp drying machine as bales or rolls for final sale.

The mill utilizes sump systems in selected areas which are activated by conductivity to reclaim process losses into collection tanks. The reclaimed losses are reintroduced into the chemical recovery process. Distributed process control systems are used in nearly all the major process areas to improve process stability and control.

2.4 EXISTING MILL AIR SOURCES

The Pensacola Mill currently operates a total of twenty-nine (29) air sources which are covered by twenty-one (21) DER air permits. Table 2-1 is a summary list of the sources, the source ID number, and the permit number under which the source operates. The majority of the mill sources will not be impacted by the proposed consent order modifications. The sources which will be affected by the project include some sources which will be physically modified and will experience throughput increases, and other sources which will not be modified but will experience throughput increases.

The sources impacted by the project fall within three main areas of the mill pulping process as follows:

- Chemical cooking
- O_2 delignification and bleaching
- Chemical recovery and power generation

The existing sources in each area which will be affected by the project are depicted in Figure 2-3 and are discussed below.

Chemical Cooking

The air emission sources in the chemical cooking area include the digesters, the brown stock washers, and the non-condensible gas (NCG) system. The digester systems on both the hardwood and softwood lines are closed systems which vent off-gases to the NCG system. Condensate from the cooking process is stripped to remove as much of the organic fraction as possible, and the off-gas from the condensate stripper is also vented to the NCG system. The NCG system itself vents to either the lime kiln or the lime calciner. The lime kiln is used as the primary control device for incinerating the NCGs with the calciner serving as backup.

TABLE 2-1
CHAMPION INTERNATIONAL CORPORATION - PENSACOLA MILL
FLORIDA DER AIR PERMITS

SOURCE	PERMIT #	SOURCE ID #
Wooodyard	AO17170657	10PEN1700 4252 & 58
Kamyr Digesters	AO17212422	10PEN1700 4254
Kamyr Diffusion Washer	AO17212422	10PEN1700 4254
Condensate Stripper	AO17212422	10PEN1700 4254
Batch Digesters	AO17212422	10PEN1700 4253
Brown Stock Washers	AO17212422	10PEN1700 4253
A Line 0_2 Delignification	AO17142570	10PEN1700 4250
B Line 0_2 Delignification	AO17142570	10PEN1700 4251
A Line Bleach Plant	AO17142570	10PEN1700 4250
B Line Bleach Plant	AO17142570	10PEN1700 4251
Salt Unloading	AO17142572	10PEN1700 4256 & 57
Chlorine Dioxide Generator	AO17142566	10PEN1700 4247, 48, & 49
Multiple Effect Evaporators	AO17212422	10PEN1700 4255
No. 1 Recovery Furnace	AO17181730	10PEN1700 4230
No. 1 Smelt Dissolving Tank	AO17181734	10PEN1700 4232
No. 2 Recovery Furnace	AO17181732	10PEN1700 4229
No. 2 Smelt Dissolving Tank	AO17181735	10PEN1700 4238
Lime Slaker	AO17137615	10PEN1700 4246
Lime Kiln	AO17181738	10PEN1700 4228
Fluo-Solids Unit (Calciner)	AO17151541	10PEN1700 4236
Tall Oil Plant	AO17181741	10PEN1700 4201
No. 1 Power Boiler	AO17181726	10PEN1700 4224
No. 2 Power Boiler	AO17181727	10PEN1700 4214
No. 3 Power Boiler	AO17146028	10PEN1700 4233
No. 4 Power Boiler	AO17145038	10PEN1700 4237
No. 5 Power Boiler	AO17203050	10PEN1700 4202
Coal Crushing and Handling	AO17143517	10PEN1700 4239 & 40
P5 Dry Additives	AO17213490	10PEN1700 4245
P5 Starch	AO17213492	10PEN1700 4244

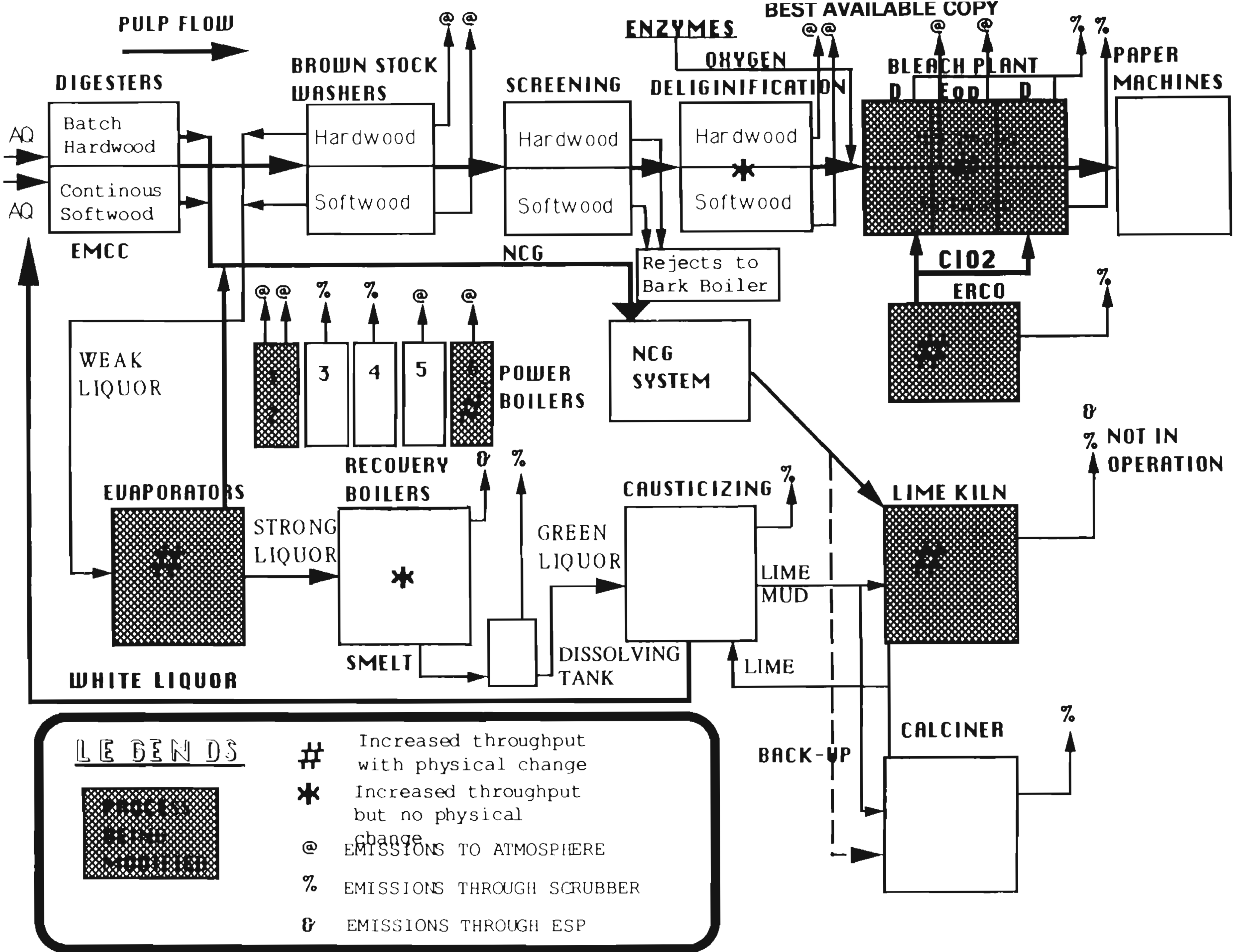

PULP FLOW
DIGESTERS
Batch Hardwood
Continous Softwood
AQ
AQ
EMCC
BROWN STOCK WASHERS
Hardwood
Softwood
SCREENING
Hardwood
Softwood
ENZYMES
OXYGEN DELIGINIFICATION
Hardwood
Softwood
BLEACH PLANT
D
Eop
D
PAPER MACHINES
NCG
Rejects to Bark Boiler
ClO2
ERCO
NCG SYSTEM
WEAK LIQUOR
3
4
5
POWER BOILERS
RECOVERY BOILERS
EVAPORATORS
STRONG LIQUOR
GREEN LIQUOR
CAUSTICIZING
LIME KILN
& % NOT IN OPERATION
LIME MUD
LIME
SMELT
DISSOLVING TANK
WHITE LIQUOR
CALCINER
BACK-UP
LEGENDS
Increased throughput with physical change
* Increased throughput but no physical change
@ EMISSIONS TO ATMOSPHERE
% EMISSIONS THROUGH SCRUBBER
& EMISSIONS THROUGH ESP

Figure 2-3

The other sources in the cooking area include the diffusion washer on the softwood line and the brown stock washers on the hardwood line. The washers on both lines vent directly to the atmosphere.

O_2 Delignification and Bleaching

The washed brown stock from the cooking processes are further delignified using oxygen in separate O_2 reactors on each line. The O_2 delignification systems on each line are identical and include three vents each, as follows:

- The pre-O_2 decker washer vent
- The O_2 blow tank vent
- The post-O_2 washer vent

Following O_2 delignification, the pulp is processed through the bleaching system. The existing Pensacola bleaching operations are similar for each line and include the following sources:

- Cl/ClO_2 scrubber - This scrubber uses white liquor to control the emissions from the chlorination stage and chlorine dioxide stage of the existing bleaching sequence.

- E_o tower vent and E_o washer vent - These sources are direct atmospheric vents from the oxidative extraction stages of the existing bleaching sequence.

ClO_2 for the existing mill bleaching sequence is generated on site in an ERCO R3H generator. The unit uses salt, sulfuric acid, and sodium chlorate to generate ClO_2 and Cl_2. The current bleaching sequence includes chlorine and chlorine dioxide in the first stage, an oxygen extractive stage, and chlorine dioxide in the final stage (C_DE_OD). There are five vent sources associated with the ClO_2 generator as follows:

- One tail gas scrubber - This scrubber uses sodium hydroxide to control Cl_2 and ClO_2 from the generator.

- Two ClO_2 storage tanks controlled by chilled water scrubbers.

- Two salt unloading/pneumatic transfer systems controlled by separate water spray towers.

Chemical Recovery and Power Generation

The chemical recovery and power generation area includes the process equipment associated with recovering the cooking chemicals and the power boilers which generate the necessary process steam. Each of the sources affected by the proposed project are detailed below.

- *Multiple Effect Evaporators* - The evaporators are used to concentrate the weak black liquor prior to firing in the recovery furnaces. The off-gas from the evaporators is vented into the NCG system previously described and is ultimately combusted in the lime kiln or calciner.

- *No. 1 and No. 2 Recovery Furnaces* - These boilers burn the concentrated black liquor to generate process steam and to recover smelt for further reprocessing. The boilers are identical Babcock and Wilcox low-odor design units equipped with dual-chamber multifield electrostatic precipitators (EPs) to control particulate matter emissions.

- *Lime Kiln* - The lime kiln is used to calcine lime mud from the slaking process in the chemical recovery area. The kiln is permitted to burn natural gas and is rated to produce up to 328 tons of CaO per day. It also serves as the primary control device for the NCGs generated in the pulping process. Particulate emissions from the kiln are controlled by a venturi scrubber and mist separator.

- *No. 1 Power Boiler* - This boiler is a natural gas-fired boiler originally rated to produce 140,000 pounds of steam per hour and having a derated heat input of 175mm BTU per hour.

- *No. 2 Power Boiler* - This boiler is a natural gas-fired boiler originally rated to produce 140,000 pounds of steam per hour and having a derated heat input of 170mm BTU per hour.

2.5 MODIFIED AND NEW AIR SOURCES

The project will affect the various air sources outlined in Section 2.4 on a source-specific basis. The following information is intended to provide details on the changes which each of the existing affected sources will experience, and also to provide information on the proposed new No. 6 Power Boiler which will replace the No. 1 and No. 2 Power Boilers as part of the project. The information is presented based upon the production area groupings previously identified in Section 2.4.

Chemical Cooking

Improved delignification in the cooking processes might play a role in reducing the wastewater treatment load. CHAMPION has identified two potential changes to be made to the digester processes to improve delignification, including:

- Extended modified continuous cooking (EMCC)
- Anthraquinone cooking (AQ)

It is important to understand that these are both changes in the cooking process which should not impact air emissions from the system. Therefore, by themselves EMCC and AQ do not require air permitting. Both methods have undergone trial efforts at the Pensacola Mill and continue to be evaluated.

EMCC can only be considered in the continuous digester serving the softwood line. It involves changes in feeding the cooking liquor into the digester in stages and different cooking conditions. If successfully implemented, it is expected to produce a pulp which is easier to wash, therefore, improving lignin extraction. While some changes in piping are required for the digester, it is a sealed unit with any emissions ultimately vented directly to the NCG system. No increase in throughput occurs in the digester as a result of EMCC.

Anthraquinone (AQ) is an organic catalyst which accelerates and increases the selectivity of the wood cooking chemicals in the delignification of the pulp fiber. It can potentially be used in both the batch digesters serving the hardwood line and the continuous digester serving the softwood line. The ultimate goal of applying AQ is a reduction in the organic loading, the color, and the conductivity in the bleach plant effluent and further reduction in the chlorine usage in the bleach plant.

The project will require the installation of storage and handling equipment for AQ. AQ is water soluble and, therefore, CHAMPION proposes to utilize a system designed for transporting and storing water-soluble anthraquinone (SAQ). AQ is not on the Clean Air List of 189 Air Toxics. It is a reportable substance and adequate containment of the storage and unloading facility will be provided.

While both EMCC and AQ are changes in the digester cooking processes, it is believed that there will be no changes resulting in the emissions from the digesters following implementation of these methods. Since feed rate to the digesters will not change the material flow rate from the digesters to the brown stock, washers will also be unchanged. Air emissions from the brown stock washers should be no different following implementation of these improved cooking methods.

O_2 Delignification and Bleaching

The washed brown pulp from the cooking processes goes through further delignification in

O_2 reactors on each line. If these improvements in the digester cooking processes occur, less fiber may be wasted which could result in an increase in the fiber processed through the O_2 delignification systems. Since there could also be reduced levels of lignin in the brown pulp, the emissions from the pre- and post-O_2 washers and the O_2 blow tank are not expected to change as a result of the project, even if fiber throughput increases.

The most significant change in the pulp production process will be the conversion of the existing C_DE_OD bleach plant. This will be accomplished by elimination of the existing chlorine gas handling system, the addition of a hydrogen peroxide handling system, and the modification of the chlorine dioxide generator. In addition, enzymes may be added to the high density storage tanks between the oxygen delignification systems and the bleach plants. Each of these changes is detailed below.

- *Enzyme Bleach Boosting* - Enzyme bleach boosting is a new technique which must still undergo field trails. It involves the application of xylanase enzyme prior to pulp bleaching with the purpose of modifying the chemical structure to make subsequent bleach stages more efficient. The high degree of specificity of action and mild working conditions generally result in fewer non-desirable byproducts. This tends to give a more efficient process and should lead to improved process yields. Significant reductions in chlorine dioxide required to bleach pulp are possible with no significant impact on pulp properties.

  From an environmental viewpoint, enzymes are safe and quite desirable. They are easy to handle, require mild conditions for reaction, are effective in small amounts, biodegradable, and non-toxic. The xylanase enzymes to be used in pulp bleaching are categorized as food grade products.

  The use of enzymes will require the installation of enzyme storage and handling facilities. Since enzymes are water soluble, there will be no air emission associated with this system.

- *Chlorine Dioxide Substitution for Chlorine* - The mill will eliminate the use of molecular chlorine as a bleaching agent, and the first stage of each bleach plant will be 100% chlorine dioxide. This will require a modification of the existing chlorine dioxide generator.

  The existing generator is an ERCO R3H which uses salt, sulfuric acid, hydrochloric acid, and sodium chlorate to generate chlorine dioxide and chlorine. The generator will be modified to an R8 process which uses methanol, sulfuric acid, and sodium chlorate to generate chlorine dioxide. The conversion to R8 is necessary to eliminate the chlorine gas byproduct which is currently generated in the R3H process. The modified reactor capacity will be increased from the present 16 tons per day to 37.4 tons per day of chlorine dioxide. A new storage tank will also be installed, as well as modification of the existing chlorine absorption towers to chlorine dioxide absorption towers.

  The existing tail gas scrubber will be modified by installing an extra 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide plus sodium sulfide). The existing storage tank scrubbers, as well as the new storage tank scrubber will be rerouted to the tail gas scrubber.

  The existing salt unloading and storage system will be shut down and dismantled.

  The existing bleach plant scrubbers are equally effective for chlorine and chlorine dioxide removal, and the scrubber systems have adequate capacity for the expected emissions. Therefore, no change in the bleach plant scrubber system is planned.

- *Peroxide Fortified Oxidative Caustic Extraction* - Hydrogen peroxide is an oxidizing agent that works optimally in alkaline conditions and is typically applied to the pulp in a 50% solution. The peroxide is applied in the oxidative extraction stage. The hydrogen peroxide is a non-specific oxidizer that reacts as readily with the extracted lignin as it does with the pulp. Because of the non-specificity, half of the peroxide decolorizes the extraction filtrate. The other half of the charge increases the brightness of the pulp leaving the extraction stage. Because of the higher brightness achievable, chlorine dioxide charged to either the first stage or the final bleaching stage is reduced.

The use of hydrogen peroxide will require the installation of a storage and handling system for the chemical. The peroxide will completely react in the extraction tower. There are no air emissions associated with the use of hydrogen peroxide.

Chemical Recovery and Power Generation

The improvements in the chemical cooking processes will result in increased organic levels in the weak liquor. Furthermore, the other mill improvements aimed at reducing the amount of wastewater generated by minimizing process losses will increase the overall load to the multiple effect evaporators and through the subsequent chemical recovery process. Other improvements to the existing facility associated with minimizing process losses include upgrading the evaporator foul condensate stripper and modifying the lime kiln. Each of the affected air emission sources are discussed below.

- *Evaporation Capacity Upgrade* - Reclaimed process or liquor losses eventually are processed through the black liquor evaporators. These evaporators are currently at capacity during normal operation. Any added liquor volume for evaporating reclaimed process losses will require added capacity.

  With the planned process loss containment project and pulp-mill process changes, it is estimated that a 50% increase in evaporation capacity of the No. 2 set evaporator will be needed. This will be accomplished by the addition of two new evaporator effects.

- *Recovery Furnace Operations* - The resulting solids generated from the evaporation of contained spills will be sent to the two recovery furnaces. As a result, the overall annual solids throughput to the recovery furnaces will increase. However, the furnaces will continue to be operated at or below the black liquor solids firing rate limit of 111,000 pounds per hour (virgin plus makeup) contained in the current air permits.

  In order to improve the furnace availability, the existing direct steam injection black liquor heaters associated with the liquor feed systems will be converted to indirect heaters. The indirect heaters will allow more heat to be transferred to the liquor without affecting the heating value of the liquor, in turn allowing more efficient use of the existing limited vertical sweep (LVS) burners in the furnaces, and improving furnace uptime. CHAMPION does not believe that the change in the type of liquor heaters is a modification to the furnaces, but rather is a modification to the fuel delivery system.

  The smelt dissolving tanks associated with each recovery furnace will not experience increased throughput. The majority of additional solids burned in the recovery furnaces will be organic, i.e., lignin from the wood. The small amount of inorganic solids (sodium and sulfur compounds) collected will be offset by the reduction of purchased makeup chemicals. Since the lignin will be burned in the boiler, the throughput of smelt to the dissolving tank will not change.

- *Evaporator Foul Condensate Stripping Upgrade* - Various volatile organic compounds are released with digester steam after the cooking of wood chips. Some of the volatile compounds or non-condensible gases are piped to the lime kiln and burned. The remaining portion is dissolved and carried in the digester steam (contaminated) condensate to a heat recovery system. Condensates from the black liquor evaporation process are also rich in dissolved organic compounds. Most of the organic component in digester steam and evaporator condensates is methanol and other low molecular weight compounds. These compounds produce a very large biochemical oxygen demand on the wastewater treatment facility. The mill currently collects and steam strips most of the more concentrated or "foul" condensates. The liberated volatile organic compounds are then burned with the non-condensible gases in the lime kiln. However, a significant BOD load is discharged to the waste treatment plant due to an excess of less contaminated condensates and the lack of stripping capacity.

CHAMPION has evaluated the upgrade of the existing contaminated condensate stripper and the installation of an additional steam stripper. With added stripper capacity, initial estimates have shown that the mill effluent BOD load to the wastewater treatment plant could be reduced by as much as 15%. The evaluation is currently not completed, and the exact configuration has not been determined.

The installation of a stripper will not directly affect air emission except to the extent these chemicals are being stripped in the wastewater treatment system. In that regard, a steam stripper will directly reduce the emissions of volatile compounds. There will be an indirect impact on air emissions since the collected compounds will be burned in the lime kiln and/or calciner.

- *Lime Reburning Capacity - Lime Mud Dryer Upgrade* - Currently, the lime kiln and calciner cannot process all of the lime mud produced by the causticizing process. The difference between the current lime reburning capability and the requirements to produce white liquor for the pulping process is made up with purchased fresh lime. The excess lime mud (calcium carbonate) produced in the causticizing operation is discharged to the sewer in a weak wash solution. The sewered lime mud flows to the waste treatment primary settling basin, is dredged with other mill settled sludge, and pumped to the decanting basins. The combined mud and mill sludge is reclaimed from the decanting basins and hauled to the landfill. The weak wash solution sewered with the lime mud is an alkaline solution that has to be neutralized in the settling basin by carbon dioxide injection. However, the alkaline solution increases the mill effluent conductivity.

An upgraded kiln capacity will supply the total lime requirements eliminating the sewering of lime mud in weak wash solution as part of daily operation. Initial estimates indicate that the required capacity increase will reduce daily landfill by approximately 100 tons and reduce the conductivity by about 20%.

The increase in lime kiln capacity will be accomplished by the installation of a lime mud dryer. Figure 2-4 shows a representation of the system.

The fluid bed calciner will not be changed, and the normal throughput will not change.

The amount of lime added to the green liquor in the slaker will not change. The additional reburned lime from the modified lime kiln will allow the reduction of purchased fresh lime.

There will be a slight increase in non-condensible gases (NCGs) and rectifier gases (methanol) being burned in the lime kiln. The only impact will be to increase the amount of sulfur dioxide formed in the kiln due to the sulfur in the NCGs. Since testing has shown a near 100% removal of sulfur dioxide by the system, there should be no impact on air emissions.

- *Steam Capacity Upgrade (No. 6 Package Boiler)* - Added steam capacity will be required to support the process modifications. The specific added steam demand will come from an increase in evaporation and contaminated condensate stripping capacity, black liquor heaters, the cooking modifications, and bleach plant load reduction technologies.

In addition to the added steam demand, CHAMPION will shut down No. 1 and No. 2 power boilers. These boilers, built in the early 50s, are in poor repair and poor efficiency.

A new high pressure steam boiler to supply 350,000 pounds per hour additional steam load for consent order projects and replacement of the two obsolescent power boilers will be installed.

AHLSTROM LIME MUD DRYER SYSTEM

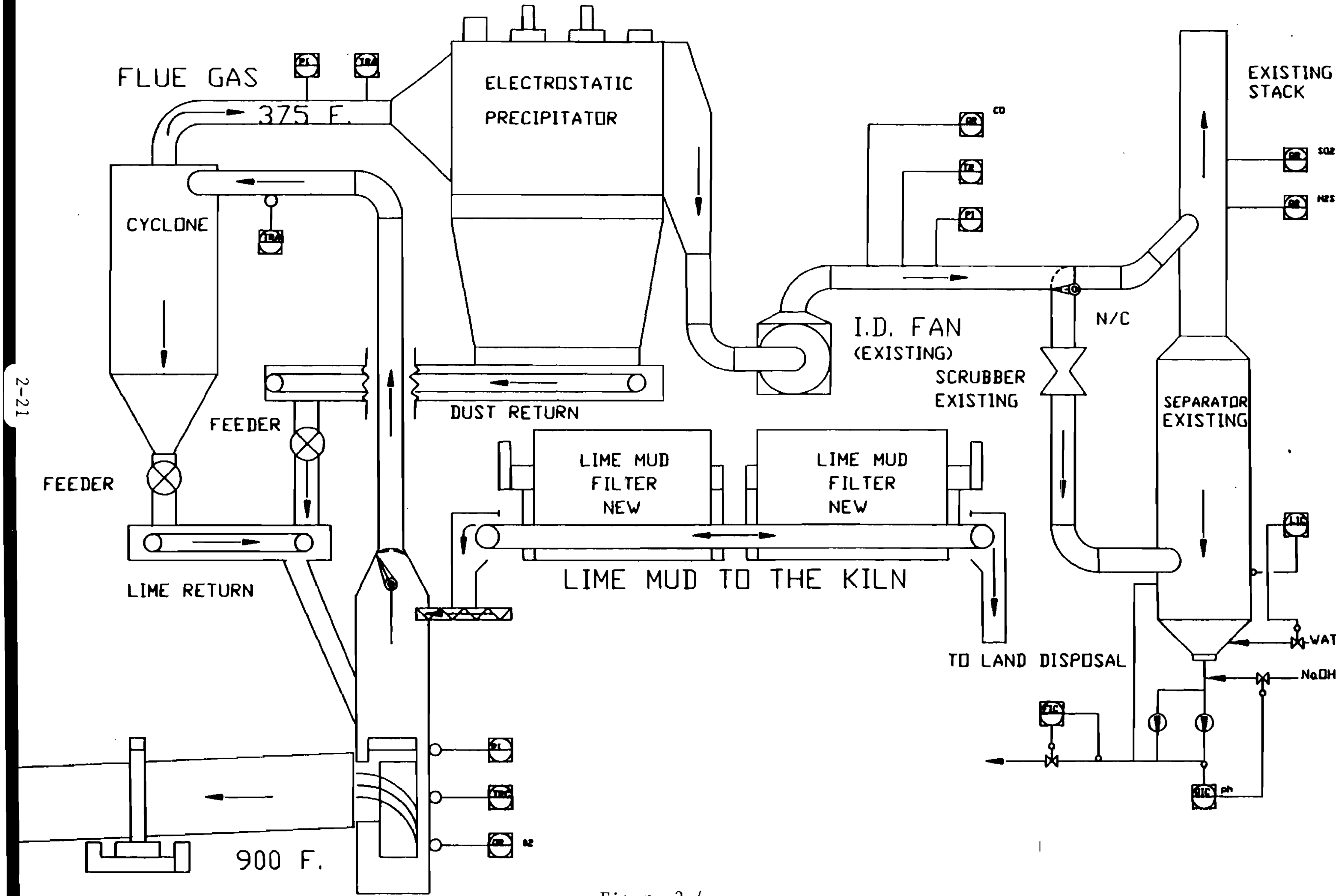


Figure 2-4

SECTION 3
SUMMARY OF EMISSIONS

3.1 INTRODUCTION

A baseline and proposed future emissions inventory has been developed for the Pensacola mill sources affected by the proposed modifications. A list of the affected sources is included in Table 3-1. The inventory includes baseline emission rates from the existing affected sources and future emission rates for the proposed new and modified sources.

The baseline emission rates have been developed based on the two year period dating from July 1, 1990 through June 30, 1992. The baseline rates were determined using the individual source operating information including: fuel use data, process throughput data, actual source operating hours, and continuous emission monitoring (CEM) data where available. For each affected source, emission factors were developed from available emission tests or CEM data or from applicable literature. The factors were then used with the operating data to calculate annual baseline emission rates. Future emissions were projected using vendor data or guarantees, where available.

The following sections briefly identify the basis for each emission factor and source in the emissions inventory. The actual calculations, source operating data, and detailed monthly emission rates for the period July 1990 - June 1992 are included in Appendix A. Appendix B includes the backup documentation for the data used in the emission calculations.

TABLE 3-1

CHAMPION - PENSACOLA
SUMMARY OF AFFECTED SOURCES

BASELINE SOURCES
No. 1 Power Boiler
No. 2 Power Boiler
Lime Kiln
No. 1 Recovery Boiler
No. 2 Recovery Boiler

3.2 BASELINE EMISSION RATES

A summary of the emission factors utilized for baseline emissions is presented in Table 3-2. The calculated baseline emission rates for the two year averaging period for the affected sources are presented in Table 3-3.

The following subsections provide a brief source-by source description of the development of individual emission factors.

3.2.1 No. 1 Power Boiler

The No. 1 power boiler has a design heat input rating of 180 MMBtu per hour. The primary fuel fired in the boiler was natural gas. However, the boiler is also equipped to burn No. 6 fuel oil for emergency use. For the baseline period, natural gas was the only fuel fired and emissions are based on natural gas usage for the period. The following information presents the basis for the selected emission factors for each pollutant.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based upon the average NO_x mass emission rates and total heat input rates measured during a series of three test runs conducted on 8 February 1991. The NO_x emission factor is 0.10 lb/MMBtu.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based upon the typical sulfur content of the natural gas burned in the No. 1 power boiler as supplied by the gas vendor and the assumption of 100% conversion to SO_2. The SO_2 emission factor is 0.0018 lbs/MMBtu.

TABLE 3-2
CHAMPION
PENSACOLA, FLA
SUMMARY OF EMISSION FACTORS
BASELINE EMISSIONS

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	0.1 lb/MMBtu	0.0018 lb/MMBtu	0.1 lb/MMBtu	0.005 lb/MMBtu	7.82 lb/hr	NA
#2 POWER BOILER	0.42 lb/MMBtu	0.0018 lb/MMBtu	0.1 lb/MMBtu	0.005 lb/MMBtu	7.77 lb/hr	NA
LIME KILN	15.5 lb/hr	0.43 lb/hr	1.4 lb/hr	14.0 lb/hr	0.41 lb/hr	2.02 lb/hr
#1 RECOVERY BOILER(1)	1.5 lb/ton BLS	1.33 lb/ton BLS	7.25 lb/ton BLS	1.12 lb/ton BLS	0.144 lb/ton BLS	0.019 lb/ton BLS
#2 RECOVERY BOILER(1)	1.5 lb/ton BLS	1.33 lb/ton BLS	7.25 lb/ton BLS	1.12 lb/ton BLS	0.144 lb/ton BLS	0.013 lb/ton BLS

(1) BLS represents "as-fired" black liquor solids content.

TABLE 3-3
CHAMPION
PENSACOLA, FLA
SUMMARY OF BASELINE EMISSION RATES
JULY 1990 - JUNE 1992
(tons/year)

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	40.57	0.73	40.57	2.03	31.39	NA
#2 POWER BOILER	113.20	0.49	26.95	1.35	19.47	NA
LIME KILN	63.46	1.76	5.73	57.32	1.68	8.27
#1 RECOVERY BOILER	319.51	283.30	1544.30	238.57	30.67	4.05
#2 RECOVERY BOILER	322.18	285.67	1557.20	240.56	30.93	2.79

- Carbon Monoxide (CO)

  The CO emission factor used is the same emission factor reported in Champion's PSD permit application for the No. 5 Package Boiler submitted in February 1991. This factor was based on testing conducted on Champions No. 5 Package Boiler on 16-17 May 1989. The CO emission factor is 0.1 lb/MMBtu.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the AP-42 emission factor for natural gas (Table 1.4-1, utility boiler size). This factor is 5 lb/10^6 cf. Assuming a natural gas heating value of 1000 Btu/scf, the PM/PM_{10} emission factor is 0.005 lb/MMBtu.

- Volatile Organic Compounds (VOC)

  The VOC emission factor used is based upon the same VOC concentration reported in Champion's PSD permit application for the No. 5 Package Boiler submitted in February 1991. This concentration of 20 ppm (as propane) was established by testing conducted on 16-17 May 1989 and is used in conjunction with volumetric flow rate data from testing on 8 February 1991. The VOC emission factor is 7.82 lb/hr.

3.2.2 No. 2 Power Boiler

The No. 2 power boiler has a design heat input rating of 220 MMBtu per hour. The primary fuel fired in the boiler is natural gas. However, the boiler is also equipped to burn

No. 6 fuel oil for emergency use. For the baseline period, natural gas was the only fuel fired and emissions are based on natural gas usage. The following information presents the basis for the selected emission factors for each pollutant.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based upon the average NO_x mass emission rates and total heat input rates measured during a series of three test runs conducted on 9 February 1991. The NO_x emission factor is 0.42 lb/MMBtu.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based upon the typical sulfur content of the natural gas burned in the No. 1 power boiler as supplied by the gas vendor and the assumption of 100% conversion to SO_2. The SO_2 emission factor is .0018 lb/MMBtu.

- Carbon Monoxide (CO)

  The CO emission factor used is the same emission factor reported in Champion's PSD permit application for the No. 5 Package Boiler submitted in February 1991. This factor was based on testing conducted on Champion's No. 5 Package Boiler on 16-17 May 1989. The CO emission factor is 0.1 lb/MMBtu.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the AP-42 emission factor for natural gas (Table 1.4-1, utility boiler size). This factor is 5 $lb/10^6$ cf of natural gas. Assuming a natural gas heating value of 1000 Btu/scf, the PM/PM_{10} emission factor is 0.005 lb/MMBtu.

- Volatile Organic Compounds (VOC)

  The VOC emission factor used is based upon the same VOC concentration reported in Champion's PSD permit application for the No. 5 Package Boiler submitted in February 1991. This concentration of 20 ppm as propane was established by testing conducted 16-17 May 1989 and is used in conjunction with volumetric flow rate data from 9 February 1991. The VOC emission factor is 7.77 lb/hr.

3.2.3 Lime Kiln

The Pensacola lime kiln is rated to produce approximately 320 tons of lime per day. The kiln fires natural gas and has a maximum heat input rate of approximately 123 MMBtu per hour. The kiln is also used to incinerate non-condensible gases (NCG) from the Kraft mill process.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based on the average of two series of tests conducted on 13 December 1989 and 11-12 April 1990. The NO_x emission factor is 15.5 lb/hr.

- Sulfur Dioxide (SO_2)

The SO_2 emission factor is an average of four series of tests conducted 26 April, 16 May, 13 December 1989 and 11-12 April 1990. The 16 May 1989 test results included in the average only include the test runs during which all noncondensible gas streams were ducted to the lime kiln. The results included are the most representative of normal kiln operations. The SO_2 emission factor is 0.43 lb/hr.

- Carbon Monoxide (CO)

The CO emission factor is an average of two series of tests conducted on 13 December 1989 and 11-12 April 1990. The CO emission factor is 1.4 lb/hr.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

The PM/PM_{10} emission factor is based on an average of four series of tests conducted 26 April 1989, 12 December 1989, 19 March 1991, and 27 March 1992. The PM/PM_{10} emission factor is 14.0 lb/hr.

- Volatile Organic Compounds (VOC)

The VOC emission factor is based on an average of two series of tests conducted 13 December 1989 and 11-12 April 1990. The VOC emission factor is 0.42 lb/hr.

- Total Reduced Sulfur Compounds (TRS)

  The TRS emission factor is based on the 2-year average CEM data and the average gas stream volumetric flow rate from testing conducted 19 March 1991 and 27 March 1992. The TRS value is assumed to be 100% H_2S for calculating a mass emission rate. The TRS emission factor is 2.02 lb/hr.

3.2.4 No. 1 Recovery Boiler

The No. 1 recovery boiler was manufactured by B&W and is rated to fire up to 111,000 pounds of black liquor solids per hour. The No. 1 recovery boiler emission factors for NO_x, SO_2, CO, and VOC are all based on the upper 95% confidence interval values for a series of tests conducted in February 1989. A total of 25 individual test runs were conducted for NO_x, CO, SO_2, and VOC. This approach to calculating an emission factor for recovery boiler emissions was dictated by the wide variability in the test results. The upper 95% confidence interval value provides a more conservative indication of the potential emission factor for these sources. For PM only six separate test runs were conducted; therefore, the emission factor is based upon the mean test value. The TRS emission rate was based on CEM data for this source.

It is important to note that for some test runs, 0 ppm was reported. In these cases, where a one-hour test average was 0 ppm, one half of the mass rate corresponding to 1 ppm was utilized in the calculations. All of the factors are based upon the pounds of pollutant generated per ton of BLS fired.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based on the 95% confidence interval (95% CI) value for the tests conducted 23-24 February 1989. The NO_x emission factor is 1.50 lb/ton BLS.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The SO_2 emission factor is 1.33 lb/ton BLS.

- Carbon Monoxide (CO)

  The CO emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The CO emission factor is 7.25 lb/ton/BLS.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the mean value for the tests conducted 23-24 February 1989. The PM/PM_{10} emission factor is 1.12 lb/ton BLS.

- Volatile Organic Compounds (VOC)

  The VOC emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The VOC emission factor is 0.144 lb/ton BLS.

- Total Reduced Sulfur Compounds (TRS)

  The TRS emission factor is based on the 2-year average CEM data and the average gas stream volumetric flow rate from stack tests conducted 23-24 February 1989. The TRS value is assumed to be 100% H_2S when calculating a mass emission rate. The TRS emission factor is 0.019 lb/ton BLS.

3.2.5 No. 2 Recovery Boiler

The No. 2 recovery boiler is essentially identical to the No. 1 boiler. It is also a B&W boiler rated to fire up to 111,000 pounds of black liquor solids (BLS) per hour. The emission factors for the No. 2 recovery boiler are based on the same approach and test results as the No. 1 recovery boiler. The TRS emission factor differs from the No. 1 recovery boiler factor because the No. 2 recovery boiler has an independent TRS CEM system. All emission factors are based upon the pounds of pollutant generated per ton of BLS fired.

- Nitrogen Oxides (NO_x)

  The NO_x emission factor is based on the 95% confidence interval (95% CI) value for the tests conducted 23-24 February 1989. The NO_x emission factor is 1.50 lb/ton BLS.

- Sulfur Dioxide (SO_2)

  The SO_2 emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The SO_2 emission factor is 1.33 lb/ton BLS.

- Carbon Monoxide (CO)

  The CO emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The CO emission factor is 7.25 lb/ton/BLS.

- Total Suspended Particulate Matter and Particulate Matter less than 10 microns (PM/PM_{10})

  The PM/PM_{10} emission factor is based on the mean value for the tests conducted 23-24 February 1989. The PM/PM_{10} emission factor is 1.12 lb/ton BLS.

- Volatile Organic Compounds (VOC)

  The VOC emission factor is based on the 95% CI value for the tests conducted 23-24 February 1989. The VOC emission factor is 0.144 lb/ton BLS.

- Total Reduced Sulfur Compounds (TRS)

  The TRS emission factor is based on the 2-year average CEM data and the average gas stream volumetric flow rate from tests conducted 19 March 1991 and 27 March 1992. The TRS value is assumed to be 100% H_2S for calculating a mass emission rate. The TRS emission factor is 0.013 lb/ton BLS.

APPENDIX A

APPENDIX A

CHAMPION - PENSACOLA
SUMMARY OF EMISSION FACTORS
BASELINE EMISSIONS

#1 POWER BOILER

- NO_x - Stack test 2/91 (Appendix B, pg. B-2), 3 test runs conducted and the NO_x emission rate reported for each run was 0.10 lbs/MMBtu, the average emission rate was 0.10 lb/MMBtu.

  Emission Factor = 0.10 lb/MMBtu

- SO_2 - Natural gas sulfur content reported as 10.7 ppm by weight (Appendix B, pg. B-3). SO_2 emission factor calculated as follows:

$$\frac{10.7 \text{ parts S}}{1 \times 10^6 \text{ ft}^3 \text{ N.G.}} \times \frac{32 \text{ lbs}}{\text{lb-mole}} \times \frac{1 \text{ lb-mole}}{385.35 \text{ ft}^3} = \frac{0.89 \text{ lbs S}}{1 \times 10^6 \text{ ft}^3 \text{ N.G.}}$$

assume 1,000 BTU/ft³ N.G.

$$\frac{.89 \text{ lbs S}}{1 \times 10^6 \text{ ft}^3 \text{ N.G.}} \times \frac{\text{ft}^3 \text{ N.G.}}{1{,}000 \text{ BTU}} \times \frac{64 \text{ lbs-moles } SO_2}{32 \text{ lbs-moles S}} =$$

$$\frac{.0018 \text{ lbs } SO_2}{\text{MMBtu}}$$

Emission Factor = 0.0018 lb/MMBtu

- CO - PSD Permit Application for Proposed Package Boiler - Pensacola 2/91, (Appendix B, pg. B-4)

Emission Factor = 0.1 lb/MMBtu

- PM/PM_{10} - The AP-42 emission factor estimate for PM/PM10 for utility boilers burning natural gas (Appendix B, pg. B-5) is 5 lbs per 10^6 ft^3 of natural gas. Assuming 1,000 BTU per ft^3, the PM/PM10 emission factor is calculated as follows:

$$\frac{5 \text{ lbs PM/PM10}}{1 \times 10^6 \text{ ft}^3 \text{ N.G.}} \times \frac{1 \text{ ft}^3 \text{ N.G.}}{1{,}000 \text{ BTU}} = \frac{.005 \text{ lbs PM/PM10}}{\text{MMBtu}}$$

Emission Factor = 0.005 lb/MMBtu

- VOC 11-5-92 will resubmit

Emission Factor = 7.82 lb/hr

Emission Factor Based on 20 ppm and 5.71 x 10^4 dscfm - PSD Permit App - Pensacola 2/91, Appendix B, pg. B-7
- Stack Test 2/91

$$\frac{lb}{hr} = \frac{ppm}{385.35 \times 10^6} \times Q_{dscfm} \times \frac{60 \text{ min}}{hr} \times MW$$

Where:

385.35×10^6 = A conversion factor relating cf/l (0.03531), g/lb (453.6), l/g-mole (24.06), and ppm (10^6)

44 = Molecular Weight as Propane

$$= \frac{20 \text{ ppm}}{385.35 \times 10^6} \times (5.71 \times 10^4) \times 60 \times 44 = 7.82 \text{ lb/hr}$$

= 7.82 lb/hr

#2 POWER BOILER

- NO_x - Results of three separate NO_x emission test runs during 2/91 were 0.40 lb/MMBtu, 0.42 lb/MMBtu and 0.44 lb/MMBtu. Mean value from the testing was 0.42 lb/MMBtu (Appendix B, pg. B-6).

  Emission Factor = 0.42 lb/MMBtu

- SO_2 - Natural gas sulfur content reported as 10.7 ppm by weight (Appendix B, pg. B-3). SO_2 emission factor calculated as above for #1 Power Boiler.

  Emission Factor = 0.0018 lb/MMBtu

- CO - PSD Permit Application for Proposed Package Boiler - Pensacola 2/91, (Appendix B, pg. B-4).

  Emission Factor = 0.1 lb/MMBtu

- PM/PM_{10} - The AP-42 emission factor estimate for PM/PM10 from utility boilers burning natural gas (Appendix B, pg. B-5) is 5 lbs per 10^6 ft^3 of natural gas. Assuming 1,000 BTU per ft^3, the PM/PM10 emission factor is calculated as above for #1 Power Boiler.

  Emission Factor = 0.005 lb/MMBtu

- VOC

  11-5-92 will resubmit

  Emission Factor = 7.77 lb/hr

  Emission Factor Based on 20 ppm and 5.67×10^4 dscfm - PSD Permit App - Pensacola 2/91, Appendix B, pg. B-7
  - Stack Test 2/91

  Where:

  385.35×10^6 = A conversion factor relating cf/l (0.03531), g/lb (453.6), l/g-mole (24.06), and ppm (10^6)

  44 = molecular weight as propane

$$\frac{lb}{hr} = \frac{20 \text{ ppm}}{385.35 \times 10^6} \times (5.67 \times 10^4) \times 60 \times 44 = 7.77 \text{ lb/hr}$$

Emission Factor = 7.77 lb/hr

LIME KILN

- NO_x - The NO_x emission factor is based upon the average NO_x emission rate from seven one-hour tests conducted December 1989 and one twelve-hour test conducted in April 1990. (Appendix B, pgs. B-8 and B-9)

Average

14.2 lb/hr	Stack Test	12/89
16.8 lb/hr	Stack Test	4/90

Emission Factor = 15.5 lb/hr

- SO_2 - The SO_2 emission factor is based upon the average of four series of tests as indicated below (Appendix B, pgs. B-8, B-9, B-10, and B-11)

Average

0.2 lb/hr	Stack Test	4/89
0.7 lb/hr	Stack Test	5/89
0.1 lb/hr	Stack Test	12/89
0.7 lb/hr	Stack Test	4/90

Emission Factor = 0.43 lb/hr

- CO - The CO emission factor is based upon the average of two series of tests as indicated below (Appendix B, pgs. B-8, B-9)

Average

1.0 lb/hr	Stack Test	12/89
1.8 lb/hr	Stack Test	4/90

Emission Factor = 1.4 lb/hr

- PM/PM_{10} - The PM/PM10 emission factor is based upon four series of stack tests as indicated below (Appendix B, pgs. B-10, B-12, B-13, and B-14)

<u>Average</u>

10.8 lb/hr	Stack Test	4/89
23.2 lb/hr	Stack Test	12/89
14.8 lb/hr	Stack Test	3/91
7.2 lb/hr	Stack Test	3/92

Emission Factor = 14.0 lb/hr

- VOC - The VOC emission factor is based upon two series of stack tests as indicated below (Appendix B, pgs. B-8 and B-9)

<u>Average</u> (As Propane)

0.700 lb/hr	Stack Test	12/89
0.119 lb/hr	Stack Test	4/90

Average Emission Factor = 0.41 lb/hr as propane

- TRS

Emission Factor = 2.02 lb/hr

Emission Factor Based on 12.8 ppm @ 10% O_2 - 2-year average based on CEM data using average gas stream volumetric flow data from stack tests in March 91 and March 92 (Appendix B, pgs. B-13 and B-14)

27,100 dscfm @ 8.9% O_2

$$27{,}100 \text{ dscfm} \times \left[\frac{20.9 - 8.9}{20.9 - 10}\right] = 29{,}835 \text{ dscfm @ } 10\%\ O_2$$

Where:

20.9 = O_2 concentration at standard conditions

$$\frac{lb}{hr} = \frac{ppm}{385.35 \times 10^6} \times Q_{dscfm} \times \frac{60 \text{ min}}{hr} \times MW$$

Where:

385.35×10^6 = A conversion factor relating cf/l (0.03531), g/lb (453.6), l/g-mole (24.06), and ppm (10^6)

$$= 12.8 \text{ ppm} \times \frac{29{,}835 \text{ dscfm}}{385.35 \times 10^6} \times 34 \times 60 = 2.02 \text{ lb/hr}$$

$$= 2.02 \text{ lb/hr}^2 \textit{ as } H_2S$$

#1 RECOVERY BOILER

- NO_x - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16) and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

Black Liquor Solids Firing Rate

$$= \frac{260 \text{ gal as-fired Black Liquor}}{\text{min}} \times \frac{11.2 \text{ lb Black Liquor}}{\text{gal Black Liquor}} \times \frac{60 \text{ min}}{\text{hr}} \times (0.65)$$

$$= 113{,}568 \text{ lb as-fired BLS/hr} = 56.78 \text{ tons BLS/hr} = 1.50 \text{ lb } NO_x\text{/ton BLS}$$

0.65 = Solids Fraction in Black Liquor

85.3 lbs/hr NO_x ÷ 56.78 tons BLS/hr = 1.5 lb/ton BLS

Emission Factor = 1.50 lb/ton BLS

- SO_2 - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

$$\frac{\dfrac{75.4 \text{ lb } SO_2}{\text{hr}}}{\dfrac{56.78 \text{ tons BLS}}{\text{hr}}} = 1.33 \text{ lb/ton BLS}$$

Emission Factor = 1.33 lb/ton BLS

- CO - The emission factor is based upon the results of the February 1989 stack tests, the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate. (Appendix B, pg. B-15 and B-16)

$$\frac{\frac{411.6 \text{ lb CO}}{\text{hr}}}{\frac{56.78 \text{ tons BLS}}{\text{hr}}} = 7.25 \text{ lb/ton BLS}$$

Emission Factor = 7.25 lb/ton BLS

- PM/PM_{10} - The emission factor is based upon the average PM/PM10 emission rate for the stack tests conducted February 1989 (Appendix B, pg. B-17)

63.4 lb/hr @ 260 gpm BLS

$$\frac{\frac{63.4 \text{ lb PM/PM10}}{\text{hr}}}{\frac{56.78 \text{ tons BLS}}{\text{hr}}} = 1.12 \text{ lb/ton BLS}$$

Emission Factor = 1.12 lb/ton BLS

- VOC - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

$$\frac{\frac{8.2 \text{ lb VOC}}{\text{hr}}}{\frac{56.78 \text{ tons BLS}}{\text{hr}}} = 0.144 \text{ lb/ton BLS}$$

Emission Factor = 0.144 lb/ton BLS

- TRS

Emission Factor = 0.019 lb TRS/ton BLS

Emission factor based on 1.3 ppm @ 8% O_2 - 2 yr average based on CEM data.

Using average flow data from Stack Test 2/89 (Appendix B, pg. B-17)

139,000 dscfm @ 6.4% O_2 and 113, 568 lb BLS/hr

$$\frac{139{,}000\ \text{dscf}}{\text{min}} \times \left[\frac{20.9\ -\ 6.4}{20.9\ -\ 8}\right] = 156{,}240\ \text{dscfm @ } 8\%\ O_2$$

Where:

20.9 = O_2 concentration @ standard conditions

$$\frac{\text{lb}}{\text{hr}} = \frac{\text{ppm}}{385.35 \times 10^6} \times Q_{dscfm} \times \frac{60\ \text{min}}{\text{hr}} \times \text{MW}$$

Where:

385.35×10^6 = A conversion factor relating cf/l (0.03531), g/lb (453.6), l/g-mole (24.06), and ppm (10^6)

$$1.3\ \text{ppm @ } 8\%\ O_2 \times \frac{156{,}240\ \text{dscfm}}{385.35 \times 10^6} \times 34 \times 60 = 1.08\ \text{lb/hr}^2$$

$$\frac{\frac{1.08\ \text{lb TRS}}{\text{hr}}}{\frac{56.78\ \text{tons BLS}}{\text{hr}}} = 0.019\ \text{lb/ton BLS}$$

#2 RECOVERY BOILER

- NO_x - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

Black Liquor Solids Firing Rate

$$= \frac{260\ \text{gal as-fired Black Liquor}}{\text{min}} \times \frac{11.2\ \text{lb Black Liquor}}{\text{gal Black Liquor}} \times \frac{60\ \text{min}}{\text{hr}} \times (0.65)$$

$$= 113{,}568\ \text{lb as-fired BLS/hr} = 56.78\ \text{tons BLS/hr} = 1.50\ \text{lb } NO_x\text{/ton BLS}$$

0.65 = Solids Fraction in Black Liquor

85.3 lbs/hr NO_x ÷ 56.78 tons BLS/hr = 1.5 lb/ton BLS

Emission Factor = 1.50 lb/ton BLS

- SO_2 - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

$$\frac{\dfrac{75.4 \text{ lb } SO_2}{\text{hr}}}{\dfrac{56.78 \text{ tons BLS}}{\text{hr}}} = 1.33 \text{ lb/ton BLS}$$

Emission Factor = 1.33 lb/ton BLS

- CO - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

$$\frac{\dfrac{411.6 \text{ lb CO}}{\text{hr}}}{\dfrac{56.78 \text{ tons BLS}}{\text{hr}}} = 7.25 \text{ lb/ton BLS}$$

Emission Factor = 7.25 lb/ton BLS

- PM/PM_{10} - The emission factor is based upon the average PM/PM10 emission rate for the stack tests conducted February 1989 (Appendix B, pg. B-17)

63.4 lb/hr @ 260 gpm BL Stack Test 2/89

$$\frac{\dfrac{63.4 \text{ lb PM/PM10}}{\text{hr}}}{\dfrac{56.78 \text{ tons BLS}}{\text{hr}}} = 1.12 \text{ lb/ton BLS}$$

Average Emission Factor = 1.12 lb/ton BLS

- VOC - The emission factor is based upon the results of the February 1989 stack tests (Appendix B, pg. B-15 and B-16), and the 95% confidence interval value as determined in Table A-1. All tests were conducted at 260 gpm BLS firing rate.

$$\frac{\dfrac{8.2 \text{ lb VOC}}{\text{hr}}}{\dfrac{56.78 \text{ tons BLS}}{\text{hr}}} = 0.144 \text{ lb/ton BLS}$$

Emission Factor = 0.144 lb/ton BLS

- TRS

Emission Factor = 0.013 lb/ton BLS

Emission factor based on 0.9 ppm @ 8.1% O_2 - 2 yr average based on CEM data.

Using Average gas stream volumetric flow data from stack tests in March 91 and March 92 (Appendix B, pg. B-18 and B-19)

131,000 dscfm @ 8% O_2 and 96406 lb BLS/hr

$$\frac{131{,}000 \text{ dscf}}{\text{min}} \times \left[\frac{20.9 - 8.1}{20.9 - 8}\right] = 129{,}985 \text{ dscfm @ } 8\% \ O_2$$

Where:

20.9 = O_2 concentration @ standard conditions

$$\frac{\text{lb}}{\text{hr}} = \frac{\text{ppm}}{385.35 \times 10^6} \times Q_{dscfm} \times \frac{60 \text{ min}}{\text{hr}} \times MW$$

Where:

385.35×10^6 = A conversion factor relating cf/l (0.03531), g/lb (453.6), l/g-mole (24.06), and ppm (10^6)

$$0.9 \text{ ppm} \times \frac{129{,}985 \text{ dscfm}}{385.35 \times 10^6} \times 34 \times 60 = 0.62 \text{ lb/hr}^2$$

$$\frac{\frac{0.62 \text{ lb}}{\text{hr}}}{\frac{48.20 \text{ tons BLS}}{\text{hr}}} = 0.013 \text{ lb/ton BLS}$$

TABLE A-1
CHAMPION PAPER
PENSACOLA, FLA
SUMMARY OF EMISSION FACTORS USING A 95% CONFIDENCE INTERVAL

NO_x				
n =	25	t = 1.711		
x =	74.9	95% Confidence Interval = 74.9 + (1.711 * 6.08) =	85.3 1.50	#/hr #/ton BLS
s =	6.08			
CO				
n =	25	t = 1.711		
x =	158.2	95% Confidence Interval = 158.2 + (1.711 * 148.1) =	411.6 7.25	#/hr #/ton BLS
s =	148.1			
SO_2				
n =	25	t = 1.711		
x =	28.0	95% Confidence Interval = 28.0 + (1.711 * 27.7) =	75.4 1.33	#/hr #/ton BLS
s =	27.7			
VOC				
n =	25	t = 1.711		
x =	3.1	95% Confidence Interval = 3.1 + (1.711 * 2.96) =	8.2 0.14	#/hr #/ton BLS
s =	2.96			

where:
- n = number of test runs
- x = mean test value
- s = standard deviation

09-Oct-92 g:\...\champen\ci

TABLE A-2
CHAMPION PAPER
PENSACOLA, FLA
SUMMARY OF FUEL USAGE AND BLS FIRING RATES
BASELINE EMISSIONS

	#1 POWER BOILER NAT GAS MCF	#2 POWER BOILER NAT GAS MCF	#1 RECOVERY BOILER NAT GAS MCF	#1 RECOVERY BOILER BLS TONS	#2 RECOVERY BOILER NAT GAS MCF	#2 RECOVERY BOILER BLS TONS	LIME KILN NAT GAS MCF
JULY 1990 – JUNE 1991							
JULY	68255	29824	3791	28250	11378	39500	66014
AUGUST	59233	23397	4387	31250	2601	35000	38205
SEPTEMBER	17573	36018	942	37500	3758	35750	59954
OCTOBER	22428	72631	5367	37000	5713	35500	59954
NOVEMBER	60138	79234	677	37500	3115	10750	48243
DECEMBER	72004	23764	3131	38250	4604	39400	71857
JANUARY	77658	20639	4278	36687	4795	40505	68545
FEBUARY	62558	20639	2914	36240	3074	34701	60673
MARCH	79126	25355	6410	27100	4449	35151	55633
APRIL	70618	79987	7737	37115	6695	37411	67532
MAY	78319	11796	6303	36932	8707	32162	64778
JUNE	77987	15617	5749	35543	5330	39439	62870
TOTAL	745897	438901	51686	419367	64219	415269	724258
JULY 1991 – JUNE 1992							
JULY	85896	12759	1936	35990	2885	39333	60628
AUGUST	90188	18899	4420	39632	4253	39212	60054
SEPTEMBER	84396	31455	4201	32887	4081	38109	51897
OCTOBER	85672	28729	2057	38166	4268	38952	61132
NOVEMBER	77255	86364	3058	36070	3607	31551	56137
DECEMBER	82502	90904	3574	36524	3002	38640	55669
JANUARY	79989	90904	1101	38541	4780	38514	58747
FEBUARY	60252	58326	4385	27542	2087	33818	44198
MARCH	56035	49474	1022	36658	4596	38177	62085
APRIL	58854	57331	2207	36403	5719	31902	56431
MAY	54785	52559	1609	38673	3444	38057	60342
JUNE	61189	61473	3462	35577	6958	37610	56258
TOTAL	877013	639177	33032	432663	49680	443875	683578

TABLE A-3
CHAMPION PAPER
PENSACOLA, FLA
SUMMARY OF HOURS OF OPERATION AND PULP PRODUCTION
BASELINE EMISSIONS

	#1 POWER BOILER (hrs)	#2 POWER BOILER (hrs)	#1 RECOVERY BOILER (hrs)	#2 RECOVERY BOILER (hrs)	LIME KILN (hrs)	PULP PRODUCTION (ADUBT)[1]
JULY 1990 - JUNE 1991						
JULY	711	198	744	744	729	47241
AUGUST	741	198	624	744	570	42326
SEPTEMBER	245	477	715	713	675	45529
OCTOBER	194	685	732	670	735	45041
NOVEMBER	615	712	223	714	556	34893
DECEMBER	741	222	744	743	717	46414
JANUARY	707	172	697	744	716	42526
FEBUARY	625	97	671	662	643	39572
MARCH	737	217	606	741	599	40226
APRIL	635	420	713	700	713	43182
MAY	742	88	711	650	722	40742
JUNE	717	133	701	720	697	43545
TOTAL	7410	3619	7881	8545	8072	511237
JULY 1991 - JUNE 1992						
JULY	730	107	709	737	738	44294
AUGUST	737	141	744	740	731	44609
SEPTEMBER	709	232	632	700	601	39708
OCTOBER	744	191	743	734	735	42609
NOVEMBER	642	638	710	580	704	38935
DECEMBER	744	740	727	744	720	42650
JANUARY	718	744	743	744	732	45379
FEBUARY	696	696	564	692	556	38878
MARCH	744	732	739	727	736	46554
APRIL	720	720	711	617	709	42500
MAY	744	743	736	734	729	46388
JUNE	718	720	687	720	614	42838
TOTAL	8646	6404	8445	8469	8305	515342

[1] ADUBT - AIR DRIED UNBLEACHED TONS

TABLE A-4
CHAMPION
PENSACOLA, FLA
SUMMARY OF ACTUAL EMISSIONS

JULY 1990 – JUNE 1991

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	37.29 tons	0.67 tons	37.29 tons	1.86 tons	28.97 tons	NA
#2 POWER BOILER	92.17 tons	0.40 tons	21.95 tons	1.10 tons	14.06 tons	NA
LIME KILN	62.56 tons	1.74 tons	5.65 tons	56.50 tons	1.65 tons	8.15 tons
#1 RECOVERY BOILER	314.53 tons	278.88 tons	1520.21 tons	234.85 tons	30.19 tons	3.98 tons
#2 RECOVERY BOILER	311.45 tons	276.15 tons	1505.35 tons	232.55 tons	29.90 tons	2.70 tons
TOTAL	818.00 tons	557.83 tons	3090.45 tons	526.86 tons	104.78 tons	14.84 tons

TABLE A-5
CHAMPION
PENSACOLA, FLA
SUMMARY OF ACTUAL EMISSIONS

JULY 1991 – JUNE 1992

SOURCE	NO_x	SO_2	CO	PM/PM_{10}	VOC	TRS
#1 POWER BOILER	43.85 tons	0.79 tons	43.85 tons	2.19 tons	33.80 tons	NA
#2 POWER BOILER	134.23 tons	0.58 tons	31.96 tons	1.60 tons	24.88 tons	NA
LIME KILN	64.36 tons	1.79 tons	5.81 tons	58.13 tons	1.70 tons	8.39 tons
#1 RECOVERY BOILER	324.50 tons	287.72 tons	1568.40 tons	242.29 tons	31.15 tons	4.11 tons
#2 RECOVERY BOILER	332.91 tons	295.18 tons	1609.05 tons	248.57 tons	31.96 tons	2.89 tons
TOTAL	899.84 tons	586.05 tons	3259.07 tons	552.78 tons	123.50 tons	15.38 tons

APPENDIX B

SECTION 2. RESULTS AND DISCUSSION

Emission testing on the No. 1 and No. 2 Power Boilers was performed on 08 and 09 February 1991. The results of this testing are summarized in Tables 2.1 and 2.2. Field and process data are located in Appendices B, C, and D, respectively. Sample calculations are illustrated in Appendix E.

TABLE 2.1. SUMMARY OF NO_x EMISSION - NO. 1 POWER BOILER

	RUN 1	RUN 2	RUN 3	MEAN
Date	02/08/91	02/08/91	02/08/91	----
Time Begin	1246	1417	1545	----
Time Ended	1346	1517	1645	----
Stack Gas				
Temperature, °F	485	486	490	487
Velocity, ft/sec	47.9	52.7	52.3	51.0
Moisture, %	5.4	5.4	5.4	5.4
Oxygen, %	9.8	9.9	9.8	9.8
Carbon Dioxide, %	5.9	5.9	6.1	6.0
Volumetric Flow Rate				
at Stack Conditions, x 10^5 ft^3/min	0.98	1.08	1.07	1.04
at Standard Conditions, x 10^4 ft^3/min	5.19	5.71	5.65	5.5
Nitrogen Oxides				
Concentration, ppm	31	29	28	29
Emission Rate, lb/hr	11.5	11.9	11.3	11.6
Emission Rate, lb/mmBTU	0.10	0.10	0.10	0.10

Champion
Champion International Corporation

BEST AVAILABLE COPY

DATE 8/23 TIME 4:30 NO OF PAGES 2

TO: John Egan FROM: Steve Webb

LOCATION: LOCATION:

COMMENTS: Total S component analysis from one of our suppliers.
Other component analysis included as well –

FC-1129

PETROLEUM ANALYST INC.

ANALYTICAL CONSULTANTS

GAS ANALYSIS REPORT NO: 007-050892-02 DATE: 05-08-92

FOR:	FIVE FLAGS PIPELINE	SAMPLE IDENTIFICATION:	
	ATTN: MR. N. SMITH	COMPANY:	FIVE FLAGS PIPELINE
	P.O. BOX 1062	FIELD:	PACE FLORIDA
	PACE FL 32570	LEASE:	CHAMPION

SAMPLE DATA: DATE: 04-29-92 BY: N. SMITH
PSIG: 68 TEMP: DEG.F. GRAV:
MCF/D: DIF: IN. DP: LBS H2O

REMARKS: COMPOSITE SAMPLE FROM 03-30-92 TO 04-29-92.

CYL # 1024

COMPONENT ANALYSIS

TOTAL SULFUR = 10.7 PPM (BY WEIGHT)

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Steve Webb	From Nathan Smith
Co. Champion	Five Flags Pipeline
Dept.	

PSD Permit Application for A Proposed Package Boiler

Champion International Corporation Pensacola Florida Mill

February 1991

2.5 Other Criteria Pollutants

A summary of the expected emission rates from the No. 5 Package Boiler of particulate matter, PM-10, sulfur dioxide, carbon monoxide, and hydrocarbons is presented in Table 2-2. The emissions of the above criteria pollutants are less than the PSD threshold levels requiring new source review.

Particulate matter emissions were derived using Table 1.4-1, Uncontrolled Emission Factors for Natural Gas Combustion in U.S. EPA Publication AP-42. A conservative factor for utility boilers of 5 lbs per million cubic feet of natural gas was used. Based on the maximum heat input of 195 MMBtu/hr and 8,760 hours of operation per year maximum hourly and annual particulate matter emissions are 0.98 lbs/hr and 4.3 tons/year respectively. All of the particulate matter generated is assumed to be PM-10.

Sulfur dioxide emissions were derived using Table 1.4-1, Uncontrolled Emission Factors for Natural Gas Combustion in U.S. EPA Publication AP-42. A conservative factor for utility boilers of 0.60 lbs per million cubic feet of natural gas was used. Based on the maximum heat input of 195 MMBtu/hr and 8,760 hours of operation per year, maximum hourly and annual sulfur dioxide emissions are estimated to be 0.12 lbs/hr and 0.53 tons/year respectively.

The carbon monoxide emission rate in Table 2-2 was derived from actual emission tests conducted on the No. 5 Package Boiler in May of 1989. Based on a "worst case" measured mass emission rate approximately 0.1 pounds of CO per MMBtu, a maximum heat input of 195 MMBtu/hr and 8,760 hours of operation per year, annual CO emissions are estimated to be 85.41 tons/year.

TABLE 1.4-1. UNCONTROLLED EMISSION FACTORS FOR NATURAL GAS COMBUSTION[a]

Furnace Size & Type (10^6 Btu/hr heat input)	Particulates[b]		Sulfur Dioxide[c]		Nitrogen Oxide[d,e]		Carbon Monoxide[f,g]		Volatile Organics Nonmethane		Volatile Organics Methane	
	$kg/10^6m^3$	$lb/10^6ft^3$	$kg/10^6m^3$	$lb/10^6ft^3$	$kg/10^6m^3$	$lb/10^6ft^3$	$kg/10^6m^3$	$lb/10^6ft^3$	$kg/10^6m^3$	$lb/10^6ft^3$	$kg/10^6m^3$	$lb/10^6ft^3$
Utility boilers (>100)	16-80	1-5	9.6	0.6	8800[h]	550[h]	640	40	23	1.4	4.8	0.3
Industrial boilers (10 - 100)	16-80	1-5	9.6	0.6	2240	140	560	35	44	2.8	48	3
Domestic and commercial boilers (<10)	16-80	1-5	9.6	0.6	1600	100	320	20	84	5.3	43	2.7

[a] All emission factors are expressed as weight per volume fuel fired.
[b] References 15-18.
[c] Reference 4 (based on an average sulfur content of natural gas of 4600 $g/10^6\ Nm^3$ (2000 $gr/10^6$ acf).
[d] References 4-5,7-8,11,14,18-19,21.
[e] Expressed as NO_2. Test results indicate that about 95 weight % of NO_x is NO.
[f] References 4,7-8,16,18,22-25.
[g] References 16 and 18. May increase 10 to 100 times with improper operation or maintenance.
[h] Use 4400 $kg/10^6\ m^3$ (275 $lb/10^6 ft^3$) for tangentially fired units. At reduced loads, multiply this factor by the load reduction coefficient given in Figure 1.4-1. See text for potential NO_x reductions by combustion modifications. Note that the NO_x reduction from these modifications will also occur at reduced load conditions.

TABLE 2.2. SUMMARY OF NO_x EMISSION - NO. 2 POWER BOILER

	RUN 1	RUN 2	RUN 3	MEAN
Date	02/09/91	02/09/91	02/09/91	----
Time Begin	0938	1100	1221	----
Time Ended	1039	1200	1321	----
Stack Gas				
Temperature, °F	373	379	382	378
Velocity, ft/sec	43.5	44.1	47.0	44.9
Moisture, %	6.1	6.1	6.1	6.1
Oxygen, %	9.5	9.4	9.5	9.5
Carbon Dioxide, %	6.5	6.4	6.5	6.5
Volumetric Flow Rate				
at Stack Conditions, $\times 10^4$ ft^3/min	8.88	9.00	9.60	9.16
at Standard Conditions, $\times 10^4$ ft^3/min	5.30	5.34	5.67	5.44
Nitrogen Oxides				
Concentration, ppm	173	179	178	177
Emission Rate, lb/hr	66	69	72	69
Emission Rate, lb/mmBTU	0.40	0.42	0.44	0.42

The hydrocarbon emission rate in Table 2-2 was derived from actual emission tests conducted on the No. 5 Package Boiler in May of 1989. Based on a measured hydrocarbon concentration of 20 ppm (vol, dry), a volumetric flow rate of 33,000 dscfm (0°C, 1 atm) and 8,760 hours of operation per year, the hourly and annual hydrocarbon emissions are estimated to be 1.8 lbs/hr and 7.9 tons/year respectively.

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TABLE 2.3. ONE HOUR SUMMARY OF O_2, CO, NO_x, SO_2, AND THC EMISSION, LIME KILN

	TIME PERIOD							
	1	2	3	4	5	6	7	AVG
Date[a]	12/13	12/13	12/13	12/13	12/13	12/13	12/13	---
Time Began	1201	1300	1400	1500	1600	1700	1800	---
Time Ended	1259	1359	1459	1559	1659	1759	1859	---
Volumetric Flow Rate $\times 10^4$ ft^3/min at Standard Conditions	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72
Carbon Dioxide Concentration, %	16.6	17.2	17.9	14.9	18.4	16.7	17.5	17.0
Oxygen Concentration, %	6.0	5.9	5.7	7.7	5.6	6.9	6.2	6.3
Carbon Monoxide								
Concentration, ppm	11.0	8	8	7	9	9	9	9
Emission Rate, lb/hr	1.3	1.0	1.0	0.9	1.1	1.0	1.0	1.0
Nitrogen Oxides[b]								
Concentration, ppm	76	72	73	70	72	70	73	72
Emission Rate, lb/hr	14.8	14.1	14.2	13.6	14.1	13.6	14.8	14.2
Sulfur Dioxide								
Concentration, ppm	1	<1	1	0	0	0	0	<1
Emission Rate, lb/hr	0.3	0.1	0.2	0.0	0.0	0.0	0.0	0.1
Total Hydrocarbons[c]								
Concentration, ppm	5	7	7	2	2	1	2	4
Emission Rate, lb/hr	0.9	1.2	1.3	0.4	0.3	0.2	0.3	0.7

[a]1989.
[b]as NO_x.
[c]as propane.

II. **SUMMARY**

Tabulated below are data collected on the Lime Kiln emissions during testing on April 11-12, 1990.

CHAMPION INTERNATIONAL CORPORATION

LIME KILN

PARAMETER	PERMIT LIMIT	RUN 1 (12 hr avg.)
DATE		4/11-12/90
TIME		1720-2104
		2251- 728
SULFUR DIOXIDE		
(PPM)		~~2.08~~
(lb/hr)		0.666
OXIDES OF NITROGEN		
(PPM)		73.08
(lb/hr)		16.791
CARBON MONOXIDE		
(PPM)		12.95
(lb/hr)		1.811
TOTAL HYDROCARBON**		
(PPM)		1.63
(lb/hr)		0.131
OPERATING RATE		
(ton lime mud/hr)	24.5	na
OXYGEN - test monitor		
(%)		6.84
STACK GAS DATA - *		
TEMPERATURE, F		182
MOISTURE, %		38.10
VELOCITY, ft/ sec		31.37
FLOW RATE, ACFM		62460.8
, DSCFM		32049.7

* - Average of three particulate tests conducted on 4-11-90

** - AS METHANE

SECTION 2.

RESULTS AND DISCUSSION

2.1. LIME KILN

Emission testing on the Lime Kiln was performed on 26 April 1989. The results of this testing are summarized in Tables 2.1 and 2.2. Supporting field, process, and laboratory data are provided in Appendices B and C, respectively. Example calculations are illustrated in Appendix F.

TABLE 2.1

LIME KILN
SUMMARY OF PARTICULATE, NITROGEN OXIDES,
AND SULFUR DIOXIDE EMISSIONS

	RUN 1	RUN 2	RUN 3	MEAN
Date	4/26/89	4/26/89	4/26/89	----
Time Began	1028	1220	1423	----
Time Ended	1132	1329	1525	----
Stack Gas				
Temperature, °F	172	170	172	171
Velocity, ft/sec	24.4	23.4	24.4	24.1
Moisture, %	41.1	37.6	38.7	39.2
Oxygen, %	6.7	4.8	5.0	5.5
Carbon Dioxide, %	16.0	18.9	17.8	17.6
Volumetric Flow Rate				
At Stack Conditions $\times 10^4$ ft^3/min	4.85	4.66	4.87	4.79
At Standard Conditions $\times 10^4$ ft^3/min	2.40	2.45	2.50	2.45
Particulate				
Isokinetic Sampling Rate, %	87	90	93	90
Concentration[a], gr/ft^3	0.071	0.050	0.035	0.052
Emission Rate, lb/hr	14.6	10.4	7.4	10.8
Allowable Limit, lb/hr	----	----	----	26.1
Nitrogen Oxides				
Concentration[a], ppm	82	82	81	82
Emission Rate, lb/hr	14.1	14.4	14.5	14.3
Sulfur Dioxide				
Concentration[a], ppm	1.1	0.2	0.2	0.5
Emission Rate, lb/hr	0.3	0.1	0.1	0.2

[a]At standard conditions 68° F and 29.92 inches of mercury.

WESTON
MANAGERS DESIGNERS CONSULTANTS

2.2. LIME KILN CONDITION 1 - ALL NGC SOURCES

Sulfur Dioxide testing on the Lime Kiln with All NCG Sources feed was performed on 16 May 1989. The results of this testing are summarized in Table 2.2. Supporting field and laboratory data are provided in Appendix B. Example calculations are illustrated in Appendix I.

TABLE 2.2

SUMMARY OF EMISSIONS - LIME KILN CONDITION 1
ALL NCG SOURCES

	RUN 1	RUN 2	RUN 3	MEAN
Date	5/16/89	5/16/89	5/16/8	---
Time Began	1000	1108	1200	---
Time Ended	1030	1138	1230	---
Stack Gas				
Temperature, °F	166	166	166	166
Velocity, ft/sec	20.9	21.1	20.7	20.9
Moisture, %	37.2	37.2	37.2	37.2
Oxygen, %	19.0	19.0	18.0	18.7
Carbon Dioxide, %	6.0	6.5	4.5	5.7
Volumetric Flow Rate				
At Stack Conditions $\times 10^4$ ft^3/min	4.16	4.21	4.13	4.17
At Standard Conditions $\times 10^4$ ft^3/min	2.21	2.23	2.19	2.21
Sulfur Dioxide				
Concentration[a], ppm	4.4	3.3	2.4	3.3
Emission Rate, lb/hr	1.0	0.7	0.5	0.7

[a]At standard condition - 68° F and 29.92 inches of mercury.

2.2. LIME KILN

This section summarizes the results of the emission testing on the lime kiln. Table 2.2 summarizes the three one-hour particulate emission tests performed at the outlet of the kiln. Table 2.3 summarizes the results of the continuous emission monitoring system (CEMS) for CO_2, O_2, CO, THC, NO_x, and SO_2 on an hourly basis. These results for the CEMS are then provided in graphical form in Figures 2.1 and 2.2. Particulate and CEMS field data are located in Appendices B and C, respectively. Laboratory and process data are provided in Appendices D and E, respectively. Example calculations are illustrated in Appendix G.

TABLE 2.2. LIME KILN
SUMMARY OF PARTICULATE EMISSIONS

	RUN 1	RUN 2	RUN 3	MEAN
Date	12-12-89	12-12-89	12-12-89	---
Time Began	0930	1230	1510	---
Time Ended	1030	1330	1610	---
Stack Gas				
Temperature, °F	160	162	161	161
Velocity, ft/sec	26.5	25.2	26.9	26.2
Moisture, %	37.3	34.7	36.2	36.0
Oxygen, %	6.5	7.0	6.5	6.7
Carbon Dioxide, %	16.5	16.0	16.5	16.3
Volumetric Flow Rate $x10^4$ ft^3/min				
At Stack Conditions	5.08	4.82	5.16	5.02
At Standard Conditions	2.71	2.66	2.79	2.72
Particulate				
Isokinetic Sampling Rate, %	95	97	95	96
Concentration[a], gr/ft^3	0.099	0.103	0.097	0.100
Emission Rate, lb/hr	22.8	23.6	23.1	23.2

[a]At standard conditions 68°F and 29.92 inches of mercury.

2.6. LIME KILN

Table 2.6 summarizes the results of the particulate emission testing performed on 19 March 1991 on the Lime Kiln. Field and laboratory data are provided in Appendices G and K, respectively. Sample calculations are presented in Appendix N.

TABLE 2.6. EMISSION DATA - LIME KILN

	RUN 1	RUN 2	RUN 3	MEAN
Date	03/19/91	03/19/91	03/19/91	---
Time Began	1005	1138	1310	---
Time Ended	1108	1240	1412	---
Stack Gas				
Temperature, °F	166	167	167	167
Velocity, ft/sec	24.0	26.1	24.6	24.9
Moisture, %	36.6	36.9	37.8	37.1
CO_2 Concentration, %	16.5	16.5	16.0	16.3
O_2 Concentration, %	11.0	9.0	9.3	9.8
Volumetric Flow Rate				
At Stack Conditions, $\times 10^4$ ft^3/min	4.77	5.19	4.89	4.95
At Standard Conditions[a], $\times 10^4$ ft^3/min	2.56	2.77	2.57	2.63
Particulate				
Isokinetic Sampling Rate, %	95	91	96	94
Concentration, gr/ft^3 @ Standard Cond.[a]	0.058	0.070	0.069	0.065
Emission Rate, lb/hr	12.6	16.5	15.2	14.8
Permit Limit, lb/hr	---	---	---	26.1

[a]68°F, 29.92 in. Hg.

2.5. LIME KILN

Table 2.5 summarizes the results of the particulate emission testing performed on 27 March 1992 on the Lime Kiln. Field and laboratory data are provided in Appendices F and G, respectively. Sample calculations are presented in Appendix H.

TABLE 2.5. EMISSION DATA - LIME KILN

	RUN 1	RUN 2	RUN 3	MEAN
Date	03/27/92	03/27/92	03/27/92	----
Time Began	1002	1138	1302	----
Time Ended	1102	1238	1402	----
Stack Gas				
Temperature, °F	165	165	165	165
Velocity, ft/sec	25.1	26.3	25.9	25.8
Moisture, %	36.2	36.2	35.7	36.0
CO_2 Concentration, %	16.0	18.0	18.0	17.3
O_2 Concentration, %	8.0	8.0	8.0	8.0
Volumetric Flow Rate				
@ Stack Conditions,				
x 10^4 ft^3/min	5.00	5.24	5.16	5.14
@ Standard Conditions[a],				
x 10^4 ft^3/min	2.71	2.84	2.82	2.79
Particulate				
Isokinetic Sampling Rate, %	98	96	95	96
Concentration,				
gr/ft^3 @ Standard Cond.[a]	0.029	0.032	0.030	0.030
Emission Rate,				
lb/hr	6.7	7.7	7.2	7.2
Permit Limit,				
lb/hr	----	----	----	26.1

[a]68°F, 29.92 in. Hg.

TABLE 2.8

ONE-HOUR SUMMARY OF O_2, CO, NO_x, SO_2, AND THC EMISSION

	TIME PERIOD												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Date[a]	2/23	2/23	2/23	2/23	2/23	2/23	2/23	2/23	2/23	2/24	2/24	2/24	2/24
Time Began	1403	1500	1600	1700	1906	2000	2100	2200	2300	0000	0100	0200	0300
Time Ended	1459	1559	1659	1752	1959	2059	2159	2259	2359	0059	0159	0259	0359
Volumetric Flow Rate $x10^5$ ft^3/min at Standard Conditions	1.36	1.36	1.37	1.37	1.37	1.38	1.38	1.38	1.38	1.43	1.43	1.43	1.43
Carbon Dioxide Concentration, %	16.3	16.7	16.6	16.2	13.4	14.6	15.9	15.8	15.6	15.2	14.6	15.0	15.2
Oxygen Concentration, %	4.5	4.8	5.0	5.2	7.2	6.4	5.2	5.4	5.5	5.6	6.2	5.8	5.6
Carbon Monoxide													
Concentration, ppm	323	940	281	302	69	6	31	36	50	24	16	71	295
Emission Rate, lb/hr	191.7	557.9	168.0	180.6	41.3	3.6	18.7	21.7	30.1	15.0	10.0	44.3	184.1
Nitrogen Oxides[b]													
Concentration, ppm	80	75	81	78	79	80	81	79	81	85	80	80	79
Emission Rate, lb/hr	78.0	73.1	79.6	76.6	77.6	79.1	80.1	78.2	80.1	87.1	82.0	82.0	81.0
Sulfur Dioxide													
Concentration, ppm	0	0	0	0	0	3	1	0	3	0	28	28	5
Emission Rate, lb/hr	0.0	0.0	0.0	0.0	0.0	4.1	1.4	0.0	4.1	0.0	40.0	40.0	7.1
Total Hydrocarbons[c]													
Concentration, ppm	4	13	3	2	1	1	1	1	1	0	0	1	3
Emission Rate, lb/hr	3.7	12.1	2.8	1.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	1.0	2.9

[a] 1989
[b] as NO_2
[c] as Propane

TABLE 2.8

ONE-HOUR SUMMARY OF O_2, CO, NO_x, SO_2, AND THC EMISSION
(Continued)

	TIME PERIOD												
	14	15	16	17	18	19	20	21	22	23	24	25	AVG.
Date[a]	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	---
Time Began	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	---
Time Ended	0459	0559	0659	0759	0859	0959	1059	1159	1259	1359	1459	1512	---
Volumetric Flow Rate $x10^5$ ft^3/min at Standard Conditions	1.41	1.41	1.41	1.41	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.38
Carbon Dioxide													
Concentration, %	14.9	14.6	15.0	15.5	14.9	14.8	14.6	15.0	15.0	15.2	14.9	15.0	15.2
Oxygen													
Concentration, %	5.8	6.2	5.7	4.9	5.2	5.1	5.0	5.2	5.6	5.1	5.3	5.5	5.5
Carbon Monoxide													
Concentration, ppm	63	88	469	836	467	470	467	206	291	213	342	225	263
Emission Rate, lb/hr	38.8	54.2	288.6	514.4	277.2	279.0	277.2	122.3	172.7	126.4	203.0	133.5	147.1 158.2
Nitrogen Oxides[b]													
Concentration, ppm	78	72	71	73	67	69	68	70	69	73	69	70	75
Emission Rate, lb/hr	78.8	72.8	71.8	73.8	65.3	67.3	66.3	68.2	67.3	71.2	67.3	68.2	74.9
Sulfur Dioxide													
Concentration, ppm	13	56	22	19	40	35	40	39	27	28	62	55	20
Emission Rate, lb/hr	18.3	78.8	31.0	26.7	54.3	47.5	54.3	52.9	36.7	38.0	84.2	74.7	31.9 27.8
Total Hydrocarbons[c]													
Concentration, ppm	1	1	7	10	5	6	6	2	4	2	4	3	3
Emission Rate, lb/hr	1.0	1.0	6.8	9.7	4.7	5.6	5.6	1.9	3.7	1.9	3.7	2.8	3.1

[a] 1989
[b] as NO_2
[c] as Propane

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TABLE 2.6

Not Reviewed [illegible]

PARTICULATE EMISSION DATA - PRECIPITATOR INLET AND OUTLET AT CONDITION 2

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	RUN 7		RUN 8		RUN 9		RUN 10		RUN 11		RUN 12		MEAN	
	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET
Date	2/23/89	2/23/89	2/23/89	2/23/89	2/23/89	2/23/89	2/24/89	2/24/89	2/24/89	2/24/89	2/24/89	2/24/89	---	---
Time Began	1413	1330	1738	1730	2140	2130	0130	0130	0535	0530	0930	0930		
Time Ended	1540	1430	1852	1830	2300	2230	0255	0230	0655	0630	1025	1030		
Stack Gas														
Temperature, °F	487	461	490	462	484	457	484	458	488	459	491	468	487	461
Velocity, ft/sec	57.9	83.9	56.7	82.9	56.1	84.0	57.0	84.2	57.5	85.2	58.4	83.1	57.3	83.9
Moisture, %	34.4	25.4	26.4	24.4	25.5	24.9	24.4	27.5	24.6	27.3	26.0	27.3	26.9	26.1
Oxygen, %	7.0	7.0	7.0	7.5	6.0	5.6	6.4	6.4	6.0	6.0	7.0	6.0	6.6	6.4
Carbon Dioxide, %	12.0	13.0	12.0	12.9	13.2	14.0	13.0	13.0	13.0	13.0	12.0	13.0	12.5	13.2
Volumetric Flow Rate $x10^5$ ft^3/min														
At Stack Conditions	3.26	3.14	3.19	3.10	3.16	3.15	3.21	3.15	3.24	3.19	3.29	3.11	3.23	3.14
At Standard Conditions	1.19	1.36	1.31	1.37	1.32	1.38	1.36	1.43	1.37	1.41	1.36	1.36	1.32	1.39
Particulate														
Isokinetic Sampling Rate, %	115	101	104	102	99	97	99	95	100	100	101	97	103	99
Concentration @ STP, gr/ft^3	6.812	0.058	6.730	0.066	5.363	0.053	5.877	0.049	5.375	0.045	6.589	0.049	6.124	0.053
Emission Rate, lb/hr	6928	67.9	7147	77.7	6068	63.0	6857	59.4	6291	55.1	7657	57.2	6825	63.4
Removal Efficiency, %	---	99.0	---	98.9	---	99.0	---	99.1	---	99.1	---	99.3	---	99.1

2.7. NO. 2 RECOVERY FURNACE

Table 2.7 summarizes the results of the particulate emission testing performed on 20 March 1991 on the No. 2 Recovery Furnace. Field and laboratory data are provided in Appendices H and K, respectively. Sample calculations are presented in Appendix N.

TABLE 2.7. EMISSION DATA - NO. 2 RECOVERY FURNACE

	RUN 1	RUN 2	RUN 3	MEAN
Date	03/20/91	03/20/91	03/20/91	---
Time Began	0934	1120	1258	---
Time Ended	1039	1223	1401	---
Stack Gas				
Temperature, °F	421	427	425	424
Velocity, ft/sec	78.9	81.0	78.9	79.6
Moisture, %	26.9	28.8	27.8	27.8
CO_2 Concentration, %	12.5	12.5	13.0	12.7
O_2 Concentration, %	8.5	8.0	7.5	8.0
Volumetric Flow Rate				
At Stack Conditions,				
x 10^5 ft^3/min	2.98	3.06	2.98	3.01
At Standard Conditions[a],				
x 10^5 ft^3/min	1.31	1.31	1.29	1.30
Production Rate, lbBLS[b]/hr	96,120	96,120	96,120	96,120
Particulate				
Isokinetic Sampling Rate, %	98	100	97	99
Concentration,				
gr/ft^3 @ Standard Cond.[a]	0.058	0.056	0.057	0.057
Emission Rate,				
lb/hr	65.8	63.2	62.8	63.9
lb/3000 lbBLS[b]	2.1	2.0	2.0	2.0
Permit Limit,				
lb/3000 lbBLS[b]	---	---	---	3

[a]68°F, 29.92 in. Hg.

[b]Pounds black liquor solids.

2.3. NO. 2 RECOVERY FURNACE

Table 2.3 summarizes the results of the particulate emission testing performed on 26 March 1992 on the No. 2 Recovery Furnace. Field and laboratory data are provided in Appendices D and G, respectively. Sample calculations are presented in Appendix H.

TABLE 2.3. EMISSION DATA - NO. 2 RECOVERY FURNACE

	RUN 1	RUN 2	RUN 3	MEAN
Date	03/26/92	03/26/92	03/26/92	----
Time Began	1235	1444	1616	----
Time Ended	1410	1600	1721	----
Stack Gas				
Temperature, °F	441	453	451	448
Velocity, ft/sec	81.0	83.1	83.6	82.6
Moisture, %	27.2	26.5	28.7	27.5
CO_2 Concentration, %	16.0	14.5	15.0	15.2
O_2 Concentration, %	8.5	7.0	9.0	8.2
Volumetric Flow Rate				
@ Stack Conditions,				
x 10^5 ft^3/min	3.06	3.14	3.16	3.12
@ Standard Conditions[a],				
x 10^5 ft^3/min	1.31	1.34	1.31	1.32
Production Rate, lb BLS[b]/hr	97,187	96,445	96,445	96,692
Particulate				
Isokinetic Sampling Rate, %	94	97	99	97
Concentration,				
gr/ft^3 @ Standard Cond.[a]	0.058	0.054	0.048	0.053
Emission Rate,				
lb/hr	65.2	61.4	54.3	60.3
lb/3000 lb BLS[b]	2.0	1.9	1.7	1.9
Permit Limit,				
lb/3000 lb BLS[b]	----	----	----	3

[a]68°F, 29.92 in. Hg.
[b]Black liquor solids.

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Champion
Champion International Corporation

28 September 1992

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Division of Air
Resources Management

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

Dear Mr. Fancy:

We appreciate the time spent by you and your staff at our 10 September 1992 meeting to discuss CHAMPION's proposed mill modifications to the Pensacola facility. As we noted during our meeting, this letter is intended to document our understanding of the issues discussed relative to the air permitting requirements which will be associated with the mill modification. The issues we discussed can be loosely categorized into three areas:

- Engineering aspects of the permit process
- Air quality modeling issues
- Schedule for submission of information and agency reviews

Our understanding of the issues discussed and agreed upon for each of these areas is summarized below.

Engineering Aspects of the Permit Process

- Based on our preliminary analysis of emissions associated with the proposed mill modification, only two pollutants, CO and NO_x will result in a significant emissions increase, as defined by the PSD regulations. Florida DER indicated that only these pollutants would be required to undergo a BACT review if the preliminary analysis is correct.

- The modified sources which must undergo a BACT analysis include the two recovery boilers, the lime mud dryer, and the new No. 6 boiler.

- The method used to develop the preliminary baseline emissions for the existing mill sources involved using actual stack test data, actual production data, and actual hours of operation for the period, 1 July 1990 through 30 June 1992. In addition, AP-42 emission factors were used to determine TSP/PM-10 emissions associated with the No. 1 and No. 2 gas-fired boilers since no stack test data were available for these sources. SO_2 emissions from these boilers will be determined based upon fuel usage and sulfur content. CHAMPION understands that this approach is acceptable to Florida DER.

- The test data for SO_2, NO_x, CO, and VOCs from the recovery boilers included 25 one-hour test runs. The data was highly variable for these sources; hence, a statistical approach to calculating annual baseline emissions for these sources was used. CHAMPION understands that the approach , which included the use of the upper 95% confidence interval value of the test results to calculate an emission factor for these sources, is considered acceptable by Florida DER.

- CHAMPION understands that there are no new permit application forms and that forms used in the No. 5 boiler application should also be used for this application.

<u>Air Quality Modeling Issues</u>

- The general approach to modeling the mill and other PSD increment and major sources used in CHAMPION's No. 5 Boiler Permit application is still applicable and acceptable.

- Two EPA-approved models will be used in the analysis:

  - SCREEN
  - ISCLT

  The most recent EPA version of each model will be used.

- The SCREEN model will be used to determine the "worst-case" load conditions associated with the new boiler as well as the other source modifications. It will also be used to evaluate one-hour and eight-hour CO impacts associated with these sources.

- The ISCLT model will be used to evaluate the annual NO_x increment consumption and compliance with the NO_x NAAQS.

- The most recent available meteorologic data set for Pensacola, Florida (1986-1990) will be used. These data will be supplied to Florida DER on a computer disc.

- The receptor grid used in the previous No. 5 boiler application is acceptable for use in the current application.

- The major sources and PSD increment sources used in the No. 5 boiler application will form the basis for the modeling study. The Florida DER meteorologist, Cleve Holaday, will identify any new NO_x PSD increment consuming sources or major sources which must be included in the modeling analysis. CHAMPION will contact Alabama to determine if any new sources in Alabama must be included in the modeling analysis.

- Only pollutants which will result in a significant emissions increase, as defined in the PSD regulations, must undergo an air quality modeling study. Preliminary emissions data suggest that only NO_x and CO will have significant emissions increases.

- A building wake effects analysis, similar to that used in the No. 5 boiler application, will be conducted for all sources at the mill including the new No. 6 boiler. It is understood that WESTON's down-wash program, previously used in the No. 5 boiler application, which will be used in this application, is acceptable to Florida DER. The results of the analysis will be included with the application.

- The Florida DER meteorologist, Cleve Holaday, will review background NO_x data for the Pensacola area and will advise CHAMPION of the appropriate background NO_x concentration to be used in the NAAQS demonstration.

- A modeling analysis of impacts on Class I areas is not anticipated to be required since the areas are more than 150 km from the mill. Florida DER will advise CHAMPION of any requirements if modeling is required.

- Impacts on soils, vegetation, visibility, and acid rainfall will be similar to the analysis used in the No. 5 boiler application. This is acceptable to Florida DER.

- An air toxics analysis need only be conducted on emissions from new or modified sources. Pollutants to be evaluated include any known or published emissions of the 189 chemicals included on the CAA list of air toxics. Testing of these sources for these compounds is not required.

- A hard copy of the model input and output as well as a disc containing this information will be provided to Florida DER with the application.

- A formal modeling protocol is not required since the proposed analysis will be similar to the previous No. 5 boiler application.

Schedule for Submission of Information and Agency Review

- CHAMPION understands that the agency will accept information, as developed, to begin their review of the proposed modification prior to the submission of a complete application.

- CHAMPION will submit a description of the proposed project and the baseline emissions inventory the week of 28 September 1992. This will provide an opportunity for the DER engineers assigned to review the modification to become familiar with the project and to evaluate the methods used to establish the baseline emissions prior to the formal submission.

- CHAMPION plans to submit the complete permit application by the second week in November. Florida DER has agreed to review the application and advise CHAMPION of any deficiencies by phone to ensure that all information is received in a timely fashion.

- Florida DER indicated that a complete application could potentially be reviewed and a permit could be issued by March of 1993.

We believe this summarizes the issues addressed at our meeting. Please advise us via letter of your concurrence with these issues, or provide us with any difference between our understanding and yours. We appreciate your assistance on this important project.

Sincerely,

David Arceneaux
Permitting Coordinator

DTA:sa

cc: John Barone, Roy F. Weston, Inc.

TECHNICAL ID:9049683068 OCT 22'92 13:36 No.008 P.01

Champion
Champion International Corporation

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DATE 10/22 TIME 1:40 CT NO OF PAGES 4

TO: [redacted] FROM: Steve Webb 904 968 2121 x 2498

LOCATION: LOCATION:

COMMENTS: Follow up letter from Champion and FDER meeting of September 10, 1992 –

Bruce ?

049683068 OCT 22'92 13:36 No.008 P.01

DATE 10/22 TIME 1:40 CT NO OF PAGES 4

FROM: Steve Webb 904 968 2121 x 2498

LOCATION:

from Champion and FDER meeting ...er 10, 1992 –

~~Patty~~ – 10-26-92
~~Preston~~, Bruce
FYI or discard
I don't know who has this or attended the meeting. Until I saw calculations and reviewed them, I would not have committed to this!!!
Bru

Bruce ?

~~Patty~~ has this
Who has
Willie Tims
Janet Price

He says that he has sent about 1" of paper plus the original to CHE.
Preston
10/22/92

Champion
Champion International Corporation

28 September 1992

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

Dear Mr. Fancy:

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- Engineering aspects of the permit process
- Air quality modeling issues
- Schedule for submission of information and agency reviews

Our understanding of the issues discussed and agreed upon for each of these areas is summarized below.

Engineering Aspects of the Permit Process

3.121(13), F.A.C.), ammonia (§17-3.121(3),F.A.C.) and biological integrity (§17-3.121(7), F.A.C.).

7. Under Section 17-4.240(4), F.A.C., DER is prohibited from issuing a permit for a discharge renewal permit if the proposed discharge will reduce the quality of the receiving waters below the classification established for them. The DER was therefore without authority to grant the instant permit.

8. The discharge is not only polluting Eleven-Mile Creek but is travelling into Perdido Bay and backflowing up the Perdido River, an Outstanding Florida Water. The discharge is lowering ambient water quality and is not in the public interest, contrary to Section 17-4.242, Florida Administrative Code.

9. The pollution from the pulp plant is interfering with the biological health of Eleven-Mile Creek, Perdido Bay and the Perdido River by adversely impacting aquatic life, disrupting photosynthetic processes in the water column which damages aquatic vegetation, and causing the discoloration and fouling of the water generally. The pollution settles over the water bottoms and smothers benthic vegetation and organisms.

10. Respondent Champion International, Inc. is not entitled to the permit in that it, in effect, seeks a variance of previous restrictions placed upon Champion International by FDER.

a) Under §403.201(1)(b), F.S. Champion would only be entitled to a variance if the technologies available are unreasonably expensive and must be spread over a considerable time. In order to qualify for a variance under §403.201(1)(b), the Respondent/Corporation would have to adhere to a specific timetable for compliance. Champion cannot qualify for this variance because the company, in relation to its size and corporate assets, can afford to make the pollution reductions immediately. Even if the reductions had to be spread out over a period of time, the variance permit would have to fail because DER failed to follow its own rules by failing to put the corporation on a specific timetable for a specific technology. The variance permit contains only the vaguest language about future compliance and has no mandatory conditions requiring the corporation to reach compliance by a specific method or by a date certain. For this reason, it must fail.

b) Under Section 403.20(1)(c), Florida statutes, the second possible statutory scheme under which to gain a variance, Champion would have to show that compliance would be a substantial hardship upon it. Champion has failed to show that it would. Further, the corporation is not entitled to a variance under this provision because such variances are only allowed for a maximum period of 24 months. Champion's variance is not so limited. Furthermore, the corporation is already operating under a variance and would not be entitled to any extensions.

c) Furthermore, by incorporating in its application for permit, Champion International is essentially creating a domino effect to earlier restrictions and regulations placed upon it and by granting the proposed permit, the Department of Environmental Regulations will effectively be waiving prior restrictions due to the fact that the practical effect of the modifications to the plant will be to alter the operation of other operations of the plant and in effect, by-pass and shortcut other regulations imposed by FDER on said plant which were imposed for the protection of Perdido Bay, its estuaries and the citizens living and earning a living in and on and under its estuaries, bays and other waters. Unstated in the permit is an obvious intent to increase production which will thereby be allowed although not specifically applied for. The proposed permit is simply a sidestep to important regulatory functions of the Florida Department of Environmental Regulations and shows a callous disregard for the Environment of Escambia County, Florida and Baldwin County, Alabama including its air, water, lands and living organisms.

11. The variance should not be granted because it will continue a pattern of degradation of the creek and bay system that has endured for many years. The corporation has been violating state standards for years under a variety of variances. Instead of the discharge pollutants decreasing, they are increasing. Champion is hereby requesting a variance to discharge amounts of pollutants that are higher than those allowed under its old variance. The plant operations are greatly expanding output from 280 tons of pulp per day to 1400 tons of pulp per day. It is this five-fold increase in bleached pulp capacity that requires the increased pollutant limits under the variance request. Champion is not obligated to increase its pulp production. It should clean up what it has first before it is allowed to expand.

12. The data upon which the variance was based is faulty.

13. The variance application was incomplete and DER should have denied the variance on that basis alone.

14. Under DER's rules, the agency should be seeking compliance through enforcement instead of granting a variance to subvert state water quality standards.

15. Champion's plant does not have adequate capacity to prevent spills and leaks nor to contain its contaminated run-off in the event of hurricanes or other meteorological disasters.

WHEREFORE, Petitioner requests the following relief:

A. That the operating permit be denied.

B. That the variance be denied.

C. That, in the alternative, Champion be required to address the fact that it will be violating or side-stepping rules and regulations applying to it and otherwise admit that it will violate as well as the unadmitted parameters that it will violate and that the corporation be required to make specific technical changes in its plant so as to bring itself into compliance with Florida law by a date certain, but in no event more than six (6) months, and that the agency condition any temporary operating permit issued during the technical "change-over" period so that if the plant fails to accomplish the change-over within the required time frame, it will be shut down until the changes are made. Further, if the changes are made and the plant still does not come into compliance with state law, that the plant be shut down until such time as it can affirmatively show that it can bring itself into compliance.

RESPECTFULLY SUBMITTED,

THOMAS O. BEAR
ATTORNEY FOR PETITIONERS

THOMAS O. BEAR
ATTORNEY AT LAW
P.O. BOX 1238
FOLEY, AL 36536
205/943-3077

Jacqueline M. Lane
10738 Lillian Highway
Pensacola, Fl. 32506
904-453-5488
Escambia County, Florida

vs.

Florida Department of Environmental Regulation
Office of General Counsel
2600 Blair Stone Road
Tallahassee, Fl. 32399-2400

REQUEST FOR HEARING CHALLENGING THE LEGALITY OF THE INTENDED CONSTRUCTION PERMIT ISSUED TO CHAMPION INTERNATIONAL CORPORATION

COMES NOW Jacqueline M. Lane and hereby requests a Formal hearing pursuant to Section 120.57 F.S. to determine that the construction permit (DER File Nos. AC 17-223343, PSD-FL-200, Escambia County) issued to Champion International Corporation is inconsistent with the department's rules for permitting and hence is illegal, and in support thereof would allege as follows:

1. The Petitioner's address for the purpose of this action is: 10738 Lillian Highway; Pensacola, Fl. 32506; Escambia County, Fl.

2. The permit applicant is Champion International; 375 Muscogee Road; Cantonment, Fl 32533.

3. The Department of Environmental Regulation is located at 2600 Blair Stone Road; Tallahassee, Florida 32399-2400.

4. The Petitioner is a substantially affected person, as follows:

a. She owns property on Perdido Bay and she and her family use Perdido Bay for recreational purposes.

b. She lives approximately 15 miles South of Champion and can see and smell the air emissions from the mill.

c. Champion discharges effluent into Eleven Mile Creek and then into Perdido Bay. The effluent from the mill has been degrading the water quality and causing a nuisance along the property owned by the Petitioner.

5. A Consent Order was issued to Champion in 1988, whereby Champion was required to submit engineering plans to the Department of Environmental Regulation (hereafter "The Department") within 6 months after approval of the study report addressing water quality violations. To accomplish the

corrective actions, the Consent Order allows Champion to apply for necessary permits (Section 14E).

6. On March 13, 1993, the Petitioner read in the legal notices in the Pensacola News Journal that The Department intended to issue Champion International a "permit". Upon going to the Department's Northwest District Office and obtaining a copy of the permit, she discovered "the permit" was for construction of changes to the mill's processes in order to improve the mill's effluent, as required in the Consent Order. However the "permit" was issued through the air department, and not through the industrial wastewater section.

REASONS WHICH MAKE THIS CONSTRUCTION PERMIT ILLEGAL

7. As required in 17-4.030 F.A.C., a permit is required to expand or modify a facility. This modification will change not only the air emissions of the mill, but also the effluent emissions. The changes which are being made, are supposed to improve the wastewater and improve surface water quality. The construction permit application should have been made to the wastewater section, and perhaps another permit application to the air section. As required in 17-4.210 (5), design criteria must be presented with the application of a construction permit. This permit, for which the intent was issued on March 13, 1993, contained NO design criteria for the improvements to the wastewater system, **and hence is incomplete**.

8. The proposed project was subject to Prevention of Significant Deterioration regulations, which meant that under section 17-210.350 (2)a, 1-3. F.A.C., additional public notice requirements were required. This rule is/was being violated, in that a 30-day comment period is required, and a complete file must be made available to the public. The intent to issue only gives the public a 15-day period of comment and the Department does not have in its district office a complete copy of the modeling program which was required to evaluate the impact of the significant increase in certain air emissions.

9. Champion has been violating certain requirements of the Florida Administrative Codes, specifically 17-296.320(2) in its release of obnoxious odors, and 17-210.650 and 17-210.700(4) by operating the plant in an irresponsible manner so as to release excessive air emissions and cause harm to public health.

REQUEST FOR RELIEF

WHEREFORE the Petitioner requests:

1) that the Department require an additional construction permit for wastewater treatment improvements, including the effluent characteristics which the improvements are expected to achieve, and reasonable assurance that the effluent characteristics will not violate state water quality regulations

given in 17-302 F.A.C. and F.S. 304; or that the Department include the above information with the air permit.

2) that the Department reissue the Statement of Intent allowing 30-days for public comment and review, and that the Department make available to the public at the District Office in Pensacola, all information concerning how a determination was made, including the air dispersion model, as required by 17-210.350 (2) F.A.C.

3) that the Department investigate fully, citizen complaints about human health problems around the mill, including an epidemiological study of child allergies and cancers.

4) that the Department place more stringent standards on the Total Reduced Sulfur emissions so that the obnoxious odors are less obnoxious.

Respectfully submitted,

Jacqueline M Lane

Jacqueline M. Lane
10738 Lillian Highway
Pensacola, Florida 32506
904-453-5488

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the above has been sent by Federal Express to The Office of General Counsel at The Department of Environmental Regulation and to Mr. Doug Owenby at Champion International, at the addresses specified above, on this 22 day of March, 1993

Jacqueline M Lane
Jacqueline M. Lane

Copies Sent to:

J. Alan Cox
Suite F-100
820 east Park Avenue
Tallahassee, Fl. 32301-2600

375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

March 15, 1993

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

Dear Mr. Fancy:

Please find attached a photostatic copy of the intent to issue public notice for Champion's mill modifications in conjunction with the wastewater consent order. This notice was published in the Pensacola News Journal on March 13, 1993. It is Champion's understanding that receipt of this letter and copy of the public notice by the department constitutes proof of publication for this construction permit (AC17-223343).

If further information is required please contact myself or Mr. W. C. Tims at (904) 968-2121.

Sincerely,

Kyle J. Moore
Environmental Supervisor

RECEIVED

MAR 17 1993

Division of Air
Resources Management

KJM:sa

Attachment

cc: W. C. Tims, Jr., Champion International Corp.
Terry Cole, Esq., Oertel, Hoffman, Fernandez & Cole
Frank Westmark, Champion International Corp.
Bruce Mitchell, DER, Tallahassee
Ed Middleswart, DER, Northwest District

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

NOTICE OF INTENT TO ISSUE PERMIT
Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modificatin of the existing A and B Bleach Plant Lines and their operations, the modificatin of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Revised Technical Evaluation and Preliminary determination (original draft dated February 25, 1993).

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

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

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

The applications are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northwest District
160 Government Center
Pensacola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Legal No. 42634 1T
March 13, 1993

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

APR 13 1993

4APT-AEB

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

RE: Champion International Corporation (PSD-FL-200)

Dear Mr. Fancy:

This is to acknowledge receipt of your revised preliminary determination and draft Prevention of Significant Deterioration (PSD) permit for the above referenced facility by letter dated March 8, 1993. The proposed project includes the construction of a new gas-fired power boiler, the modification of the existing lime kiln, and the modification of the existing bleach lines. The project is subject to PSD review for the emissions of NO_x, CO, and VOC. The revised preliminary determination includes several minor changes such as clarification of averaging times for emission limits, clarification of test methods, modification of the allowable heat input to the lime kiln, and modification to the allowable steam produced by the #6 power boiler.

We have reviewed the package as requested and have no adverse comments. If you have any questions or comments, please contact Mr. Gregg Worley of my staff at (404) 347-5014.

Sincerely yours,

Brian L. Beals, Chief
Source Evaluation Unit
Air Enforcement Branch
Air, Pesticides and Toxics
 Management Division

cc: E. Middleswart, NWD
J. Bunyak, NPS
T. Cole, OHF&C
G. Golson, ADEM
R. Moore, EIC
CHF/RBM

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO	
ACTION DUE DATE	

1. TO: (NAME, OFFICE, LOCATION) Bruce Mitchell - DARM BAR TT	Initial / Date
2. Room 310D	Initial / Date
3.	Initial / Date
4.	Initial / Date

REMARKS:

per your request

RECEIVED

MAR 17 1993

Division of Air Resources Management

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: R. J. Prusa NWD

DATE 3/16/93

PHONE

AIR050 10PEN17004255 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE SCC AOR SCREEN 16:32:28FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 03/23/92SOURC DESC: TWO MULTIPLE EFFECT EVAPORATORS PERMIT: AO17 - 212422 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 51 (WK/YR) 8598 (HR/YR) COMMENTS:

*****

SCC INFORMATION ***** **SCC: 3-07-001-03 PULP & PAPER KRAFT PULPING MULTI-EFFECT EVAP GENERA ANN RATE: _527591 UNIT: AIR-DRY TONS UNBLEACHED PULP AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _____

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

RECEIVED

MAR 17 1993

Division of Air Resources Management

AIR051 10PEN17004255 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE POLLUTANT AOR SCREEN 16:57:55FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 03/23/92SOURC DESC: TWO MULTIPLE EFFECT EVAPORATORS PERMIT: AO17 - 212422 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 51 (WK/YR) 8598 (HR/YR) COMMENTS:

___

___

___

***** POLLUTANT INFORMATION *****

POLLUTANT	DESCRIPTION	TONS/YEAR	EM CODE
TRS	TOTAL REDUCED SULFUR	____53 . 0000	3

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

Bob Martinez
GOVERNOR
Dale Twachtmann
SECRETARY
ROBERT V. KRIEGEL
DISTRICT MANAGER

BEST AVAILABLE COPY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5791

ANNUAL OPERATION REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 1991 prior to March 1st of the following year.

I GENERAL INFORMATION

1. Source Name: Champion International Corporation
2. Permit Number: I. D. #10PEN17004255
3. Source Address: 375 Muscogee Road, P. O. Box 37, Cantonment, Florida 32533
4. Description of Source: NCG System - Multiple Effect Evaporators

II ACTUAL OPERATING HOURS: 8,598 Yr. ~~hrs/day~~ ________ days/wk ________ wks/yr

III RAW MATERIAL INPUT PROCESS WEIGHT: (List separately all materials put into process and specify applicable units if other than tons/yr)

Raw Material	Input Process Weight	
Black Liquor (15% solids)	1.34×10^9 gal/yr.	tons/yr
		tons/yr
		tons/yr
		tons/yr
		tons/yr

IV PRODUCT OUTPUT (Specify applicable units)

Black Liquor (63% solids) 247×10^6 gal/yr.

527,591 ADTP unbleached

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MAR 23 1992
Northwest Florida
DER

V **TOTAL FUEL USAGE** including standby fuels. If fuel is oil, specify type and sulfur content (e.g., No. 6 oil with 1% S). (NOT APPLICABLE)

_______ 10^6 cubic feet Natural Gas _______ 10^3 Kerosene

_______ 10^3 gallons _______ Oil, _______ %S _______ tons Coal

_______ 10^3 gallons Propane _______ tons Carbonaceous

_______ 10^6 Black Liquor Solids _______ tons Refuse

Other (Specify type and units) _______

VI **EMISSION RATE(S)** (tons/yr)

-- Particulates -- Sulfur Dioxide 53 Total Reduced Sulfur (During Venting)

-- Nitrogen Oxide -- Carbon Monoxide -- Fluoride

_______ Hydrocarbon Other (Specify type and units) _______

VII **METHOD OF CALCULATING EMISSION RATES** (e.g., use of fuel and materials balance, emission factors drawn from AP 42, etc.)

Material balance and industry developed emission factors.

VIII CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

Harry Dail

SIGNATURE OF OWNER OR AUTHORIZED REPRESENTATIVE

Harry Dail, Environmental Supervisor

TYPED NAME AND TITLE

3-12-92

DATE

AIR050 10PEN17004230 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE SCC AOR SCREEN 16:37:47FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 05/15/92SOURC DESC: NO. 1 RECOVERY BOILER PERMIT: AO17 - 181730 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 50 (WK/YR) 8364 (HR/YR) COMMENTS: BLACK_LIQUOR_SOLIDS_BURNED________________________________

____

____ *****

SCC INFORMATION ***** **SCC: 3-07-001-10 PULP & PAPER KRAFT PULPING RECVRY FURNACE W/ INDIRE ANN RATE: _258520 UNIT: AIR-DRY TONS UNBLEACHED PULP AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _____ **SCC: 1-02-012-01 EXTCOMB BOILER INDUSTRIAL SLD WASTE-SPECIFY SPEC M ANN RATE: _429000 UNIT: TONS BURNED AVG % S: 5 . 50 AVG % ASH: __ . _ MMBTU / UNIT ABOVE: ___12 **SCC: 1-02-006-03 EXTCOMB BOILER INDUSTRIAL NATURAL GAS <10MMB ANN RATE: _____53 UNIT: MILLION CUBIC FEET BURNED AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _1000

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

AIR051 10PEN17004230 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE POLLUTANT AOR SCREEN 16:56:16FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 05/15/92SOURC DESC: NO. 1 RECOVERY BOILER PERMIT: AO17 - 181730 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 50 (WK/YR) 8364 (HR/YR) COMMENTS: BLACK_LIQUOR_SOLIDS_BURNED____________________

***** POLLUTANT INFORMATION *****

POLLUTANT	DESCRIPTION	TONS/YEAR	EM CODE
VOC	NONMETHANE VOLATILE ORGANIC COMPOUNDS	_____2 . 9000	3
TRS	TOTAL REDUCED SULFUR	_____3 . 7000	3
SO2	SULFUR DIOXIDE	____54 . 0000	3
PM	PARTICULATE MATTER	___257 . 0000	3
NOX	NITROGEN OXIDES	___355 . 0000	3
CO	CARBON MONOXIDE	___176 . 0000	3

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

BEST AVAILABLE COPY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5791

Bob Martinez
GOVERNOR
Dale Twachtmann
SECRETARY
ROBERT V. KRIEGEL
DISTRICT MANAGER

ANNUAL OPERATION REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 1991 prior to March 1st of the following year.

I GENERAL INFORMATION

1. Source Name: Champion International Corporation
2. Permit Number: I. D. #10PEN17004230
3. Source Address: 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533
4. Description of Source: No. 1 Recovery Boiler

II ACTUAL OPERATING HOURS: 8364 hr/Yr ~~hrs/day~~ ____ days/wk ____ wks/yr

III RAW MATERIAL INPUT PROCESS WEIGHT: (List separately all materials put into process and specify applicable units if other than tons/yr)

Raw Material	Input Process Weight	
Black Liquor Solids	429,000	tons/yr
Saltcake	7,880	tons/yr
Cellosize	2,713	tons/yr
		tons/yr
		tons/yr

IV PRODUCT OUTPUT (Specify applicable units)

Green Liquor Smelt 197,340 tons/yr

258,520 ADTP unbleached

RECEIVED
MAR 23 1992
Northwest Florida
DER

V TOTAL FUEL USAGE including standby fuels. If fuel is oil, specify type and sulfur content (e.g., No. 6 oil with 1% S).

53	10^6 cubic feet Natural Gas	____	10^3 Kerosene
____	10^3 gallons ____ Oil, ____ %S	____	tons Coal
____	10^3 gallons Propane	____	tons Carbonaceous
858	10^6 Black Liquor Solids (pounds)	____	tons Refuse

Other (Specify type and units) ____

VI EMISSION RATE(S) (tons/yr)

275	Particulates	54	Sulfur Dioxide	3.7	Total Reduced Sulfur
355	Nitrogen Oxide	176	Carbon Monoxide	--	Fluoride
2.9	Hydrocarbon		Other (Specify type and units) ____		

VII METHOD OF CALCULATING EMISSION RATES (e.g., use of fuel and materials balance, emission factors drawn from AP 42, etc.)

Fuel consumption records, material balance, stack test (12/89), (3/91), and CEM data. Stack test of 3/91 was used only for particulate emission rate calculation. Stack test data of 12/89 was used for calculating all other emissions.

VIII CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

Harry A. Dail
SIGNATURE OF OWNER OR AUTHORIZED REPRESENTATIVE

Harry Dail, Environmental Supervisor
TYPED NAME AND TITLE

3-12-92
DATE

AIR050 10PEN17004229 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE SCC AOR SCREEN 16:35:05FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 05/15/92SOURC DESC: NO. 2 RECOVERY BOILER PERMIT: AO17 - 181732 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 50 (WK/YR) 8452 (HR/YR) COMMENTS: BLACK_LIQUOR_SOLIDS_BURNED_AS_WASTE________________________

____ *****

____

SCC INFORMATION ***** **SCC: 3-07-001-10 PULP & PAPER KRAFT PULPING RECVRY FURNACE W/ INDIRE ANN RATE: _269071 UNIT: AIR-DRY TONS UNBLEACHED PULP AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _____ **SCC: 1-02-012-01 EXTCOMB BOILER INDUSTRIAL SLD WASTE-SPECIFY SPEC M ANN RATE: _445000 UNIT: TONS BURNED AVG % S: 5 . 50 AVG % ASH: __ . _ MMBTU / UNIT ABOVE: ___12 **SCC: 1-02-006-03 EXTCOMB BOILER INDUSTRIAL NATURAL GAS <10MMB ANN RATE: _____53 UNIT: MILLION CUBIC FEET BURNED AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _1000

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

AIR051 10PEN17004229 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE POLLUTANT AOR SCREEN 17:00:07FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 05/15/92SOURC DESC: NO. 2 RECOVERY BOILER PERMIT: AO17 - 181732 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 50 (WK/YR) 8452 (HR/YR) COMMENTS:
BLACK_LIQUOR_SOLIDS_BURNED_AS_WASTE____________________________

***** POLLUTANT INFORMATION *****

POLLUTANT	DESCRIPTION	TONS/YEAR	EM CODE
VOC	NONMETHANE VOLATILE ORGANIC COMPOUNDS	_____3 . 8000	3
TRS	TOTAL REDUCED SULFUR	_____3 . 9000	3
SO2	SULFUR DIOXIDE	____41 . 0000	3
PM	PARTICULATE MATTER	___270 . 0000	3
NOX	NITROGEN OXIDES	___289 . 0000	3
CO	CARBON MONOXIDE	___221 . 0000	3

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

BEST AVAILABLE COPY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5791

Bob Martinez
GOVERNOR
Dale Twachtmann
SECRETARY
ROBERT V. KRIEGE
DISTRICT MANAGER

ANNUAL OPERATION REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 1991 prior to March 1st of the following year.

I GENERAL INFORMATION

1. Source Name: Champion International Corporation
2. Permit Number: I. D. #10PEN17004229
3. Source Address: 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533
4. Description of Source: No. 2 Recovery Boiler

II ACTUAL OPERATING HOURS: 8452 Yr. ~~hrs/day~~ ______ days/wk ______ wks/yr

III RAW MATERIAL INPUT PROCESS WEIGHT: (List separately all materials put into process and specify applicable units if other than tons/yr)

Raw Material	Input Process Weight	
Black Liquor Solids	445,000	tons/yr
Saltcake	8,004	tons/yr
Cellosize	2,705	tons/yr
		tons/yr
		tons/yr

IV PRODUCT OUTPUT (Specify applicable units)

Green Liquor Smelt 204,700 tons/yr

269,071 ADTP unbleached

RECEIVED
MAR 23 1992
Northwest Florida
DER

V TOTAL FUEL USAGE including standby fuels. If fuel is oil, specify type and sulfur content (e.g., No. 6 oil with 1% S).

53	10^6 cubic feet Natural Gas	____	10^3 Kerosene
____	10^3 gallons ____ Oil, ____ %S	____	tons Coal
____	10^3 gallons Propane	____	tons Carbonaceous
890	10^6 Black Liquor Solids (pounds)	____	tons Refuse

Other (Specify type and units) ____

VI EMISSION RATE(S) (tons/yr)

270	Particulates	41	Sulfur Dioxide	3.9	Total Reduced Sulfur
289	Nitrogen Oxide	221	Carbon Monoxide	--	Fluoride
3.8	Hydrocarbon		Other (Specify type and units) ____		

VII METHOD OF CALCULATING EMISSION RATES (e.g., use of fuel and materials balance, emission factors drawn from AP 42, etc.)

Fuel consumption records, material balances, stack test of 3/91 for particulates and stack test 12/89 for all other emissions.

VIII CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

Harry Dail
SIGNATURE OF OWNER OR AUTHORIZED REPRESENTATIVE

Harry Dail, Environmental Supervisor
TYPED NAME AND TITLE

3-12-92
DATE

RUN DATE 03/15/93

DEPARTMENT OF ENVIRONMENTAL REGULATION
AIR PROGRAM INFORMATION SYSTEM
FACILITY EMISSION REPORT

FILE AIRF10

FACILITY ID: 10PEN170042
OWNER: CHAMPION INTERNATIONAL CORPORATION NAME/LOC: 375 MUSCOGEE ROAD FAC STATUS: ACTIVE
SRC: 33 # SRC REPORTED: 30 MAJOR FAC: Y CITY: CANTONMENT CDS: A1A VOC: A2P

POLLUTANT	POTENTIAL (TPY)	ESTIMATED (TPY)	ALLOWABLE (TPY)	# SRC	ACTUAL 92 (TPY)	# SRC	ACTUAL 91 (TPY)	# SRC	MAJOR
TRS	116.9083	7.5700	9.0483	6	0.0000	0	213.7900	10	*
NOX	239.1000	956.1000	3,693.3600	9	0.0000	0	2,284.5000	9	*
CO	224.4000	868.4000	1,532.4000	7	0.0000	0	1,125.3000	9	*
VOC	23.4000	23.4000	0.0000	1	0.0000	0	244.3000	15	*
SO2	147.9900	416.0000	1,556.9900	5	0.0000	0	903.7900	9	*
PM	1,315.4800	520.6500	1,458.5500	10	0.0000	0	965.6200	23	*
P10	0.7860	0.7860	0.7000	1	0.0000	0	0.0000	0	

NOT IN YET

PENSACOLA
News Journal

PUBLISHED DAILY

Pensacola, Escambia County, Florida

STATE OF FLORIDA
County of Escambia

Before the undersigned authority personally appeared
Sharon Dartman
who is personally known to me and who on oath says that he/she is a representative of The Pensacola News Journal, a daily newspaper published at Pensacola in Escambia County, Florida; that the attached copy of advertisement, being a Legal in the matter of
Issue Permit
in the _____ Court, was

published in said newspaper in the issues of
March 13, 1993

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

Sworn to and subscribed before me this 15

day of March A.D., 19 93

Betty J. Weekley
Notary Public

BETTY J. WEEKLEY
"Notary Public--State of Florida"
My Commission Expires Nov. 21, 1995
CC463199

c: B. Mitchell
J. Sallady
C. Middleswart
J. Harper, EPA
J. Bunyak, NPS

DEPARTMENT OF ENVIRONMENTAL REGULATION

NOTICE OF INTENT TO ISSUE PERMIT
Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modificatin of the existing A and B Bleach Plant Lines and their operations, the modificatin of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Revised Technical Evaluation and Preliminary determination (original draft dated February 25, 1993).

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

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

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

BEST AVAILABLE COPY

FEDERAL EXPRESS [redacted]

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER 6373096811

2352 P 6373096811

RECIPIENT'S COPY

1 [redacted] Date 3/18/93

From (Your Name) Please Print: WESTMARK
Your Phone Number (Very Important): (818) 968-4227
Company: PION INTERNATIONAL
Department/Floor No.
Street Address: MUSCOGEE RD
City: CANTONMENT State: FL ZIP Required: 3 2 5 3 3

2 To (Recipient's Name) Please Print: Bureau of Air Regulation
Recipient's Phone Number (Very Important): (904) 488-1344
Company: Dept of Environmental Regulation
Department/Floor No.
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2600 Blair Stone Road
City: Tallahassee State: FL ZIP Required: 32399-2400

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): Public Affairs (Dept 0000)

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City State ZIP Required

3 PAYMENT 1 ☐ Bill Sender 2 ☐ Bill Recipient's FedEx Acct. No. 3 ☐ Bill 3rd Party FedEx Acct. No. 4 ☐ Bill Credit Card
5 ☐ Cash/Check [redacted]

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 ☐ OTHER PACKAGING
- 16 ☐ FEDEX LETTER*
- 12 ☐ FEDEX PAK*
- 13 ☐ FEDEX BOX
- 14 ☐ FEDEX TUBE

Standard Overnight (Delivery by next business afternoon. No Saturday delivery†)
- 51 ☐ OTHER PACKAGING
- 56 ☐ FEDEX LETTER*
- 52 ☐ FEDEX PAK*
- 53 ☐ FEDEX BOX
- 54 ☐ FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
- 30 ☐ ECONOMY*

*Economy Letter rate not available. Minimum charge: One pound economy rate.

Government Overnight (Restricted for authorized users only)
- 46 ☐ GOV'T LETTER
- 41 ☐ GOV'T PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 ☐ OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 ☐ TWO-DAY FREIGHT**

† Delivery commitment may be later in some areas.
*Declared Value Limit $500.
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 ☐ HOLD FOR PICK-UP (Fill in Box H)
- 2 ☒ DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) (Not available to all locations) ☐
- 4 ☐ DANGEROUS GOODS (Extra charge)
- 5 ☐
- 6 ☐ DRY ICE Dangerous Goods Shipper's Declaration not required
  Dry Ice, 9, UN 1845 ______ x ______ kg. 904 III
- 7 ☐ OTHER SPECIAL SERVICE
- 8 ☐
- 9 ☐ SATURDAY PICK-UP (Extra charge)
- ☐ DESCRIPTION
- 12 ☐ HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total	Total

DIM SHIPMENT (Chargeable Weight) ☐ lbs.
L x W x H

Received At
1 ☐ Regular Stop 3 ☐ Drop Box
4 ☐ B.S.C.
2 ☐ On-Call Stop 5 ☐ Station

Emp. No. Date
☐ Cash Received
☐ Return Shipment
☐ Third Party ☐ Chg. To Del. ☐ Chg. To Hold
Street Address
City State Zip
Received By:
X
Date/Time Received FedEx Employee Number

7 Release Signature:

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 11/92
PART #137204 FXEM 11/92
FORMAT #155
155

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

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

Department of Environmental Regulation
Northwest District
160 Government Center
(Pensacola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Legal No. 42634 1T
March 13, 1993

Check Sheet

Company Name: Champion Internat
Permit Number: AC 17-223343
PSD Number: PSD FL-200
Permit Engineer:

Cross References:
- [ ] AO 17-219596
- [ ] AO 17-219600
- [ ] AO 17-181738
- AO 17-151941
- AO 17-212422
- AC 62-172092

Application:

- [x] Initial Application
  - [ ] Incompleteness Letters
  - [ ] Responses
  - [ ] Waiver of Department Action
  - [ ] Department Response
  - [x] Other

Intent:

- [x] Intent to Issue revised
- [x] Notice of Intent to Issue "
- [x] Technical Evaluation "
- [x] BACT Determination "
- [x] Unsigned Permit "
- Correspondence with:
  - [x] EPA
  - [ ] Park Services
  - [ ] Other
- [x] Proof of Publication
  - [ ] Petitions - (Related to extensions, hearings, etc.)
  - [ ] Waiver of Department Action
  - [x] Other

Final Determination:

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

Post Permit Correspondence:

- [ ] Extensions/Amendments/Modifications
- [ ] Other

REVISION #3 KKW 06/03/94

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

February 25, 1993

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. F. Doug Owenby
Vice President/Operations Manager
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

Dear Mr. Owenby:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permits to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers.

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

Sincerely,

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

CHF/BM/rbm

Attachments

c: E. Middleswart, NWD
D. Smith, P.E., CE
J. Harper, EPA
J. Bunyak, NPS
J. Braswell, Esq., DER
G. Golson, ADEM
K. Moore, CIC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of
Applications for Permit by:

DER File Nos. AC 17-223343
PSD-FL-200
Escambia County

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

INTENT TO ISSUE

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

The applicant, Champion International Corporation, applied on December 21, 1992, to the Department of Environmental Regulation for permits to be allowed to make modifications to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. The existing pulp mill is located at 375 Muscogee Road, Cantonment, Escambia County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S., and Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be the one with significant circulation in the area that may be affected by the permitting action. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (904-488-1344), within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

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

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

The Petition shall contain the following information;

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

cc: E. Middleswart, NWD
D. Smith, P.E., CE
J. Harper, EPA
J. Bunyak, NPS
J. Braswell, Esq., DER
G. Golson, ADEM
K. Moore, CIC

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 2-26-93 to the listed persons.

Clerk Stamp

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

Kim Tobin 2-26-93
Clerk Date

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

Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

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(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Department of Environmental Regulation
Northwest District
160 Government Center
Penscaola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

Champion International Corporation
Escambia County, Florida

Permit Numbers: AC 17-223343
PSD-FL-200

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

February 25, 1993

I. Application

A. Applicant

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

B. Project Description and Location

The applicant proposes to modify the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system and the existing A and B Bleach Plants's operations, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. Also, the applicant stated that this activity will not result in a mill production increase, thereby eliminating the need to address actual emissions from other mill sources (source annual operation reports will be used to verify).

The existing facility is located in Escambia County, Florida. The UTM coordinates are Zone 17, 469.0 km East and 3,385.8 km North.

C. Process and Controls

1. General

The kraft cooking process is used to separate the lignin and wood fiber to produce brown pulp from wood chips (see Figure 2-3). After the wood chips have been cooked with an alkaline liquor in the batch digesters (hard wood) and the continuous digester (soft wood) and washed, the pulp is screened to separate rejects. The pulp is then further delignified in separate oxygen delignification reactors, washed, and sent to the A and B Bleach Plants, where it is reacted with various chemicals in a sequence for purification, brightening and viscosity control. Chemicals are added in retention towers, and reactants are removed in washers. After being bleached, the pulp is dried on the Nos. 3 and 5 Paper Machines and finished for customer specifications. Market pulp is dried on a pulp drying machine as bales or rolls for final sale.

2. Chemical Cooking

Improved delignification in the cooking processes is proposed for the soft wood chips, which are cooked in the continuous digester, by an extended modified continuous cooking. By adding cooking liquor at different stages and using different cooking conditions, the proposed process is expected to produce a pulp which is easier to wash and, therefore, improving lignin extraction. The continuous digester system is a sealed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln: primary; calciner: backup) for control. No increase in throughput should occur due to the proposed changes to the continuous digester system.

The project will include the installation of storage and handling equipment for anthraquinone (AQ), which is water soluble; and, therefore, Champion proposes to utilize a system designed for transporting and storing water-soluble anthraquinone. AQ is an organic catalyst which accelerates and increases the selectivity of the wood cooking chemicals in the delignification of the pulp fiber. It will be used in both the batch digester system and the continuous digester system for the purpose of reducing the organic loading, the color, and the conductivity in the bleach plant effluent.

It is believed that emissions from the digesters should not change following implementation of these new methods. Since feed rate to the digesters will not change, the material flow rate from the digesters to the brown stock washers will also be unchanged. No net change in black liquor solids to the recovery boilers is anticipated.

As is the continuous digester system, the batch digester system is a closed system and its emissions are collected and transported to an incinerator system (i.e., lime kiln or calciner) for control.

3. O_2 Delignification

The washed brown pulp from the cooking processes goes through further delignification in O_2 reactors on each line (i.e., soft wood and hard wood). If the proposed improvements in the digester cooking processes occur, then less fiber may be wasted, which could result in an increase in the fiber processed through the O_2 delignification systems. Since there could also be reduced levels of lignin in the brown pulp, the actual emissions from the pre- and post-O_2 washers and the O_2 blow tank are not expected to change, even if fiber throughput increases.

4. A and B Bleach Plants

The existing A and B Bleach Plants are identical and use a three stage bleaching sequence commonly referred to as CED (C: a chlorination stage with chlorine dioxide added; E: an oxidative caustic extraction stage; and, D: a final chlorine dioxide bleaching stage). The final bleaching sequence will be referred to as DED (see Figure 1).

The chlorine dioxide (ClO_2) is manufactured on site in a chemical generator employing the R3H process, which reacts salt, sulfuric acid, hydrochloric acid, and sodium chlorate to form a chlorine dioxide/chlorine gas mixture that is absorbed in chilled water and stored in storage tanks for use by both plants.

There are five vent sources associated with the ClO_2 generator, which includes a tail gas scrubber using a sodium hydroxide media to control ClO_2, two ClO_2 storage tanks using chilled water scrubbers to control ClO_2, and two salt unloading/pneumatic transfer systems using separate water spray towers to control particulate emissions.

The proposal will eliminate the existing chlorine gas handling system, add a hydrogen peroxide handling system, add a methanol storage tank, and modify the ClO_2 generator. In addition, enzymes (i.e., xylanase) may be added to the high density storage tanks between the oxygen delignification systems and the bleach plants.

The mill will eliminate the use of molecular chlorine as a bleaching agent, and the first stage of each plant will be 100% ClO_2, which will require a modification to the existing ClO_2 generator. The generator will be modified to an R8/R10 process (see Figure 2), which uses methanol, sulfuric acid, and sodium chlorate to generate ClO_2. The modified reactor's capacity will be increased from 16 tons per day to 37.4 tons per day of ClO_2. A third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers.

The storage tank scrubbers will continue to vent the existing two tanks and will also vent the new storage tank. The exhaust from the two tank vent scrubbers will be directed to the tail gas scrubber. The tail gas scrubber will be modified by installing an extra 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide plus sodium sulfide).

A hydrogen peroxide storage and handling system will be installed. Hydrogen peroxide is an oxidizing agent that works optimally in alkaline conditions and is typically applied to the pulp in a 50% solution. The peroxide is applied in the oxidative extraction stage and is completely reacted. There are no emissions associated with the use of hydrogen peroxide.

The proposal to use the enzyme, xylanase, as a bleach boosting technique is not completely proven. By adding the enzyme prior to pulp bleaching, it is hoped that it will modify the chemical structure to make subsequent bleach stages more efficient and resulting in fewer non-desirable by-products, improved process yields, and significant reductions in ClO_2 required to bleach pulp. Installation of enzyme storage and handling facilities will be

required. Since enzymes are water soluble, there will be no air emissions associated with these systems.

A new 21,880 gallon methanol storage tank will be installed. The tank will be nitrogen blanketed and equipped with a conservation vent.

The existing salt unloading and handling system will be shut down and dismantled.

The existing bleach plant scrubbers are equally effective for Cl_2 and ClO_2 removal, and the scrubber systems have adequate capacity for the expected emissions. Therefore, no changes are planned for these scrubber systems.

5. Evaporators

Additional loading (i.e., ~ 50%) is expected on the No. 2 Multiple Effect Evaporator (MEE) system by the processing of reclaimed sewer effluent. This will be accomplished by the addition of two new evaporator effects to the existing No. 2 MEE system. Although the color and B.O.D. reclaimed represents a significant portion of the wastewater load, the associated solids contribution to the chemical recovery system is insignificant. Therefore, the recovery boilers and associated equipment are not impacted.

6. Foul Condensate Stripper System

An upgrade of the existing contaminated condensate stripper and the installation of an additional steam stripper is planned . With added stripper capacity, initial estimates have shown that the mill effluent B.O.D. load to the wastewater treatment plant could be reduced by as much as 15%. Since a steam stripper directly reduces volatile organic compounds (VOCs) released from the digester steam after the cooking of wood chips, this will decrease the amount of VOCs previously released to the wastewater treatment system. The existing emissions, as well as the new emissions, from the condensate stripper system will be collected and transported to an incinerator (i.e., lime kiln) for control.

7. Lime Kiln-Mud Dryer

The lime kiln and calciner cannot process all of the lime mud produced by the causticizing system, thus discharging the excess mud to the sewer in a weak wash solution. This severed lime mud with settled mill sludge is collected and landfilled from decanting basins, with the resulting weak wash alkaline solution requiring neutralization using CO_2 injection. The alkaline solution does increase mill effluent conductivity.

The proposal will add a lime mud dryer system (see Figure 3) in order to eliminate the sewering of the excess lime mud in weak wash solution from the causticizing process, reduce landfilling requirements, and reduce conductivity by about 20%.

The upgrade will increase the capacity to 500 tons of CaO per day. A new multifield electrostatic precipitator will be installed between the lime kiln and the existing caustic scrubber will be modified to provide SO_2 scrubbing capability (the packed column will utilize recirculating NaOH as the scrubbing medium). A minimum pH of 8.0 will be maintained.

A slight increase in non-condensible gases (i.e., total reduced sulfur compounds) will be burned in the lime kiln, resulting in an increase in SO_2 emissions. These SO_2 emissions will be subjected to the lime mud in the lime kiln and a caustic scrubber system. Projected emissions are not significant. A performance test will be required to substantiate this.

8. New No. 6 Power Boiler

Added steam capacity will be required to support the proposed process modifications. The specific added steam demand will come from an increase in evaporation and contaminated condensate stripping capacity, black liquor heaters, the cooking modifications, and bleach plant load reduction technologies.

The new No. 6 Power Boiler will be permitted to fire only natural gas as a fuel, with a maximum heat input of 533 MMBtu/hr. The new boiler will permit the retirement of the existing Nos. 1 and 2 Power Boilers. The new boiler will provide 350,000 pounds per hour of steam product.

D. The Standard Industrial Codes are:

Major Group No. 26 - Paper and Allied Products
Industry Group No. 2611 - Pulp Mills

II. Rule Applicability

The proposed project is subject to preconstruction review in accordance with Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297, and 17-4; and, the 40 CFR (July, 1991 version).

The application package was deemed complete on January 20, 1993.

The plant is located in an area designated as attainment for all pollutants in accordance with F.A.C. Rule 17-275.400.

The existing mill is a major emitting facility in accordance with F.A.C. Rule 17-212.200, Definitions, for the pollutants particulate matter (PM/PM10), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), TRS, and volatile organic compounds (VOCs).

The proposed mill modification will result in a net significant increase for the pollutants NOx, CO and VOCs (see Tables 1 & 2), thus requiring new source review for Prevention of Significant Deterioration (PSD) in accordance with F.A.C. Rule 17-212.400. This review consists of a determination of Best Available Control Technology (BACT) pursuant to F.A.C. Rule 17-212.410 and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The proposed new sources and modified sources shall be in compliance with all applicable provisions of F.A.C. Chapters 17-210 thru 17-297 and 17-4; and, the 40 CFR (July, 1991 version). The proposed source shall be in compliance with all applicable provisions of F.A.C. Rules 17-210.650: Circumvention; 17-210.700: Excess Emissions; 17-296.800: Standards of Performance for New Stationary Sources (NSPS); 17-297: Stationary Point Source Emission Test Procedures; and, 17-4.130: Plant Operation-Problems.

This proposed new No. 6 Power Boiler shall be in compliance with the NSPS for Industrial Steam Generating Units, 40 CFR 60, Subpart Db, and BACT.

The new methanol storage tank shall be in compliance with the NSPS for Storage Vessels for Petroleum Liquids, 40 CFR 60, Subpart Kb.

As a first tier level of review, the pollutants chlorine, chlorine dioxide, and chloroform, were evaluated with considerations given to carcinogenicity and toxicity using risk assessment guidelines. Through these considerations, initial property line acceptable ambient concentrations were established for each pollutant along with the appropriate averaging times.

Since neither State nor Federal ambient standards for chlorine, chlorine dioxide, and chloroform have yet been adopted, post-modification performance tests will be required to quantify the emissions, which might result in additional rule evaluation requirements.

III. Emission Limitations and Impact Analysis

A. Emission Limitations

The proposed project is subject to emission limitations for the pollutants NOx, SO2, CO, VOC, TRS, and PM/PM10. Applicable visible emission (VE) standards will also be imposed. The following table will reflect the allowable emission standards/limitations:

Table A

Source	Pollutant	Allowable Emission Standard/Limitation
1. No. 6 Power Boiler:		maximum 533 MMBtu/hr heat input
	NOx	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
	PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
	SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
	VOC	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
	VE	≤ 20 % opacity (6-min avg), except for one 6-min period/hr @ ≤ 27% opacity
2. Lime Kiln-Mud Dryer		System: maximum 500 TPD CaO; 34,383 dscfm
	NOx	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
		Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
	VOC	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
	TRS	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
	SO_2	6.49 lbs/hr, 28.4 TPY
	VE	< 20% opacity
3. A-Line Bleach Plant		
a. E_o Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. Tail Gas Scrubber	CL_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY
4. B-Line Bleach Plant		
a. E_o Washer	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b. Tail Gas Scrubber	Cl_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

Table A cont.

5. R8/R10 ClO_2 Generator: 37.6 TPD
   Tail Gas Scrubber
   Cl_2 0.1 lb/hr, 0.44 TPY
   ClO_2 0.25 lb/hr, 1.1 TPY

6. Methanol Storage Tank: 21,880 gallons - horizontal fixed roof
   VOC Not Applicable (for PSD tracking purposes: 2.2 TPY projected potential emissions)

NOTE:
1. Natural gas usage only in the No. 6 PB.
3. Hours of operation at 8760 per year.
3. Maximum heat input:
   a. No. 6 PB: 533 MMBtu/hr.
   b. Lime kiln: 150 MMBtu/hr.
4. Steam production:
   a. No. 6 PB: 350,000 pounds per hour.
5. Pollutant basis: #6 PB and Lime Kiln-Mud Dryer
   a. NOx: BACT
   b. CO: BACT
   c. PM/PM_{10}: #6 PB: vendor guarantee of 0.037 gr/dscf
      LK-MD: AP-42 Emission Factors, Table 1.4-1
   d. VOC: BACT (basis: 750 ADTP/day each hard and soft wood)
6. The maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight.

The following table will present the initial property line acceptable ambient concentrations and their averaging times for chloroform, chlorine, and chlorine dioxide:

Table B

Chemical	Acceptable Ambient Conc.	Averaging Time
1. Chloroform	0.043 ug/m^3	annual
2. Chlorine	15.0 ug/m^3 (5 ppb)	8-hour
	3.57 ug/m^3 (1.2 ppb)	24-hour
3. Chlorine Dioxide	3.0 ug/m^3 (1 ppb)	8-hour
	0.71 ug/m^3 (0.24 ppb)	24-hour

Note:

1. Since chloroform is a carcinogen with an EPA unit risk value (a measure of its carcinogenic potency) and the facility will continuously emit this chemical, the initial acceptable ambient concentration is based on providing protection from the long-term exposure to chloroform. The level of protection, that corresponds to a one-in-a-million increased risk of developing cancer from continuous exposure to chloroform, is

calculated by dividing 1.0E-6 by 2.3E-5 (the unit risk factor for chloroform). The resulting quotient (0.043 ug/m^3) is the initial acceptable ambient concentration. Since the health concern is for long-term exposure (and the unit risk factor reflects a 70-year exposure), the averaging time should be on an annual basis.

2. Chlorine is not a carcinogen, but has an occupational exposure level (TLV) of 0.5 ppm (1.5 mg/m^3). The initial acceptable ambient concentration is based on providing two orders of magnitude below the occupational level. The two orders of magnitude represent protection for the differences between healthy workers and the more sensitive public, and the public's potential exposure to multiple chemicals, which may exert synergistic effects, or may produce exposures through other environmental media.

   The first ambient guideline is based on an 8-hour average concentration, as is the occupational exposure level. An additional protection factor which takes into account the public's continuous exposure, compared to a worker's exposure, which ceases in 8 hours, is provided by the longer-term 24-hour guideline. For the 24-hour guideline, the 8-hour guideline is divided by 4.2, which is the ratio between a 168-hour week of public exposure to a continuous emission and a worker's exposure to 40 hours of the toxic. The 24-hour guideline does not need to be used for batch operations or processes which operate for less than 8 hours. If a process can pass the 8-hour ambient guideline and does not operate more than 8 hours, then its average ambient concentration for 24 hours will be well below the 24-hour guideline.

3. The initial acceptable ambient concentration for chlorine dioxide* is derived by the same methodology as was used for chlorine. The occupational exposure level is 0.3 mg/m^3 (0.1 ppm). Dividing the TLV by 100 gives the 8-hour acceptable ambient concentration, and dividing the TLV by 420 gives the 24-hour concentration.

* Facility representatives indicated that chlorine dioxide is very reactive and rapidly breaks down to chlorine in the atmosphere. Therefore, an acceptable ambient concentration guideline may not be appropriate for chlorine dioxide.

4. Testing will be required to verify the emissions from all sources.

B. Air Quality Impact Analysis

1. Introduction

The proposed No.6 Power Boiler and the modification of the Lime Kiln-Mud Dryer will emit three pollutants in PSD-significant amounts. These pollutants include the criteria pollutants carbon monoxide (CO), nitrogen oxides (NOx), and ozone (O3) (as volatile organic compounds). (see Table 1)

The air quality impact analysis required by the PSD regulations for these pollutants includes:

* An analysis of existing air quality;
* A PSD increment analysis (for NO2);
* An Ambient Air Quality Standards (AAQS) analysis;
* An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality impacts; and,
* A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The PSD increment and AAQS analysis depends on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed mill modification, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment. A discussion of the modeling methodology and required analysis follows.

2. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review.

An exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined by air quality modeling, is less than a pollutant-specific "de minimus" concentration.

The predicted ambient impact of the the proposed project for those pollutants subject to the PSD review is listed in Table 2.

The predicted maximum impacts for CO and NO2 are less than their respective de minimus impact levels. Therefore, no additional monitoring is required for these pollutants.

Preconstruction monitoring review is not required for ozone concentrations either, because the maximum potential VOC emissions from the proposed plant are less than 100 TPY.

However, a background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department for use in the ambient air quality analysis. This value was based on data from sites in

Jacksonville and Tarpon Springs both about equally distant from Champion. There were no quality assured NO_2 monitoring sites in the Pensacola area.

3. Modeling Methodology

The modeling analysis included both screening and refined EPA-approved models. Screening models were used to determine the "worst case" loaded conditions associated with the No.6 Power Boiler and to evaluate the No.6 Power Boiler and Lime Kiln-Mud Dryer impacts due to CO emissions. The EPA-approved Industrial Source Complex Long-Term (ISCLT2) dispersion model was used to evaluate NO_2 impacts. All recommended EPA default options were used. Direction-specific downwash parameters were used because the stacks were less than the GEP stack height.

Meteorological data used in the modeling consisted of five years (1985-1989) of hourly surface and upper air meteorological data taken at Pensacola, Florida. These data were input into the National Climatic Data Center (NCDC) stability array (STAR) preprocessor program for use as input to the ISCLT2 model. The STAR program converts the hourly data into the joint frequency of occurrence of wind direction, wind speed, and atmospheric stability. The STAR program can produce monthly, seasonal and annual stability arrays of input into ISCLT2.

The highest predicted yearly impact from the proposed NOx emissions was compared with the standards.

4. Modeling Results

The applicant performed screening modeling to determine the "worst case" load conditions for the proposed boiler. The worst case ambient impacts were predicted to occur during the 100% load condition. Based on the results above, all refined modeling included the 100% load emission parameters and emission rates for the No.6 Power Boiler.

The Screening model was also used to demonstrate that the CO impacts from the No.6 Power Boiler and the modification to the Lime Kiln were below the 1-hour and 8-hour significance levels of 2,000 ug/m3 and 500 ug/m3, respectively. The maximum combined impact from these two sources was 413.7 ug/m3 on a 1-hour basis. The 8-hour impact was 289.6 ug/m3. Therefore, since the proposed mill modification will not result in a significant ambient CO air quality impact, no further air quality modeling for CO is required. The proposed facility is located in a Class II area. The applicant evaluated the potential increases in ambient ground-level concentrations associated with the project and determined that the maximum projected ambient concentration increase would be greater than the PSD significant level for NO_2, thus requiring the applicant to perform a full impact analysis for NO_2. The significant impact area was determined to be 2.4 km and an emissions inventory for NOx sources was developed for the Champion mill and other major sources.

A combination of polar coordinate receptors and rectangular coordinate receptors was established for the ISCLT2 modeling. The polar grid was centered on the location of the No.5 Boiler stack. The following downwind receptor rings for every 10 degrees of arc from 0 degrees to 360 degrees were included: 4250m, 4500m, 4750m, 5000m, 6000m, 7000m, 8000m, and 10,000m. Due to the narrow boundary of Champion's property, an extensive network of discrete receptors along the boundary was used to supplement the polar grid. Since the polar receptor grid was centered on the No.5 Boiler, additional discrete receptors were required to adequately fill in the area between the property and the start of the grid. These additional receptors included points at 100m spacing out to 1000m and 250m spacing from 1000m to 4500m where the full polar grid started. Receptors were also placed at approximately 100m intervals along the perimeter of the facility boundary.

Atmospheric dispersion modeling, as previously described, was performed to quantify the amount of PSD increment consumed. The modeling results are summarized in Table 3. Based on these modeling results, the impacts from the proposed facility will not violate any of the Class II increments.

No PSD Class I increment analysis was done since the project is located more than 160 km from the nearest Class I area.

For the pollutants subject to an AAQS review, the total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The "background" concentrations are taken from areas that are much more industrialized than the proposed facilities location. Therefore, these background values are considered to be conservative. A background NO_2 concentration of 22.5 ug/m3 annual average was developed by the Department based on the data from sites in Jacksonville and Tarpon Springs.

Given existing air quality in the area of the proposed facility, emissions from the proposed facility are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are summarized in Table 4.

There is currently no acceptable method to model VOCs for ozone formation. Consequently, the control of the VOC emissions are addressed in the BACT review.

Chlorine, chlorine dioxides, and chloroform do not have an AAQS. However, these pollutants were modeled and the results were compared to the Department's air toxics reference concentrations. Table 5 summarizes the results of this analysis. The predicted concentrations for each of these pollutants is less than their respective reference concentrations.

5. Additional Impacts Analysis

a. Impacts on Soils and Vegetation

The maximum ground-level concentration predicted to occur for each pollutant as a result of the proposed project, including a background concentration, will be below the applicable AAQS including the national secondary standards developed to protect public welfare-related values. As such, this project is not expected to have a harmful impact on soils and vegetation.

b. Impact on Visibility

The mill modifications are estimated to result in a decrease in annual particulate matter emissions and an increase of less than 28 tons of SO2. Hence, it is not anticipated that any perceptible reduction in visibility will occur due to the emission of primary or secondary aerosols by the proposed mill modification. And the ambient ground level concentration of nitrogen oxides (in the form of NO_2) is anticipated to decrease due to the shutdown and removal of the No.1 and No.2 Power Boilers. Hence, visibility impairment should not occur.

c. Growth-Related Air Quality Impacts

The proposed facility is not expected to significantly change employment, population, housing or commercial or industrial development in the area to the extent that an air quality impact will result.

IV. CONCLUSION

Based on the information provided by Champion International Corporation, the Department has reasonable assurance that the proposed mill modification, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapters 17-210 thru 17-297 of the Florida Administrative Code.

#41755

FIGURE 2-3: CONSENT ORDER AIR PERMITTING PLAN - MILL LAYOUT

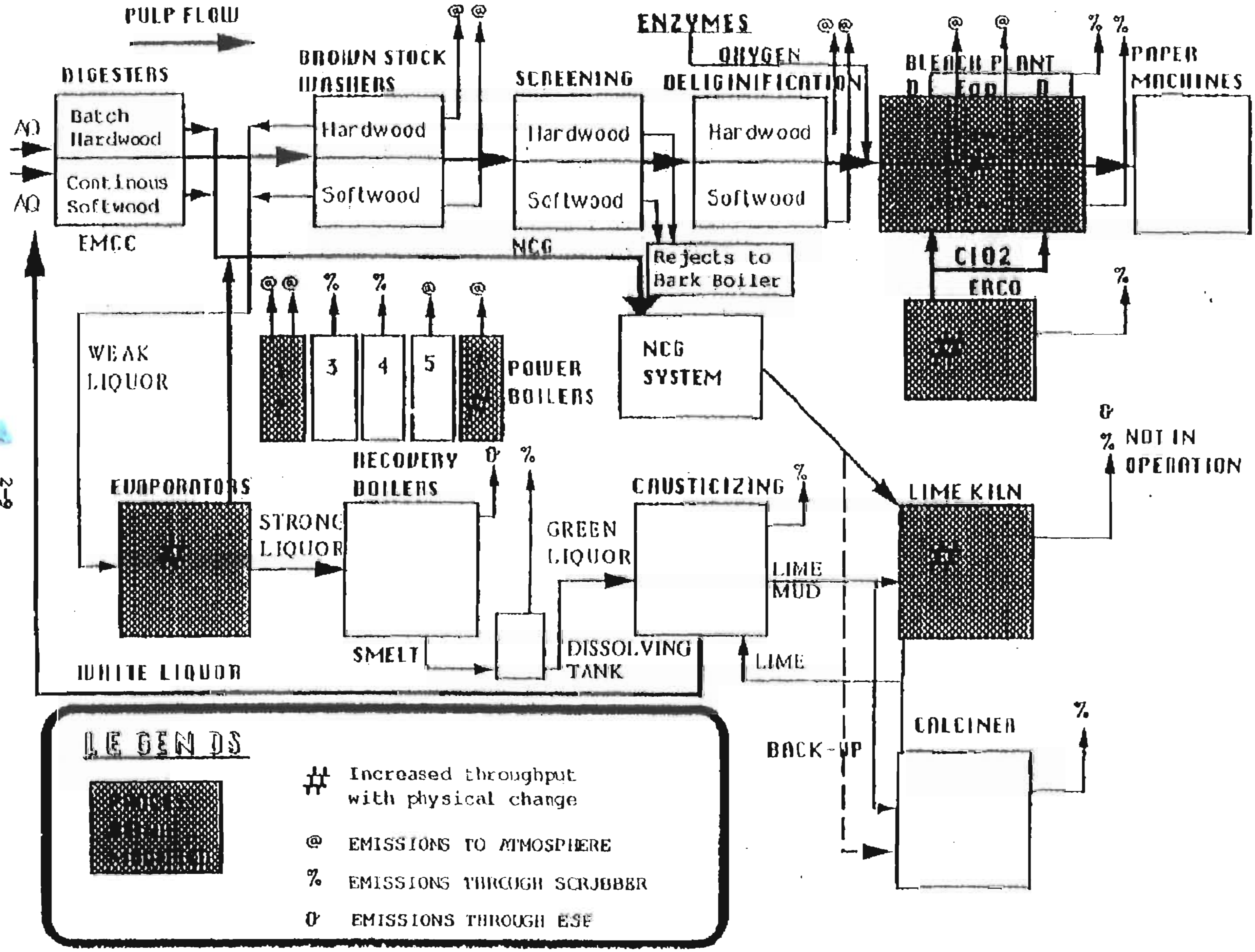
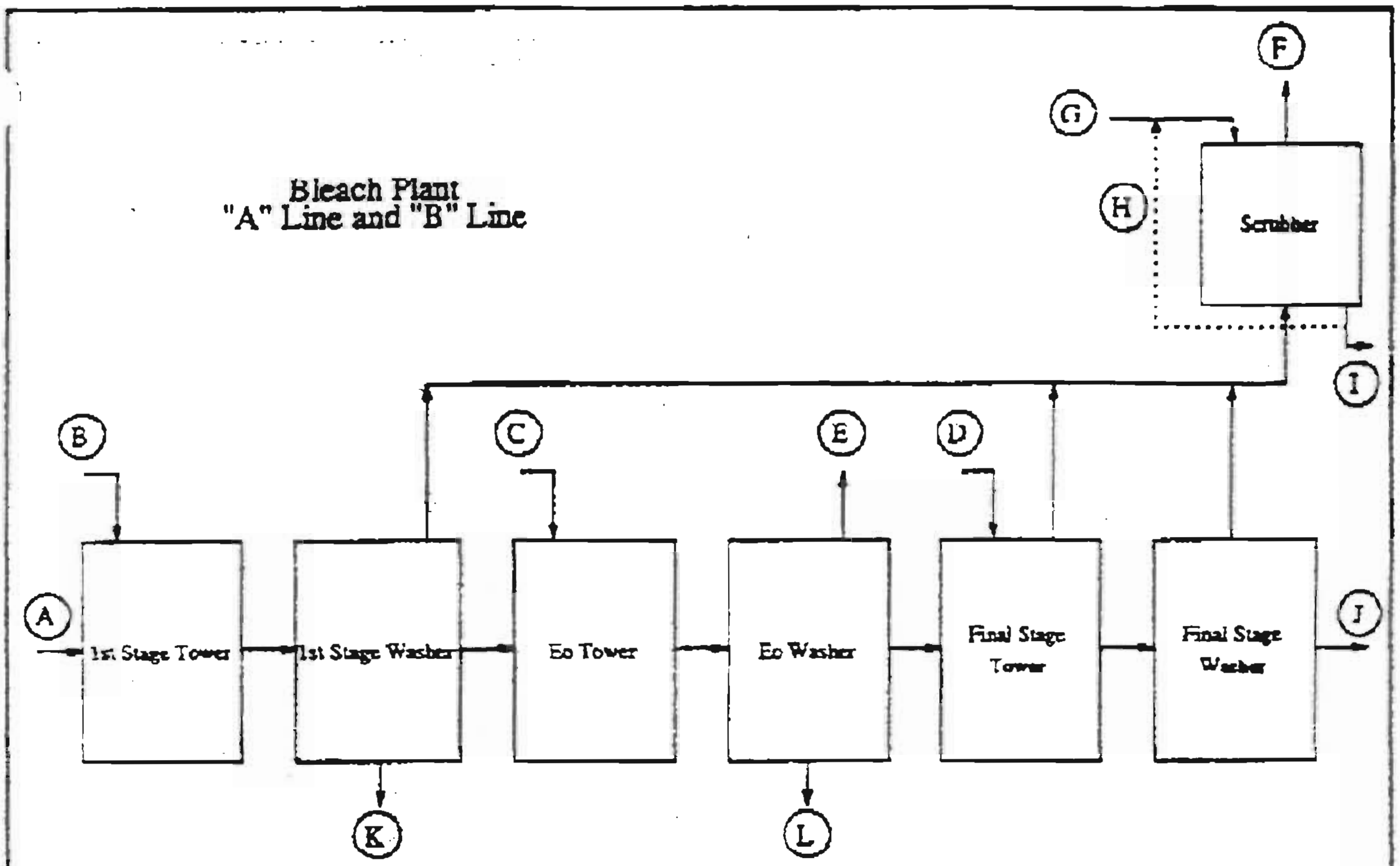


Figure 1

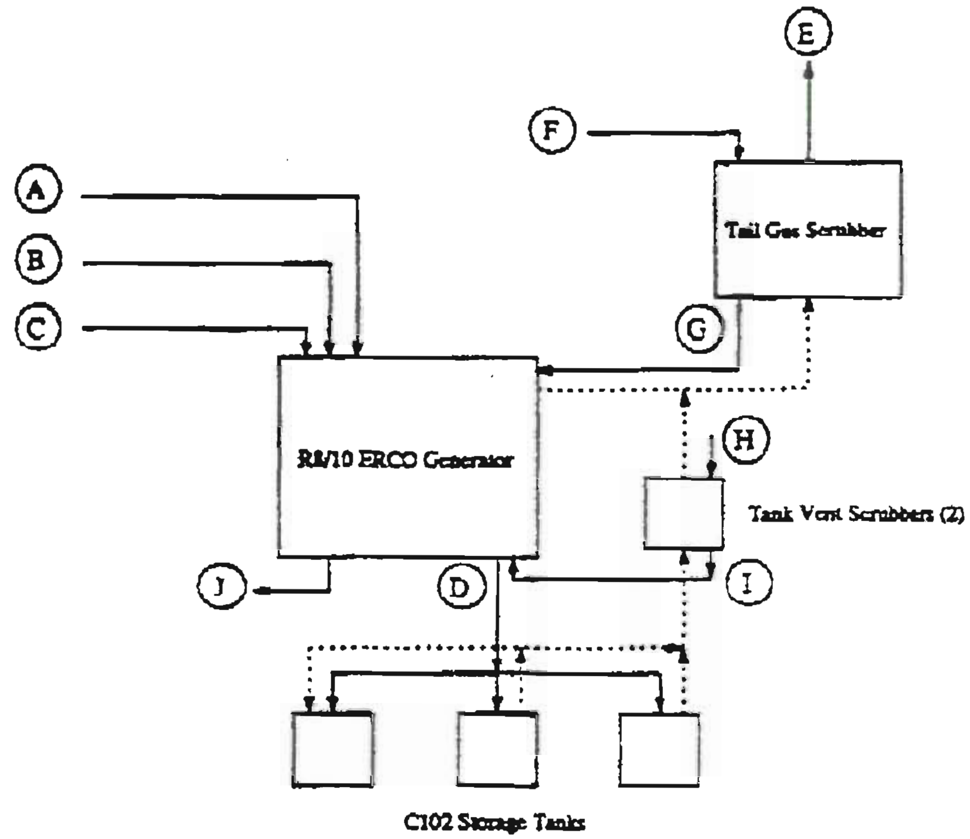


		"A" Line	"B" Line
A	Unbleached Pulp	910.8 ADT/D	851.3 ADT/D
B	CLO2	10.7 T/D	6.3 T/D
C	Peroxide	3.3 T/D	3.1 T/D
D	CLO2	8.2 T/D	5.0 T/D
E	Eo Washer Vent Gas	13,812 ACFM	8,227 ACFM
F	Scrubber Vent Gas	10,200 ACFM	7,350 ACFM
G	Scrubber Makeup Flow	1.1 GPM	.2 GPM
H	Scrubber Recirculation	225 GPM	190 GPM
I	Scrubber Blowdown	2 GPM	1 GPM
J	Bleached Pulp	888 ADT/D	830 ADT/D
K	Acidic Effluent	3.5 MGD	3.5 MGD
L	Alkaline Effluent	2.3 MGD	2.3 MGD

Process Flow Diagram 4
Bleach Plant

Camp04-D19

Figure 2

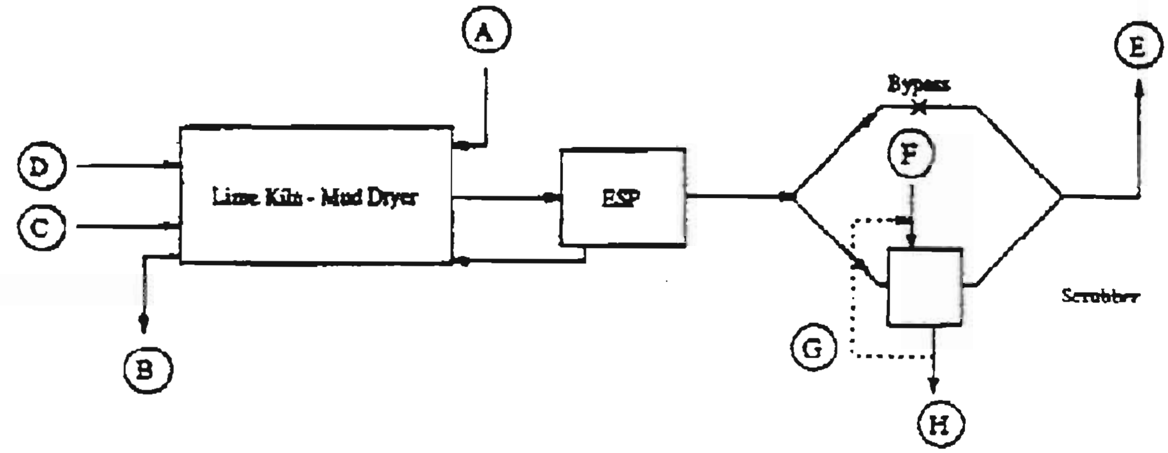


A	Methanol	5.6 T/D
B	Sulfuric Acid	29.6 T/D
C	Sodium Chlorate	61.3 T/D
D	Chlorine Dioxide	37.4 T/D
E	Stack Effluent	1,321.0 ACFM
F	Makeup White Liquor to Scrubber	<1.0 GPM
G	Scrubber Discharge	1.0 GPM
H	Water to Tank Vent Scrubbers	79.1 GPM
I	Tank Vent Scrubber Discharge	79.1 GPM
J	Saltcake Generation	53.6 T/D

Process Flow Diagram 3
Chlorine Dioxide Generator

Chmp03-D10

Figure 3

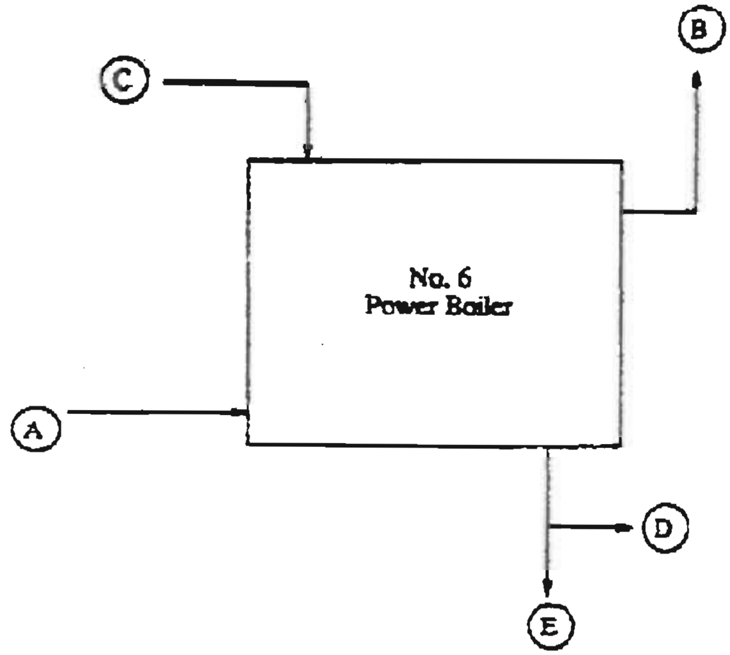


A	Lime Mud	893 T/D
B	Product Lime	500 T/D
C	Fuel - Natural Gas - No. 6 Oil	144.231 MCFH 1,000 GPH
D	NCGs	358 lb/hr *
E	Stack Effluent	57,208 ACFM
F	Scrubber Makeup	25 GPM
G	Scrubber Recirculation	1,700 GPM
H	Scrubber Blowdown	5 GPM

* Based on 1,718 ADBT/D

Process Flow Diagram 2
Lime Kiln - Mud Dryer

Figure 4



A	Natural Gas	533 MCFH
B	Stack Effluent	161,000 ACFM
C	Feed Water	6,667 lb/min
D	Steam	384 KPPH
E	Blow Down	266.7 lb/min

Process Flow Diagram 1
No. 6 Power Boiler

Table 1: Siginificant and Net Emission Rates (Tons per Year)

Pollutant	Significant Emission Rate	Proposed Net Emissions	Applicable Pollutant (Yes/No)
CO	100	189	Yes
NO_x	40	138.8	Yes
SO_2	40	27.4	No
PM	25	-1.3	No
PM10	15	-1.3	No
O_3 (VOC)	40	85.5	Yes
TRS	10	-1.9	No

Table 2. Maximum Air Quality Impacts for Comparison to the Significant and De Minimus Ambient Levels.

Pollutant	Avg. Time	Predicted Impact (ug/m_3)	Significant Imapct Level (ug/m_3)	De Minimus Level (ug/m_3)
CO	1-hour	413.7	2000.0	N/A
	8-hour	289.6	500.0	575.0
NO_2	Annual	2.4	1.0	14.0
VOC	Annual	85.5 TPY	N/A	100 TPY

Table 3. PSD Class II Increment Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Allowable Increment (ug/m^3)
NO_2	Annual	2.4	25

Table 4. Ambient Air Quality Impact

Pollutant and Averaging Time	Major Sources Impact (ug/m^3)	Background Conc. (ug/m^3)	Total Impact (ug/m^3)	Florida AAQS (ug/m^3)
NO_2 (Annual)	42.0	22.5	64.5	100

Table 5. Air Toxics Analysis

Pollutant	Averaging Time	Max. Predicted Impact (ug/m^3)	Air Toxics Reference Conc. (ug/m^3)
Chloroform	Annual	0.026	0.043
Chorine Dioxide	Annual	0.198	0.20
Chlorine	Annual	0.0384	0.40

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor Virginia B. Wetherell, Secretary

PERMITTEE:

Champion International Corporation
375 Muscogee Road
Cantonment, FL 32533

Permit Number: AC 17-223343
PSD-FL-200
Expiration Date: Dec. 31, 1995
County: Escambia
Latitude/Longitude: 30°36'30"N
87°19'13"W
Project: Mill Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes; Florida Administrative Code (F.A.C.) Chapters 17-210 thru 17-297 and 17-4; and, 40 CFR (July, 1991 version). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the permitting of a mill modification in concert with the mill's wastewater Consent Order, to include the construction of a new natural gas fired No. 6 Power Boiler (PB), the surrendering of the operation permits for the existing Nos. 1 and 2 Power Boilers, modification to both the A and B Bleach Plants, construction of a new methanol storage tank, and modification of the Lime Kiln's mud handling system. The UTM coordinates of the existing facility are Zone 17, 469.0 km East and 3386.0 km North.

The Standard Industrial Codes are:

- o Major Group No. 26 - Paper and Allied Products
- o Industry Group No. 2611 - Pulp Mills

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

Attachments to be Incorporated:

1. Application to Construct/Modify Air Pollution Sources, DER Form 17-1.202(1), received December 21, 1992.
2. Technical Evaluation and Preliminary Determination dated February 25, 1993.

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

GENERAL CONDITIONS:

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

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

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

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

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

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

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

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

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however,

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. Expiration Date: Dec. 31, 1995

GENERAL CONDITIONS:

the permittee does not waive any other rights granted by F.S. or Department rules.

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

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

13. The permittee shall comply with the following:

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

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

   c. Records of monitoring information shall include:

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

14. This permit constitutes compliance with:
   a. New Source Performance Standards (NSPS), 40 CFR 60, Subparts Db and Kb;
   b. Prevention of Significant Deterioration; and,
   c. Best Available Control Technology (BACT).

GENERAL CONDITIONS:

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

SPECIFIC CONDITIONS:

A. <u>No. 6 Power Boiler</u> (PB)

1. The No. 6 PB may operate continuously (i.e., 8760 hrs/yr).

2. The No. 6 PB is permitted to fire natural gas only, with a maximum heat input of 533 MMBtu per hour, yielding a maximum steam product of 350,000 lbs/hr.

3. The No. 6 PB will be an ABB/CE boiler.

4. The Source Classification Code is:

1-02-006-01 Ext. Combustion Boiler-Industrial 10^6 ft.^{3} Burned

5. The No. 6 PB is subject to all applicable standards of 40 CFR 60, Subpart Db (July, 1991 version).

6. The No. 6 PB is subject to all applicable standards of F.A.C. Rule 17-296.405(2).

7. The No. 6 PB's pollutant emissions shall not exceed:

NO_x	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY)
PM/PM_{10}	2.67 lbs/hr, 11.7 TPY
SO_2	Not Applicable: Natural gas usage (for PSD tracking purposes: 2.2 TPY projected potential emissions)
VOC	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY)
VE	$\leq$ 20 % opacity (6-min avg), except for one 6-min period/hr @ $\leq$ 27% opacity

8. The initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Subpart Db and Appendix A (July, 1991 version):

a) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.

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PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

b) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
c) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
d) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
e) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

A

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

9. Emission monitoring for nitrogen oxides shall be in accordance with 40 CFR 48b (July, 1991 version).

10. Reporting and recordkeeping requirements shall be in accordance with 40 CFR 60.46b (July, 1991 version).

B. Lime Kiln - Mud Dryer System (LK-MDS)

1. Operation permit No. AO 17-181738 is incorporated by reference except for the following changes and/or additions:

a. the LK-MDS may operate continuously (i.e., 8760 hrs/yr);

b. a new lime mud drier system will be constructed as an addition to the existing lime kiln operation;

c. the pollutant emissions from the LK-MDS will be vented to a new electrostatic precipitator, which will be vented in series to a modified packed column wet scrubber using NaOH as the scrubbing media; there will be no bypass of the wet scrubber system allowed except for emergency or malfunction, which is a reportable activity;

d. the wet scrubber slurry shall be maintained at a minimum pH of 8.0 and the unit shall be equipped with a continuous pH monitor/ recorder system; records shall be maintained for a minimum two year period;

e. the maximum allowable operating rate of CaO (lime) produced will be increased from 13.67 to 20.83 tons per hour;

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PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

f. the pollutant emissions from the LX-MDS shall not exceed:

NOx	No. 6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY)
	Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
PM/PM_{10}	10.9 lbs/hr, 47.7 TPY
CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
VOC	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)
TRS	8 ppmvd @ 10% O_2 (1.46 lbs/hr, 6.4 TPY)
SO_2	6.49 lbs/hr, 28.4 TPY
VE	< 20% opacity

Note:
- o Maximum of 500 tons/day CaO product;
- o Maximum sulfur content of the No. 6 Fuel Oil is 1.0%, by weight; and,
- o Volumetric flow rate @ 34,383 dscfm.

g. while firing No. 2 fuel oil, initial and subsequent annual compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.
3) EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources;
4) EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.
5) EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.
6) EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

h. while firing natural gas, initial compliance tests shall be conducted using the following test methods in accordance with F.A.C. Rule 17-297 and 40 CFR 60, Appendix A (July, 1991 version):

1) EPA Method 5, Determination of Particulate Emissions from Stationary Sources.
2) EPA Method 7E, Instrumental Method for Determining Nitrogen Oxide Concentrations at Fossil Fuel Fired Steam Generators.

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

3) **EPA Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources;**
4) **EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources.**
5) **EPA Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources.**
6) **EPA Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.**

Note: Other reference methods may be used with prior written approval received from the Department in accordance with F.A.C. Rule 17-297.620.

C. Chlorine Dioxide (ClO_2) Generator

1. Operation permit No. AC 17-219596 is incorporated by reference except for the following changes and/or additions:

a. the existing chlorine gas handling system will be eliminated;

b. the generating process will be modified from a R3H process to a R8/R10 process, which will use methanol, sulfuric acid, and sodium chlorate to generate ClO_2;

c. the maximum allowable operating rate will be increased from 16 tons/day ClO_2 to 37.4 tons/day;

d. a third ClO_2 storage tank will be installed and the existing chlorine absorption towers will be converted to ClO_2 absorption towers;

e. the ClO_2 storage tanks will vent to the existing two ClO_2 storage tank chilled water scrubbers;

f. the existing two ClO_2 storage tank scrubbers will be vented to the tail gas scrubber, which will be modified by adding an additional 10 feet of tower and the scrubbing media will be changed from sodium hydroxide to white liquor (sodium hydroxide and sodium sulfide);

g. a new 21,880 gallon methanol storage tank and handling system will be installed and is subject to all applicable standards pursuant to 40 CFR 60, Subpart Kb (July, 1991 version); for PSD tracking purposes, the projected potential VOC emissions are 2.2 TPY; also, the tank will be nitrogen blanketed and equipped with a conservation vent;

SCC: 4-07-008-15 Meth. Tank-Breathing Loss 10^3 gals. storage cap.
4-07-008-16 Meth. Tank-Working Loss 10^3 gals. storage cap.

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200

Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

h. the existing salt unloading and storage system will be shut down and dismantled;

i. the pollutant emissions shall not exceed:

R8/R10 ClO_2 Generator: 37.6 TPD
Tail Gas Scrubber

Cl_2	0.1 lb/hr, 0.44 TPY
ClO_2	0.25 lb/hr, 1.1 TPY

j. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining Cl_2, ClO_2, and $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

D. A and B Bleach Plant Lines

1. Operation permit No. AO 17-219600 is incorporated by reference except for the following changes and/or additions:

a. both lines may operate continuously (i.e., 8760 hrs/yr);

b. the bleaching sequence will be changed from CED to DED;

c. a storage and handling system for the enzyme xylanase will be installed;

d. a storage and handling system for hydrogen peroxide will be installed;

e. the existing chlorine gas handling system will be eliminated;

f. the pollutant emissions shall not exceed:

1) A-Line Bleach Plant : [illegible] ADT/D, max

a) E_O Washer Vent	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) Tail Gas Scrubber	CL_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200

Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

2) B-Line Bleach Plant		
a) E_O Washer Vent	$CHCl_3$	0.038 lb/hr, 0.16 TPY
b) Tail Gas Scrubber	Cl_2	1.45 lbs/hr, 6.4 TPY
	ClO_2	0.45 lb/hr, 2.0 TPY
	$CHCl_3$	0.34 lb/hr, 1.5 TPY

Note: Both lines at an average 1500 ADT/calendar day max. total

h. after construction/modification is completed, a meeting to establish the testing protocol shall be held with the Department, at which the following information shall be provided:

1) identification of all sources and their associated waste streams to be evaluated;

2) proposed sampling procedures/methods and analysis for determining Cl_2, ClO_2, and $CHCl_3$; and,

3) proposed testing dates.

Note: A post-test evaluation for rule applicability will be conducted to see if additional emissions evaluation is required.

E. No. 2 Multiple Effect Evaporators (MEEs), Batch and Continuous Digester Systems, and Foul Condensate Steam Stripper System

1. Operation permit No. AO 17-212422 is incorporated by reference except for the following changes and/or additions:

a. the No. 2 MEEs will be modified to include the addition of two new effects, which will be vented to the non-condensible gas (NCG) handling system. which will allow an increase in the maximum operating rate from 97,000 to 151,000 lb/hr BLS/day, determined by measuring solids and flow into the system.

b. a storage and handling system will be installed for water-soluble anthraquinone, an organic catalyst, which will be used in both the batch and continuous digester systems; both systems vent to the NCG handling system; and,

c. an additional foul condensate steam stripper will be installed and will be vented to the lime kiln or calciner for incineration.

F. General

1. The facility shall be in compliance with all applicable standards/limitations of F.A.C. Rules 17-210 thru 297, 17-4, and 40 CFR (July, 1991 version).

2. The permittee is subject to the applicable provisions of F.A.C. Rules 17-4.130: Plant Operation-Problems; 17-210.650: Circumvention; and, 17-210.700: Excess Emissions.

PERMITTEE: **Permit Number: AC 17-223343**
PSD-FL-200
Champion International Corp. **Expiration Date: Dec. 31, 1995**

SPECIFIC CONDITIONS:

3. Objectionable odors shall not be allowed off plant property in accordance with F.A.C. Rule 17-296.320(2).

4. The Department's Northwest District office shall be notified in writing at least 15 days prior to source testing pursuant to F.A.C. Rule 17-297.340. Written reports of the tests shall be submitted to the Department's Northeast District office within 45 days of the test completion in accordance with F.A.C. Rule 17-297.450.

5. Any change in the method of operation, raw materials, equipment, operating hours, etc., pursuant to F.A.C. Rule 17-212.200, Definitions-Modification, the permittee shall submit an application and the appropriate processing fee to the Department's Bureau of Air Regulation (BAR) office.

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

7. An application for an operation permit must be submitted to the Department's Northwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this ______ day
of ______________, 1993

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

____
Virginia B. Wetherell
Secretary

Best Available Control Technology (BACT) Determination
Champion International Corproation
Escambia County

PSD-FL-200

The applicant proposes to modify its existing pulp mill, which includes the installation of a natural gas fired power boiler rated at a maximum heat input of 533 MMBtu/hr (350,000 lbs/hr steam) and the modification of the existing lime kiln and the A and B Bleach Plants. The steam will be used in the processes undergoing modifications in concert with the mill's wastewater Consent Order.

The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired to be as follows:

Pollutant	Emissions (TPY)	PSD Significant Emission Rate (TPY)
NO_x	138.8	40
SO_2	27.4	40
PM/PM10	-1.3	25/15
CO	189.0	100
VOC	85.5	40
TRS	-1.9	10

Florida Administrative Code (F.A.C.) Rule 17-212.400(2)(f) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

December 21, 1992

BACT Determination Requested by the Applicant

Source	Pollutant	Determination
#6 Power Boiler	NO_x	0.06 lb/MMBtu (32.0 lbs/hr,140.1 TPY)
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY
	VOCs	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-212, Stationary Sources - Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, than the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- Combustion Products (e.g., particulates). Controlled generally by efficient combustion of clean fuels.
- Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- Acid Gases (e.g., NOx). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc,), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion/Incomplete Combustion Products

The projected emissions of carbon monoxide and volatile organic compounds from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

CO and VOCs:

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these pollutants. Therefore, the limits requested are considered reasonable as BACT.

Acid Gas Products

The projected emissions of nitrogen oxides from the proposed modification to Champion International Corporation's facility surpass the significant emission rates given in Florida Administrative Code Table 17-212.400-2.

NOx:

For NOx, the proposed BACT limits for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer System are within the range of similar sources in the BACT/LAER clearinghouse data base.

For the No. 6 Power Boiler, there have been limited cases of SCR impositions, but the cost evaluation of such technology is prohibitive for this project. Costs and process parameters rule out the use of other technologies (i.e., SNCR and FGDN). The proposal to use Coen low-NOx burners together with flue gas recirculation to the combustion zone for minimizing NOx emissions is considered as BACT. However, available space will be made for the potential retrofit of a control system to control NOx.

For the Lime Kiln-Mud Dryer, the application of SCR, SNCR, or FGDN, have never been applied to a lime kiln system due to process variables. Therefore, the proposal to use good operational practices and proper combustion, along with the proposed emission limitations, is considered BACT.

Adverse Environmental Impact Analysis

The predominant adverse environmental impacts associated with the potential use of add-on control technology (SCR, SNCR or FGDN) are the emissions of other pollutants (i.e., ammonia, urea, hazardous waste from catalysts, etc.) used in the process for NOx control. Although the use of add-on controls do have some positive environmental benefits, the disadvantages may outweigh the benefits provided by reducing NO_X emissions.

From the evaluation of natural gas combustion, toxics are projected to be emitted in very small amounts. Although the emissions of toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber system, the amount of emission reductions would not warrent the added expense. Consequently, the Department does not believe that the BACT determination would be affected by the emissions of the toxic polutants associated with the firing of natural gas.

BACT Determination by DER

NOx Control

For the No. 6 Power Boiler, the information that the applicant presented indicates that the incremental cost of controlling NOx is high compared to the guidelines. Based on the information presented by the applicant and the evaluation conducted, the Department believes that the use of add-on controls NOx control is not justifiable as BACT. Therefore, the Department will accept the Coen low-NOx burners together with flue gas recirculation to the combustion zone as NOx control when firing natural gas.

For the Lime Kiln-Mud Dryer, there has not been an application of NOx add-on controls for this type of source contained in the data base. Therefore, there will not be any add-on controls required for NOx for this source.

CO and VOC Control

For CO and VOCs, the data base does not list any sources incorporating any add-on controls for these type of sources. Due to the interrelationship between these combustion related pollutants, it is generally acceptable to utilize good combustion practices and process controls to minimize these

Attachments

Available Upon Request

pollutants. Therefore, there will not be any add-on controls required for CO or VOCs for both the No. 6 Power Boiler and the Lime Kiln-Mud Dryer.

The BACT limits for the proposed modification of the Champion International Corporation's facility are thereby established as follows:

Source	Pollutant	Emission Standard/Limitation
#6 Power Boiler	NO_x	0.06 lb/MMBtu (32.0 lbs/hr, 140.1 TPY)
	CO	0.1 lb/MMBtu (53.3 lbs/hr, 233.5 TPY) Combustion Control
	VOCs	0.01 lb/MMBtu (5.33 lbs/hr, 23.4 TPY) Combustion Control
Lime Kiln-Mud Dryer	NOx	#6 fuel oil: 200 ppmvd @ 10% O_2 (49.3 lbs/hr, 215.9 TPY) Natural Gas: 175 ppmvd @ 10% O_2 (43.1 lbs/hr, 188.8 TPY)
	CO	45 ppmvd @ 10% O_2 (6.75 lbs/hr, 29.6 TPY)
	VOCs	104 ppmvd @ 10% O_2 (as propane) (24.5 lbs/hr, 107.3 TPY)

Note: The maximum sulfur content of the #6 fuel oil is 1.0%, by weight.

Details of the Analysis May be Obtained by Contacting:

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

Recommended by:

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

________________ 1993
Date

Approved by:

Virginia B. Wetherell, Secretary
Dept. of Environmental Regulation

________________ 1993
Date

Fold at line over top of envelope to the

Is your RETURN ADDRESS completed on the reverse side?

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

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: H. James Spahr, Env. Eng.
Champion Int'l Corp
P O Box 87
Cantonment, Fl
32533-0087

4a. Article Number
Z 127 632 588

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

7. Date of Delivery

CANTONMENT FL 32533 DEC 11 1995 USPS

5. Signature (Addressee)
X

6. Signature (Agent)
D. Retank

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

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 588

UNITED STATES POSTAL SERVICE

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

Sent to H James Spahr	
Street and No. Champion Int'l	
P.O., State and ZIP Code Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12-7-95 AC17-223343 PSD-Fl-200	

PS Form 3800, March 1993

Fold at line over top of envelope

Is your RETURN ADDRESS completed on the reverse side?

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

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

Consult postmaster for fee.

3. Article Addressed to:
H. James Spahr, Env Eng
Champion Int'l Corp
PO Box 87
Cantonment, Fl 32533-0087

4a. Article Number
Z 127 632 589

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

7. Date of Delivery
DEC 11 1995

5. Signature (Addressee)

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

6. Signature (Agent)
A. [signature]

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 589

UNITED STATES POSTAL SERVICE

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

Sent to: H. James Spahr	
Street and No.: Champion Int'l	
P.O., State and ZIP Code: Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date: 12-7-95 AC 17-223343 PSD-FI-200	

PS Form **3800**, March 1993

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. H. James Spahr, EE.
Champion Int'l Corp
PO Box 87
Cantonment, Fl
32533

4a. Article Number
Z 392 979 036

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

7. Date of Delivery
8-31-95

5. Signature (Addressee)
Pat Dunn

6. Signature (Agent)
Champion

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

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 036

UNITED STATES POSTAL SERVICE

Receipt for Certified Mail

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

PS Form 3800, March 1993

Sent to H. James Spahr	
Street and No. Champion Int'l	
P.O., State and ZIP Code Cantonment, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$

Postmark or Date 8-29-95
AC17-223343
PSD-Fl-200

Is your RETURN ADDRESS completed on the reverse side?

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

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. F. Doug Owenby
Vice President/Operations Mgr.
Champion International Corporation
375 Muscogee Road
Cantonment, Florida 32533

4a. Article Number
P 872 563 611

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

7. Date of Delivery

CANTONMENT, FL APR 6 PM 1994

5. Signature (Addressee)

6. Signature (Agent)

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

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

P 872 563 611

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

UNITED STATES POSTAL SERVICE

Sent to	Mr. F. Doug Owenby
Street and No.	375 Muscogee Road
P.O., State and ZIP Code	Cantonment, Florida 32533
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	Mailed: 4/5/94 AC 17-223343

PS Form **3800**, JUNE 1991

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Bruce Mitchell
2.
3.
4. AMR

Remarks:

Bruce -
Let me know
when we issue this
permit!
Thanks

From Holly Burnama

Date 3/21

Phone

AIR050 10PEN17004255 91 AIR PROGRAM INFORMATION SYSTEM 03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE SCC AOR SCREEN 16:32:28FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 03/23/92SOURC DESC: TWO MULTIPLE EFFECT EVAPORATORS PERMIT: AO17 - 212422 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK) TOTAL OPER: 51 (WK/YR) 8598 (HR/YR) COMMENTS:

*****

SCC INFORMATION ***** **SCC: 3-07-001-03 PULP & PAPER KRAFT PULPING MULTI-EFFECT EVAP GENERA ANN RATE: _527591 UNIT: AIR-DRY TONS UNBLEACHED PULP AVG % S: _ . __ AVG % ASH: __ . _ MMBTU / UNIT ABOVE: _____

MORE AOR RECORDS ON FILE? YES (,B) ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO	
ACTION DUE DATE	

TO: (NAME, OFFICE, LOCATION)		
1. Bruce Mitchell - DARM BAR Room 310D	Initial TT	Date
2.	Initial	Date
3.	Initial	Date
4.	Initial	Date

REMARKS:

per your request

RECEIVED

MAR 17 1993

Division of Air Resources Management

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: R. J. Prusa NWD

DATE 3/16/93

PHONE

AIR051 10PEN17004255 91   AIR PROGRAM INFORMATION SYSTEM   03/15/93 # OF SRC: 033 MAJ FAC? Y SOURCE POLLUTANT AOR SCREEN   16:57:55FACIL: OWN: CHAMPION INTERNAT N/L: 375 MUSCOGEE ROAD AOR LAST UPDATED: 03/23/92SOURC DESC: TWO MULTIPLE EFFECT EVAPORATORS   PERMIT: AO17 - 212422 AOR YEAR: 91 DATE RECEIVED: 03 / 23 / 92 AOR REPORTED THIS YEAR? Y (Y OR N) AVG OPER: 24 (HR/DA) 7 (DA/WK)   TOTAL OPER: 51 (WK/YR) 8598 (HR/YR) COMMENTS:

***** POLLUTANT INFORMATION *****

POLLUTANT	DESCRIPTION	TONS/YEAR	EM CODE
TRS	TOTAL REDUCED SULFUR	____53 . 0000	3

MORE AOR RECORDS ON FILE?

YES (,B)   ACTION TAKEN: _ TRANSMIT HERE: _YEAR WAS NOT SPECIFIED - MOST RECENT AOR ON FILE FOR THIS SOURCE WAS SELECTED!

PENSACOLA
News Journal

PUBLISHED DAILY

Pensacola, Escambia County, Florida

STATE OF FLORIDA
County of Escambia

Before the undersigned authority personally appeared Sharon Wartman who is personally known to me and who on oath says that he/she is a representative of The Pensacola News Journal, a daily newspaper published at Pensacola in Escambia County, Florida; that the attached copy of advertisement, being a Legal in the matter of Issue Permit

in the ________ Court, was

published in said newspaper in the issues of March 13, 1993

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

Sworn to and subscribed before me this 15 day of March A.D., 19 93

Betty J. Weekley
Notary Public

BETTY J. WEEKLEY
"Notary Public—State of Florida"
My Commission Expires Nov. 21, 1995
CC463199

cc: B. Mitchell
C. Holladay
C. Middleswart
J. Harper, EPA
J. Bunyak, NPS

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

NOTICE OF INTENT TO ISSUE PERMIT
Champion International Corporation

AC 17-223343

PSD-FL-200

The Department of Environmental Regulation gives notice of its intent to issue a permit to Champion International Corporation, 375 Muscogee Road, P. O. Box 87, Cantonment, Florida 32533, to allow modifications to be made to the existing pulp mill in concert with the mill's wastewater Consent Order, including the construction of a new No. 6 Power Boiler, the modification of the existing Lime Kiln's mud handling system, the modificatin of the existing A and B Bleach Plant Lines and their operations, the modificatin of the No. 2 Multiple Effect Evaporator set by adding new effects, the construction of a new methanol storage tank, and the surrender of the operation permits for the existing Nos. 1 and 2 Power Boilers. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to the Prevention of Signification Deterioration (PSD) regulations. Approximately 10 percent of the annual NOx PSD increment will be consumed. The Department is issuing this Intent to Issue for the reasons stated in the Revised Technical Evaluation and Preliminary determination (original draft dated February 25, 1993).

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

The petition shall contain the following information;

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

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

BEST AVAILABLE COPY

FEDERAL EXPRESS

[redacted]

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER 6373096811

2352R 6373096811

[redacted]

Date 3/18/93

RECIPIENT'S COPY

1 From (Your Name) Please Print: WESTMARK
Your Phone Number (Very Important): (908)968-4227
Company: PION INTERNATIONAL
Department/Floor No.
Street Address: MUSCOGEE RD
City: CANTONMENT
State: FL
ZIP Required: 32533

2 To (Recipient's Name) Please Print: Bureau of Air Regulation
Recipient's Phone Number (Very Important): (904)488-1344
Company: Dept of Environmental Regulation
Department/Floor No.
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2600 Blair Stone Road
City: Tallahassee
State: FL
ZIP Required: 32399-2400

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): Public Affairs (Dept 0000)

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City
State
ZIP Required

3 PAYMENT
1 [x] Bill Sender
2 [ ] Bill Recipient's FedEx Acct. No.
3 [ ] Bill 3rd Party FedEx Acct. No.
4 [ ] Bill Credit Card
5 [ ] Cash/Check

[redacted]

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)	Standard Overnight (Delivery by next business afternoon. No Saturday delivery†)
11 [ ] OTHER PACKAGING	51 [ ] OTHER PACKAGING
16 [x] FEDEX LETTER*	56 [ ] FEDEX LETTER*
12 [ ] FEDEX PAK*	52 [ ] FEDEX PAK*
13 [ ] FEDEX BOX	53 [ ] FEDEX BOX
14 [ ] FEDEX TUBE	54 [ ] FEDEX TUBE
Economy Two-Day (Delivery by second business day †)	**Government Overnight** (Restricted for authorized users only)
30 [ ] ECONOMY*	46 [ ] GOV'T LETTER
*Economy Letter rate not available. Minimum charge: One pound economy rate.	41 [ ] GOV'T PACKAGE

Freight Service (for packages over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
80 [ ] TWO-DAY FREIGHT**
†Delivery commitment may be later in some areas.
*Declared Value Limit $500.
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [x] DELIVER WEEKDAY
3 [ ] DELIVER SATURDAY (Extra charge) (Not available to all locations)
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE
Dangerous Goods Shipper's Declaration not required
Dry Ice, 9, UN 1845, ______ x ______ kg. 904 III
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ] DESCRIPTION
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6
PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total	Total

OIM SHIPMENT (Chargeable Weight)
[ ] ______ lbs.
L x W x H

Received At
1 [ ] Regular Stop
2 [ ] On-Call Stop
3 [ ] Drop Box
4 [ ] B.S.C.
5 [ ] Station

Emp. No. | Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold
Street Address
City | State | Zip
Received By:
X
Date/Time Received | FedEx Employee Number

7 Release Signature:

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 11/92
PART #137204 FXEM 11/92
FORMAT #155
155
© 1992-93 FEDEX
PRINTED IN U.S.A.

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

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

Department of Environmental Regulation
Northwest District
160 Government Center
(Pensacola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Legal No. 42634 1T
March 13, 1993

P 062 921 973

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

UNITED STATES POSTAL SERVICE

Sent to	F Doug Owenby
Street and No.	Champion Int'l Corp
P.O., State and ZIP Code	Cantonment, Fl
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	3-10-93 AC 17-223343 P50-F1-200

PS Form **3800**, June 1991

Is your RETURN ADDRESS completed on the reverse side?

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

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

Consult postmaster for fee.

3. Article Addressed to:
F. Doug Owenby, VP. -OM
Champion Int'l Corp.
375 Muscogee Rd
Cantonment, Fl
32533

4a. Article Number
P062 921 973

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

7. Date of Delivery
12 MAR 93

5. Signature (Addressee)

6. Signature (Agent)

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

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

P 360 185 708

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

Sent to	F. Doug Owenby
Street and No.	Champion Int'l Corp
P.O., State and ZIP Code	Cantonment, Fl
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	2-26-93 PSD-Fl-200

PS Form **3800**, June 1991

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
F. Doug Owenby, VP, OTM
Champion Int'l Corp
375 Muscogee Rd
Cantonment, Fl 32533

4a. Article Number
P 360 185 708

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

7. Date of Delivery
01 MAR 93

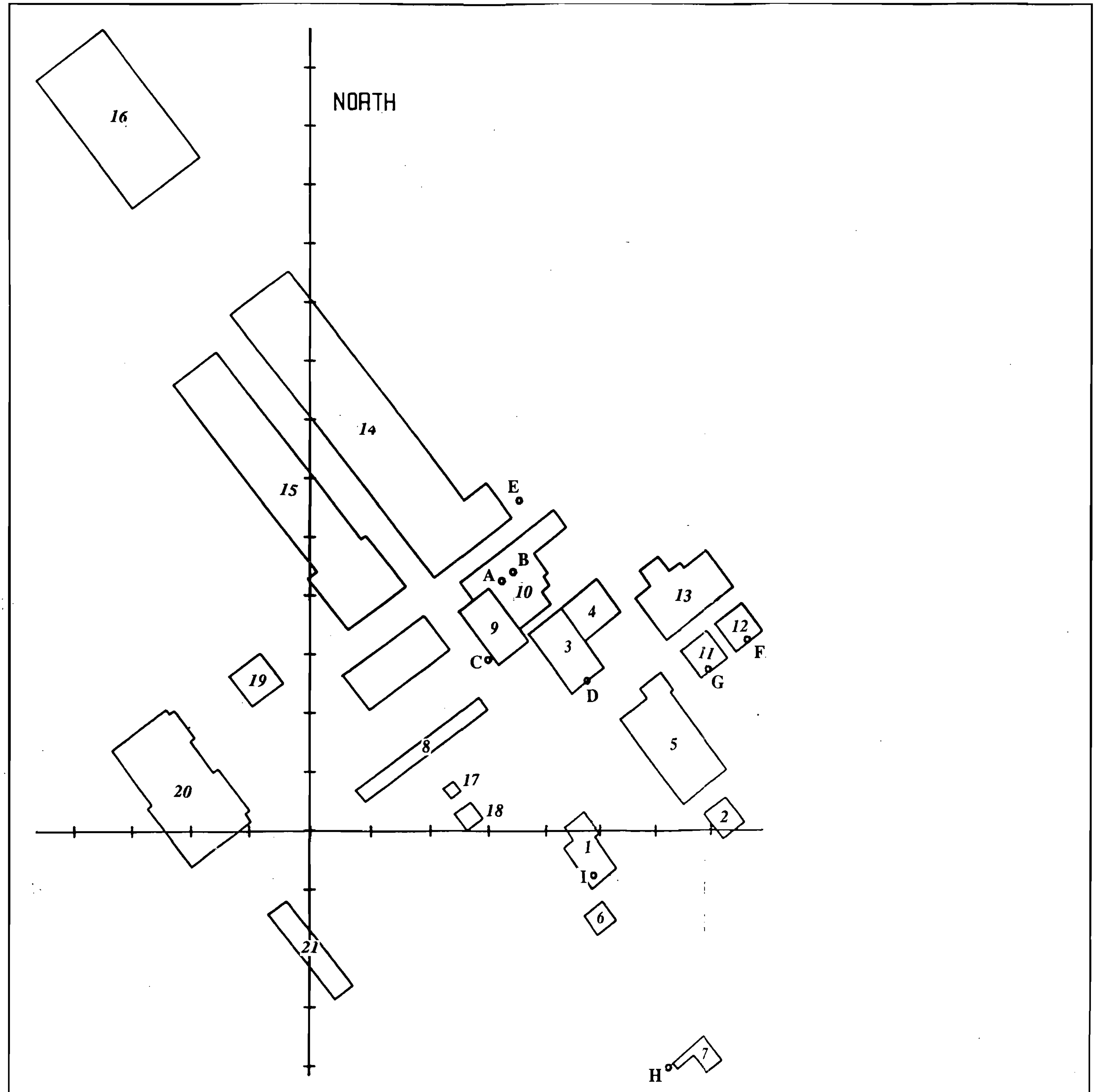
5. Signature (Addressee)

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

6. Signature (Agent)
Rebecca Truckenbrod

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.



BUILDING/STRUCTURE

1. - LIME RECOVERY BUILDING
2. - COOLING TOWER
3. - NO. 4 POWER BOILER
4. - TURBINE GENERATOR BUILDING
5. - EVAPORATORS
6. - LIME KILN NORTH
7. - LIME KILN SOUTH
8. - BATCH DIGESTERS
9. - NO. 3 POWER BOILER
10. - NO.1 & 2 BOILER
11. - RECOVERY BOILER PRECIPITATOR 1
12. - RECOVERY BOILER PRECIPITATOR 2
13. - RECOVERY BOILERS
14. - PAPER MACHINE COMPLEX
15. - HIGH BAY STORAGE BUILDING
16. - WAREHOUSE
17. - KAMYR DIGESTER
18. - KAMYR DIFFUSER
19. - NO. 9 H. D. STORAGE
20. - BLEACH PLANT
21. - CHIP SILO

SOURCES:

A. - NO. 1 POWER BOILER STACK
B. - NO. 2 POWER BOILER STACK
C. - NO. 3 POWER BOILER STACK
D. - NO. 4 POWER BOILER STACK
E. - NO. 5 POWER BOILER STACK
F. - RECOVERY BOILER STACK 1
G. - RECOVERY BOILER STACK 2
H. - LIME KILN STACK
I. - CALCINER STACK

SOURCE: BASE MAP ADAPTED FROM DRAWINGS SUPPLIED BY CHAMPION

CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY
CANTONMENT, ESCAMBIA COUNTY
FLORIDA

CHAMPEN2-H/DM-2/91

FIGURE 2-2
LOCATION OF STACKS AND PRIMARY BUILDINGS IDENTIFIED FOR SCHULMAN-SCIRE DOWNWASH ANALYSIS