Stone Container Corporation

Containerboard and Paper Division

Technology and Engineering

1979 Lakeside Parkway
Suite 300
Tucker, Georgia 30084

404 621-6700
404 621-6703 Fax

TELEFAX MESSAGE

DATE: Feb 11, 1993

FROM: Curt Barton PHONE # 404/621-____

TO: John Reynolds FAX # 904 922 6979

Number of Pages 2 (including cover page)

Message:

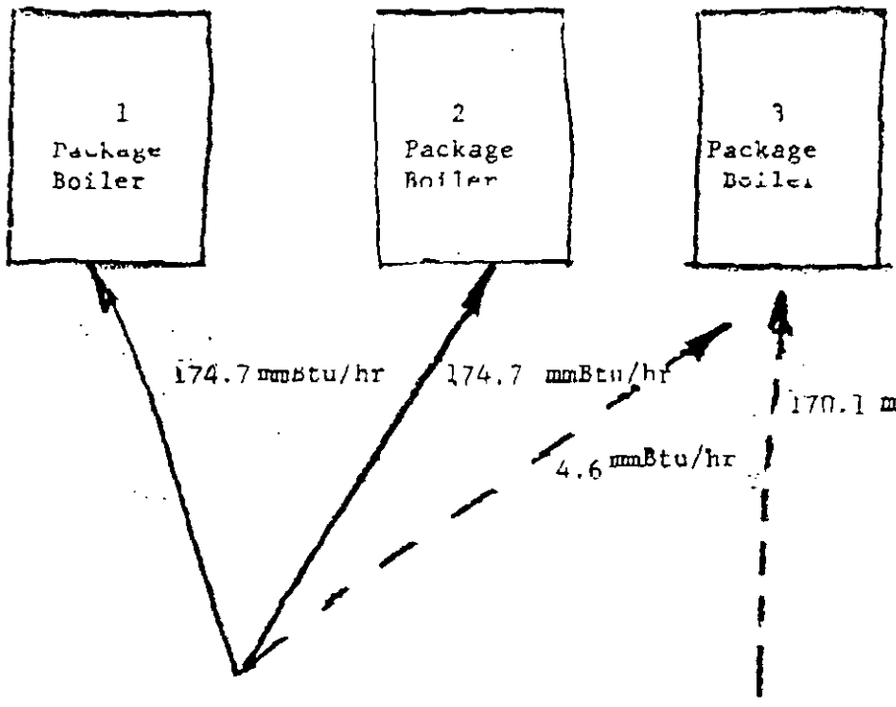
John

Here is diagram I indicated we would send we will call to discuss or when your ready call Al Tabeff 404 621 6704

Handling Instructions: ✓ TOP PRIORITY ____ NORMAL PROCESSING

OTHER: _____

SEMINOLE KRAFT



Total gas Contracted 354 mmBtu/hr (1)
Interstate Line - Firm Transportation (2)
Peoples Gas - Interruptible Transport (2&3)

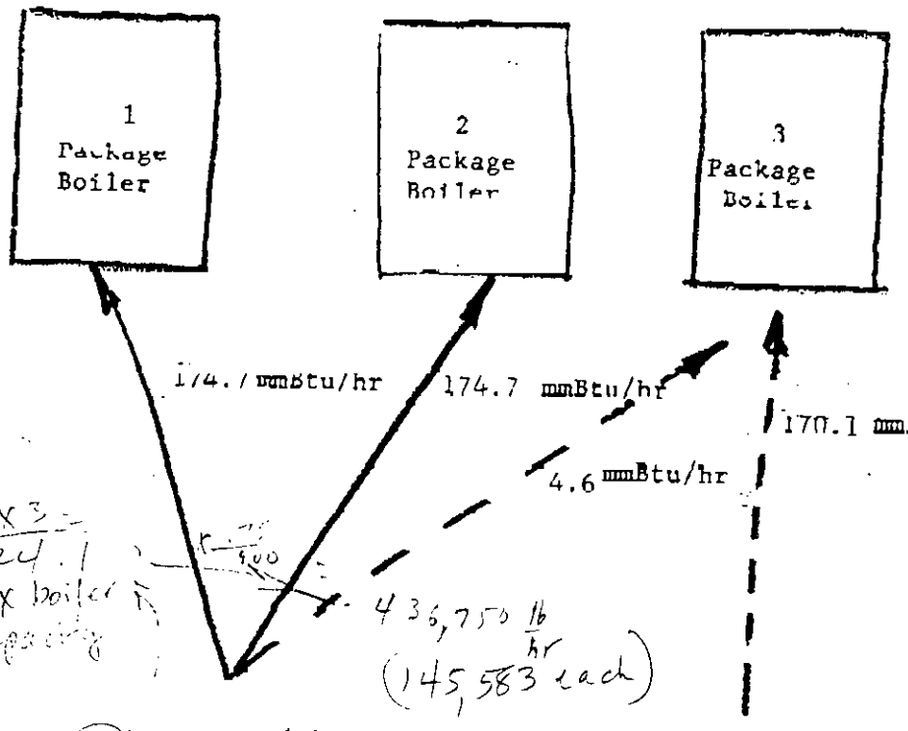
Gas from Peoples-If Available-
on 48 hours notice

(1) Peak requirement when receiving 380,000#/hr
Steam from Cedar Bay. When Cedar Bay does not supply 380,000#/hr all three package boilers must operate. They are capable of supporting the operation of Seminole's largest paper machine with -0- steam from Cedar Bay.

(2) Subject to force majeure

(3) Mainly weather related

SEMINOLE KRAFT



Total gas Contracted (354) mmBtu/hr (1)
Interstate Line - Firm Transportation (2)
Peoples Gas - Interruptible Transport (DGD)

Gas from Peoples-If Available-
on 48 hours notice

This is superceded by copy of contract showing 4440 mmBTU/HR.

$\frac{354}{3} = 118$ mmBTU/hr

$354 \frac{\text{mmBtu}}{\text{hr}} \times \frac{\text{lb}}{900 \text{ Btu}} \times .75 = 295{,}000$

$380{,}000$ Cedar Bay

$675{,}000$ vs. $640{,}000$

$320{,}000 \frac{\text{lb}}{\text{hr}} \times 900 \frac{\text{Btu}}{\text{lb}} \times \frac{1}{.75} = 456$ mmBtu/hr HEAT EQUIVALENT OF C.B. STEAM

PEAK (BASE) LOAD $+ 354$

810 mmBTUH WHEN CB NOT OPERATING

-524 TOTAL FOR 3 PACKAGE BOILERS

286 DEFICIT.

(1) Peak requirement when receiving 380,000#/hr Steam from Cedar Bay. When Cedar Bay does not supply 380,000#/hr, all three package boilers must operate. They are capable of supporting the operation of Seminole's largest paper machine with -0- steam from Cedar Bay.

(2) Subject to force majeure

(3) Mainly weather related

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

February 10, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley, General Manager
Seminole Kraft Corporation
9469 East Port Road
Jacksonville, Florida 32229

Dear Mr. Stanley:

Seminole Kraft requested confirmation of completeness of their permit application (AC16-222359, PSD-FL-198, New Package Boilers). Since this permit requires application of Best Available Control Technology (BACT), the Department had requested additional information on availability of natural gas as the primary fuel. Since Terry Cole confirmed today by phone that a natural gas contract has been obtained, the Department will consider the application complete as of today, February 10, 1993.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting & Standards

JB/JR/ms

cc: J. Cole, NED
B. Oven, O/Sec.
R. Roberson, BESD
C. Hurd, SKC
J. Harper, EPA
D. Buff, KBN
B. Mitchell, NPS
T. Cole, OHF&C

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 Fee will provide you the signature of the person delivered to and the date of delivery.

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:
R A Stanley Gen Mgr
Seminole Kraft Corp
9469 E Port Rd 2698
Jacksonville FL 32219
32226

4a. Article Number
P 062 921 968

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

7. Date of Delivery
2-24-93

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form 3811, November 1990 *U.S. GPO: 1991—287-086 DOMESTIC RETURN RECEIPT

P 062 921 968

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

UNITED STATES POSTAL SERVICE

Sent to R A Stanley	
Street and No. SKC	
P.O. State and ZIP Code Jax, 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 2-11-93	

AC 16-222359
PSD-FL-198

PS Form 3800, June 1991

Patty - file
John K
JR Hon
Copy

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
NORMAN H. HORTON, JR.
KENNETH G. OERTEL
PATRICIA A. RENOVITCH
SCOTT SHIRLEY
THOMAS G. TOMASELLO
W. DAVID WATKINS

SUITE C
2700 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. R. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

January 29, 1993

BY HAND DELIVERY

Mr. John C. Brown, Jr., P.E.
Administrator, Air Permitting & Standards
Florida DER, Room 310
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE Seminole Kraft Corporation Construction
Permit Application for Three Package Boilers

Dear Mr. Brown:

As we promised, this will update the Department on the status of Seminole Kraft's attempts to obtain natural gas as a primary fuel for the proposed three new power boilers. A meeting was held on January 25, 1993, with officials from Peoples Gas to attempt to finalize an agreement for transportation of natural gas to Seminole Kraft.

As a result of that meeting, an agreement in substance has been reached between Seminole Kraft, Peoples Gas and the other interstate carriers. There will be a contract for firm capacity on the interstate pipeline segments and interruptible capacity for the Peoples Gas segment.

The contracts are being prepared by attorneys for the companies to reflect the agreements reached at the meeting. We anticipate having a signed contract by February 15 and will furnish a copy to the Department.

This will also respond to your letter of January 25, 1993, regarding an additional completeness item. While we believe the application to be complete and the questions regarding natural gas to not be relevant to an application involving fuel oil, we will respond since we anticipate amending the application to use natural gas as a primary fuel anyway. In regard to Item 2, natural gas is available. The issue is capability of transporting the gas to the Seminole Kraft site. Interstate pipeline capacity is available, but Peoples Gas capacity is limited. The issue is the degree of interruption in service during certain peak periods of use. As discussed above, we

believe those issues are now resolved in principle and only need to be reduced to writing in a contract. This is the best that the question can be answered.

We would appreciate the Department confirming that in the meantime the application is complete. We would also request the date upon which the permit was determined complete. (We do not view the natural gas issue as being a completeness issue, but as something to be addressed as to final permit questions.)

If we can do anything else to expedite processing and issuance of the permit, please let us know. We appreciate the way the Department has expedited the matter to date.

Sincerely,

Terry Cole
Terry Cole

c: John Reynolds
Clair Fancy
Richard Donelan

Cole\Seminole\Brown1.26

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Richard Donelan
2.
3.
4.

Remarks:

As part of the SKC's pty boiler evaluation, contemporary emissions credits were requested (see attached Tables), which is a project that I have been evaluating. The attached proposed letter is the result of my evaluation. Chair will not sign without your blessing.

Please review and advise. If OK, please say so. Call me for pick-up. Thanks,

B

P.S. Please say hello to Cindy.

OK. RTD 1/28/93

CHF - 1-27-93 mailed 1-29-93 faxed 1-29-93

From	Date
Bruce Mitchell	1-28-93
	Phone 5-1344

Things we discussed at . . .

TREASURE ISLAND INN

1/27

Bruce –

Is it necessary to send this out? Did they ask for letter? Has Richard Dorlan said ok on it? I can't sign anything on Seminole or AES unless Dorlan has said it is OK – Clair

1-26-93

Clair,

The result of a project that I have been working on since Sept '92; and, is tied into the SRC project of 3 new pkg. boilers (J. Reynolds project).

Thanks! Bruce

P.S. I have kept J. Reynolds updated on this project.

P 062 921 962

Receipt for Certified Mail

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

Sent to La Starkey	
Street and No. Seminole Kraft	
P.O. State and ZIP Code Jax. 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	1-29-93

1-3 LK
1-3 RB
1-35 DT

No. 3 Slaker

PS Form **3800**, June 1991

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 28, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218-0998

Dear Mr. Stanley:

Re: Contemporaneous Emissions Credit Evaluation

The Department has reviewed documents regarding the issue of contemporaneous emissions credit for the Nos. 1-3 Lime Kilns (LK), the Nos. 1-3 Recovery Boilers (RB), the Nos. 1-3 Smelt Dissolving Tanks (SDT), and the No. 3 Slaker. Based on the review, the following credits are granted for a five year period beginning September 11, 1992, which is the date that the operation permits were surrendered to the Department's Northeast District office:

Table 1

Contemporaneous Emissions Credit (TPY)

Source	CO	PM	SO_2	NOx	VOC	TRS	$H2SO_4$
RB #1	**1118.5**	107.8	3.7	**117.5**	**114.3**	7.2	**9.5**
RB #2	**1169.8**	156.0	2.8	**129.0**	**185.0**	12.3	19.9
RB #3	**468.5**	129.7	**1.2**	**139.5**	**36.6**	14.0	**13.9**
LK #1	**1.4**	3.8	0.1	**9.0**	2.1	0.2	--
LK #2	**10.1**	21.6	8.5	**41.3**	19.1	1.7	--
LK #3	**9.9**	19.6	6.7	**60.2**	18.6	1.4	--
SDT #1	--	22.6	2.9	--	--	1.6	--
SDT #2	--	23.8	2.8	--	--	1.8	--
SDT #3	--	36.9	2.9	--	--	1.6	--
Slaker #3	--	**0.9**	--	--	--	--	--
Ttl:	**2778.2**	**522.7**	**31.6**	**496.5**	**375.7**	41.8	**43.3**

Note:
o Bold print denotes a different result between the Department's Bureau of Air Regulation and both tables designated Table I and Table 3-6 (attached);

Note cont.

o Table abbreviations:

CO: Carbon Monoxide
PM: Particulate Matter
SO_2: Sulfur Dioxide
NOx: Nitrogen Oxides
VOC: Volatile Organic Compounds
TRS: Total Reduced Sulfur
H_2SO_4: Sulfuric Acid Mist

o Average annual hours of operation used in the calculations:

Source	1990	1991	avg.
RB #1	8000	8322	8161
RB #2	8085	8140	8112.5
RB #3	7919	8347	8133
LK #1	1500	840	1170
LK #2	7695	7769	7732
LK #3	7618	7577	7597.5
SDT #1	8000	8322	8161
SDT #2	8085	8140	8112.5
SDT #3	7919	8347	8133
Slaker #3	7808	7823	7815.5

Note: Values based on the 1990 and 1991 AORs.

o Where values differ, the following "lbs/hr" values were used to calculate the Table's values and are based on the raw data taken from the various reports submitted for the evaluation (note: the majority of differences are due to rounding-off):

Source	CO	SO_2	VOC
RB #1	274.1	0.92	28.0
RB #2	288.4	0.68	45.6
RB #3		0.29	

Note: Values were calculated using:

$$\text{lbs/hr} = \text{ppm}/1 \times 10^6 \times \text{lb-mole}/385\ \text{ft}^3 \times \text{MW-lbs/lb-mole} \times \text{dscfm} \times 60\ \text{min/hr}$$

MW (molecular weight): CO - 28
SO_2 - 64
VOC - 60, as propanol

The following table will display available contemporaneous emissions credit for other pollutants not contained in Table 1 and may differ from those values contained in Table II (attached), which was submitted for the evaluation. As was submitted, the values are the sum of the emission results from tests conducted on the Nos. 1-3 RBs. However, if a pollutant was not detected in at least 6 of the 9 test runs, then the test results were deemed inconclusive and not considered acceptable; and, therefore, no credit will be granted (i.e., a "0" will be used).

Table 2

Contemporaneous Emissions Credit

Pollutant	lbs/yr
Barium	0
Chromium	19.5
Copper	13.5
Manganese	64.3
Mercury	0
Nickel	0
Phosphorus	171.7
Silver	0
Zinc	291.4

Note:
- o For barium, 7 of 9 test results were "0".
- o For mercury, 7 of 9 test results were "0".
- o For nickel, 7 of 9 test results were "0".
- o For phosphorus, the No. 3 RB's 3rd test run was considerably out of tolerance (4-7 times the other values) and was rejected.
- o For silver, 8 of 9 test results were "0".

Attachments:

- o Mr. L. A. Stanley's letter with attachments received September 2, 1992.
- o Mr. L. A. Stanley's letter with enclosures received September 11, 1992, by the Department's Northeast District.
- o Me. W. Joe Eskridge's letter with attachments dated September 28, 1992.
- o Mr. W. Joe Eskridge's letter with attachment received October 2, 1992.
- o Mr. W. Joe Eskridge's letter with enclosures received January 1, 1993, via FAX.
- o Mr. W. Joe Eskridge's letter received January 22, 1993, via FAX.

Attachments cont.

- Table I
- Table 3-6
- Table II

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

Sincerely,

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

CHF/BM/rbm

Attachments

cc: A. Kutyna, NED
R. Roberson, DCAQD
J. Braswell, Esq., DER
R. Donelan, Esq., DER
M. Riddle, SKC
J. Eskridge, SKC

Attachments

Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

904 751-6400

September 10, 1992

Mr. Ernie Frey
Department of Environmental Regulation
3426 Bills Road
Jacksonville, FL 32207

Dear Mr. Frey:

In accordance with Consent Order 88-12385 9.A.1.b., 9.A.3.b, and 9.A.4.b., the permits are being surrendered to you. This equipment was shut down on September 10, 1992.

The Smelt Dissolving Tanks have been rendered inoperable as required by Section 9.A.2.b.

Should you have any questions, please call Mike Riddle at 751-6400, ext. 252.

Sincerely,

L.A. Stanley
General Manager

ah

enclosures

TABLE I - AVERAGE TONS/YEAR

	Carbon Monoxide (CO)	Particulate Matter (PM) (c)	Sulfur Dioxide (SO_2)	Nitrogen Oxides (NOx) (e)	Volatile Organic Compounds (VOC)	Total Reduced Sulfur (TRS) (c)	Sulfuric Acid (H_2SO_4) (a)
Recovery Boiler 1	1141 (a)	108	4 (a)	120	114 (a)	7	10
Recovery Boiler 2	1173 (a)	156	3 (a)	129	193 (a)	12	20
Recovery Boiler 3	481 (a)	130	1 (a)	143	38 (a)	14	14
Lime Kiln 1	1 (b)	4	-	7	2 (f)	-	-
Lime Kiln 2	11 (b)	22	9 (d)	41	19 (f)	2	-
Lime Kiln 3	10 (b)	20	7 (d)	60	19 (f)	1	-
Smelt Dissolving Tank 1	-	23	2 (b)	-	-	1	-
Smelt Dissolving Tank 2	-	24	3 (b)	-	-	2	-
Smelt Dissolving Tank 3	-	37	3 (b)	-	-	2	-
Slaker 3	-	1	-	-	-	-	-
TOTAL	2817	525	34	500	385	41	44

(a) = Emission test report by IEA Inc. (Attachment 3)
(b) = AP-42 factors used due to lack of actual data
(c) = Annual Operating Reports for 1990 and 1991 (Attachments 1 & 2)
(d) = SO_2 Source Test Reports by TSI and ACE (Attachments 4, 5, 6)
(e) = NOx Test Report by TSI (Attachment 7)
(f) = NCASI information (Attachment 8)

Table 3-6. PSD Source Applicability Analysis, SKC Package Boiler Project

Regulated Pollutant	Baseline Emissions (TPY)										Future Emissions (TPY)				Net Change (TPY)	Significant Emission Rate (TPY)	PSD Applies ?
	RB1	RB2	RB3	SDT1	SDT2	SDT3	LK1	LK2	LK3	Totals	PB1	PB2	PB3	Totals			
Particulate (TSP)	107.8	156.0	129.7	22.6	23.8	36.9	3.8	21.6	19.6	521.8	36.05	36.05	36.05	108.1	-413.7	25	No
Particulate (PM10)	80.8	117.0	97.2	20.2	21.3	33.0	3.7	21.2	19.3	413.7	18.00	18.00	18.00	54.0	-359.7	15	No
Sulfur dioxide	3.7	2.8	0.8	2.9	2.8	2.9	0.1	8.5	6.7	31.2	216.15	216.15	216.15	648.5	617.3	40	Yes
Nitrogen oxides	119.8	129.4	143.2	--	--	--	6.4	41.6	60.2	500.6	153.04	153.04	153.04	459.1	-41.5	40	No
Carbon monoxide	1,140.9	1,173.0	480.8	--	--	--	1.5	10.2	10.0	2,816.4	273.31	273.31	273.31	819.9	-1,996.5	100	No
Vol. org compds.	114.0	193.3	37.6	--	--	--	2.1	19.1	18.6	384.7	1.05	1.05	1.05	3.2	-381.5	40	No
Lead	0	0	0	--	--	--	--	--	--	0.0	0.0064	0.0064	0.0064	0.019	0.019	0.6	No
Mercury	0	0.0045	0	--	--	--	--	--	--	0.0045	0.0024	0.0024	0.0024	0.0073	0.0028	0.1	No
Beryllium	0	0	0	--	--	--	--	--	--	0.0	0.0018	0.0018	0.0018	0.0054	0.0054	0.0004	Yes
Fluorides	--	--	--	--	--	--	--	--	--	0.0	0.023	0.023	0.023	0.069	0.069	3	No
Sulfuric acid mist	9.7	19.9	14.3	--	--	--	--	--	--	43.9	10.8	10.8	10.8	32.4	-11.5	7	No
Total reduced sulfur	7.2	12.3	14.0	1.6	1.8	1.6	0.2	1.7	1.4	41.8	--	--	--	0	-41.8	10	No
Asbestos	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0.007	No
Vinyl Chloride	0	0	0	--	--	--	--	--	--	--	--	--	--	--	0	0	No

TABLE II
HEAVY METALS

JANUARY 6-13, 1992	LBS/YR
BARIUM	9
CHROMIUM	20
COPPER	14
MANGANESE	65
MERCURY	4
NICKEL	11
PHOSPHORUS	255
SILVER	5
ZINC	296

PATTY
P JOHN R.

KBN

January 26, 1993

RECEIVED
JAN 27 1993
Division of Air
Resources Management

Mr. John Brown, Jr., P.E.
Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Seminole Kraft Proposed Package Boilers
AC16-222359, PSD-FL-198

Dear Mr. Brown:
It has come to our attention that a minor error was made in determining the baseline NO_x emissions for Lime Kiln No. 3 in the PSD source applicability for the proposed package boilers (reference Table 3-5 in KBN's letter submittal of December 22, 1992). This error stemmed from an error in the consultant's stack test report (excerpts attached), which showed a NO_x emission rate of 15.85 lb/hr in the summary section, but reported 14.1 lb/hr in the detailed data table (Table III). The 14.1 lb/hr emission rate is the correct value for Lime Kiln No. 3. Therefore, Tables 3-5 and 3-6 of the PSD application have been revised to reflect this change.

In addition to this change, the baseline VOC emissions for the lime kilns have been revised based on the 2-year average (1990-1991) fuel use, instead of the 1991 fuel usage. This changes the baseline VOC emissions slightly. These revisions are also reflected in the revised tables. Other minor typographical errors have also been corrected in Tables 3-3, 3-4, and 3-5. All of these tables have been revised and are attached.

Based on the revised tables, the PSD source applicability analysis (Table 3-6) has been revised. As shown, the PSD applicability is not affected by these minor corrections. Please call if you have any questions concerning this information.

Sincerely,

David A. Buff

David A. Buff, M.E, P.E.
Principal Engineer

DAB/dmm

cc: Curt Barton, Stone Container
Craig Hurd, Stone Container
Mike Riddle, Seminole Kraft
Scott Shirley, Oertel & Hoffman
B. Mitchell, National Park Service
Jewell Harper, EPA Region IV
R. Robertson, Jacksonville BES
A. Kutyna, FDER Jacksonville
File (2)
G. Reynolds
C. Holladay
B. Crum
R. Donelan

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

Table 3-3. Baseline Emissions for Recovery Boilers (revised 01/20/93)

Regulated Pollutant	Recovery Boiler No. 1			Recovery Boiler No. 2			Recovery Boiler No. 3		
	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)
Particulate (TSP)	--	--	107.75	--	--	156.00	--	--	129.65
Particulate (PM10)	--	--	80.81	--	--	117.00	--	--	97.24
Sulfur dioxide	8,161	0.9	3.67	8,113	0.7	2.84	8,133	0.2	0.81
Nitrogen oxides	8,161	28.8	117.52	8,113	31.8	129.00	8,133	34.3	139.48
Carbon monoxide	8,161	274.2	1,118.87	8,113	288.2	1,169.08	8,133	115.2	468.46
Volatile org. compds.	8,161	27.4	111.81	8,113	47.5	192.68	8,133	9.0	36.60
Lead	8,161	0	0	8,113	0.0	0	8,133	0	0
Mercury	8,161	0	0	8,113	0.0011	0.0045	8,133	0	0
Beryllium	8,161	0	0	8,113	0.0	0	8,133	0	0
Arsenic	8,161	0	0	8,113	0.0	0	8,133	0	0
Fluorides	8,161	--	--	8,113	--	--	8,133	--	--
Sulfuric acid mist	8,161	2.34	9.55	8,113	4.90	19.88	8,133	3.42	13.91
Total reduced sulfur	--	--	7.17	--	--	12.35	--	--	14.00
Asbestos	--	--	--	--	--	--	--	--	--
Vinyl Chloride	--	0	0	--	0	0	--	0	0

Notes: Operating hours represent average of 1990-1991 actual operating hours.
Emission rates are measured emission rates during actual stack test, unless otherwise noted below.
PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.
PM10 is based on extrapolation of AP-42 data for recovery boilers: 75% of PM is PM10.
Fluorides and asbestos were not measured; there are no emission factors; there are no known emissions.

Table 3-4. Baseline Emissions for Smelt Dissolving Tanks (revised 01/20/93)

Regulated Pollutant	Smelt Tank No. 1 Operating Hours (hr/yr)	Smelt Tank No. 1 Annual Emissions (TPY)	Smelt Tank No. 2 Operating Hours (hr/yr)	Smelt Tank No. 2 Annual Emissions (TPY)	Smelt Tank No. 3 Operating Hours (hr/yr)	Smelt Tank No. 3 Annual Emissions (TPY)
Particulate (TSP)	--	22.6	--	23.8	--	36.9
Particulate (PM10)	--	20.2	--	21.3	--	33.0
Sulfur dioxide	8,161	2.9	8,113	2.8	8,133	2.9
Nitrogen oxides	--	--	--	--	--	--
Carbon monoxide	--	--	--	--	--	--
Volatile org. compds.	--	--	--	--	--	--
Lead	--	--	--	--	--	--
Mercury	--	--	--	--	--	--
Beryllium	--	--	--	--	--	--
Arsenic	--	--	--	--	--	--
Fluorides	--	--	--	--	--	--
Sulfuric acid mist	--	--	--	--	--	--
Total reduced sulfur	--	1.6	--	1.8	--	1.6
Asbestos	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--

Notes: Operating hours represent actual operating hours for 1991.
PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.
PM10 is based on AP-42 data for controlled PM from smelt tanks: 89.5% of PM is PM10.
SO2 emissions based on AP-42 factor of 0.2 lb/ton ADUP, and 80% removal efficiency for spray chamber with demister pad for PM control. Total pulp production was as follows:

1990-- 459,683 tons ADUP
1991-- 395,040 tons ADUP
Average-- 427,362 tons ADUP

427,362 tons ADUP x 0.2 lb/ton x (1-0.80) / 2,000 lb/ton = 8.55 TPY
Divide SO2 emissions between smelt tanks based on average operating hours for 1990-1991.

Table 3-5. Baseline Emissions for Lime Kilns (revised 1/18/93)

Regulated Pollutant	Emission Factor	Lime Kiln No. 1 Activity Factor	Lime Kiln No. 1 Annual Emissions (TPY)	Lime Kiln No. 2 Activity Factor	Lime Kiln No. 2 Annual Emissions (TPY)	Lime Kiln No. 3 Activity Factor	Lime Kiln No. 3 Annual Emissions (TPY)
Particulate (TSP)	--	--	3.8	--	21.6	--	19.6
Particulate (PM10)	--	--	3.7	--	21.2	--	19.3
Sulfur dioxide	0.16/2.18/1.76 lb/hr^a	1,170 hr/yr	0.1	7,732 hr/yr	8.4	7,598 hr/yr	6.7
Nitrogen oxides	15.3/10.7/14.1 lb/hr^a	1,170 hr/yr	9.0	7,732 hr/yr	41.4	7,598 hr/yr	53.6
Carbon monoxide	0.1 lb/ton ADUP	1,170 hr/yr	1.5	7,732 hr/yr	10.0	7,598 hr/yr	9.9
Volatile org. compds.	0.13 lb/MM Btu	53,719 MM Btu/yr	3.5	286,109 MM Btu/yr	18.6	281,373 MM Btu/yr	18.3
Lead	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--
Beryllium	--	--	--	--	--	--	--
Arsenic	--	--	--	--	--	--	--
Fluorides	--	--	--	--	--	--	--
Sulfuric acid mist	--	--	--	--	--	--	--
Total reduced sulfur	--	--	0.2	--	1.7	--	1.4
Asbestos	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--

^a Emission factors for Lime Kilns No. 1, No. 2 and No. 3, respectively, based on actual test data.

Notes: Operating hours represent two year average, 1990-1991.
PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.
PM10 is based on AP-42 data for lime kilns controlled with venturi scrubber: 98.3% of PM is PM10.
SO2 emissions based on average of stack tests conducted in 1989.
NOx emissions based on stack tests conducted on each lime kiln in 1992.
CO emissions based on AP-42 factor of 0.1 lb/ton ADUP.
Total pulp production was as follows:

1990--	459,683 tons ADUP
1991--	395,040 tons ADUP
Average--	427,362 tons ADUP

CO: 427,362 tons ADUP x 0.1 lb/ton / 2,000 lb/ton = 21.4 TPY
Divide emissions between lime kilns based on average operating hours in 1990-1991.
VOC emissions based on heat input and NCASI emission factors (see attached)
Heat input based on actual fuel oil fired in kilns in 1990-1991, using 142,000 Btu/gal for fuel oil.

	Kiln 1	Kiln 2	Kiln 3
1990 Gallons--	533,000	1,962,100	1,946,500
1991 Gallons--	223,600	2,067,600	2,016,500
Average Gallons--	378,300	2,014,850	1,981,500
Average Btu/yr--	5.372E+10	2.861E+11	2.814E+11

Table 3-6. PSD Source Applicability Analysis, SKC Package Boiler Project (revised 01/20/93)

Regulated Pollutant	Baseline Emissions (TPY)										Future Emissions (TPY)				Net Change (TPY)	Significant Emission Rate (TPY)	PSD Applies ?
	RB1	RB2	RB3	SDT1	SDT2	SDT3	LK1	LK2	LK3	Totals	PB1	PB2	PB3	Totals			
Particulate (TSP)	107.8	156.0	129.7	22.6	23.8	36.9	3.8	21.6	19.6	521.8	36.05	36.05	36.05	108.2	-413.65	25	No
Particulate (PM10)	80.8	117.0	97.2	20.2	21.3	33.0	3.7	21.2	19.3	413.7	18.00	18.00	18.00	54.0	-359.7	15	No
Sulfur dioxide	3.7	2.8	0.8	2.9	2.8	2.9	0.1	8.4	6.7	31.1	216.15	216.15	216.15	648.5	617.4	40	Yes
Nitrogen oxides	117.5	129.0	139.5	--	--	--	9.0	41.4	53.6	490.0	153.04	153.04	153.04	459.1	-30.9	40	No
Carbon monoxide	1,118.9	1,169.1	468.5	--	--	--	1.5	10.0	9.9	2,777.9	273.31	273.31	273.31	819.9	-1958.0	100	No
Vol. org. compds.	111.8	192.7	36.6	--	--	--	3.5	18.6	18.3	381.5	1.05	1.05	1.05	3.2	-378.35	40	No
Lead	0	0	0	--	--	--	--	--	--	0.0	0.0064	0.0064	0.0064	0.019	0.019	0.6	No
Mercury	0	0.0045	0	--	--	--	--	--	--	0.0045	0.0024	0.0024	0.0024	0.0072	0.0027	0.1	No
Beryllium	0	0	0	--	--	--	--	--	--	0.0	0.0018	0.0018	0.0018	0.0054	0.0054	0.0004	Yes
Fluorides	--	--	--	--	--	--	--	--	--	0.0	0.023	0.023	0.023	0.069	0.069	3	No
Sulfuric acid mist	9.6	19.9	13.9	--	--	--	--	--	--	43.4	10.8	10.8	10.8	32.4	-11.0	7	No
Total reduced sulfur	7.2	12.4	14.0	1.6	1.8	1.6	0.2	1.7	1.4	41.9	--	--	--	0	-41.9	10	No
Asbestos	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0.007	No
Vinyl Chloride	0	0	0	--	--	--	--	--	--	--	--	--	--	--	0	0	No

II SUMMARY AND DISCUSSIONS OF RESULTS

Measurements of NO_x emissions were made at the discharge stacks for Lime Kilns 1, 2, and 3 using a Thermoelectron Model 12A chemiluminescense NO_x analyzer following the protocol of EPA method 7E. The instrument span was set at 500ppm full scale and the appropriate standards for this range were used to calibrate the instrument. High, low and midrange standards were used and ambient air was used to zero the instrument. At the same time, a portion of the sample gas stream was directed to a Teledyne Model 720P oxygen analyzer and oxygen concentrations measured simultaneously with the NO_x measurements. Ambient air was used to span the oxygen analyzer, a midrange gas was utilized and zero was set using one of the NO_x standards.

The NO_x and O_2 concentrations were monitored for three hours at each kiln. The sampling point was the same as that utilized for particulate sampling and sample was drawn from the centroid of the stack in each case. Tables I - III present summaries of the NO_x and O_2 concentrations for the three kilns and the calculated mass emissions are also tabulated. NO_x emissions in lbs/MMBTU heat input was also calculated using the "F" factor for fuel oil.

Average Emissions were:

	ppm	NO_x lbs/hr	lb/MMBTU
No. 1 Kiln	193.8	15.34	0.294
No. 2 Kiln	101.6	10.67	0.210
No. 3 Kiln	181.3	15.85	0.297

Volumetric flow rates from particulate emission sampling were used for calculations.

TABLE 1

NITROGEN OXIDE (NOx) EMISSIONS SUMMARY

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

NO. 1 LIME KILN

DATE	TIME PERIOD	LEVEL	OXYGEN %	NITROGEN OXIDES PPM	LBS/HR	LB/MMBTU	VOLUMETRIC FLOW SCFM
2-20-92	1340-1440	MAX	6.5	190.0	15.04	0.284	11040
		MIN	2.5	167.5	13.26	0.251	
		AVG	5.6	177.5	14.05	0.266	
2-20-92	1440-1540	MAX	6.1	202.5	16.03	0.307	11040
		MIN	5.4	172.5	13.66	0.261	
		AVG	5.8	187.0	14.80	0.283	
2-20-92	1540-1640	MAX	6.1	222.5	17.61	0.342	11040
		MIN	5.9	210.0	16.62	0.323	
		AVG	6.0	216.8	17.16	0.333	
	MEAN		5.8	193.8	15.34	0.294	11040

$$LBS/HR = ppm \times 10^{-6} \times \frac{lb/lb\text{-}mole}{385\ ft^3} \times 60\ \frac{min}{hr} \times SCFMD;\ lb/lb\text{-}mole\ for\ NO_x = 46.01$$

$$= ppm \times 10^{-6} \times \frac{46.01}{385} \times 60 \times SCFMD = ppm \times 10^{-6} \times 7.1704 \times SCFMD$$

$$LB/MMBTU = 1.1917 \times 10^{-7} \times 9190 \times ppm \times \frac{20.9}{20.9 - \%O_2}$$

TABLE II

NITROGEN OXIDE (NOx) EMISSIONS SUMMARY

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

NO. 2 LIME KILN

DATE	TIME PERIOD	LEVEL	OXYGEN %	NITROGEN OXIDES PPM	LBS/HR	LB/MMBTU	VOLUMETRIC FLOW SCFMD
2-20-92	1010-1110	MAX	9.8	95.0	9.98	0.191	14646
		MIN	9.1	87.5	9.13	0.176	
		AVG	9.5	90.8	9.54	0.182	
2-20-92	1110-1210	MAX	10.5	102.5	10.76	0.217	14646
		MIN	9.0	92.5	9.71	0.196	
		AVG	9.8	99.0	10.4	0.210	
2-20-92	1210-1310	MAX	10.5	130.0	13.65	0.271	14646
		MIN	9.0	95.0	9.98	0.198	
		AVG	9.8	115.0	12.08	0.239	
MEAN			9.7	101.6	10.67	0.210	14646

$$LBS/HR = ppm \times 10^{-6} \times \frac{lb/lb\text{-}mole}{385\ ft^3} \times 60\ \frac{min}{hr} \times SCFMD;\ lb/lb\text{-}mole\ for\ NO_x = 46.01$$

$$= ppm \times 10^{-6} \times \frac{46.01}{385} \times 60 \times SCFMD = ppm \times 10^{-6} \times 7.1704 \times SCFMD$$

$$LB/MMBTU = 1.1917 \times 10^{-7} \times 9190 \times ppm \times \frac{20.9}{20.9 - \%O_2}$$

TABLE III

NITROGEN OXIDE (NO_x) EMISSIONS SUMMARY

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

NO. 3 LIME KILN

DATE	TIME PERIOD	LEVEL	OXYGEN %	NITROGEN OXIDES PPM	LBS/HR	LB/MMBTU	VOLUMETRIC FLOW SCFM
2-21-92	0925-1025	MAX	7.6	177.2	15.49	0.300	12190
		MIN	7.0	139.4	12.18	0.236	
		AVG	7.4	162.2	14.18	0.275	
2-21-92	1025-1125	MAX	6.8	168.7	14.75	0.274	12190
		MIN	6.6	146.9	12.84	0.238	
		AVG	6.8	157.8	13.79	0.256	
2-21-92	1125-1225	MAX	6.6	169.9	14.85	0.272	12190
		MIN	6.5	160.1	13.99	0.256	
		AVG	6.6	164.7	14.40	0.264	
	MEAN		6.9	161.6	14.12	0.265	12190

$$LBS/HR = ppm \times 10^{-6} \times \frac{lb/lb\text{-}mole}{385\ ft^3} \times 60\ \frac{min}{hr} \times SCFMD;\ lb/lb\text{-}mole\ for\ NO_x = 46.01$$

$$= ppm \times 10^{-6} \times \frac{46.01}{385} \times 60 \times SCFMD = ppm \times 10^{-6} \times 7.1704 \times SCFMD$$

$$LB/MMBTU = 1.1917 \times 10^{-7} \times 9190 \times ppm \times \frac{20.9}{20.9 - \%O_2}$$

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 25, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley, General Manager
Seminole Kraft Corporation
9469 East Port Road
Jacksonville, Florida 32229

Dear Mr. Stanley:

Re: Permit Application AC16-222359, PSD-FL-198
New Package Boilers - Seminole Kraft

The Department received Stone Container Corporation's January 15 response to our incompleteness letter dated January 5, 1993. This response satisfies Item 1 which requested evidence of efforts to obtain a gas contract. However, Item 2, requesting the supplier's estimate of gas availability, has not been answered. The determination of best available control technology cannot be completed unless the required information concerning gas availability is provided.

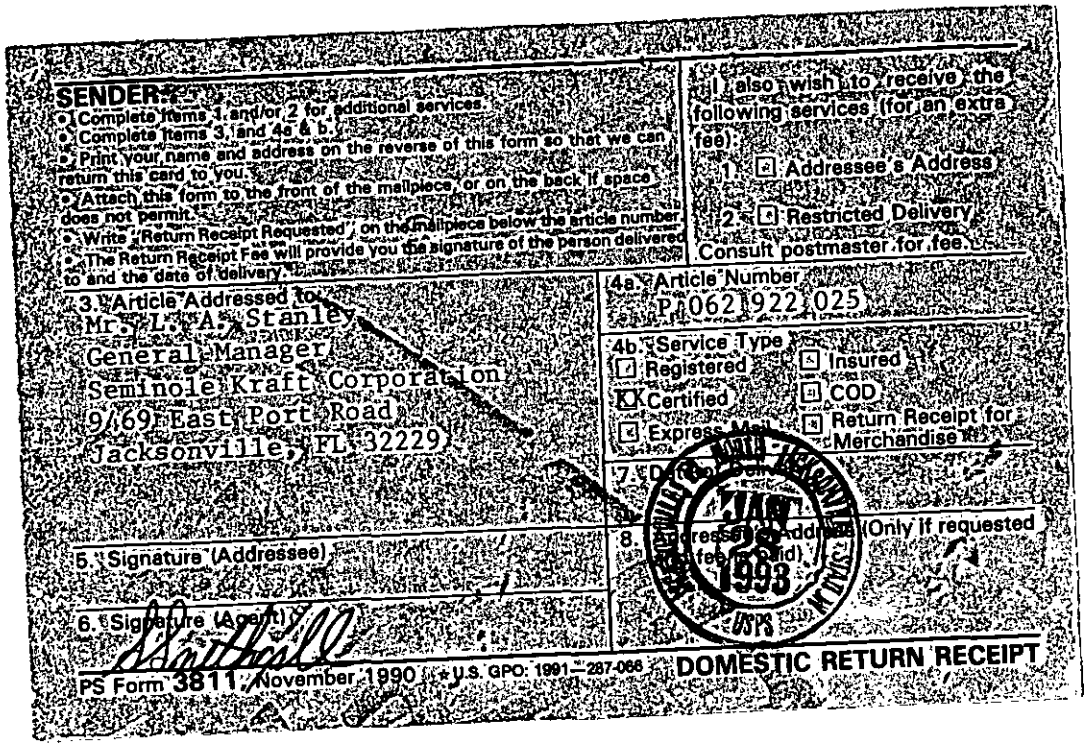
If there are any questions regarding the above, please contact Preston Lewis or John Reynolds at (904) 488-1344.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JCB/JR/plm

cc: A. Kutyna, NED
B. Collum, GEPD
R. Roberson, BESD
C. Hurd, SKC
J. Harper, EPA
D. Buff, KBN
B. Mitchell, NPS
T. Cole, OHF&C
B. Oven



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 Fee will provide you the signature of the person delivered to and the date of delivery.

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. L. A. Stanley
General Manager
Seminole Kraft Corporation
9469 East Port Road
Jacksonville, FL 32229

4a. Article Number
P 062 922 025

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

7. Date of Delivery

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

5. Signature (Addressee)

6. Signature (Agent)

JAN 28 1993 USPS

PS Form 3811, November 1990 * U.S. GPO: 1991—287-066 DOMESTIC RETURN RECEIPT

P 062 922 025

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

UNITED STATES POSTAL SERVICE

Sent to: Mr. L. A. Stanley, Seminole Kraft Corp.	
Street and No.: 9469 East Port Road	
P.O., State and ZIP Code: Jacksonville, FL 32229	
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: 1-25-93 Permit: AC 16-222359 PSD-FL-198	

PS Form 3800, June 1991

OERTEL, HOFFMAN, FERNANDEZ & COLE, P. A.

ATTORNEYS AT LAW

SUZANNE BROWNLESS
M. CHRISTOPHER BRYANT
R. L. CALEEN, JR.
C. ANTHONY CLEVELAND
TERRY COLE
ROBERT C. DOWNIE, II
SEGUNDO J. FERNANDEZ
KENNETH F. HOFFMAN
NORMAN H. HORTON, JR
KENNETH G. OERTEL
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TALLAHASSEE, FLORIDA 32301

MAILING ADDRESS:
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TALLAHASSEE, FLORIDA 32314-6507

TELEPHONE (904) 877-0099
FACSIMILE (904) 877-0981

JOHN H. MILLICAN
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

J. P. SUBRAMANI, PH. D., P. E.
ENVIRONMENTAL CONSULTANT
(NOT A MEMBER OF THE FLORIDA BAR)

January 19, 1993

Mr. John C. Brown, Jr., P.E.
Administrator, Air Permitting & Standards
Florida DER
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Brown:

Attached is a letter from Seminole Kraft providing the information that you requested regarding efforts to obtain natural gas for its proposed new replacement power boilers.

With this information, we believe that we have fully responded to the completeness report previously provided as well as the information requested in your letter of January 5, 1993. Thus, we believe the application should now be considered complete. We understand the Department's issue of natural gas as BACT, although we may not fully agree with the Department on the issue. However, that should not prevent the application from being determined complete, although it may be an ultimate permitting issue for the Department to consider.

If the Department has not determined the application to be complete with the receipt of this information, we would appreciate your letting us know as soon as possible. As we committed at the meeting, we will follow up with an update on the natural gas issue after the next meeting with Peoples Gas.

We appreciate you and the other staff taking time to meet and discuss this information with us and your attempts to speedily process the application.

Sincerely,

Terry Cole
Terry Cole

Attachments
c: Richard Donelan
Clair Fancy
John Reynolds
B. Owen
Cole\Seminole\Brown1.18
C. Holladay
R. Robinson, BESD
A. Kutyna, NE Dist.
J. Harper, EPA
J. Bunyak, NPS

Stone Container Corporation

Containerboard and Paper Division

Technology and Engineering

1979 Lakeside Parkway
Suite 300
Tucker, Georgia 30084

404 621-6700
404 621-6733 Fax

January 15, 1993

Mr. John C. Brown, Jr. P.E.
Administrator, Air Permitting & Standards
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear John:

As promised during our meeting in Tallahassee on January 14th, following is a chronological list of our contacts with Peoples Gas regarding a natural gas supply for the package boilers to be installed at Seminole Kraft. In addition, of course, there were numerous phone contacts.

May 4, 1992	Letter from Peoples responding to our verbal inquiry about gas supply.
May 29, 1992	Confirming letter from Peoples indicating they had delivery capacity available.
June 2, 1992	Letter from Peoples indicating they had no local barriers to gas supply.
July 3, 1992	Correspondence form Sun Coast Pipeline regarding pipeline development (alternate delivery route).
August 6, 1992	Meeting with Peoples at which we defined volume requirements and requested a firm transportation contract be prepared.
Sept. 1, 1992	Draft term sheet received from Peoples.
Sept. 2, 1992	Internal correspondence with term sheet review. We requested additional data from Peoples.
Sept. 16, 1992	Additional material received from Peoples.
Sept. 16- Oct. 9, 1992	Internal review of Peoples term sheet proposals.

Oct. 13, 1992	Correspondence from Peoples regarding our comments on term sheet.
Oct. 14, 1992	Meeting with Peoples Gas in Jacksonville. Instructed them to prepare contracts.
Nov. 24, 1992	Teleconference regarding contract terms with external counsel specialized in natural gas matters.
Dec. 4, 1992	Meeting in Tampa - draft contract review.
Dec. 9, 1992	Internal correspondence defining pending issues.
Dec. 9-29, 1992	Legal review and rewrite of contract using external counsel.
Dec. 16, 1992	Teleconference regarding contract terms (Seminole Kraft and attorneys).
Jan. 6, 1993	Redraft of contracts received from attorneys.
Jan. 8, 1993	Teleconference (attorneys, Seminole, and Peoples).
Jan. 15, 1993	"Final" draft contract promised by Peoples.

At such time as the contract with Peoples is finalized we will be happy to provide you with a copy.

We understand that this information is sufficient response to your letter of January 5, 1993. Please advise immediately if you find any remaining completeness questions.

Sincerely,

STONE CONTAINER CORPORATION

Allen M. Koleff, Vice President
Environmental, Process & Energy Technology

AMK/ss
cc: Terry Cole, Esq.
Mike Riddle/Seminole
C. Fancy/Florida DER
Larry Stanley/Seminole
Curt Barton/Atlanta

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

4APT-AEB

JAN 15 1993

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: Seminole Kraft Corporation, Duval County
(PSD-FL-198)

Dear Mr. Fancy:

This is to acknowledge receipt of the Prevention of Significant Deterioration (PSD) permit application package for the above referenced facility. The existing Seminole Kraft Corporation facility is a 100-percent recycled fiber paper mill. The proposed modification to the existing facility will be the addition of three package boilers, to be fired with fuel oil and natural gas.

The applicant proposes to limit SO_2 emissions through limiting the sulfur content of the distillate fuel oil and to limit beryllium emissions through efficient combustion and the use of ash free and low ash fuels.

We have reviewed the package as submitted and have no adverse comments. Thank you for the opportunity to review and comment on the package. If you have any questions or comments, please contact either Mr. Lew Nagler for modeling/monitoring or Mr. Scott Davis 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

J. Reynolds
C. Holladay
G. Kuteman, NE Dist
R. Robinson, BESD
B. Owen
G. Bunyak, NPS
D. Buff, KBN
B. Collom, GEPD

D. Cole, OHF&C
L.A. Stanley, SKC
C. Hurd, SCC
CHF/JCB/PL

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JAN 25 1993
Division of Air
Resources Management

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Jacksonville, FL

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General

Seminole Kraft Corporation

Jacksonville Mill

9469 Eastport Road
P.O. Box 26998
Jacksonville, Florida 32218-0998

904 751-6400

January 9, 1991

RECEIVED
JAN 17 1991
DER - BAQM

Mr. James L. Manning, P.E.
Department of Health, Welfare and
Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, FL 32202-4111

Dear Mr. Manning:

This letter is provided to comply with paragraph 11 of the Stipulation for Entry of a Consent Judgement (the odor settlement) that Seminole Kraft notify the City of Jacksonville that it has achieved certain items in the compliance schedule. This letter will provide notification that Seminole has completed the first two items on the compliance scheduled.

As the Department knows, Seminole entered into a letter of intent with Holder Pamac, Ltd. to conduct a pre-engineering study to establish firm project definition and costs in June, 1990. That study was completed in late Fall and confirmed our original cost estimates. Accordingly, the project is moving ahead as scheduled.

As of December 31, 1990, Seminole has placed orders for the following major equipment:

1. OCC plant repulpers and detrashing system
2. OCC plant cleaners
3. OCC plant fiber fractionation equipment
4. OCC plant dispersion equipment and refiners
5. OCC plant flotation separation equipment
6. All new pumps and motors
7. New rolls for the paper machine
8. New winder for the paper machine

The project remains on schedule and completion is expected during the summer of 1992.

Please let me know if you have any questions.

Sincerely,

L.A. Stanley
General Manager

CC: Clair Fancy, DER
Ernest Frey, DER

IQS

KBN

RECEIVED

JAN 11 1993

Bureau of
Air Regulation

January 8, 1993

Mr. John Brown, Jr., P.E.
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Seminole Kraft Corporation (SKC) Proposed Package Boilers
AC16-222359, PSD-FL-198

Dear Mr. Brown:

At the request of the Florida Department of Environmental Regulation (the Department), KBN has performed an analysis of potential impacts on vegetation, soils, wildlife, and the aquatic environment for SKC's proposed package boilers. The analysis was conducted for potential impacts on the Okefenokee National Wilderness Area and the Wolf Island National Wilderness Area, which are two PSD Class I areas. As requested by the Department, the pollutants addressed in this assessment are sulfur dioxide and beryllium. The analysis is presented in the attached report.

With this response, SKC has responded to all completeness questions raised in the Department's December 23, 1992, letter. Please call if you have any questions concerning this information.

Sincerely,

David A. Buff

David A. Buff, M.E., P.E.
Principal Engineer

DAB/dmpm

cc: Curt Barton, Stone Container
Craig Hurd, Stone Container
Mike Riddle, Seminole Kraft
Scott Shirley, Oertel & Hoffman
B. Mitchell, National Park Service
Jewell Harper, EPA Region IV
R. Robertson, Jax BESD
Andy Kutyna, FDER Jacksonville
File (2)
G. Reynolds
C. Holladay
B. Owens

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

AIR QUALITY RELATED VALUES ANALYSIS FOR SEMINOLE KRAFT'S PROPOSED PACKAGE BOILERS

Prepared For:

Seminole Kraft Corporation
9469 Eastport Road
Jacksonville, Florida 32218

Prepared By:

KBN Engineering and Applied Sciences, Inc.
1034 NW 57th Street
Gainesville, Florida 32605

January 1993
12169B1/R1

1.0 INTRODUCTION

Seminole Kraft Corporation (SKC) is proposing to construct and operate three new package boilers at their 100 percent recycled fiber paper mill facility located in Jacksonville, Florida. The new package boilers are subject to the prevention of significant deterioration (PSD) new source review requirements for the pollutants sulfur dioxide (SO_2) and beryllium (Be). As a result, the Florida Department of Environmental Regulation (FDER) has requested that an analysis of the impacts of these emissions upon two PSD Class I areas be performed. The analysis addresses the potential impacts on vegetation, soils, wildlife, and the aquatic environment due to SKC's proposed package boilers, including other sources.

The Okefenokee National Wilderness Area (NWA) is located approximately 55 kilometers (km) northwest of SKC, and the Wolf Island NWA is located approximately 100 km north of SKC.

2.0 AQRVS FOR THE OKEFENOKEE NWA AND WOLF ISLAND NWA

2.1 DEFINITION OF AQRVS AND CRITERIA APPLIED TO OKEFENOKEE NWA AND WOLF ISLAND NWA

Both Okefenokee NWA and Wolf Island NWA are classified as Class I areas by the U.S. Fish and Wildlife Service (USFWS) for purposes of prevention of significant deterioration (PSD) new source review. USFWS has defined air quality related values (AQRVs) for such areas as being:

> All those values possessed by an area except those that are not affected by changes in air quality and include all those assets of an area whose vitality, significance, or integrity is dependent in some way upon the air environment. These values include visibility and those scenic, cultural, biological, and recreational resources of an area that are affected by air quality.
>
> Important attributes of an area are those values or assets that make an area significant as a natural monument, preserve, or primitive area. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside (Federal Register, 1978).

2.2 AQRVS OF OKEFENOKEE NWA AND WOLF ISLAND NWA

Those values of the Okefenokee NWA and Wolf Island NWA which are directly dependent upon the air environment are the water, soil and vegetation resources. Less directly dependent on the air environment are the wildlife resources. Important aquatic, vegetation, and wildlife attributes of these areas which make the Okefenokee NWA and Wolf Island NWA significant are presented in Table 2-1. The reported general effects on aquatic, vegetation, and wildlife resources from significant degradation in air quality are described in Table 2-2. All terrestrial vegetation, including threatened and endangered plant species of Okefenokee NWA and Wolf Island NWA, are dependent upon the air environment and are considered AQRVs. Some terrestrial wildlife and endangered and threatened wildlife are also considered AQRVs for Okefenokee NWA and Wolf Island NWA. Threatened and endangered species associated with terrestrial habitats of Okefenokee NWA and Wolf Island NWA are listed in Table 2-3.

Table 2-1. Important Aquatic Vegetational and Water Resource Attributes or AQRVs of Okefenokee NWA and Wolf Island NWA Dependent Upon the Air Environment

Attribute	Location
Aquatic	
Tidal creeks	Wolf Island NWA
Blackwater rivers, ponds, sloughs	Okefenokee NWA
Vegetation	
Ecological communities including:	
Salt marsh	Wolf Island NWA
Cypress wetlands	Okefenokee NWA
Wet flatwoods	Okefenokee NWA
Bay-shrub bogs	Okefenokee NWA
Basin marshes	Okefenokee NWA
Mixed hardwood swamp	Okefenokee NWA
Unique ecological communities	
Maritime hammock	Wolf Island NWA
Old-growth cypress swamp	Okefenokee NWA
Unique plants	
Threatened and endangered species	Okefenokee NWA
Ephiphytic plants including orchids and bromeliads	Okefenokee NWA
Air quality bioindicators - lichens	Okefenokee NWA
Wildlife	
Birds, mammals, reptiles and amphibians	Wolf Island NWA Okefenokee NWA
Threatened and endangered species (see Table 2-3)	Wolf Island NWA Okefenokee NWA

Note: NWA = National Wilderness Area.

Table 2-2. Reported General Effects on Aquatic, Vegetation, and Wildlife Resources From Significant Degradation in Air Quality

Attribute	Potential Effects and Associated Air Quality Change
Aquatic Resources	Acidification of waters and subsequent changes (loss and replacement) of ecological components; sensitive systems have low buffering capacity
Vegetation Resources	Most common effects include reduced growth, injury, and species replacement; species show specific sensitivity
Wildlife Resources	Potential effects include avoidance and increased body burdens of contaminants

Source: KBN, 1986.

Table 2-3. Federal and State Listed Endangered and Threatened Animals in the Okefenokee and Wolf Island NWAs

Species	Designated Status	
	State[a]	USFWS[b]
Florida Black Bear	S4	C2
Arctic Peregrine Falcon	S1	-
Bachman's Warbler	E	E
Bald Eagle	E	E
Piping Plover	S1/S2	T
Red-Cockaded Woodpecker	E	E
Wood Stork	S2	E
American Alligator	-	T(S/A)
Atlantic Loggerhead	-	T
Eastern Indigo Snake	S3	T

[a] State (Georgia) Status:
E = endangered.
S1 = regionally endangered.
S2 = regionally threatened.
S3 = regionally of concern.
S4 = regionally apparently secure.

[b] USFWS Status:
C2 = candidate for listing, with some evidence of vulnerability, but for which not enough data exist to support listing.
E = endangered.
T = threatened.
T(S/A) = threatened due to similarity of appearance.

Sources: U.S. Fish and Wildlife Service.
Georgia Freshwater Wetlands and Heritage Inventory Program.

3.0 AQRV ANALYSIS

In the foregoing analysis, the maximum air quality impacts predicted to occur in the two Class I areas due to all sources formed the basis for the analysis. The AQRVs involved predicting worst-case maximum short- and long-term concentrations of SO_2 in the Class I areas, identifying AQRVs for Okefenokee NWA and Wolf Island NWA, and comparing the maximum predicted concentrations to lowest observed effect levels for AQRVs or analogous organisms. In conducting the assessment, several assumptions were made as to how pollutants interact with the different matrices, i.e., vegetation, soils, wildlife, and aquatic environment.

3.1 MAXIMUM PREDICTED SO_2 AND BERYLLIUM IMPACTS

3.1.1 PROPOSED PACKAGE BOILERS ONLY

An air quality impact assessment was conducted to determine SKC's proposed package boilers' maximum SO_2 impacts as well as the maximum Be concentration and deposition impacts at the Okefenokee and Wolf Island NWAs.

The Industrial Source Complex Short-Term (ISCST) model (Version 92062) was used to compute both maximum concentration and total deposition. Maximum impacts were predicted for the same 11 receptors used for the PSD Class I impact assessment (see Table 6-7 of the PSD report). Meteorological data used in the ISCST2 consisted of the same 5-year record used for the AAQS and PSD impact assessment, which consists of surface observations from Jacksonville and upper-air data from Waycross for the years 1983 to 1987. Emissions for the proposed package boilers are provided in Table 2-3 of the PSD report, and stack and operating data are provided in Table 2-1 of the report. Information on particle sizes was obtained from AP-42 and was included in the deposition modeling. Table 3-1 presents a summary of the particle size distribution used for the modeling.

The results of the SO_2 and Be concentration modeling for the package boilers are presented in Table 3-2. Impacts are presented for both NWAs for the annual, 24-hour, 8-hour, 3-hour, and 1-hour averaging times.

The results of the Be deposition modeling for the package boilers are presented in Table 3-3. Impacts are presented for both NWAs for the annual, 24-hour, 8-hour, 3-hour, and 1-hour averaging times.

Table 3-1. Particle Size Distribution for SKC Package Boilers

Particle Diameter (μm) Range	Mean Mass	Mass Fraction	Settling Velocity (cm/s)	Settling Velocity (m/s)	Reflection Coefficient
0 - 0.625	0.039	0.02	4.6E-06	4.6E-08	1.00
0.625 - 1	0.644	0.06	1.2E-03	1.2E-05	1.00
1 - 1.25	1.130	0.01	3.8E-03	3.8E-05	1.00
1.25 - 2.5	1.942	0.03	1.1E-02	1.1E-04	1.00
2.5 - 6	4.477	0.18	6.0E-02	6.0E-04	1.00
6 - 10	8.162	0.20	2.0E-01	2.0E-03	1.00
10 - 15	12.661	0.18	4.8E-01	4.8E-03	0.84
15 - 25	20.402	0.32	1.2E+00	1.2E-02	0.78

Source: AP-42 Table 1.3-4 (Uncontrolled Industrial Boilers Firing Distillate Oil).

Table 3-2. Maximum Predicted Package Boiler SO_2 and Be Impacts at the Okefenokee NWA and Wolf Island NWA

Averaging Time	Maximum Concentration SO_2 ($\mu g/m^3$)	Maximum Concentration Be (10^{-12} g/m^3)
OKEFENOKEE NWA		
Annual	0.033	0.16
24-Hour	0.74	3.69
8-Hour	1.66	8.27
3-Hour	3.05	15.20
1-Hour	6.25	31.16
WOLF ISLAND NWA		
Annual	0.019	0.0095
24-Hour	0.40	2.00
8-Hour	0.93	4.64
3-Hour	2.25	11.22
1-Hour	5.58	27.82

Note: All short-term concentrations are highest predicted in 5 years.

Table 3-3. Maximum Predicted Package Boiler Be Depositions at the Okefenokee NWA and Wolf Island NWA

Averaging Time	Maximum Deposition Rate (10^{-6} g/m^2)
OKEFENOKEE NWA	
Annual	0.00733
24-Hour	0.00038
8-Hour	0.00033
3-Hour	0.00022
1-Hour	0.00015
WOLF ISLAND NWA	
Annual	0.00236
24-Hour	0.00015
8-Hour	0.00011
3-Hour	0.00010
1-Hour	0.00009

Note: All short-term depositions are highest predicted in 5 years.

3.1.2 CUMULATIVE SOURCE IMPACT

The SO_2 cumulative source concentration was determined at both the Okefenokee and Wolf Island NWAs. The SO_2 emission inventory utilized for the analysis was the same as was used for the SO_2 AAQS impact assessment. This inventory includes the proposed package boilers and all background SO_2 sources and is presented in Table D-1, Appendix D of the PSD report. The receptors and meteorological database are the same as those used for the AQRV analysis for the package boilers only.

The results of the SO_2 cumulative source modeling are presented in Table 3-4. Impacts are presented for both NWAs for the annual, 24-hour, 8-hour, 3-hour, and 1-hour averaging times.

3.2 VEGETATION

The gaseous concentrations ($\mu g/m^3$) of SO_2 due to all Jacksonville-area sources plus a background concentration were used in the determination of impacts on vegetation. SO_2 is believed to interact predominantly with foliage and this is considered the major route of entry into plants. In this assessment, 100 percent of the SO_2 in the ambient air was assumed to interact with the vegetation.

For beryllium, the annual deposition amount (in g/m^2) due to the proposed SKC package boilers was assumed to partition into the soil (bulk density of 0.65 g/cc for Okefenokee NWA and 1.40 g/cc for Wolf Island NWA) to a depth of 10 cm (8, 9). From this soil concentration, it was assumed that equal partitioning would ensue into dry plant matter. These values are considered to be quite conservative due to the assumption that all of the elements would be 100 percent available for plant uptake and would be internalized in plant tissue at a concentration equal to that of the soil.

3.2.1 SULFUR DIOXIDE

SO_2 at elevated levels in the ambient air has long been known to cause injury to plants. Acute SO_2 injury usually develops within a few hours or days of exposure and symptoms include marginal, flecked, and/or intercostal necrotic areas which initially appear water-soaked and dullish green. This injury generally occurs to younger leaves. Chronic injury usually is evident by signs of chlorosis, bronzing, premature senescence, reduced growth and possible tissue necrosis (10). Background levels of sulfur dioxide range from 2.5 to 25 $\mu g/m^3$.

Table 3-4. Maximum Predicted SO_2 Cumulative Source Concentrations at the Okefenokee NWA and Wolf Island NWA

Averaging Time	Maximum Concentration ($\mu g/m^3$)
OKEFENOKEE NWA	
Annual	4.9
24-Hour	52.3
8-Hour	134.5
3-Hour	181.9
1-Hour	318.4
WOLF ISLAND NWA	
Annual	3.2
24-Hour	39.3
8-Hour	83.8
3-Hour	174.2
1-Hour	389.6

Note: All short-term concentrations are highest predicted in 5 years.

Many studies have been conducted to determine the effects of high concentration, short-term SO_2 exposure on natural community vegetation. Sensitive plants include lichens, ragweed, legumes, blackberry, southern pine, and red and black oak. These species are injured by exposure to 3-hour SO_2 concentrations from 790 to 1,570 $\mu g/m^3$. Intermediate plants include locust and sweetgum. These species are injured by exposure to 3-hour SO_2 concentrations from 1,570 to 2,100 $\mu g/m^3$. Resistant species (injured at concentrations above 2,100 $\mu g/m^3$ for 3 hours) include white oak and dogwood (10).

A study of native Floridian species (12) demonstrated that cypress, slash pine, live oak, and mangrove exposed to 1,300 $\mu g/m^3$ SO_2 for 8 hours were not visibly damaged. This supports the levels cited by other researchers on the effects of SO_2 on vegetation. A corroborative study (7) demonstrated that approximately 20 percent of a cross-section of plants ranging from sensitive to tolerant were visibly injured at 3-hour SO_2 concentrations of 920 $\mu g/m^3$.

Two lichen species indigenous to Florida exhibited signs of SO_2 damage in the form of decreased biomass gain and photosynthetic rate as well as membrane leakage when exposed to concentrations of 200-400 $\mu g/m^3$ for 6 hours/week for 10 weeks (4).

When the predicted maximum 8-hour SO_2 concentrations at Okefenokee NWA and Wolf Island NWA (134 and 84 $\mu g/m^3$, respectively), with the SKC package boilers operating, are compared to the concentrations causing injury to native species, it is evident that SO_2-sensitive species (or more tolerant species) would not be damaged by predicted impacts. By comparing the SO_2 concentration of 134 $\mu g/m^3$ with the concentrations that cause plant injury, it can be shown that the amount of SO_2 in the wilderness area is 0.67 of the most conservative concentration (200 $\mu g/m^3$) that caused injury to SO_2-sensitive species. However, it is important to realize that this impact represents the worse case 8-hour exposure predicted to occur during five years of meteorological data. During the majority of the time, impacts would be much lower than this maximum level. Additionally, the 8-hour SO_2 concentrations at Okefenokee NWA and Wolf Island NWA due to the SKC package boilers only are 2 and 1 $\mu g/m^3$, respectively. These values are between 0.5 and 1.0 percent of the concentration that caused damage for an 8-hour exposure period.

The 24-hour SO_2 concentrations predicted within the wilderness areas (52 $\mu g/m^3$ at Okefenokee NWA and 39 $\mu g/m^3$ at Wolf Island NWA) represent levels which are lower than those known to

cause damage to test species. Jack pine seedlings exposed to SO_2 concentrations from 470 to 520 $\mu g/m^3$ for 24 hours demonstrated inhibition of foliar lipid synthesis; however, this inhibition was reversible (6). Black oak exposed to 1,310 $\mu g/m^3$ SO_2 for 24 hours a day for 1 week demonstrated a 48 percent reduction in photosynthesis (1). By comparison of these levels, it is apparent that the modeled 24-hour SO_2 concentrations are well below (i.e., 11 percent) of the concentrations that caused damage in SO_2-sensitive plants. The predicted annual concentrations of SO_2 (3 to 5 $\mu g/m^3$) merely add slightly to the background level (3 $\mu g/m^3$) of this gas (10) and pose minimal threat to area vegetation.

3.2.2 BERYLLIUM

Toxicity of plants has been reported at concentrations of 2 $\mu g/g$ Be in liquid culture (3). By comparison to the predicted annual amount of Be absorbed by vegetation in the Class I areas (1.1×10^{-7} $\mu g/g$ for Okefenokee NWA and 5.1×10^{-8} $\mu g/g$ for Wolf Island NWA), it can be estimated that the level of beryllium for either wilderness area is between 2.5 and 5.5×10^{-8} of the value at which retardation of growth occurred .

3.3 SOILS

3.3.1 SULFUR DIOXIDE

The soils of Okefenokee NWA are generally classified as Terric Medisaprists (8). As such, these soils are poorly drained and contain acidic muck in the upper soil profile. The soils of Wolf Island NWA are generally classified as Terric Sulfihemists (9). These soils are tidally influenced twice daily and slightly acidic. Additionally, the upper soil profile contains mucky peat and has a noticeable sulfur smell. Since the Okefenokee NWA soils are highly acidic in nature, and the Wolf Island NWA soils are tidally influenced daily, it is apparent that the minimal amount of SO_2 (in the form of H_2SO_4) (due to fallout by precipitation) would have little if any impact to these soils.

3.3.2 BERYLLIUM

Levels of beryllium in uncontaminated soils are in the range of 1 $\mu g/g$ (5). From the previous determination for vegetation exposure, it was determined that between 1.1×10^{-7} and 5.1×10^{-8} $\mu g/g$ of Be would be added to either wilderness area's soil annually. From these concentrations, it is apparent that the impacts from the proposed package boilers are insignificant in terms of beryllium loading to the wilderness area soils.

3.4 WILDLIFE

3.4.1 SULFUR DIOXIDE

Lowest observed effect values of SO_2 reported to cause physiological and behavioral changes in animals (primarily laboratory animals) range from 427 $\mu g/m^3$ for 1 hour to 13 to 157 $\mu g/m^3$ daily for 5 months (10). By comparison, the 1-hour total predicted concentrations of SO_2 at Okefenokee NWA and Wolf Island NWA (318 and 389 $\mu g/m^3$, respectively) are near but below those values that have been reported to cause some physiological changes in animals. It is important to realize that the predicted 1-hour impact is the worst-case scenario for 5 years of meteorological conditions. In addition, these changes if they occur are not significant since they are short-term and reversible and assume exposure of the animal would be 1 hour of continuous exposure at a given location in the Class I area. Additionally, the 1-hour SO_2 concentration at the wilderness areas due to SKC boiler emissions only is 6 $\mu g/m^3$. This value is less than 1.5 percent of the concentration that caused physiological changes for a 1-hour exposure period.

By comparison of the annual total predicted concentrations of SO_2 at Okefenokee NWA and Wolf Island NWA (5 and 3 $\mu g/m^3$, respectively), it is apparent that gaseous levels are less than that which caused physiological and behavioral changes (13 $\mu g/m^3$). Again, it is important to realize that the annual SO_2 concentrations at the wilderness areas due to SKC boiler emissions only are between 0.02 and 0.03 $\mu g/m^3$. These values are 0.2 percent of the concentration that caused physiological changes for an annual exposure period.

3.4.2 BERYLLIUM

The LD_{50} of Be in mice was reported to be 0.5 mg/kg (3). By comparing the amount of Be in vegetation to that consumed by a 1 kg herbivore, it is apparent that the animal would have to ingest between 5×10^6 and 1×10^7 kg plant matter to achieve a toxic dose of Be. As witnessed by the soil analysis, levels of added Be do not add significantly to the background levels of Be, and should therefore not measurably increase the inherent amount of this element in the wilderness areas.

3.5 AQUATIC ENVIRONMENT

3.5.1 SULFUR DIOXIDE

The Okefenokee NWA drains into the St. Mary's River Basin. The water in this area is characterized as having a pH range of 3.5-4.0 (2). Since the high acidity is naturally occurring

and is not due to anthropomorphic inputs, aquatic species in this area are already adapted to a low pH environment. It is not expected that predicted SO_2 concentrations in Okefenokee NWA will result in any measurable change in acidity of the aquatic environment.

The Wolf Island NWA is a tidal marsh area that is influenced by ocean tides daily. Because the ocean serves as a large buffer for elements such as carbon and sulfur, it is appropriate to conclude that acidic precipitation would not significantly influence the aquatic environment in this area.

3.5.2 BERYLLIUM

The acute and chronic toxicity of Be to aquatic organisms is reported to be as low as 5.3 and 130 μg/L, respectively (11). If the total annual deposition of Be was distributed to a 6 inch water column, the concentrations of Be in water at Okefenokee NWA and Wolf Island NWA would be 5×10^{-5} and 2.0×10^{-5} μg/L, respectively. Assuming all of the Be was available for interaction with living organisms, the predicted values would be between 9.4×10^{-6} and 1.5×10^{-7} of the values at which toxicity to aquatic organisms was reported.

4.0 SUMMARY

In summary, it is apparent that large margins of safety exist for all matrices examined with respect to the effects of SO_2 and Be on the wilderness areas. In certain cases, predicted maximum SO_2 levels were near the published lowest observed effect values. However, it must be reiterated that the SO_2 analyses were based on total SO_2 emissions from the Jacksonville area. When the SO_2 emissions from Seminole Kraft boilers are examined separately, it is concluded that these boilers will add minimally to the impacts in the Class I areas.

REFERENCES

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4. Hart, R., P.G. Webb, R.H. Biggs, and K.M. Portier. 1988. The Use of Lichen Fumigation Studies to Evaluate the Effects of New Emission Sources on Class I Areas. J. Air Poll. Cont. Assoc. 38:144-147.

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11. United States Environmental Protection Agency (EPA). 1986. Quality Criteria for Water (The Gold Book).

12. Woltz, S.S. and T.K. Howe. 1981. Effects of Coal Burning Emissions on Florida Agriculture. In: The Impact of Increased Coal Use in Florida. Interdisciplinary Center for Aeronomy and (other) Atmospheric Sciences. University of Florida, Gainesville, Florida.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 5, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley, General Manager
Seminole Kraft Corporation
9469 East Port Road
Jacksonville, Florida 32229

Dear Mr. Stanley:

Re: Permit Application AC16-222359, PSD-FL-198
New Package Boilers

The Department received KBN's incompleteness responses dated December 22 and 23, 1992. It appears that the full 30-day review period for incompleteness responses may be required to determine the sufficiency of the data submitted. However, rather than waiting the full 30 days to make all of our incompleteness follow-up requests in one letter, our review will be expedited by requesting the following additional information separately at this time:

1. Please provide copies of documents showing the applicant's efforts to obtain a firm natural gas contract and the gas supplier's responses to those efforts.

2. Please provide copies of documents showing the gas supplier's estimate of future gas availability to the applicant in the absence of a firm gas contract.

If there are any questions regarding the above, please contact Preston Lewis or John Reynolds at (904) 488-1344.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JCB/JR/plm

cc: A. Kutyna, NED
R. Roberson, BESD
J. Harper, EPA
B. Mitchell, NPS
B. Collum, GEPD
C. Hurd, SKC
D. Buff, KBN

P 062 921 944

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AC 16-222359
PSD-FL-198

PS Form 3800, June 1991

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1199 E. Port Rd.
Jacksonville, FL 32229

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DOMESTIC RETURN RECEIPT

PS Form 3811, July 1992

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 23, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. L. A. Stanley, General Manager
Seminole Kraft Corporation
9469 East Port Road
Jacksonville, Florida 32229

Dear Mr. Stanley:

Re: Air Construction Permit Application AC16-222359, PSD-FL-198
New Package Boilers

Additional information is required to complete the subject application received on November 24, 1992. The incompleteness items are listed below:

1. The applicant is apparently requesting that the proposed boilers be permitted for both gas and oil on a full-time basis. Since a BACT determination is required, please explain why the boilers should not be permitted with natural gas as the primary fuel and oil as a backup based on expected hours of gas curtailment. It is anticipated that BACT review will result in a requirement to use natural gas, except for backup during periods when gas may not be available.

2. To evaluate the extent to which test data are representative of emissions occurring at near-maximum permitted operating rates, the application should indicate the monitored operating rates during tests which are used for emission reduction credits (along with all test dates). These operating rates need to be compared to actual operating loads for the two year representative period 1990-1991. Baseline emissions should be determined on the basis of the two year representative period instead of 1991 only.

3. It appears that only the first page of EPA's letter dated April 4, 1990, was included in the application. Please provide the remaining pages.

4. Please provide an air quality-related values analysis (AQRV) of the impact this project will have on the Okefenokee National Wilderness Area and the Wolf Island National Wilderness Area for the pollutants SO_2 and Be. The AQRV analysis includes

impacts to soil, vegetation, wild life and the aquatic environment.

If there are any questions regarding this letter, please contact Preston Lewis or John Reynolds of our staff at (904) 488-1344.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JCB/JR/plm

cc: A. Kutyna, NED
R. Roberson, BESD
J. Harper, EPA
B. Mitchell, NPS
B. Collum, GEPD
C. Hurd, SKC
D. Buff, KBN

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 Fee will provide you the signature of the person delivered to and the date of delivery.

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. L. A. Stanley, General Mgr.
Seminole Kraft Coporation
9469 Eastport Road
Jacksonville, FL 32229

4a. Article Number
P 062 922 018

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

7. Date of Delivery

5. Signature (Addressee)

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

6. Signature (Agent)

JACKSONVILLE, FL NORTH ANNEX STATION DEC 23 1992

PS Form 3811, November 1990 ☆U.S.G.P.O. 1991-287-066 DOMESTIC RETURN RECEIPT

P 062 922 018

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

Sent to: Mr. L. A. Stanley, Seminole Kraft	
Street and No.: 9460 Eastport Road	
P.O., State and ZIP Code: Jacksonville, FL 32229	
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: 12-23-92 Permit: AC 16-222359 PSD-FL-198	

PS Form 3800, June 1991

KBN

RECEIVED

DEC 2 4 1992

Division of Air
Resources Management

December 22, 1992

Mr. John Reynolds
Bureau of Air Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Updates to Seminole Kraft's Proposed Package Boilers PSD Application

Dear Mr. Reynolds:

At the request of Seminole Kraft Corporation (SKC), the following items are provided to update and further clarify several issues within the above-referenced application submitted to the Florida Department of Environmental Regulation (FDER) last month.

Item 1--Submittal of boiler production rates for periods of emissions testing as provided in the PSD application.

OFFSETS DETERMINED BY BAM SINCE HE HANDLES TEST PRIOR REQMTS.

Item 2--Tables 3-3 through 3-6 of the PSD application have been revised to indicate the emission offsets that would be calculated for all sources as based on the average operating hours for the years 1990 and 1991 instead of for 1991 only. This change affects the operating hours used for the average source, excluding Lime Kiln 1, by approximately 1.2 percent. The operating hours for Lime Kiln 1 change approximately 39 percent. This change is not expected to have a significant effect on the predicted maximum source impacts.

Item 3--A complete copy of the EPA letter from Jewell A. Harper to C. H. Fancy concerning Creditable Emissions Reductions for the proposed project. The second page of this letter was not copied in Appendix C of the original report.

Item 4-- For the purpose of this current application, please consider the proposed package boilers as operating with the two following fuels: the primary fuel is to be considered No. 2 fuel oil; the backup fuel is to be considered natural gas. The reason for this change is that SKC currently does not have a firm natural gas contract in place. As a result of this change, the third paragraph on Page 1-1 and the last paragraph on Page 2-1 have been modified.

If you need further information or have any questions, please call me.

Sincerely,

Steven R. Marks/lcb

Steven R. Marks
Senior Meteorologist

Enclosure

cc: Mike Riddle
Curt Barton
Craig Hurd
David Buff
File (2)

12169A1/8

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

3. PROCESS OPERATION

The sections below briefly desrcribe the process performance during emission testing for each source. Each of the five sources maintained a wet scrubber as the primary control device. The recovery furnaces also utilized an electrostatic precipitator to reduce particulate emissions. A complete log of all process parameters is included in Appendix I.

3.1 No. 1 Bark Boiler

The target process rate for the No. 1 Bark Boiler during the emission testing was approximately 135,000 lbs. of steam production per hour. The boiler operated on a primary fuel of bark supplemented with one fuel gun injector. The individual steam production rates (in lbs./hr.) during the five test runs performed 07-08 January, 1991, were 131,000 (run 1), 135,000 (run 2), 133,000 (run 3), 135,000 (run 4), and 135,000 (run 5). The average was a consistent 133,800 lbs. of steam per hour.

3.2 No. 2 Bark Boiler

The target process rate for the No. 2 Bark Boiler during the emission testing was 135,000 lbs. of steam production per hour. The boiler operated on a primary fuel of bark supplemented with one fuel gun injector. The individual steam production rates (in lbs./hr.) during the three test runs performed 09 January, 1991 were 130,000 (run 1), 130,000 (run 2), and 129,000 (run 3). The average was a consistent 130,000 lbs. of steam per hour.

3.3 No. 1 Recovery Boiler

The No. 1 Recovery Boiler was operated at an average of 93 gallons of black liquor flow per minute. The black liquor solids content fluctuated from 66.3% to 67.8%. Emission testing was performed 10 January, 1991.

3.4 No. 2 Recovery Boiler

The No. 2 Recovery Boiler was operated at an average of 116 gallons of black liquor flow per minute. The black liquor solids content fluctuated from 66.4% to 68.4%. Emission testing was performed 11-12 January, 1991.

3.5 No. 3 Recovery Boiler

The No. 3 Recovery Boiler was operated at an average of 115 gallons of black liquor flow per minute. The black liquor solids content fluctuated from 66.7% to 67.4%. Emission testing was performed 12-13 January, 1991.

IEA-192-91-10

OPERATOR:
7-3 J Johnson / JP Gauthier
3-11 Michael / Simmons
11-7 L Wright

Seminole Kraft Corporation

Jacksonville, Fla.

BOILER PERFORMANCE DAILY RECORD

PM 13

Date Ending 1/8/91

No. 1 Bark Boiler

Scrubber Flow	Time	Steam Flow	Scrubber Amps	Drum Press	Scrubber Fan % Open	Venturi % Open	Gas Entering Heater	Gas Leaving Heater	Operative Fan Amps	Air Leaving Heater	Blower Pump Press	No. Oil Guns	Burner Press	Feed Water Flow	Furnace Draft 1" H2O	L.B. Draft 1" H2O	Blower - Amps	Venturi Diff
800 a.m.	7	96	104	630	100	100	120	371	120	519	330	—	—	87	.15	12.8	3.4	17
800	8	113	103	630	100	100	113	400	126	536	300	1	60	96	.10	11.9	3.1	16
800	9	135	103	625	100	100	118	376	120	529	340	1	70	113	.20	12.1	3.4	18
800	10	135	105	640	100	100	118	381	120	534	340	1	70	119	.15	12.6	3.4	17
800	11	122	104	640	100	100	121	378	120	531	350	1	70	105	.15	12.5	3.5	17
800	12	131	104	640	100	100	126	379	119	530	340	1	75	105	.13	12.9	3.5	17
800 p.m.	1	135	108	640	100	100	129	379	120	524	350	1	75	105	.18	12.8	3.5	17
800	2	135	104	640	100	100	124	378	120	522	350	1	75	105	.15	12.0	3.5	17
800	3	134	107	600	[illegible]	100	126	378	120	525	350	1	75	96	.20	12.4	3.5	17
800	4	135	104	640	100	100	126	377	119	526	350	1	75	105	.20	12.4	3.6	17
800	5	132	105	640	100	100	125	387	119	528	340	1	75	105	.25	12.9	3.5	17
800	6	135	104	640	100	100	125	387	119	529	320	1	75	105	.23	12.0	3.1	16
800	7	135	104	645	100	100	123	387	119	526	330	1	75	105	.20	12.7	3.5	17
800	8	136	107	645	100	100	125	377	118	527	300	1	75	105	.25	12.0	3.6	17
900	9	132	105	640	100	100	120	384	120	519	350	—	—	103	.25	12.5	3.6	17
800	10	72	100	620	100	100	110	327	125	457	210	—	—	103	[illegible]	11.8	3.1	18
800	11	122	105	640	100	100	120	379	120	520	290	-	-	105	.25	12.8	3.1	17
800	12	115	105	640	100	100	120	366	120	515	290	-	-	105	.23	12.4	3.2	18
800 a.m.	1	113	109	640	100	100	112	335	113	465	300	-	-	113	.11	13.9	3.2	18
800	2	91	106	630	100	100	108	350	107	486	310	-	-	87	.16	13.0	3.2	18
700	3	87	106	630	100	100	82	355	106	449	280	-	-	70	.75	13.2	3.2	17
800	4	96	105	630	100	100	116	367	110	519	280	-	-	70	.15	13.1	3.1	17
800	5	105	105	625	100	100	119	378	120	521	290	-	-	78	.13	13.0	3.2	17
800	6	115	105	630	100	100	114	374	120	525	290	-	-	78	.15	13.0	3.2	17

No. 2 Bark Boiler

Time	Steam Flow	Scrubber Amps	Drum Press	Scrubber Fan % Open	Venturi % Open	Gas Entering Heater	Gas Leaving Heater	Operative Fan Amps	Air Leaving Heater	Blower Pump Press	No. Oil Guns	Burner Press	Feed Water Flow	Furnace Draft 1" H2O	L.B. Draft 1" H2O	Blower Amps	Venturi Diff	Scrubber Flow
7	76	87	625	100	100	98	—	119	578	270	—	—	78	.10	12.7	3.1	13	800
8	72	85	630	100	100	95	—	117	524	275	—	—	73	.10	12.5	3.1	12	800
9	76	87	610	100	100	90	—	119	570	280	—	—	78	.13	12.2	3.1	14	900
10	80	87	620	100	100	92	—	117	583	270	—	—	87	.09	12.3	3.1	14	800
11	90	87	630	100	100	93	—	117	579	270	—	—	95	.07	12.5	3.1	13	800
12	95	86	630	100	100	98	—	117	601	270	—	—	95	.05	12.4	3.0	13	800
1	91	86	630	100	100	97	—	117	560	275	—	—	95	.09	12.3	3.1	13	800
2	95	86	630	100	100	97	—	116	597	280	—	—	95	.05	12.4	3.1	13	800
3	87	86	630	100	100	97	—	117	591	280	—	—	95	.10	12.4	3.1	12	800
4	97	86	630	100	100	98	—	116	586	270	—	—	103	.08	12.1	3.1	13	800
5	102	86	630	100	100	97	—	116	597	280	—	—	102	.01	12.3	3.1	13	900
6	110	86	630	100	100	110	—	116	600	280	—	—	122	.09	12.2	3.1	13	800
7	88	87	630	100	100	96	—	118	598	280	—	—	95	.04	12.8	3.1	13	800
8	116	86	635	100	100	95	—	116	602	280	—	—	124	.05	12.1	3.1	13	800
9	117	86	635	100	100	94	—	116	603	310	—	—	124	.10	12.0	3.1	13	800
10	95	81	625	100	100	95	—	117	580	280	—	—	102	.07	12.4	3.1	13	800
11	123	86	630	100	100	94	-	117	590	270	-	-	109	.10	12.4	3.1	13	800
12	113	89	640	100	100	93	-	115	603	270	-	-	123	.13	12.0	3.1	13	800
1	110	86	640	100	100	91	-	119	584	270	-	-	110	.03	12.6	3.1	13	800
2	95	85	630	100	100	91	-	117	581	270	-	-	103	.02	12.5	3.1	13	800
3	87	86	625	100	100	91	-	116	587	270	-	-	87	.03	12.6	3.1	13	800
4	95	85	625	100	100	90	-	117	591	270	-	-	75	.10	12.6	3.1	12	800
5	95	85	625	100	100	91	-	117	599	270	-	-	85	.08	12.3	3.1	13	800
6	95	[illegible]	625	100	100	90	-	116	601	270	-	-	95	.07	12.6	3.1	13	800

BARK FEED SCREW SPEED
% #1 ______
% #2 ______
% #3 ______
% #4 ______

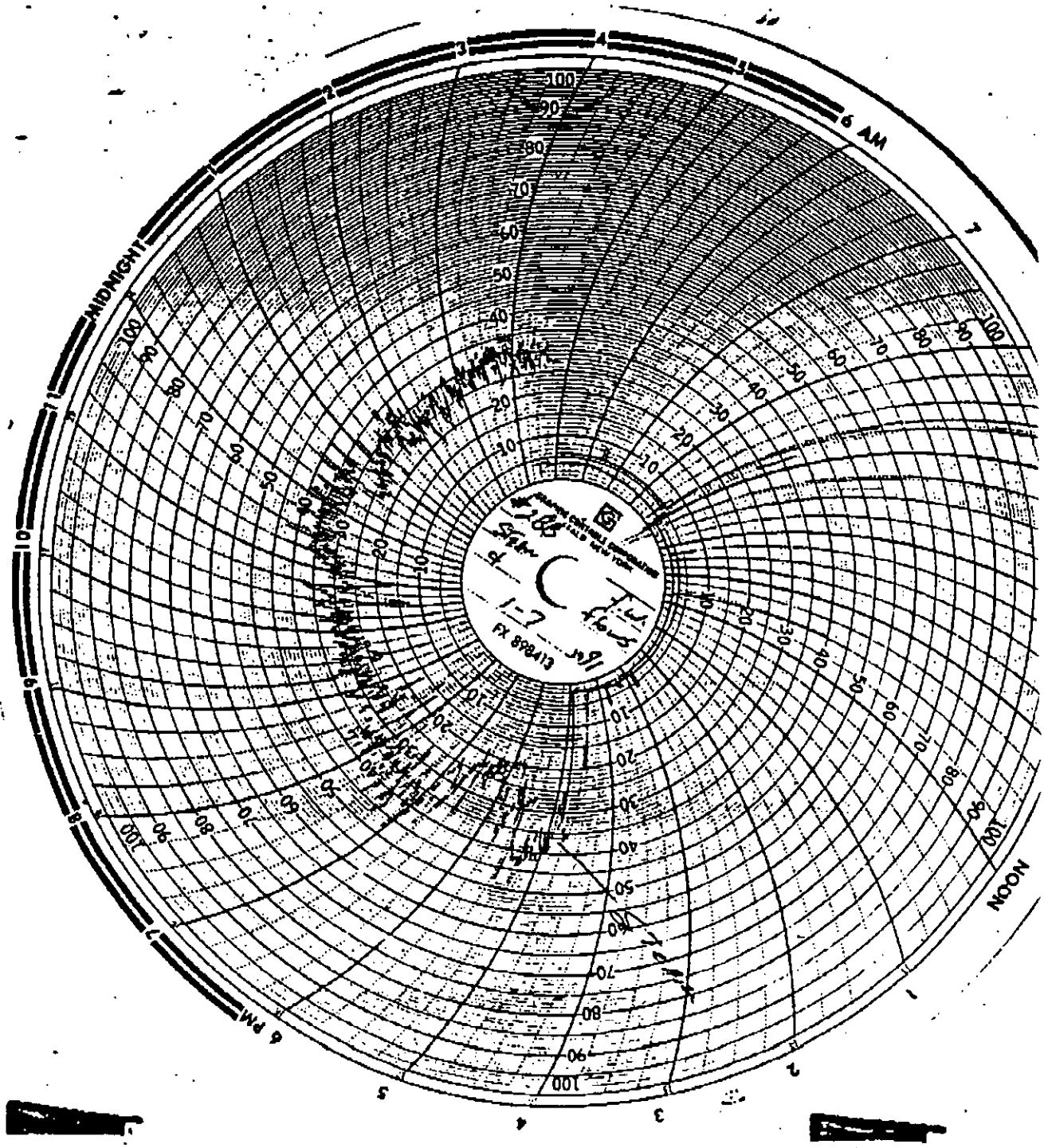
BARK PLOW
Time Down ______
Time Up ______
Reason for Dumping ______

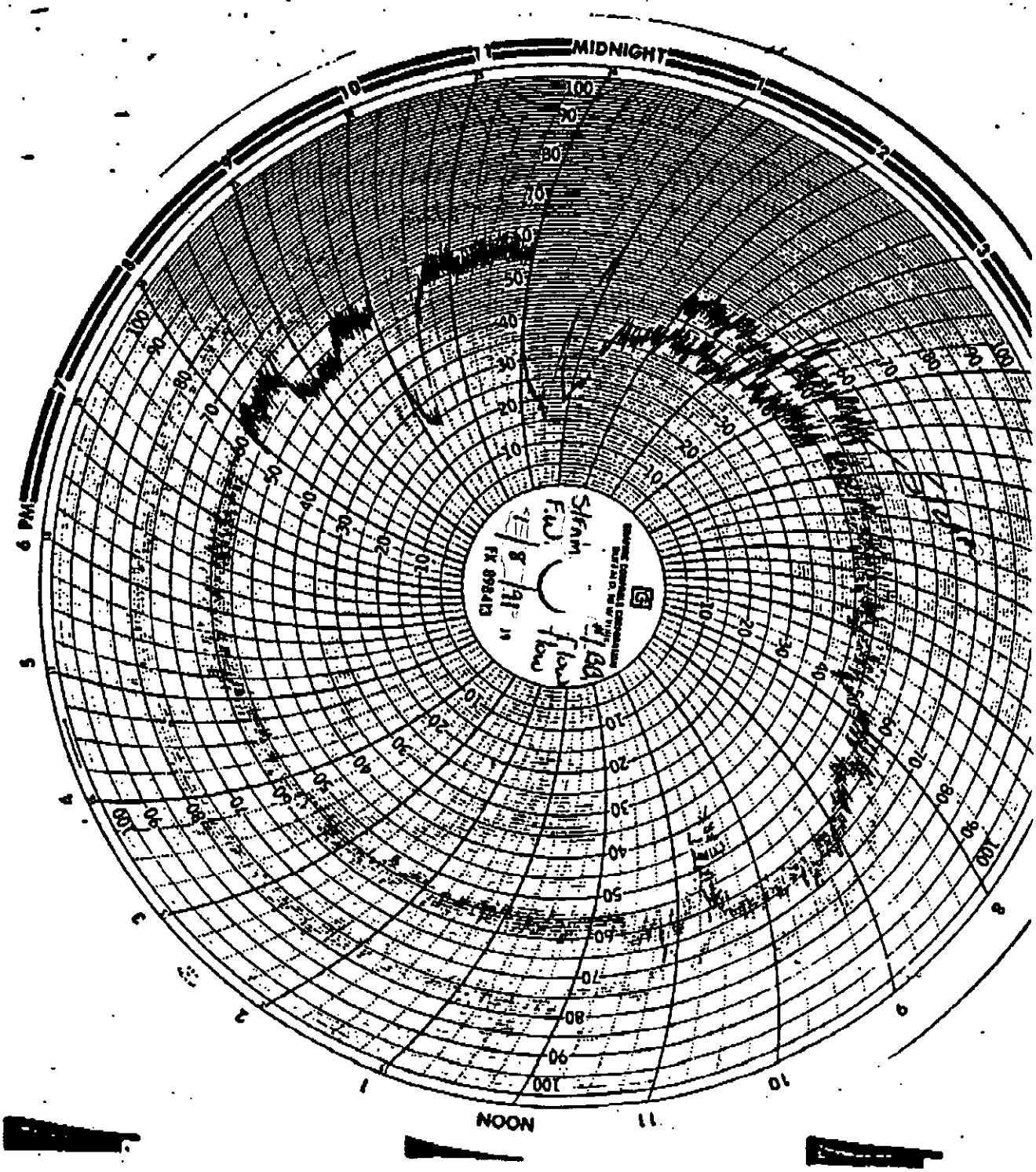
Operator's Initials ______

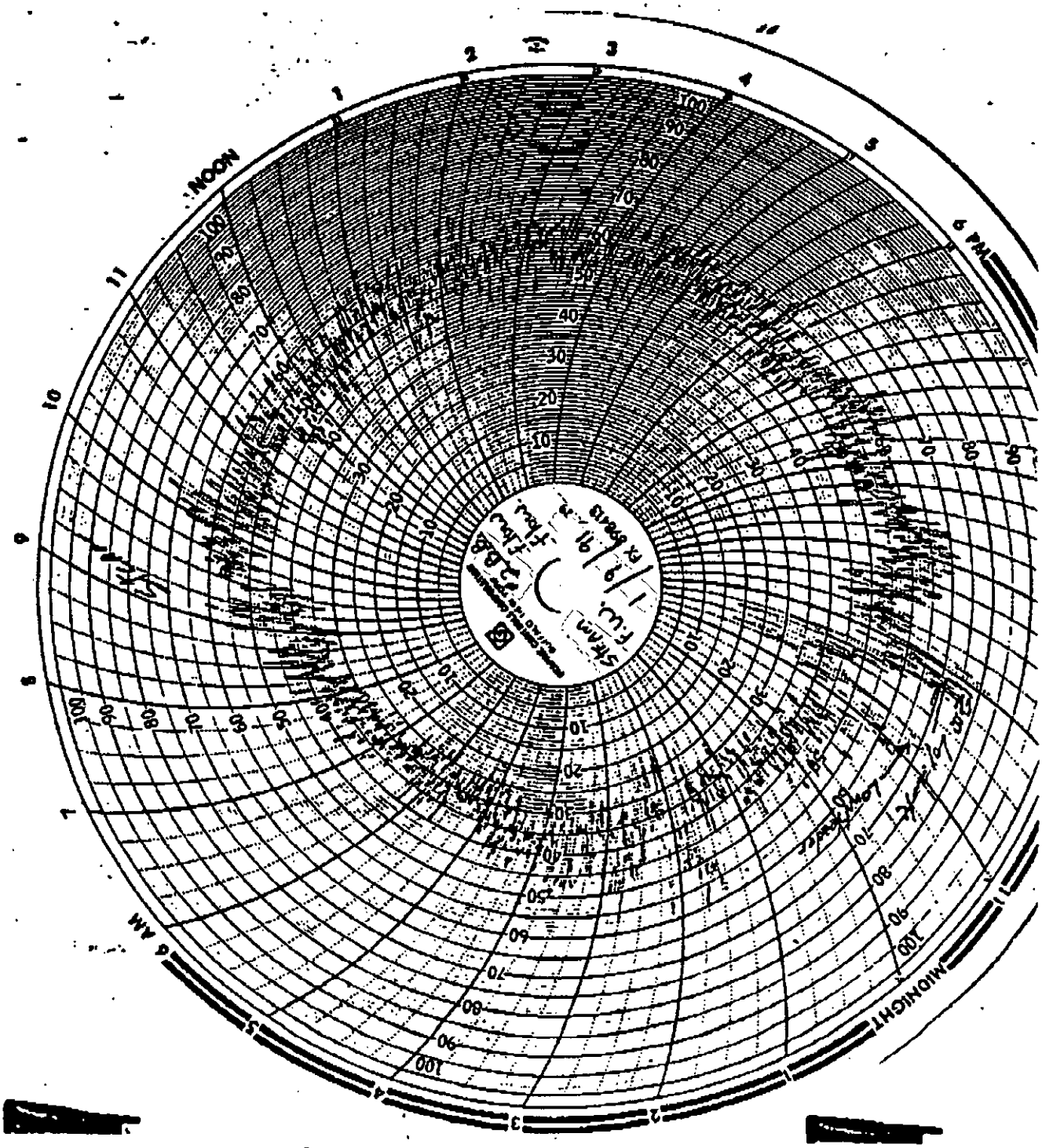
BARK FEED SCREW SPEED
% #1 ______
% #2 ______
% #3 ______
% #4 ______

COMMENTS
______

Bark
Boilers




MIDNIGHT
NOON
6 PM
Steam
F.W.


NOON
MIDNIGHT
6 AM
6 PM
Steam
Fuel
Pr Beam

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

RECOVERY DAILY REPORT

NO 1

DATE 1 10 19 91

TIME	BLACK LIQUOR: LIQUOR GUN	NOZZLE PRESSURE	PRIMARY HEATER TEMP	SECONDARY HEATER TEMP	SULFER	PERCENT SOLIDS	CASCADE EVAPORATOR: RIGHT HAND AMPS	LEFT HAND AMPS	EXCESS OXYGEN	BLACK LIQUOR FLOW	FORCED DRAFT: FLOW	INCHES PRIMARY	INCHES SECONDARY	TEMP	BOILER DRAFT: FURNACE	AVG. TRS	FIRST PASS	SECOND PASS	ESC DAMPERS A / B	PRECIP. TEMP	PRECIP. TEMP	CASCADE TEMP	SULFIDITY	STEAM: FLOW	TEMP	PRESS	GREEN LIQUOR: TEST	DEGREES BAUME	T
7 A	2	26	223	254		66.0																							
8 A	2	27	224	254	1500			43	8.9	85	39	.9	3.0	140	.18	30.0	104	14	59.4/61.9	300	288	523		119	226	645	9.3	15.6	15
9 A	2	27	224	254	[illegible]	66.3	66.3	40	6.4	93	40	1.3	3.5	240	.25	30.0	106	16	61.8/64.4	304	298	534		136	710	645	9.8	15.5	17
10 A	2	28	223	254		66.7		40	9.3	93	40	.8	3.0	240	.22	23.5	106	15	[illegible]/61.7	307	298	538		138	722	645	9.6	15.5	7
11 A	2	27	224	253				42	7.8	93	42	1.0	3.5	240	.20	3.3	107	15	55.1/65.3	309	297	546		132	725	640	7.2	15.0	10
12 N	2	27	223	253		66.3	65.8	40	8.0	93	42	1.0	3.1	240	.10	2.6	106	15	64.1/64.1	310	300	543	6.72	130	727	640	8.0	15.0	13
1 P	2	27	223	253		67.3		40	8.9	93	43	1.0	3.0	240	.16	5.2	107	15	55.1/56.0	304	301	544	11.25	138	731	645	9.2	15.0	12
2 P	2	28	224	254		67.5		42	9.0	93	42	1.0	3.0	240	.10	24.7	108	15	56.0/65.7	309	302	542	49.8	137	731	650	8.8	15.5	14
3 P	2	28	223	254	2000	67.8	62.2	42	7.5	93	42	1.2	3.4	240	.25	8.7	107	15	61.7/66.2	310	303	545		130	726	640	9.0	15.0	14
4 P	2	22.5	224	254		66.3		40	8.6	93	40	1.1	3.3	238	.02	30.0	114	15	[illegible]	310	300	540		135	726	630	10.4	15.5	14
5 P	2	22.5	224	255		66.9	65.8	40	6.9	93	40	1.2	3.4	238	.12	11.9	114	16	[illegible]	313	305	539		140	731	645	8.7	15.5	19
6 P	2	22.8	223	252		67.8		40	8.1	93	41	1.1	3.1	235	.22	6.1	132	14	[illegible]	312	307	545		136	721	640	10.3	16.5	13
7 P	2	28	224	255		67.1	65.8	40	7.1	93	41	1.4	3.3	238	.33	11.3	118	16	[illegible]	321	304	541		141	727	650		15.5	14
8 P	2	28	223	252		67.0		40	7.3	93	41	1.0	3.0	238	.25	12.3	120	16	[illegible]	313	309	548	18	142	720	645	8.9	14.5	15
9 P	2	28	223	255		67.5	66.0	40	7.0	93	41	1.3	9.3	238	.24	17.4	130	15	[illegible]	314	309	542	21	140	741	640		12.0	9
10 P	2	28	224	255		67.2		40	6.5	93	41	1.5	8.5	238	.24	11.7	142	16	[illegible]	311	307	530	47	135	725	645	9.0	14.5	13
11 P	[illegible]	28	224	255		66.8	66.0	40	7.3	93	41	1.2	3.4	238	.20	15.5	152	15	[illegible]	315	307	540	25	140	724	650	14.3	15.5	9
12 M	2	28	224	255	1200			40	7.0	92	40	1.4	3.0	238	.22	10.9	156	15	[illegible]	309	304	534		142	731	650		13.0	6
1 A	2	28	224	255		67.3		39	6.0	93	39	1.0	2.6	231	-.01	15.4	156	15	[illegible]	311	306	535		130	723	648		14	17
2 A	2	29	224	255				39	7.1	93	38	1.0	3.0	238	.15	9.5	150	15	[illegible]	311	306	532		135	725	650		15.0	10
3 A	2	28	225	255		67.1		39	5.7	91	38	1.1	3.3	237	.15	4.6	152	15	[illegible]	307	303	511		143	721	650		14.5	6
4 A	2	28	225	255				39	5.0	92	38	1.0	3.4	238	.21	16.0	153	15	[illegible]	305	305	512		142	720	640	6.6	14.5	17
5 A	2	28	224	255		66.5	66.5	38	5.0	94	38	1.2	3.1	238	.15	0.0	150	15	[illegible]	301	309	529		147	725	650		16	8
6 A	2	28	224	255				38	6.1	94	38	1.0	3.0	239	.21	16.1	150	16	[illegible]	305	307	532		141	726	650		16.5	3
								38	6.1	94	37	1.0	3.0	238	.23	6.7	150	16	[illegible]	305	307	532		142	726	650		11.3	3

7:15 DRAFT TAP BROKE OFF, SPED BOILER TO 93 GPM
1:2? DRAFT TAP WELDED BACK ON, CONTROLLER FOR I.D. FAN BACK IN [illegible]
12:?? IEA STARTING STACK TEST 1:?? TEST #1 COMPLETE
11 Ric Oil at 205 127[illegible]
Changed BL Liner at 7:25 pm
Stack Test Completed at 5:30pm Changed W.L. [illegible] 7:??

INTEGRATOR READINGS

TIME	STEAM	LIQUOR
6 AM		
2 PM		
10 PM		
6 AM		

SHIFT OPERATOR:
1. / AVDIE

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

RECOVERY DAILY REPORT #2

PM 1
DATE 1-12- 19 91

TIME	BLACK LIQUOR: LIQUOR GUN	NOZZLE PRESSURE	PRIMARY HEATER TEMP	SECONDARY HEATER TEMP	SULFUR	PERCENT SOLIDS	CASCADE EVAPORATOR: [redacted] Conc.	LEFT HAND AMPS.	EXCESS OXYGEN	BLACK LIQUOR FLOW	FORCED DRAFT: FLOW	INCHES PRIMARY	INCHES SECONDARY	[redacted] Temp. Sec. Air	BOILER DRAFT: FURNACE	AVG. T R S	[redacted] Ter. Air	SECOND PASS Dem Flow	LSC [redacted] % Solids I	II	PRECIP. TEMP E W	TEMP B W	CASCADE TEMP	SULFIDITY	STEAM: FLOW	TEMP	PRESS.	GREEN LIQUOR: % TEST	DEGREES BAUME	TA Turbidity
7 A	2	out	222	253	1600	68.2	67.1	58	1.7	116	5.9	1.8	5.9	235	+.02	7.4	17	140	68.0	68.5	366	331	774		161	752	665		18.5	12
8 A	2	out	222	252				58	1.8	118	5.5	1.6	5.6	235	+.01	8.9	17	156	68.6	68.7	367	328	765		171	747	660		17.0	9
9 A	2	out	222	252		68.1	66.8	58	1.8	115	5.3	1.4	3.1	236	+.10	9.9	17	138	72.0	69.5	366	321	772		154	741	660		15.4	26
10 A	2	out	221	252				57	.9	116	5.1	1.7	3.5	236	+.15	11.3	17	134	67.4	68.4	360	329	762		167	754	665		16.9	9
11 A	2	out	223	252		66.9	65.6	57	.9	115	5.0	1.4	3.7	236	+.10	9.0	10	128	66.7	68.0	374	335	772		162	751	665		15.5	11
12 N	2	out	222	251				57	1.5	117	5.2	1.6	3.6	236	-.03	5.1	17	132	66.9	69.1	371	329	759		163	741	660		16.5	10
1 P	2	out	222	252		63.5		57	1.6	117	5.2	1.4	3.5	236	+.11	12.1	17	137	70.0	69.3	355	325	767		165	725	660		17.0	4
2 P	2	out	222	251				57	1.4	115	5.4	1.3	3.5	236	+.08	11.2	17	132	67.0	69.3	359	329	767		167	750	660		17.0	5
3 P	2	out	222	251	1400	69.4	68.8	64	1.5	115	5.3	1.5	3.6	236	.05	9.1	16	130	68.4	71.1	357	327	755		169	757	665		17.0	24
4 P	2	out	222	251	[illegible]			64	1.4	115	5.4	1.6	3.6	236	+.10	16.4	16	130	69.8	71.5	358	332	765		171	742	670		16.5	16
5 P	2	out	222	251		68.7		64	2.1	116	5.3	1.7	3.5	236	+.15	15.8	16	134	69.5	70.6	357	329	751		169	774	670		15.2	11
6 P	2	out	223	251				64	2.4	115	5.6	1.4	3.5	236	+.12	10.8	16	132	69.8	70.4	351	330	757		167	772	670		17.2	12
7 P	2	out	223	251		68.4	67.0	61	2.0	115	5.6	1.6	3.9	236	-.10	6.9	16	132	69.9	70.7	349	329	748		161	744	665		17.2	7
8 P	2	out	223	250				62	2.4	115	5.5	1.5	3.8	236	+.11	5.6	16	134	69.3	69.6	347	326	754		161	751	670		16.0	4
9 P	2	out	223	250		68.3		62	2.6	115	5.6	1.6	4.0	236	-.10	7.6	16	134	69.4	69.8	346	329	762		160	741	660		16.2	22
10 P	2	out	224	251				62	3.0	111	5.5	1.6	3.5	236	+.20	7.5	16	130	67.6	68.0	347	326	747		163	772	670		15.0	17
11 P	2	o/s	223	251	1400	69.4	68.6	62	2.5	119	5.6	1.4	4.0	236	-.10	6.9	16	130	68.1	68.3	348	330	763		110	755	670		15.0	24
12 M	2	o/s	224	251				59	2.1	117	5.6	1.4	3.4	236	+.11	5.0	16	130	67.4	68.3	349	333	753		147	751	670		15.5	2
1 A	2	o/s	223	250		67.7		59	2.4	117	5.5	1.5	3.4	236	-.01	9.1	16	130	66.4	68.1	348	333	764		153	[illegible]	670		15.5	8
2 A	2	o/s	223	250				59	1.8	113	5.0	1.8	3.6	236	.01	14.9	16	130	63	68.1	347	331	754		152	[illegible]	670		15.0	7
3 A	2	o/s	222	250		67.6	65.2	59	1.8	116	5.1	1.9	3.8	236	-.01	5.1	16	130	68.3	66.6	347	350	756		155	760	670		15.0	4
4 A	2	o/s	223	250				59	1.9	117	5.2	1.6	3.6	236	+.09	12.7	16	130	67.7	68.1	345	330	765		153	734	670		15.0	7
5 A	2	o/s	223	250				59	1.8	118	5.2	1.4	3.6	236	+.08	5.0	16	130			344	351	745		153	720	670		15.5	24
6 A	2	o/s	223	250				59	1.8	118	5.2	1.4	3.0	230	+.09	5.0	16	130			348	331	765		153	740	670		15.5	1

INTEGRATOR READINGS

TIME	STEAM	LIQUOR
6 AM		
2 PM		
10 PM		
6 AM		

SHIFT OPERATOR:
[illegible]
[illegible]

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

RECOVERY DAILY REPORT: #3

DATE 1-12- 19 91

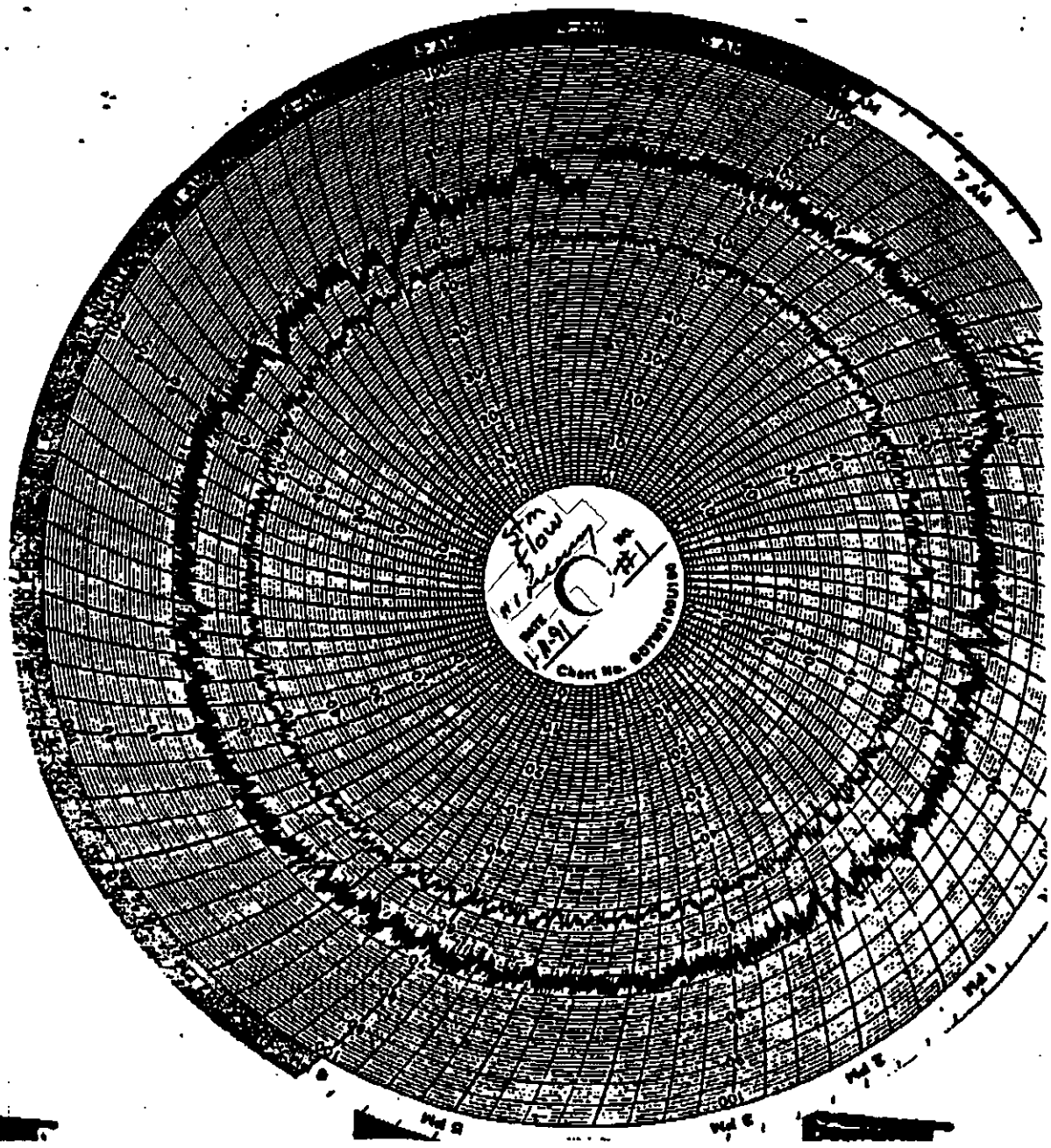
TIME	BLACK LIQUOR: LIQUOR GUN	NOZZLE PRESSURE	PRIMARY HEATER TEMP	SECONDARY HEATER TEMP	SULFER	PERCENT SOLIDS	CASCADE EVAPORATOR: RIGHT HAND AMPS	LEFT HAND AMPS	EXCESS OXYGEN	BLACK LIQUOR FLOW	FORCED DRAFT: FLOW	INCHES PRIMARY	INCHES SECONDARY	[illegible] PRESS.	BOILER DRAFT: FURNACE	AVG. T R S	[illegible]	[illegible] Flow	BURNER solids B W	PRECIP. TEMP E	PRECIP. TEMP W	CASCADE TEMP	SULFIDITY	STEAM: FLOW	TEMP	PRESS.	GREEN LIQUOR: TEST	DEGREES BAUME	[illegible]
7 A	2	16.0	225	250	1400	67.7	55.9	53	8.6	105	30	1.6	4.4	238	-1.2	1.8	20	114	659-665	318	320	657		140	230	650		16.0	11
8 A	2	18	225	250				53	3.6	116	29	1.5	4.4	238	-.07	4.5	23	127	682-684	323	326	669	-	156	218	640		16.0	7
9 A	2	20	228	251		67.9	66.8	54	3.4	117	30	1.5	4.3	238	.01	1.3	25	129	[illegible]	323	328	678		138	214	645		16.5	7
10 A	2	18.5	225	245				54	2.8	112	30	1.5	4.3	238	.02	1.5	25	128	[illegible]	323	325	677		130	224	645		15.0	11
11 A	2	17.5	225	249		67.3	66.5	55	3.2	110	28	1.5	4.4	238	-.02	2.5	23	130	[illegible]	318	323	658		145	214	640		17.0	4
12 N	2	20.0	225	252				54	3.0	114	28	1.5	4.5	238	.02	11.5	23	130	[illegible]	321	330	676	6.33	125	226	640		15.5	12
1 P	2	20.5	227	249		67.4		54	2.4	114	30	1.5	4.1	238	.00	2.4	21	125	[illegible]	322	325	652	[illegible]	141	211	650	[illegible]	15.0	1
2 P	2	19.5	226	250				54	1.5	113	30	1.7	4.3	238	-.03	1.3	27	128	[illegible]	325	331	675		121	244	646		16.0	3
3 P	2	17.0	226	248	1600	68.4	67.4	56	10.0	85	30	1.1	4.0	238	.10	1.1	21	132	669-680	304	306	620		118	207	632	20	16.5	7
4 P	2	17.0	225	249				56	10.0	86	31	.8	4.0	238	-.20	1.2	21	124	666-675	301	305	602		109	196	632	10.3	16.0	12
5 P	2	16.5	227	249		67.2		57	1.8	85	30	1.2	4.1	238	.01	.9	21	124	669-676	302	304	605		109	201	620	9.2	16.0	3
6 P	2	15.5	225	248				56	10.0	84	30	1.1	4.2	238	.05	1.8	21	134	661-668	301	302	633		104	198	645		16.0	12
7 P	2	20	226	249		67.8		55	4.0	117	31	1.6	4.1	238	.10	.9	21	136	683-691	315	318	673		144	213	640		16.0	7
8 P	2	22	226	250				54	2.5	120	30	1.2	4.1	238	.03	.8	21	138	698-704	326	331	674		163	233	653		16.0	15
9 P	2	20	227	250		67.3	68.0	52	2.8	117	31	1.4	4.2	238	.05	.7	21	134	682-699	327	332	675		162	228	645		17.0	2
10 P	2	20	225	249		66.5		49	2.3	127	31	1.6	4.7	238	-.12	1.2	21	132	671-686	326	329	652		160	240	640		17.0	4
11 P	2	20	227	249	1200	[illegible]		49	3.0	121	31	1.5	4.4	238	-.1	10.9	21	128	664-676	330	335	676		160	235	650		15.5	3
12 M	2	18	226	249		68.2	67.0	49	.0	120	30	1.6	4.6	238	-.07	4.3	21	125	638-675	331	335	672		175	232	640		15.5	3
1 A	2	18	226	251				49	1.4	119	31	1.4	4.5	238	.03	1.8	21	126	664-683	330	355	666		170	234	650		15.0	4
2 A	2	18	227	251		68.4		49	.3	119	31	1.4	4.4	238	.02	1.6	21	124	666-677	334	337	661		175	240	650		17.5	4
3 A	2	18	225	251				50	2.8	117	31	1.4	4.2	238	.06	1.1	21	124	678-682	336	350	690		151	204	600		16.0	3
4 A	2	19	227	251		68.0	67.9	49	.6	126	29	1.6	4.6	238	0	1.2	21	120	660-669	351	351	669		167	234	640		16.0	1.4
5 A	2	18	227	251				49	-0	119	29	1.6	4.6	238	.02	5.2	21	130	672-696	356	357	678		156	243	640		15.0	8
6 A	2	19	227	251				49	-0	119	29	1.4	4.4	238	.02	5.2	21	130	679-684	356	357	678		150	245	640		15.5	1

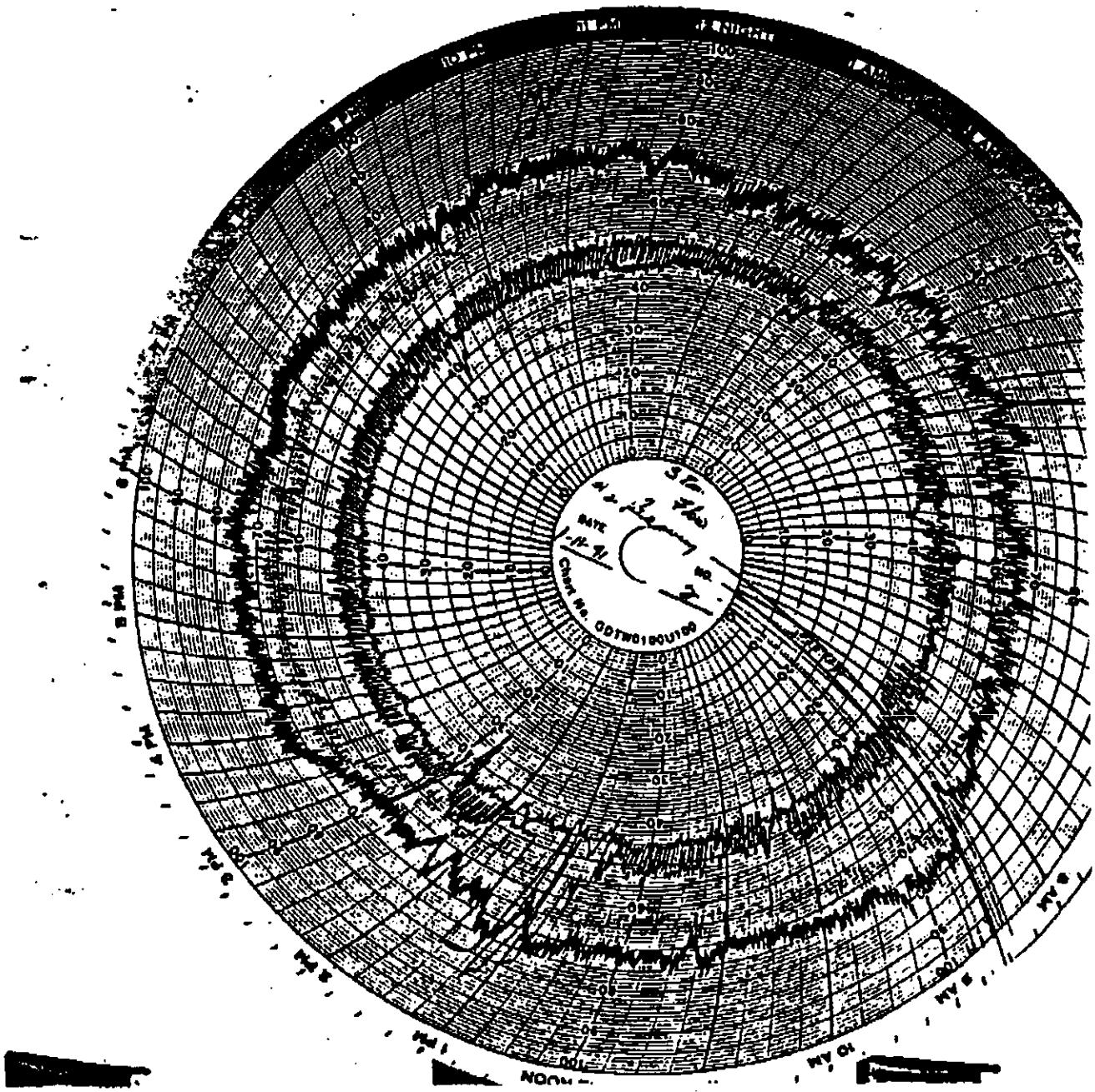
INTEGRATOR READINGS

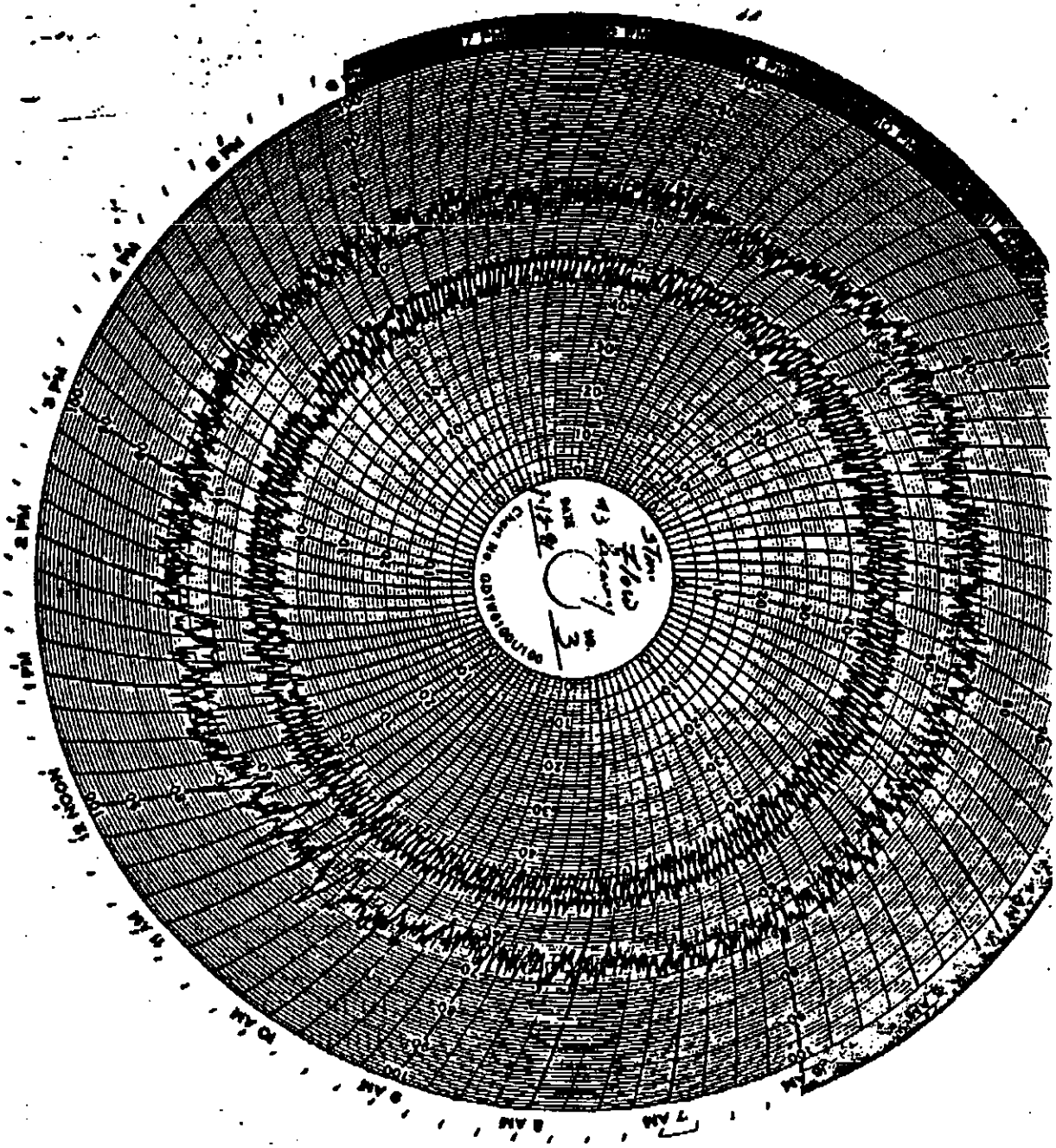
TIME	STEAM	LIQUOR
6 AM		
2 PM		
10 PM		
6 AM		

SHIFT OPERATOR:

1. [illegible signature]
2. R. Stapler
3. Bill


Stm Flow
#1
Chart No.





#1 Lime Kiln Report

DATE 3/20/92 7/3 3/11 EVANS-FLOWERS 11/7 Hall-Rose

	TRS	TRS/02	02	Mud Flow	Mud Dens	SCRB Flow	SCRB D/P	Oil Flow	Cold End	Hot End	Exit Gas	N.C Cakes	Mud Sta	Oil Temp	Stm Oil	Oil Totalizer	C.S	Oil	Gas
1	.7	.6	7.0	70	33%	1100	16.5	3.2	790	1200	168	out	10.5	248	92	705			
2	.9	.7	28	70	33%	1100	16.5	3.2	800	1900	168	✓	10.0	262	92	908			
3	.9	.7	7.5	75	33%	1100	16.0	3.1	800	1600	160	✓	10.0	262	120	1076			
4	1.0	.8	7.8	75	33%	1140	16.0	3.0	790	1600	160	✓	10.5	262	120	1242			
5	.4	.3	7.5	75	34%	1160	18.0	3.1	720	1600	160	✓	11.0	262	120	1404			
6	12.1	14.1	11.5	75	34%	1160	18.0	3.3	740	1800	167	✓	11.0	262	118	1660			
7	1.1	3.2	15.6	75	34%	1160	20.0	3.3	680	1400	167	—	12.0	262	200	1763			
8	1.3	4.8	20.2	60	34%	1160	24.0	out	660	1200	155	✓	12.0	274	—	1884			
9	1.1	2.4	15.9	7															
10	1.3	1.2	9.1	70	33%	1260	17.5	3.03	880	1800	156	—	12.5	280	150	2025			
11	0.0	0.0	0.0	75	34%	1250	18.0	3.0	820	1700	160	out	13.0	244	170	2199			
2N	2.0	1.4	8.7	75	34%	1460	19.0	3.2	750	1650	152	11:7	13.0	246	174	2304			
1	9.9	6.9	5.2	60	34%	1420	19.0	3.3	720	2000	160	11"	12.0	248	174	2416	3¼	11¾	48%
2	2.0	1.4	5.9	60	24%	1420	18.5	33	710	2000	164	11	11.0	850	174	2773			
3	1.9	1.4	6.2	60	34%	1400	18.0	3.3	740	2100	164	11	10.0	842	200	2969			
4	2.0	1.5	6.3	60	34%	1400	18.5	3.1	760	1900	165	11	9.0	240	190	3148			
5	1.8	1.3	5.8	60	34%	1400	19.0	3.1	700	1850	162	11	7.5	244	190	3320			
6	1.1	.8	6.5	H20	—	1400	22.0	3.1	580	1700	170	11	7.0	244	180	3552			
7	.7	28.0	20.6					Down					7.0			3697			
8	.7	41.3	21.1						11				7.0			3697			
9	.7	51.0	21.1						11				7.0			11			
10	.7	57.2	21.0						11				7.0			11			
1	0.0	0.0	0.0						11				7.0			3657			
2	1.4	76.9	20.9						11				7.0			11			

M/W put a Nipple on #1 stack for rapper

Kiln Down @ 8:30pm ~~gun plugged~~ pull gun clean tip

Replace gun Kiln up @ 9:15pm Mud on @ 9:30pm

load off #1 Kiln at 5:30pm

Oil Fire out at 7:00pm.

#2 Lime Kiln Report

DATE 2/20/92 7/3 3/11 EVANS-Flowers 11/7 Hall DeLisa

	TRS	TRS/O2	O2	Mud Flow	Mud Dens	SCRB Flow	SCRB D/P	Oil Flow	Cold End	Hot End	Exit Gas	N.C Gases	Mud Sta	Oil Temp	Stm Oil	Oil Totalizer	C.S	Oil	Gas
1	2.2	2.4	9.7	125	27%	500	38.0	4.6	870	2400	153	IN	11.0	85/66	170	207460			
2	2.6	2.5	10.0	125	26%	500	38.0	4.7	390	2100	151	✓	11.0	84/66	170	207756			
3	2.8	2.7	9.6	125	27%	500	36.0	4.9	400	1900	150	✓	11.0	168	84/68	208024			
4	3.0	3.0	10.0	125	27%	520	38.0	4.9	410	2400	150	✓	11.0	168	84/68	208298			
5	.7	2.6	9.4	125	27%	500	38.0	4.9	410	2350	150	✓	11.0	169	84/68	208576			
6	0.0	0.0	0.0					Down				✓	11.5			208632			
7	4.8	4.5	9.2	125	25%	520	32.0	4.8	400	2000	140	✓	12.0	168	82/64	208750			
8	2.8	2.9	10.2	125	26%	530	370	4.9	410	2360	150	✓	12.	168	84/66	208999			
9	2.8	2.8	10.1	125	28%	530	350	4.9	460	2410	150	✓	12.	168	84/66	209343			
10	2.9	2.9	10.0	125	27%	530	39.0	5.0	380	2460	150	✓	11½	168	84/66	209764			
11	0.0	0.0	0.0	125	28%	530	38.0	5.0	400	2300	152	IN	11.0	164	84/66	210032			
2N	2.7	2.8	10.5	100	26%	520	39.0	4.9	380	2500	150	✓	11.0	166	82/64	210286			
1	4.6	4.7	10.1	120	28%	520	385	4.9	410	2400	150	"	12.0	166	82/64	210515			
2	3.0	3.2	10.6	100	28%	520	385	4.9	390	2450	150	"	12.0	168	82/64	210781			
3	2.9	3.1	10.6	100	27½	520	385	4.8	400	2700	150	"	11.0	170	84/66	211191			
4	2.7	3.1	11.4	100	28½	520	38.5	4.5	400	2500	150	"	11.0	170	80/62	211430			
5	2.8	3.0	10.6	120	31%	520	365	4.6	530	2250	145	"	10.0	172	80/62	211690			
6	2.7	3.1	11.6	135	32%	520	35.5	4.1	540	2600	146	"	12.0	166	78/60	212059			
7	2.8	3.4	12.0	120	32%	520	37.0	4.1	475	2450	150	"	14.0	166	78/60	212317			
8	2.8	3.4	12.0	125	31%	520	37.0	4.0	480	2350	145	"	13.5	168	76/62	212492			
9	2.5	3.0	11.8	125	32%	520	37.5	4.1	450	2300	150	"	14.0	172	76/64	212701			
10	2.4	2.9	11.7	125	33%	520	37.0	4.1	490	2450	150	"	13.0	170	78/60	212949			
11	0.0	0.0	0.0	125	31%	520	37.0	4.1	470	2400	150	"		170	78/60	213269			
2N	2.0	1.8	8.6	135	33%	520	37.0	4.2	460	2060	160	"		173	76/60	213498			

#2

MUD OFF FINE OUT #2 KILN @ 6:05 P.M. CHAIN OFF

Vented NCG @ 5:05 P.M., OIL FIRE IN #2 KILN @ 6:35 P.M. N.C.G IN @ 6:23 P.M.

MUD ON #2 KILN @ 6:40 P.M.

Instrument man adjusted #2 Mud density control (Now its really messed up!)

#3 Lime Kiln Report

DATE 2/21/92 7/5

3/11 Evans - Flowers. 11/7 Hall - DeSue

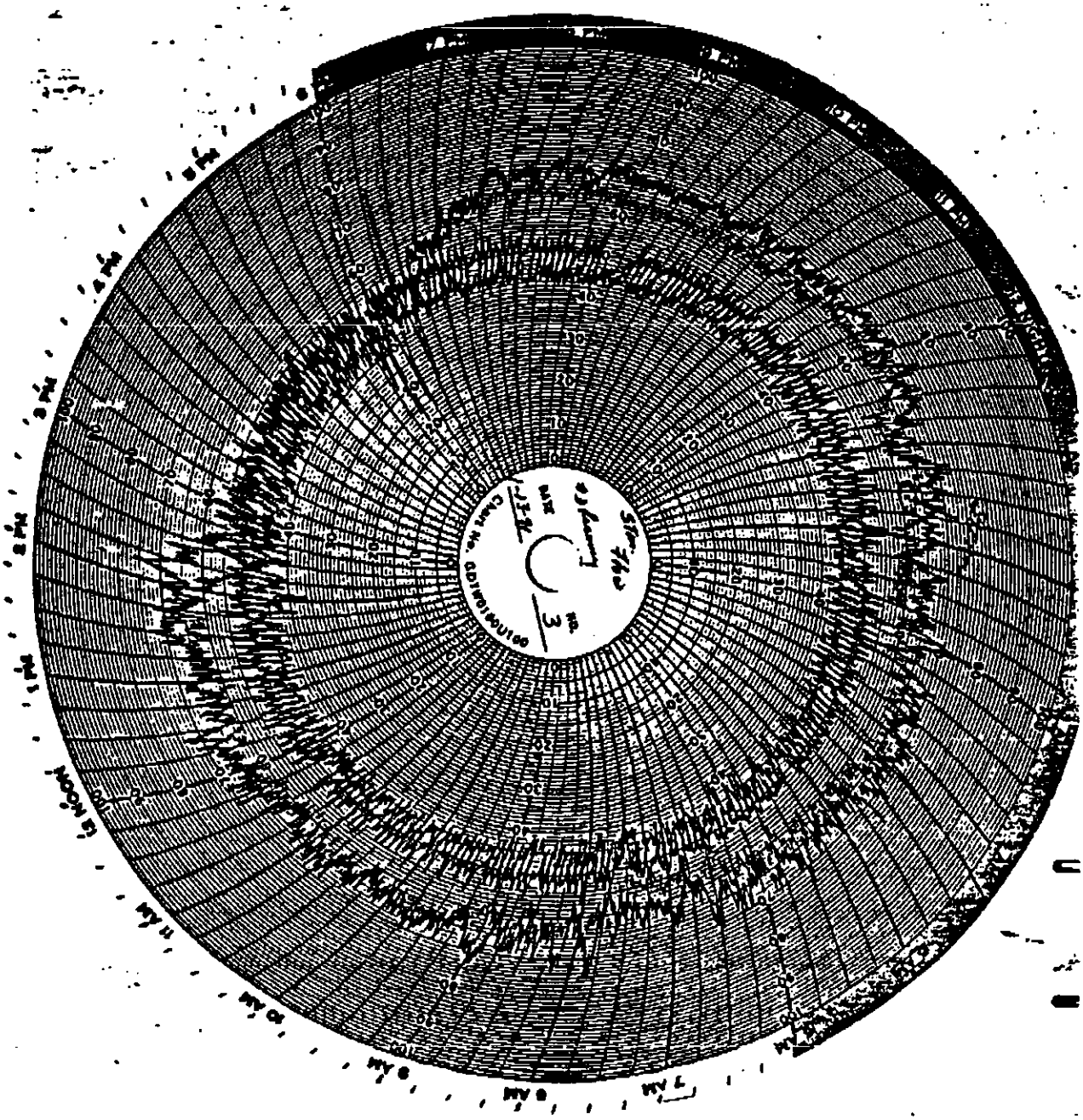
	TRS	TRS/O2	O2	Mud Flow	Mud Dens	SCRB Flow	SCRB D/P	Oil Flow	Cold End	Hot End	Exit Gas	N.C Gases	Mud Stg	Oil Temp	Oil	Stm Coil	Oil Totalizer	C.S.	Oil	Gas
1	4.3	3.4	6.9	145	32%	580	27.0	4.9	555	1750	145	out	13.0	180	68/52		199777			
2	3.8	3.1	7.7	145	32%	580	26.0	5.0	520	1700	145	✓	13.0	180	68/52		200047			
3	4.5	3.7	7.9	145	32%	580	26.5	5.0	580	1640	145	✓	12.0	180	68/52		200356			
4	4.3	3.6	7.8	145	32%	580	26.5	5.0	520	1760	145	✓	10.5	184	68/52		200700			
5	4.6	3.6	7.1	145	32%	580	26.0	5.1	570	1540	145	✓	10.0	184	70/54		200926	3'0	9½	35%
6	4.8	3.7	6.8	140	32%	580	25.0	5.1	525	1650	145	✓	9.0	184	70/54		201380			
7	8.3	6.5	7.0	155	32%	520	25.0	4.9	560	2000	145	✓	10.0	190	66/52		201579			
8	7.4	5.2	5.5	165	27%	520	26.0	5.2	580	1660	146	✓	10.0	190	70/54		201931			
9	4.7	4.0	8.0	155	29%	500	25.5	3.9	565	1800	145	✓	11.0	192	66/52		202248			
10	4.7	4.0	8.0	155	30%	500	26.0	4.0	565	1760	145	✓	10.0	192	68/54		202461			
11	0.0	0.0	0.0	155	31%	500	26.0	4.2	560	1800	145	OUT	12.0	192	64/52		202750			
2N	5.4	4.1	6.7	155	30%	500	26.0	4.2	540	1850	146	11?	12.0	194	64/52		202965			
1	5.6	4.2	6.5	155	32%	500	26.0	4.4	520	1750	150	11	14.0	194	70/54		203211			
2	5.9	4.4	6.3	155	31%	480	26.0	4.4	520	1800	150	11	13.0	190	70/56		203375			
3	6.3	4.7	6.3	160	29%	480	26.5	4.4	520	1850	150	11	11.0	184	70/56		203717			
4	6.2	4.5	5.8	160	30%	480	26.5	4.4	510	1900	150	11	10.0	180	70/56		203958			
5	6.2	4.4	5.4	160	30%	480	27.0	4.6	500	1900	150	11	11.0	180	72/58		204410			
6	6.1	4.3	5.3	160	29%	480	27.0	4.6	500	1950	150	11	11.5	180	72/54		204675			
7	6.6	4.5	4.9	160	29%	480	27.0	4.7	500	1900	150	11	12.0	182	74/60		204930			
8	6.7	4.6	5.0	160	31%	480	27.0	4.7	500	2000	150	11	13.0	180	74/58		205060			
9	6.0	4.7	5.7	160	32%	480	27.0	4.7	510	2000	150	11	14.0	180	74/58		205350	2½	11'	35%
10	5.4	4.4	7.3	160	31%	480	26.5	4.5	550	2050	150	11	12.5	182	70/54		205584			
1	0.0	0.0	0.0	160	31%	480	26.5	4.3	535	2060	150	"	12.0	184	68/54		205882			
2N	5.6	4.0	5.5	160	29%	480	27.0	4.3	520	1960	150	"	12.0	184	68/56		206072			

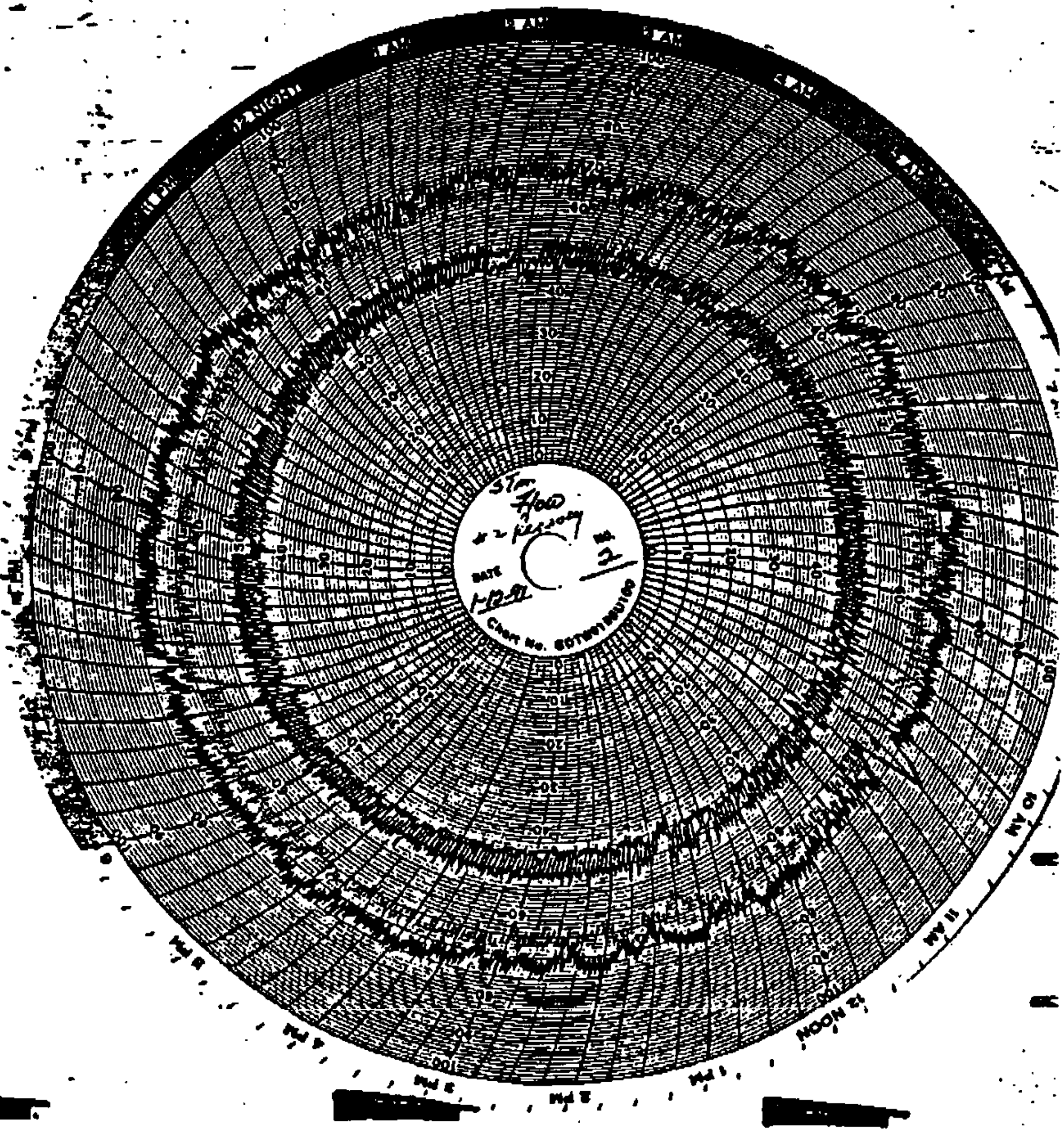
Incline Kick-out 5/30 Amp. Amp on shock Relay Reading high

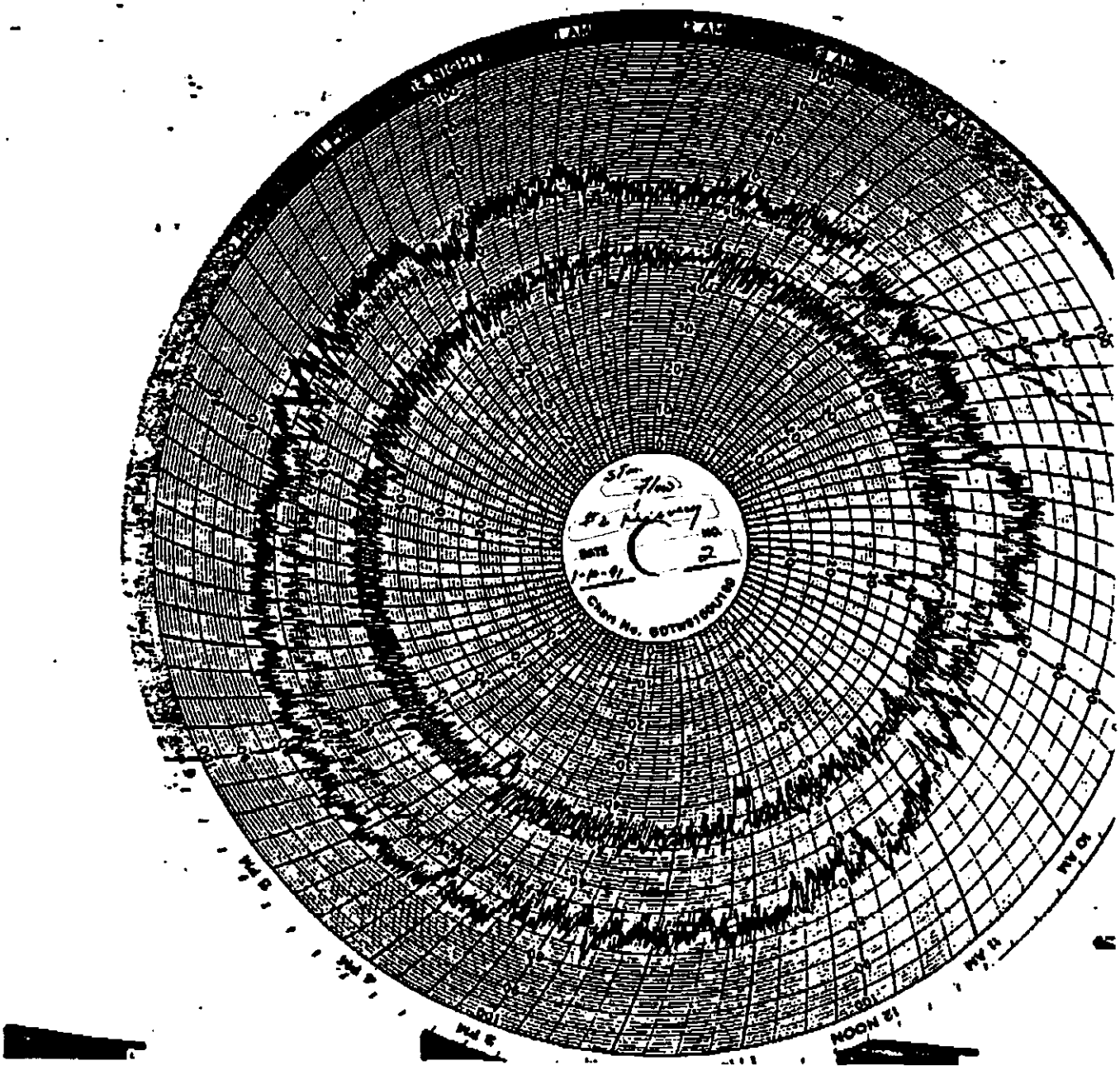
Instrument man reset the calibration on #3 Kiln oil flow

Logs #1 TRS & AF @ 9:00 AM

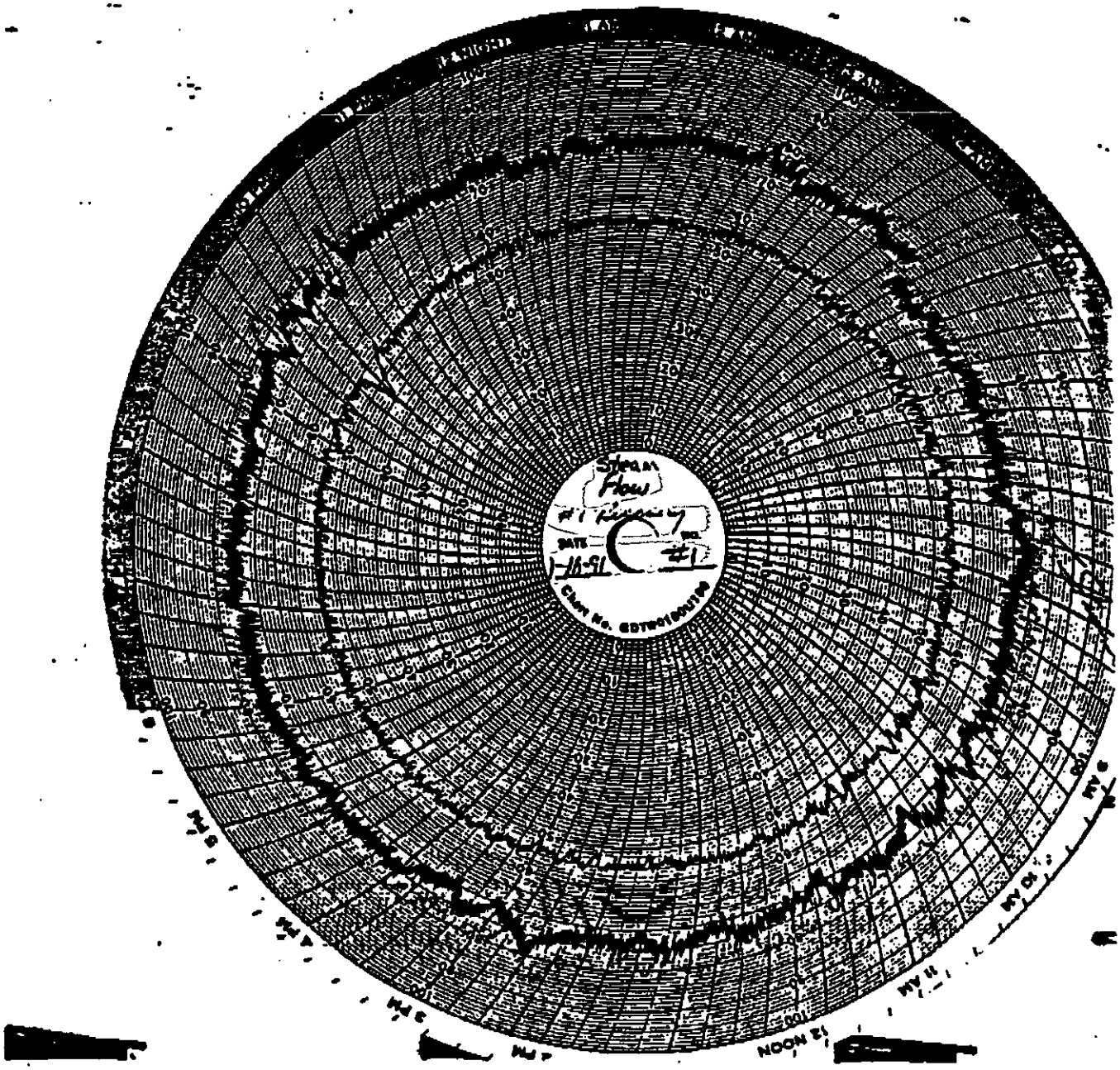
Replaced busted water line on #3 Lime crusher cooling Jacket.







Recovered



SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

RECOVERY DAILY REPORT #3

PB 1
DATE 1-12- 19 91

TIME	BLACK LIQUOR: LIQUOR GUN	NOZZLE PRESSURE	PRIMARY HEATER TEMP	SECONDARY HEATER TEMP	SULFER	PERCENT SOLIDS	CASCADE EVAPORATOR: [redacted] Conc	LEFT HAND AMPS.	EXCESS OXYGEN	BLACK LIQUOR FLOW
7 A	2	21	225	250	1600	68.8	66.9	57	1.1	113
8 A	2	22	225	250				56	.8	116
9 A	2	21	225	255		68.3	65.2	56	3.0	112
10 A	2	20	221	250				57	1.4	119
11 A	2	22	224	250		67.1	65.1	57	1.7	111
12 M	2	21	225	251				56	1.4	116
1 P	2	22	224	251		66.4		57	2.2	116
2 P	2	21.5	224	251				56	0	118
3 P	2	21	224	251	1600	68.5	67.2	59	2.2	115
4 P	2	21	223	250				58	2.3	115
5 P	2	22.5	223	250		68.4		59	2.5	115
6 P	2	21.5	223	249				60	1.0	113
7 P	2	22	224	250		68.1	67.1	58	1.8	115
8 P	2	22	225	250				58	2.4	115
9 P	2	22	224	250		68.4		58	2.0	115
10 P	2	20	223	250				68	3.0	115
11 P	2	20	225	250	1600	68.2	68.6	59	3.0	117
12 M	2	21	224	251				58	1.4	118
1 A	2	21	224	250		68.0		58	1.5	117
2 A	2	21	224	250		68.5	69.0	57	2.2	113
3 A	2	20	224	250				57	1.5	120
4 A	2	19	225	250				55	1.0	118
5 A	2	19	225	250		68.4		55	1.4	119
6 A	2	19	225	250				55	4.4	119

TIME	FORCED DRAFT: FLOW	INCHES PRIMARY	INCHES SECONDARY	[redacted] Press.	BOILER DRAFT: FURNACE	AVG. T R S	[redacted]	[redacted]	1.5C DAMPER & solids: B	N
7 A	25	1.4	4.4	240	.00	4.7	22	140	62.0	66
8 A	25	1.9	4.6	246	.02	4.2	22	135	64.0	65.2
9 A	25	1.1	4.1	230	.17	2.2	23	131	65.5	69.2
10 A	27	1.4	4.6	235	.15	2.7	22	126	63.9	72.1
11 A	27	1.0	4.6	236	.02	5.8	20	124	64.5	66.5
12 M	28	1.0	4.2	358	.03	5.2	22	132	66.5	63.1
1 P	26	.9	4.3	238	.06	14.9	22	132	67.6	69.7
2 P	28	1.3	4.2	238	.06	23.2	23	132	63.2	68.5
3 P	29	1.0	3.8	238	.20	3.0	22	130	62.0	70.8
4 P	29	.9	3.7	238	.10	3.1	23	130	65.5	70.1
5 P	28	1.1	3.7	238	.10	3.5	23	134	65.5	69.1
6 P	26	1.1	4.2	236	.15	2.2	22	132	62.0	70.0
7 P	28	1.0	4.1	236	.15	2.3	23	132	65.8	67.4
8 P	28	1.0	4.0	234	.11	1.9	23	134	64.1	69.7
9 P	29	1.1	4.4	236	.10	3.7	23	134	59.5	72.3
10 P	28	1.0	3.10	236	.15	6.1	22	130	62.2	68.8
11 P	30	1.4	4.2	236	.10	11.8	22	130	68.6	68.5
12 M	30	1.2	4.0	236	.103	1.8	22	130	65.1	68.5
1 A	30	1.6	4.4	236	.104	2.7	22	130	63.1	69.1
2 A	31	1.4	4.4	234	.102	3.3	22	130	65.0	69.6
3 A	37	1.8	4.4	236	.102	5.7	22	136	67.4	67.0
4 A	29	2.0	4.4	236	.105	1.6	22	130	63.3	65.6
5 A	25	1.9	4.4	236	.107	1.5	22	130		
6 A	29	1.8	4.4	240	.105	1.5	22	130		

TIME	PRECIP. TEMP E	PRECIP. TEMP W	CASCADE TEMP	SULFIDITY	STEAM: FLOW	TEMP	PRESS.	GREEN LIQUOR: % TEST	DEGREES BAUME	Running
7 A	310	319	655		162	735	690		15.0	12
8 A	307	318	649		169	725	690		16.0	6
9 A	308	316	638		156	722	640		11.5	11
10 A	309	318	683	32	161	722	605		15.0	6
11 A	309	314	686	27	152	721	695		15.5	4
12 M	310	319	658	26	145	725	650		14.5	4
1 P	315	322	657	2.5	162	726	645	22.72	16.5	2
2 P	311	325	664		163	721	645		15.0	12
3 P	314	321	658		161	722	648	27	16.0	4
4 P	312	325	670		174	722	650		15.5	2
5 P	316	321	661		171	721	650		16.0	5
6 P	314	319	657		163	729	650		16.0	7
7 P	319	324	656		162	732	650		16.5	6
8 P	319	320	663		165	732	650		17.0	3
9 P	317	322	651		166	728	650		17.0	8
10 P	319	324	665		161	727	650		17.0	7
11 P	331	327	652		163	724	650		15.5	11
12 M	319	324	662		176	735	650	8.8	15.0	9
1 A	326	325	662		163	734	650		15.5	15
2 A	332	328	668		163	711	650	6.8	15.0	1
3 A	334	328	665		159	724	650		15.0	9
4 A	326	330	675		158	732	651		15.5	12
5 A	305	331	668		152	744	646		15.0	9
6 A	335	330	661		157	743	646		15.0	11

7-3 changed feed liq pump using west pump
#1 IK in service 1:30 pm #3 IK in service 2:15 pm
3-11 Could not change green liq lines due to Valve Problems IN Caustic

INTEGRATOR READINGS

TIME	STEAM	LIQUOR
6 AM		
2 PM		
10 PM		
6 AM		

SHIFT OPERATOR:

SEMINOLE KRAFT CORPORATION
JACKSONVILLE, FLORIDA

RECOVERY DAILY REPORT 2

PM 1

DATE 1-11- 19 91

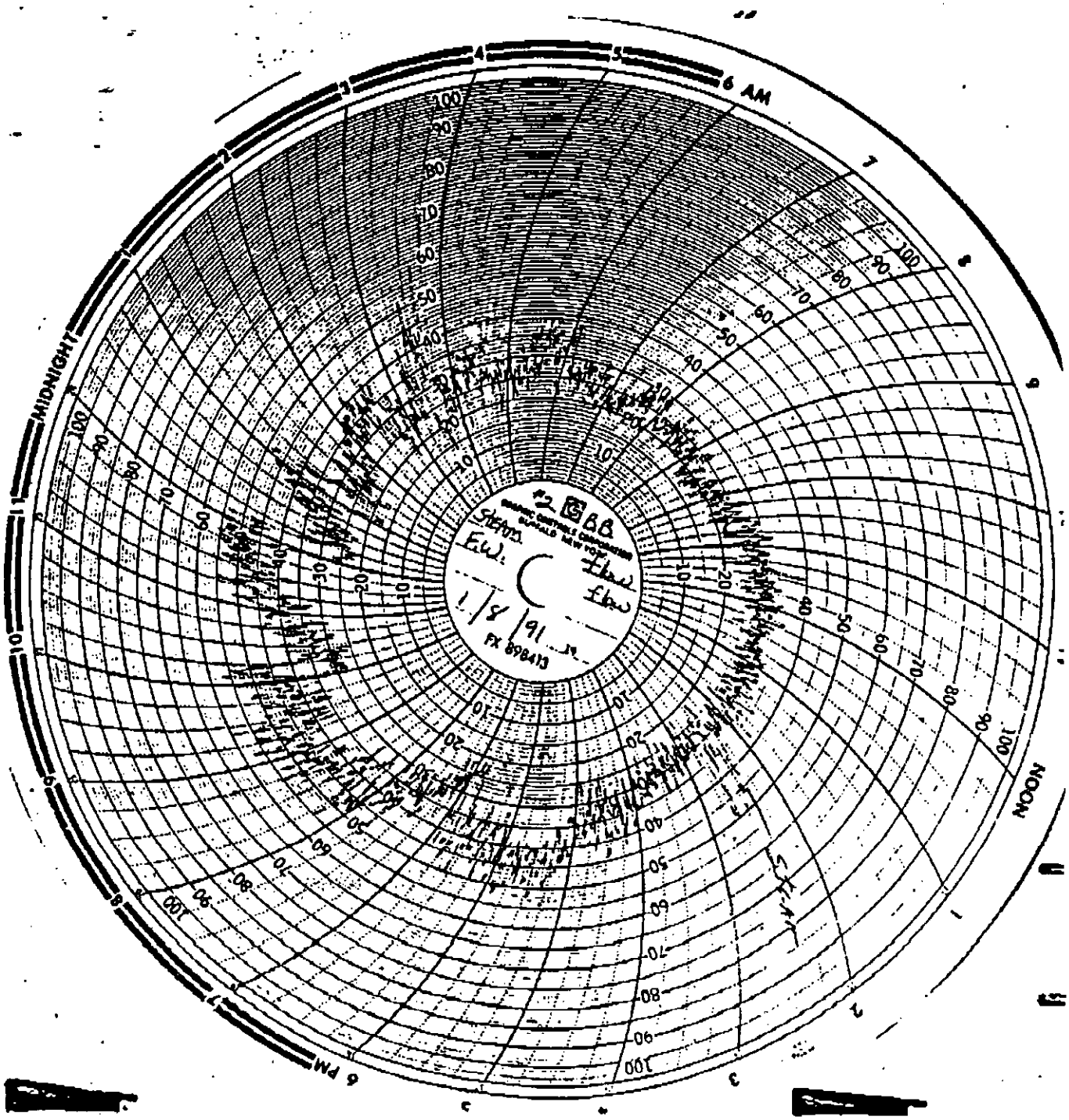
TIME	BLACK LIQUOR: LIQUOR GUN	NOZZLE PRESSURE	PRIMARY HEATER TEMP	SECONDARY HEATER TEMP	SULFUR	PERCENT SOLIDS	CASCADE EVAPORATOR: [illegible]	LEFT HAND AMPS.	EXCESS OXYGEN	BLACK LIQUOR FLOW	FORCED DRAFT: FLOW	INCHES PRIMARY	INCHES SECONDARY	Scan. Press	BOILER DRAFT: FURNACE	AVG. TRS	Dam. Press	Dam. Flow	LSC % Solid		PRECIP. TEMP E	PRECIP. TEMP W	CASCADE TEMP	SULFIDITY	STEAM: FLOW	TEMP	PRESS.	GREEN LIQUOR: TEST	DEGREES BAUME	T/x
7 A	2	12	222	254	—	66.9	66.4	57	1.8	110	49	1.1	3.5	236	.05	7.1	142	17	22.4	64.0	353	321	729		157	725	660		17	23
8 A	2	12	221	253				57	.8	121	52	1.6	3.5	236	.07	8.7	142	17	27.0	63.0	356	327	731		173	741	660		16	5
9 A	2	12	222	253		67.9		57	.5	121	50	1.5	3.2	236	.13	20.5	142	17	27.2	63.0	362	335	764		172	726	660		15.5	11
10 A	2	12	222	253	1400			57	1.0	118	57	1.3	2.1	236	.07	12.4	134	17	26.8	63.0	362	341	751		163	746	660		16.5	22
11 A	2	12	221	253	1600	66.5	67.4	57	.7	119	51	1.2	3.4	232	.09	16.8	136	18	21.0	58.0	356	335	758		178	725	661		16.0	21
12 M	2	12	224	253				57	1.2	118	50	1.9	3.4	257	.09	18.8	125	17	25.5	62.3	359	337	759		171	[illegible]	660		16.0	5
1 P	2	12	223	252		67.5		57	0.3	100	50	1.2	4.0	232	.23	12.3	130	17	30.1	52.6	340	321	774		[illegible]	[illegible]	[illegible]		19.0	6
2 P	2	12	222	253	1231			57	0.5	10A	49	2.2	4.1	236	.55	9.1	196	19	23.4	61.5	342	306	770		151	780	660		17.0	9
3 P	2	0/5	223	252	65.0	62.3	67.2	63	2.4	102	5.3	1.4	3.8	236	.15	8.0	174	18	55.9	67.4	344	329	753		140	744	660		20.0	9
4 P	2	0/5	222	252	1500			63	1.3	117	5.1	1.5	3.6	236	.12	10.2	130	15	67.1	67.5	344	328	753		160	746	660		17.0	6
5 P	2	0/5	222	251		67.1		63	1.3	117	5.2	1.3	4.0	236	.20	7.1	130	15	69.0	68.6	352	319	744		166	724	660		16.0	7
6 P	2	0/5	221	251				63	1.6	118	5.0	1.6	4.0	236	.15	13.3	132	18	65.5	63.4	292	312	712		164	740	660		17.0	8
7 P	2	0/5	222	251		67.4	68.2	63	1.8	118	5.1	1.4	3.3	236	.10	5.1	131	18	59.2	67.4	336	312	735		165	746	660		14.5	8
8 P	2	0/5	222	251				63	1.3	116	4.9	1.6	3.5	236	.15	13.5	132	18	67.7	61.3	335	317	759		161	768	660		18.0	21
9 P	2	0/5	222	251		66.8		63	1.5	116	4.9	2.0	4.2	236	.10	5.9	134	18	66.1	67.5	341	314	744		160	768	660		17.0	15
10 P	2	0/5	222	251				63	2.4	117	5.9	2.4	4.0	236	.15	6.1	132	18	62.2	68.6	362	313	777		164	[illegible]	660		17.0	4
11 P	2	0/5	223	251	1600			63	1.2	116	5.0	1.9	4.4	236	.14	6.7	132	18	33.1	68.1	362	323	784		116	781	660		15.0	8
12 M	2	0/5	222	251		67.5	68.0	62	2.0	110	5.3	1.5	3.6	236	-.06	1.9	132	19			313	301	761		147	704	660		15.0	16
1 A	2	0/5	221	251				62	2.2	110	5.2	1.4	3.6	236	-.17	2.2	121	16	61.0	70.0	361	327	735		151	733	660		15.6	5
2 A	2	0/5	222	250		67.6		62	1.8	106	5.1	1.2	3.8	236	.15	3.5	130	16	68.3	69.6	316	315	732		161	[illegible]	660		16.0	33
3 A	2	0/5	222	251				63	1.7	115	5.3	1.2	3.4	236	[illegible]	2.7	[illegible]	18	[illegible]	65.9	360	315	752		[illegible]	[illegible]	660		15.5	17
4 A	2	0/5	221	252		62.0	66.4	61	1.9	114	5.5	1.6	3.8	241	.10	9.8	138	18	64.1	69.0	367	331	710		163	742	660		15.5	11
5 A	2	0/5	222	253				60	1.1	115	5.2	1.6	3.6	236	-.09	2.6	131	18	63.4	65.5	361	328	751		161	745	660		15.5	7
6 A	2	0/5	222	253				60	1.8	113	5.2	1.6	3.6	236	.10	2.6	131	18	[illegible]	65.5	361	328	751		161	707	660		15.5	6

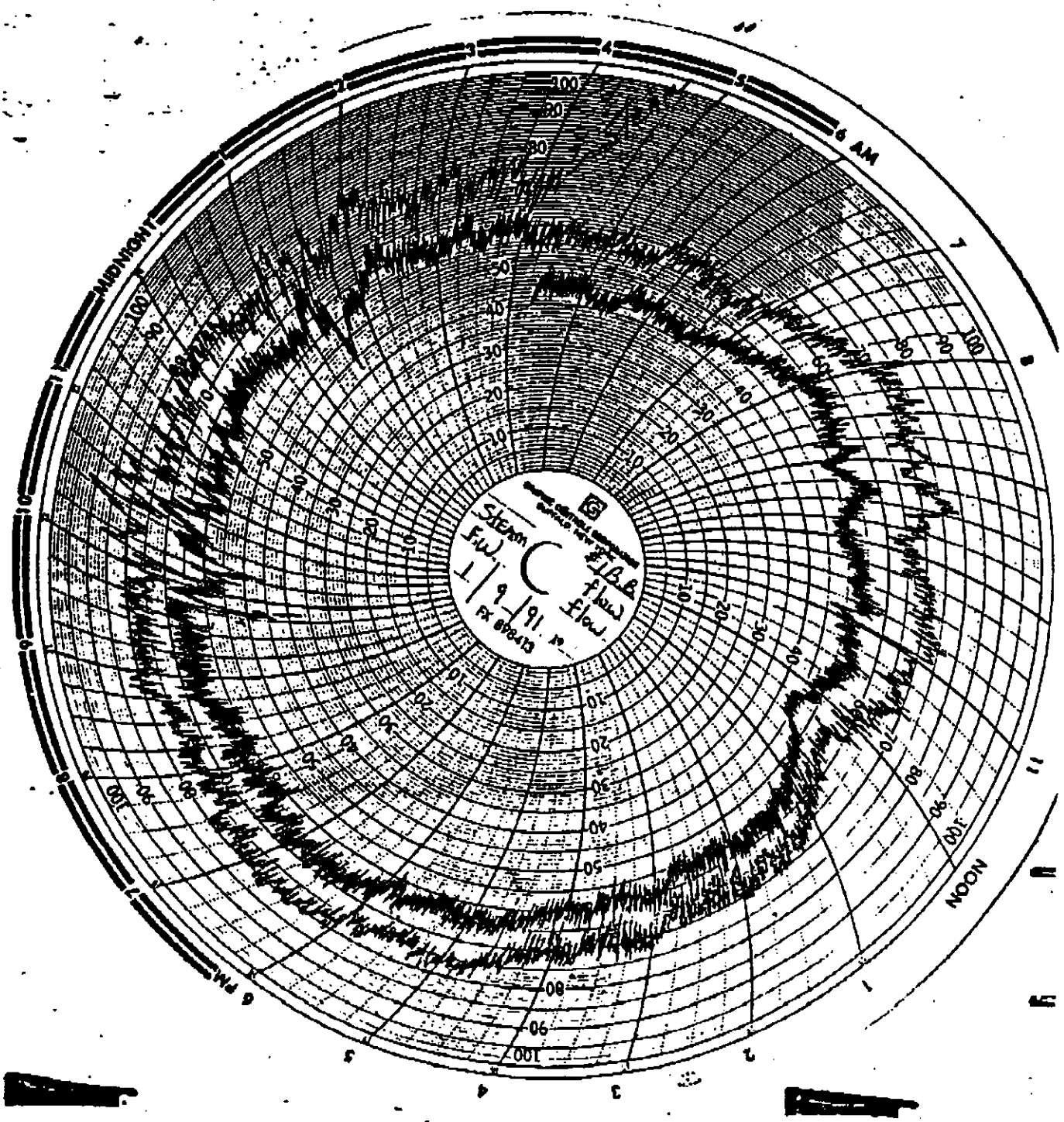
7/3 STARTED STICK TEST @ 10:00am
3/11 Ended Stick test @ 5:00pm

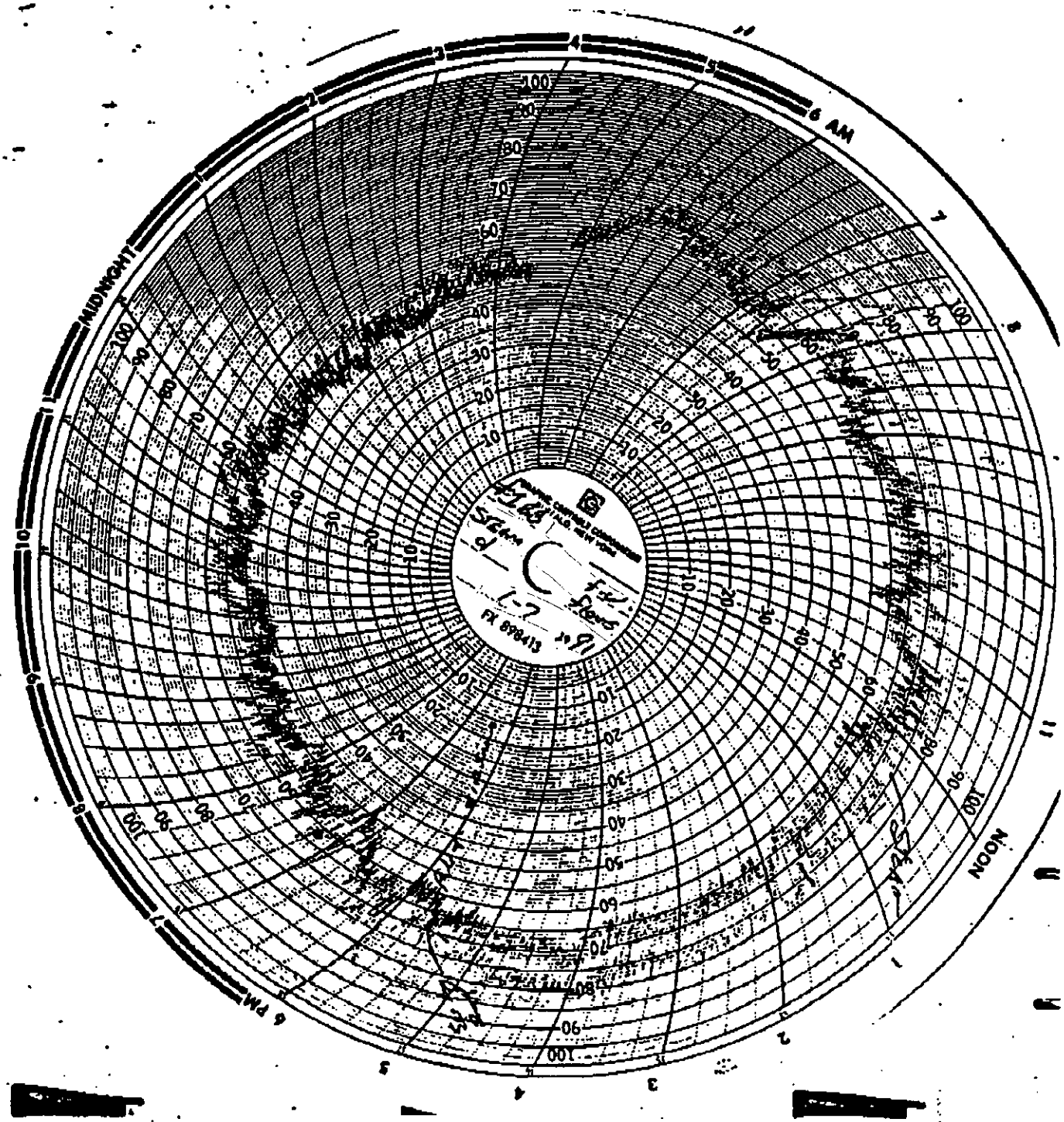
INTEGRATOR READINGS

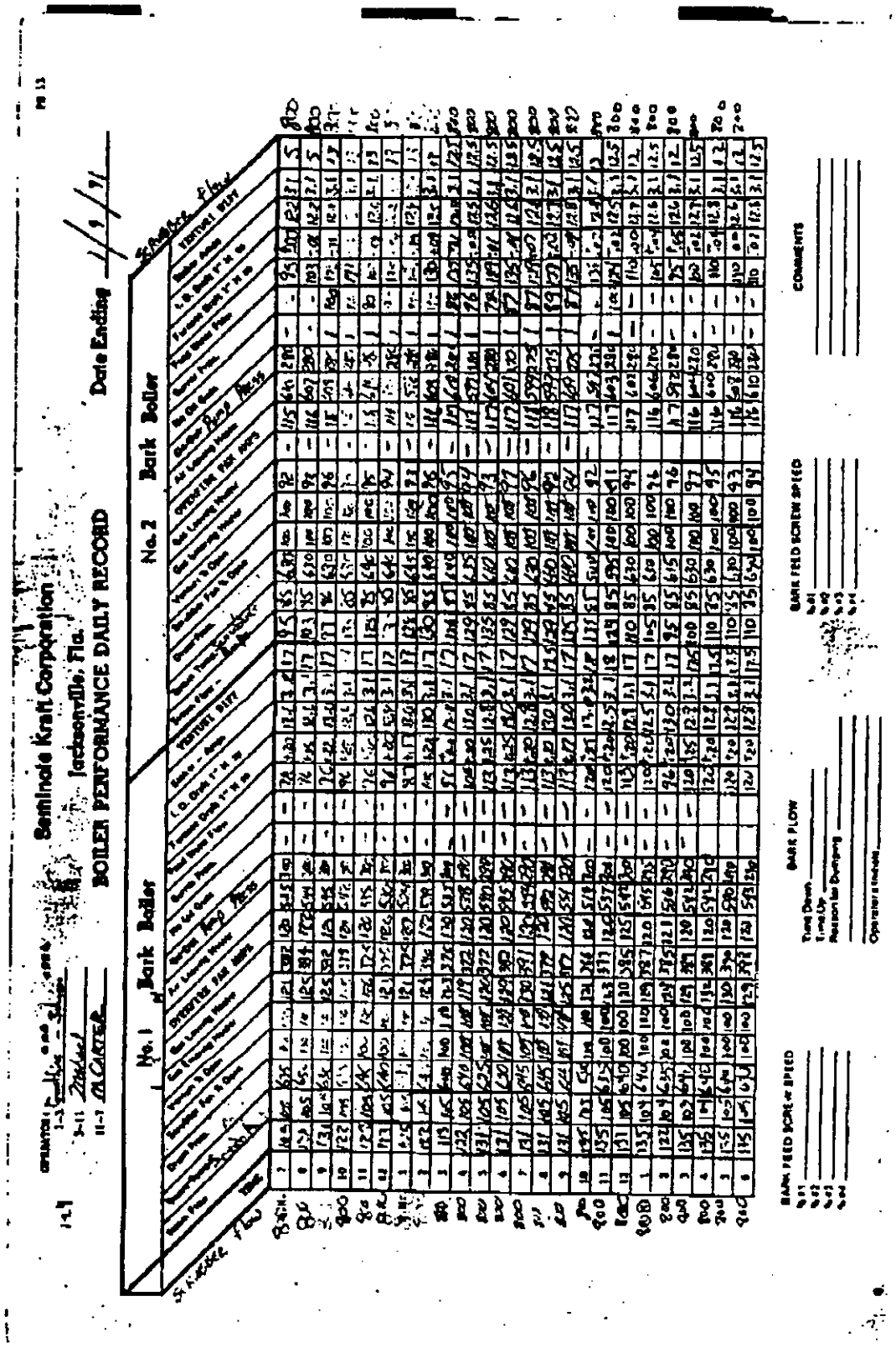
TIME	STEAM	LIQUOR
6 AM		
2 PM		
10 PM		
6 AM		

SHIFT OPERATOR:
1. Nelson
2. [illegible]


MIDNIGHT
6 AM
NOON
6 PM
STEAM
F.W.
1/8/91


MIDNIGHT
6 AM
NOON
6 PM
Steam
Flow
Differential
Pressure
Flow


MIDNIGHT
6 AM
NOON
6 PM


Seminole Kraft Corporation
Jacksonville, Fla.
BOILER PERFORMANCE DAILY RECORD
No. 1 Bark Boiler
No. 2 Bark Boiler
Date Ending
BARK FEED SCREW SPEED
BARK FLOW
COMMENTS

OPERATOR:
7-3 J.P. Gauthier
3-11 [illegible]
11-7 WRIGHT

Seminole Kraft Corporation
Jacksonville, Fla.

BOILER PERFORMANCE DAILY RECORD

Date Ending 1-7-91

Sewage Water Flow	TIME	No. 1 Bark Boiler																	No. 2 Bark Boiler																		Sewage Water Flow
500 A.M.	7	122	100	645	100	100	121	125	113	535	315	—	—	105	.15	125	3.4	16																		
EC	8	131	100	645	[illegible]	[illegible]	130	131	113	534	300	1	60	113	.10	12.7	3.4	16																		
Ecu	9	131	101	[illegible]	110	100	130	432	113	572	300	1	60	109	.10	12.5	3.4	16																		
[illegible]	10	131	101	645	100	[illegible]	121	426	115	571	300	1	60	113	.09	12.6	3.4	16																		
800	11	131	101	645	100	100	132	428	114	580	300	1	60	113	.13	12.6	3.4	16																		
800	12	131	101	645	100	100	130	429	114	579	300	1	60	113	.05	12.5	3.4	16																		
800	1	131	100	645	100	101	134	432	114	580	300	1	60	113	.11	12.4	3.4	16																		
800	2	131	100	645	100	100	139	433	113	580	380	1	60	113	.15	12.4	3.4	16																		
[illegible]	3	131	101	645	100	100	135	436	113	578	300	1	60	113	.15	12.4	3.4	16																		
[illegible]	4	131	100	645	100	100	136	436	113	587	300	1	60	113	.10	12.4	3.3	16																		
[illegible]	5	135	101	645	100	100	132	435	114	580	300	1	60	112	.10	12.4	3.2	16	104	88	630	100	100	105	–	116	566	270	–	–	100	[illegible]	12.8	3.0	15	[illegible]
[illegible]	6	132	101	640	100	100	119	434	114	579	300	1	60	113	.10	12.4	3.3	16	78	88	625	100	100	109	–	118	573	240	–	–	78	[illegible]	12.6	3.2	13	[illegible]
[illegible]	7	113	103	635	100	100	133	380	116	524	300	—	—	105	.30	12.4	3.9	11	103	86	630	100	100	107	–	118	571	230	–	–	110	[illegible]	12.1	3.0	13	[illegible]
[illegible]	8	96	100	620	100	100	157	372	115	513	300	—	—	97	.10	12.4	3.3	16	103	86	630	100	100	110	–	118	571	230	–	–	103	[illegible]	12.6	3.0	13	[illegible]
[illegible]	9	95	103	630	100	100	150	376	120	515	300	—	—	92	.15	13.0	3.3	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	108	–	120	565	270	-	-				[illegible]	[illegible]	[illegible]
600	10	96	110	630	100	100	134	387	110	527	320	—	—	96	.10	12.8	3.3	17	95	85	630	100	100	112	–	119	565	270	-	-	95	.10	12.8	3.0	13	800
800	11	96	104	630	100	100	103	391	116	534	300	-	-	96	.11	12.9	3.3	16	95	87	620	100	100	112	-	120	560	260	-	-	95	.03	12.8	3.0	13	800
800 N	12	105	103	635	100	100	134	331	117	537	300	-	-	96	.09	12.8	3.3	16	103	85	625	100	100	111	-	118	560	260	-	-	103	.03	12.6	3.0	13	800
800 A.M.	1	97	102	630	100	100	138	381	117	530	300	-	-	97	.16	12.1	3.3	16	95	85	625	100	100	114	-	117	571	260	-	-	97	.09	12.7	3.0	13	800
800	2	97	103	630	100	100	138	378	117	518	300	-	-	61	.20	12.8	3.3	17	95	85	620	100	100	114	-	117	564	260	-	-	95	.01	12.8	3.0	9	800
800	3	97	103	630	100	100	137	372	113	515	300	-	-	97	.05	12.8	3.3	16	95	85	625	100	100	106	-	119	568	250	-	-	95	.07	12.1	3.1	5	[illegible]
800	4	96	103	630	100	100	135	370	111	517	300	-	-	96	.13	12.8	3.4	17	103	85	625	100	100	101	-	119	579	260	-	-	103	.02	12.7	3.0	13	[illegible]
800	5	96	103	630	100	100	128	376	111	519	300	-	-	96	.05	12.8	3.4	17	103	85	625	100	100	108	-	119	576	260	-	-	103	.08	12.6	3.0	13	[illegible]
800	6	96	103	635	100	100	124	375	119	512	337	-	-	87	.06	12.8	3.4	17	103	86	625	100	100	105	-	119	571		-	-	103	.10	12.6	3.0	13	[illegible]

BARK FEED SCREW SPEED
%#1 ____
%#2 ____
%#3 ____
%#4 ____

BARK FLOW
Time Down ____
Time Up ____
Reason for Dumping ____

BARK FEED SCREW SPEED
%#1 ____
%#2 ____
%#3 ____
%#4 ____

COMMENTS
____

Table 3-3. Baseline Emissions for Recovery Boilers

Regulated Pollutant	Recovery Boiler No. 1			Recovery Boiler No. 2			Recovery Boiler No. 3		
	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Emission Rate (lb/hr)	Annual Emissions (TPY)
Particulate (TSP)	8,161	--	107.75	8,113	--	156	8,121	--	129.7
Particulate (PM10)	8,161	--	80.8	8,113	--	117.0	8,121	--	97.2
Sulfur dioxide	8,161	0.9	3.7	8,113	0.7	2.8	8,121	0.2	0.8
Nitrogen oxides	8,161	28.8	117.5	8,113	31.8	129.0	8,121	34.3	139.3
Carbon monoxide	8,161	274.2	1118.9	8,113	288.2	1169.0	8,121	115.2	467.7
Volatile org. compds.	8,161	27.4	111.8	8,113	47.5	192.7	8,121	9.0	36.5
Lead	8,161	0	0	8,113	0.0	0	8,121	0	0
Mercury	8,161	0	0	8,113	0.0011	0.0045	8,121	0	0
Beryllium	8,161	0	0	8,113	0.0	0	8,121	0	0
Arsenic	8,161	0	0	8,113	0.0	0	8,121	0	0
Fluorides	8,161	--	--	8,113	--	--	8,121	--	--
Sulfuric acid mist	8,161	2.34	9.5	8,113	4.90	19.9	8,121	3.42	13.9
Total reduced sulfur	8,161	--	7.2	8,113	--	12.3	8,121	--	14.0
Asbestos	8,161	--	--	8,113	--	--	8,121	--	--
Vinyl Chloride	8,161	0	0	8,113	0.0	0	8,121	0	0

Notes: Operating hours represent average of 1990-1991 actual operating hours.

Emission rates are measured emission rates during actual stack test, unless otherwise noted below.

PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.

PM10 is based on extrapolation of AP-42 data for recovery boilers: 75% of PM is PM10.

Fluorides and asbestos were not measured; there are no emission factors; there are no known emissions.

Table 3-4. Baseline Emissions for Smelt Dissolving Tanks

Regulated Pollutant	Smelt Tank No. 1		Smelt Tank No. 2		Smelt Tank No. 3	
	Operating Hours (hr/yr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Annual Emissions (TPY)	Operating Hours (hr/yr)	Annual Emissions (TPY)
Particulate (TSP)	8,161	22.6	8,113	23.8	8,133	36.9
Particulate (PM10)	8,161	20.2	8,113	21.3	8,133	33.0
Sulfur dioxide	8,161	3.0	8,113	3.0	8,133	3.0
Nitrogen oxides	--	--	--	--	--	--
Carbon monoxide	--	--	--	--	--	--
Volatile org. compds.	--	--	--	--	--	--
Lead	--	--	--	--	--	--
Mercury	--	--	--	--	--	--
Beryllium	--	--	--	--	--	--
Arsenic	--	--	--	--	--	--
Fluorides	--	--	--	--	--	--
Sulfuric acid mist	--	--	--	--	--	--
Total reduced sulfur	8,161	1.6	8,113	1.8	8,133	1.6
Asbestos	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--

Notes: Operating hours represent average of 1990-1991 actual operating hours.

PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.

PM10 is based on AP-42 data for controlled PM from smelt tanks: 89.5% of PM is PM10.

SO_2 emissions based on AP-42 factor of 0.2 lb/ton ADUP, and 80% removal efficiency for spray chamber with demister pad for PM control. Total pulp production was as follows:

1990--459,683 tons ADUP
1991--395,040 tons ADUP
Average--427,362 tons ADUP

427,362 tons ADUP x 0.2 lb/ton x (1-0.80) ÷ 2,000 lb/ton = 8.55 TPY

Divide SO_2 emissions between smelt tanks based on average operating hours.

Table 3-5. Baseline Emissions for Lime Kilns

Regulated Pollutant	Emission Factor	Lime Kiln No. 1 Activity Factor	Lime Kiln No. 1 Annual Emissions (TPY)	Lime Kiln No. 2 Activity Factor	Lime Kiln No. 2 Annual Emissions (TPY)	Lime Kiln No. 3 Activity Factor	Lime Kiln No. 3 Annual Emissions (TPY)
Particulate (TSP)	--	--	3.8	--	21.6	--	19.6
Particulate (PM10)	--	--	3.7	--	21.2	--	19.3
Sulfur dioxide	0.16/2.18/1.76 lb/hr^a	1,170 hr/yr	0.1	7,732 hr/yr	8.4	7,598 hr/yr	6.7
Nitrogen oxides	15.3/10.7/15.9 lb/hr^a	1,170 hr/yr	9.0	7,732 hr/yr	41.4	7,598 hr/yr	60.4
Carbon monoxide	0.1 lb/ton ADUP	1,170 hr/yr	1.5	7,732 hr/yr	10.2	7,598 hr/yr	10.0
Volatile org. compds.	0.13 lb/MM Btu	31,751 MM Btu/yr	2.1	293,599 MM Btu/yr	19.1	286,343 MM Btu/yr	18.6
Lead	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--
Beryllium	--	--	--	--	--	--	--
Arsenic	--	--	--	--	--	--	--
Fluorides	--	--	--	--	--	--	--
Sulfuric acid mist	--	--	--	--	--	--	--
Total reduced sulfur	--	--	0.2	--	1.7	--	1.4
Asbestos	--	--	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--	--

* Emission factors for Lime Kilns No. 1, No. 2, and No. 3, respectively, based on actual test data.

Notes: Operating hours represent two-year average, 1990-1991.1

PM and TRS annual emissions are based on average 1990-1991 emissions as reported in Annual Operation Report For Air Emission Sources.

PM10 is based on AP-42 data for lime kilns controlled with venturi scrubber: 98.3% of PM is PM10.

SO_x emissions based on average of stack tests conducted in 1989.

NO_x emissions based on stack tests conducted on each lime kiln in 1992.

CO emissions based on AP-42 factor of 0.1 lb/ton ADUP.

Total pulp production was as follows:

1990--459,683 tons ADUP

1991--395,040 tons ADUP

Average--427,362 tons ADUP

CO: 427,362 tons ADUP x 0.1 lb/ton / 2,000 lb/ton = 21.4 TPY

Divide emissions between lime kilns based on average operating hours in 1990-1991.

VOC emissions based on heat input and NCASI emission factors (see attached)

Heat input based on actual fuel oil fired in kilns in 1991, using 142,000 Btu/gal for fuel oil.

	Kiln 1	Kiln 2	Kiln 3
Gallons--	223,600	2,067,600	2,016,500

Table 3-6. PSD Source Applicability Analysis, SKC Package Boiler Project

Regulated Pollutant	Baseline Emissions (TPY)										Future Emissions (TPY)				Net Change (TPY)	Significant Emission Rate (TPY)	PSD Applies ?
	RB1	RB2	RB3	SDT1	SDT2	SDT3	LK1	LK2	LK3	Totals	PB1	PB2	PB3	Totals			
Particulate (TSP)	107.8	156.0	129.7	22.6	23.8	36.9	3.8	21.6	19.6	521.8	36.05	36.05	36.05	108.1	-413.7	25	No
Particulate (PM10)	80.8	117.0	97.2	20.2	21.3	33.0	3.7	21.2	19.3	413.7	18.00	18.00	18.00	54.0	-359.7	15	No
Sulfur dioxide	3.7	2.8	0.8	2.9	3.0	3.0	0.1	8.4	6.7	31.4	216.15	216.15	216.15	648.5	617.1	40	Yes
Nitrogen oxides	117.5	129.0	139.3	--	--	--	9.0	41.4	60.4	496.6	153.04	153.04	153.04	459.1	-37.5	40	No
Carbon monoxide	1,118.9	1,169.0	467.7	--	--	--	1.5	10.2	10.0	2,777.3	273.31	273.31	273.31	819.9	-1,957.4	100	No
Vol. org. compds.	111.8	192.7	36.5	--	--	--	2.1	19.1	18.6	381.9	1.05	1.05	1.05	3.2	-378.7	40	No
Lead	0	0	0	--	--	--	--	--	--	0.0	0.0064	0.0064	0.0064	0.019	0.019	0.6	No
Mercury	0	0.0045	0	--	--	--	--	--	--	0.0045	0.0024	0.0024	0.0024	0.0073	0.0028	0.1	No
Beryllium	0	0	0	--	--	--	--	--	--	0.0	0.0018	0.0018	0.0018	0.0054	0.0054	0.0004	Yes
Fluorides	--	--	--	--	--	--	--	--	--	0.0	0.023	0.023	0.023	0.069	0.069	3	No
Sulfuric acid mist	9.5	19.9	13.9	--	--	--	--	--	--	43.3	10.8	10.8	10.8	32.4	-10.9	7	No
Total reduced sulfur	7.2	12.3	14.0	1.6	1.8	1.6	0.2	1.7	1.4	41.8	--	--	--	0	-41.8	10	No
Asbestos	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0.007	No
Vinyl Chloride	0	0	0	--	--	--	--	--	--	--	--	--	--	--	0	0	No

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

APR 4 1990

4APT-AEB

RECEIVED
APR 09 1990
DER - BAQM

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

RE: Seminole Kraft Corporation (PSD-FL-141)

Dear Mr. Fancy:

This is to acknowledge receipt of a package from your office transmitting a request from Seminole Kraft Corporation to modify their prevention of significant deterioration (PSD) permit, dated February 16, 1990. As discussed between Mr. Pradeep Raval of your staff and Mr. Gregg Worley of my staff on March 30, 1990, we have the following comments.

CREDITABLE EMISSIONS REDUCTIONS

The source has requested that conditions be placed in the PSD permit to allow them the flexibility to convert to 100% recycled fiber in lieu of constructing the new recovery boiler. In the event that the source makes the decision to convert to recycled fiber, the source would like to retain emissions credit for the units which would be shut down at the facility (i.e., the existing kraft pulp mill). The credit for shutting down any units may be retained but we must emphasize that such credit must be based on actual operating data from the two years previous to the shutdown, unless another time period is determined to be more representative of actual operating conditions. The information submitted by Seminole Kraft is based on the years 1983-84. Apparently the source used the operating hours of this time period along with presently permitted allowable emission rates to arrive at their creditable emission reductions. This is not acceptable. We would suggest that it would be prudent of FDER to require testing of the units prior to shutdown for the pollutants which are to be credited. In any case, the actual emission rates must be used rather than the permitted allowable rates unless the actual emissions exceed the allowable emissions.

In a related matter, we do not think it is wise to include as a permit condition the language suggested by the source in provision 15 (d) which specifies what credits are available prior to the shutdown of the units. It appears that such a provision would lock FDER into accepting those numbers as creditable emissions no matter what the source operation was prior to shutdown. The fact that emissions resulting from federally enforceable shutdowns are creditible does not need to be established in a permit; the fact that such emissions are creditable is already established in federal and Florida regulations. In addition, the contemporaneous time period for which the emissions are creditable is established in regulations. Thus, it is redundant to state that "...the following emissions reductions will be available to Seminole Kraft for five (5) years from the date construction on this alternative is complete or November 12, 1992, whichever is earlier." By establishing a federally enforceable shutdown date at the completion of construction or November 12, 1992, whichever is earlier, it is understood that emissions credit is available for a period of five years from that point.

EFFECT ON THE AES CEDAR BAY PROJECT

The AES project which is currently under review for permitting plans to use the ambient impacts of shutting down several units at Seminole Kraft in their air quality analysis. How will the proposed permit amendment by Seminole Kraft affect the AES project?

Thank you for the opportunity to review and comment on this proposal by Seminole Kraft. If you have any questions or comments on this matter, please do not hesitate to contact Mr. Gregg Worley of my staff at 404/347-2864.

Sincerely yours,

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

ITEM 4

1.0 INTRODUCTION

Seminole Kraft Corporation (SKC) currently operates a 100-percent recycled fiber paper mill facility in Jacksonville, Florida. For several years, SKC planned for the shutdown of its kraft pulping facilities and for the conversion to a 100-percent recycled fiber facility. This conversion was completed in September 1992 with the shutdown of all kraft pulping facilities which produced kraft paper from virgin wood pulp. Sources of air emissions associated with the kraft pulping operation included three recovery boilers and associated smelt dissolving tanks, three lime kilns, a lime slaker, and the pulp digesters and multiple-effect evaporators. Two bark boilers and three power boilers also operated in support of the kraft pulping facility by supplying steam for the process. These five boilers will continue to operate to support the recycle fiber facility until the Applied Energy Services (AES) Cedar Bay facility begins commercial operation.

The AES Cedar Bay cogeneration facility, licensed under the Florida Power Plant Site Certification Act (FPPSCA), will be located adjacent to the existing SKC facility. This coal-fired power plant, now under construction, will provide part of the steam required for the recycle fiber facility. Under the provisions of the site certification for the power plant, the two existing bark boilers and three power boilers at SKC are to be taken out of service and the permits surrendered when the AES Cedar Bay facility begins commercial operation. These shutdowns are to provide creditable emission reductions to AES Cedar Bay under the federal prevention of significant deterioration (PSD) new source review regulations. The shutdown of the SKC recovery boilers, smelt tanks, lime kilns and lime slaker provide SKC with creditable emission reductions under the PSD regulations (refer to documentation in Appendix C).

The recycle fiber facility will require additional steam beyond that provided by the AES Cedar Bay facility. Three new package boilers will be installed to provide this necessary steam. These package boilers will be fueled with low sulfur fuel oil as the primary fuel and natural gas as the backup fuel.

Based on the historic actual emissions from the recovery boilers, smelt tanks, and lime kilns recently shutdown at SKC, and the requested maximum emissions for the new package boilers, the proposed modification will constitute a major modification at a major stationary source under current federal and Florida PSD regulations. This report addresses the requirements of the PSD review procedures, pursuant to rules and regulations implementing the Clean Air Act (CAA) Amendments of 1977. The Florida Department of Environmental Regulation (FDER) has PSD

2.0 PROJECT DESCRIPTION

2.1 GENERAL

SKC currently operates a 100 percent recycled fiber paper mill located in Jacksonville, Florida (see Figure 2-1). SKC has recently (September 1992) shut down the kraft pulping operation and converted to a 100-percent recycle fiber paper mill facility. Sources of air emissions associated with the kraft pulping operation included three recovery boilers and associated smelt dissolving tanks, three lime kilns, a lime slaker, and the batch pulp digesters and multiple-effect evaporators. Two bark boilers and three power boilers were also operated to provide steam for the process. These five boilers will continue to operate to supply the recycle fiber paper mill facility with steam until the AES Cedar Bay facility begins commercial operation.

AES Cedar Bay holds a site certification and PSD permit for a coal-fired cogeneration facility to be located adjacent to the SKC site. This facility, which was licensed under FPPSCA and is now under construction, will provide part of the steam required for the SKC recycle fiber facility. Under the provisions of the site certification for the power plant, the existing two bark boilers and three power boilers at SKC are to be permanently shutdown, rendered inoperable and the permits surrendered to FDER once the AES Cedar Bay facility begins commercial operation. These shutdowns are to provide creditable emission reductions to AES Cedar Bay under the federal PSD new source review regulations.

The batch digesters, evaporators, recovery boilers, smelt tanks, lime kilns, and lime slaker at SKC have all been shut down. These shutdowns constitute creditable emission reductions for SKC under the PSD regulations. The creditable emission reductions are based on actual testing as prescribed in a letter from FDER dated June 6, 1990, and documented in SKC's letters dated September 28, 1992, and October 21, 1992 (refer to Appendix C). The creditable emission decreases are described further in Section 3.4, Source Applicability.

The recycle fiber facility will require additional steam beyond that provided by the AES Cedar Bay facility. In order to provide this steam, SKC is proposing to install three package boilers. These package boilers will be fueled with low sulfur fuel oil as the primary fuel and natural gas as the backup fuel. The No. 2 fuel oil will have a maximum sulfur content equivalent to 0.5 lb/MMBtu.

Georgia Department of Natural Resources
205 Butler Street, S.E., East Floyd Tower, Atlanta, Georgia 30334
Joe D. Tanner, Commissioner
Harold F. Reheis, Director
Environmental Protection Division

December 10, 1992

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

Dear Mr. Fancy:

This is in regard to your letter of December 4 which enclosed the PSD application package from Seminole Kraft Corporation near Jacksonville.

Our engineers have reviewed the PSD application and have noted that the sulfur dioxide emission calculations are based on an assumed average sulfur content of 0.3% for the No. 2 fuel oil to be burned. The subsequent analyses of control options and cost effectiveness and other items is based on this 0.3% sulfur content.

Since the applicable federal NSPS allows up to 0.5% sulfur and No. 2 fuel can go that high in sulfur content, we recommend and think it appropriate that if the analysis based on 0.3% sulfur in the fuel oil is accepted that the permit make that a specific limitation, otherwise the subsequent cost effectiveness and other control analyses would not be meaningful.

We appreciate your providing this opportunity to us and trust that our comments will be useful in your review and final processing of this requested permit.

Sincerely,

R. H. Collom

Robert H. Collom, Jr.
Chief
Air Protection Branch

RHC:njj
cc: J. Reynolds
C. Holladay

KBN

December 9, 1992

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

RE: Correction to PSD Class I Analysis for the Seminole Kraft Package Boiler PSD Application

Dear Mr. Fancy:

It was discovered that the UTM North coordinate for Container Corporation of America (i.e., 3394200) was incorrectly entered as 3374200 in the Class I modeling analysis. Only the Class I analysis was affected. The affected computer printouts were rerun in-house and all changes to the PSD application are provided.

The maximum predicted PSD increments do not change significantly. The maximum predicted annual increment is unchanged. The maximum predicted 24- and 3-hour maximum increments decline slightly from 4.06 and 19.38 $\mu g/m^3$, respectively, to 4.03 and 19.32 $\mu g/m^3$.

If you need further information or have any questions, please call me.

Sincerely yours,

Steven R. Marks
Senior Meteorologist

SRM/dmm

Enclosure

cc: Mike Riddle
Curt Barton
Craig Hurd
David Buff
File (2)
C. Reynolds
C. Holladay
R. Robinson, BESD
A. Kutzpa, NE Dist
G. Harper, EPA
B. Mitchell, NPS
B. Collom, G EPD

12-14-92

RECEIVED
DEC 10 1992
Division of Air Resources Management

12169A1/7 KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

Table 6-20. Maximum Predicted SO_2 Concentrations for the PSD Class I Screening Analysis (Revised 12/09/92)

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Location[a] UTM-E (m)	Receptor Location[a] UTM-N (m)	Period Ending (YYMMDDHH)
Annual	0.0	390000.	3384000.	83------
	0.0	370000.	3383000.	84------
	-0.1	392000.	3400000.	85------
	0.0	392000.	3400000.	86------
	0.0	370000.	3383000.	87------
24-Hour[b]	3.9	390000.	3395000.	83041324
	3.9	392000.	3400000.	84112724
	4.0	392000.	3400000.	85041224
	3.8	392000.	3400000.	86043024
	3.6	392000.	3400000.	87072124
3-Hour[b]	15	391000.	3417000.	83111815
	19	391000.	3390000.	84082115
	17	390000.	3395000.	85022315
	17	390000.	3395000.	86100715
	15	391000.	3417000.	87122412

Note: YY=Year, MM=Month, DD=Day, HH=Hour

[a] All receptor coordinates are reported in Universal Transverse Mercator (UTM) coordinates.
[b] All short-term concentrations indicate highest, second-highest concentrations.

Table E-1. Source Contributions to Key Short-Term AAQS and PSD Maximum Impacts (Page 1 of 2) (Revised 12/09/92)

AAQS: 24 Hour

Total Modeled Concentration: 421.95 $\mu g/m^3$ at (230° ,8500m), End Date: 83102124

SKC Package Boilers:	0.19 $\mu g/m^3$
AES Cedar Bay:	0.55
Container Corp.:	6.87
Gilman Paper:	0.69
ITT Rayonier:	4.92
Anheuser Busch:	51.27
SCM Glidco:	355.86
Georgia Pacific:	1.60

AAQS: 3-Hour

Total Modeled Concentration: 864.4 $\mu g/m^3$ at (220°, 5000m), End Date: 83030606

Jefferson Smurfit:	33.84
JEA-Kennedy:	460.44
US Gypsum:	368.52
Occidental Chemical:	1.60

PSD Class II: 24-Hour

Total Modeled Concentration: 133.5 $\mu g/m^3$ at (250°, 4500m), End Date: 83101024

SKC Package Boilers:	0.21 $\mu g/m^3$
SKC offsets:	-8.63
AES Cedar Bay:	0.17
Gilman Paper:	0.19
ITT Rayonier:	-0.10
Anheuser Busch:	141.66

PSD Class II: 3-Hour

Total Modeled Concentration: 447.48 $\mu g/m^3$ at (250°, 3900m), End Date: 86052415

Anheuser Busch: 447.48

Table E-1. Source Contributions to Key Short-Term AAQS and PSD Maximum Impacts (Page 2 of 2)
(Revised 12/09/92)

PSD Class I; 24-Hour

Total Modeled Concentration: 4.03 $\mu g/m^3$ at (392000, 3400000), End Date: 85041224

SKC Package Boilers:	0.22 $\mu g/m^3$
AES Cedar Bay:	1.17
SKC offsets:	2.67
Jefferson Smurfit:	-0.01
Gilman Paper:	0.17
JEASJ:	4.89
JEANS:	0.29
JEAKEN:	-0.10
Anheuser Busch	0.21
SCM Glidco:	-0.01
ES Metals:	-0.12
Maxwell House:	-0.01

PSD Class I; 3-Hour

Total Modeled Concentration: 19.32 $\mu g/m^3$ at (391000, 3390000), End Date: 84042115

SKC Package Boilers:	0.41 $\mu g/m^3$
AES Cedar Bay:	2.93
SKC offsets:	-4.56
JEASJ:	19.66
JEANS:	0.58
JEAKEN:	-0.04
Anheuser Busch:	0.34

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 4, 1992

Mr. R. H. Collom, Jr., Chief
Air Protection Branch
Environmental Protection Division
Georgia Department of Natural Resources
270 Washington Street, S.W.
Atlanta, GA 30334

Dear Mr. Collom:

RE: Seminole Kraft Corporation
New Package Boilers
Duval County, PSD-FL-198

Enclosed for your information is the above referenced PSD application package. We will send you a copy of the Bureau of Air Regulation's proposed final action on this project when it is available. If you have any questions or comments, please contact John Reynolds or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

for Patricia G. Adams

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 2, 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: Seminole Kraft Corporation
New Package Boilers
Duval County, PSD-FL-198

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 December 21, 1992. 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 2, 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: Seminole Kraft Corporation•
New Package Boilers
Duval County, PSD-FL-198

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 December 21, 1992. 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