P 938 762 617

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. Henry Hirschman, GP Corp.	
Street and No. P.O. Box 919	
P.O., State and ZIP Code Palatka, FL 32078-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 7-11-89 Permit: AC 54-163040	

PS Form 3800, June 1985

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

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
P. O. Box 919
Palatka, FL 32078-0919

4. Article Number 617
P 938 762 ~~716~~

Type of Service:
☐ Registered ☐ Insured
XX Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Georgia Pacific

6. Signature — Agent
X S. Brown

7. Date of Delivery
7/12/89

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

PS Form 3811, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

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

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32078-0191

July 10, 1989

Enclosed is construction permit No. AC 54-163040 for Georgia-Pacific Corporation to increase the operation rate of the No. 4 combination power boiler the applicant's facility near Palatka, Putnam County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

D. A. Buff, P.E.
V. L. Adams
W. P. Stewart, NE District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 7-11-89.

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

Martha J. Wise 7-11-89
Clerk Date

Final Determination

Georgia-Pacific Corporation

No. 4 Combination Power Boiler

Permit No. AC 54-163040

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

July 5, 1989

Final Determination

The application by Georgia-Pacific Corporation to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler is physically capable of accommodating has been reviewed by the Bureau of Air Quality Management. The project is to be located at Georgia-Pacific's kraft pulp mill which is on the north side of State Road 216 near Palatka, Putnam County, Florida. Public notice of the Department's intent to issue the permits appeared in The Palatka Daily News on May 29, 1989.

Copies of the Technical Evaluation and Preliminary Determination and associated materials have been available at the Department's Northeast District office in Jacksonville, and the Bureau of Air Quality Management office in Tallahassee.

Only two comments were received. One of the comments was from the company and the other was from the Department's Northeast District Office. The comments were generated by two statements in the Technical Evaluation and Preliminary Determination. The statements indicated that the company would be required to install a continuous emission monitor on the No. 4 combination power boiler. But, the requirement was not reflected in the draft permit.

Comment: The company wanted to know if the Department intended to require the installation and operation of a continuous emission monitor on this source.

Response: The referenced statements in the Technical Evaluation and Preliminary Determination were intended to notify the company that continuous emission monitoring equipment would be required in the event that the No. 4 combination power boiler met the criteria in F.A.C. Rule 17-2.710 [Continuous Monitoring Requirements]. The installation of continuous emission monitoring equipment is not required until the No. 4 combination power boiler triggers the regulatory requirement.

Comment: The Northeast District office wanted to know if the permit should contain a specific condition stating the conditions that would require the installation of a continuous monitor pursuant to F.A.C. Rule 17-2.710 [Continuous Monitoring Requirements].

Response: The Department does not see any reason to include such a specific condition. General Condition No. 3 states, "As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit." This means that a permittee is not exempt from an applicable regulation simply because the requirement was not stated in the permit. The Department does not see any reason to include such a specific condition, since both parties are familiar with the provisions of F.A.C. Rule 17-2.710 [Continuous Monitoring Requirements].

Comment: The Department has taken the liberty of making two minor changes to the permit. The first change is the deletion of the references to Ringlemann Numbers in Specific Condition No. 4. The term was recently deleted from F.A.C. Chapter 17-2, because it is obsolete. The second change involves the renumbering of Specific Condition Nos. 11, 12, and 13. Specific Condition No. 13 is now Specific Condition No. 11, Specific Condition No. 11 is now Specific Condition No. 12, and Specific Condition No. 12 is now Specific Condition No. 13.

The final action of the Department is to issue the permit with the clarifications and amendments described above.

Florida Department of Environmental Regulation

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

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

PERMITTEE:
Georgia-Pacific Corporation
P. O. Box 919
Palatka, Florida 32078-0919

Permit Number: AC 54-163040
Expiration Date: Dec. 31, 1989
County: Putnam
Latitude/Longitude: 29°41'00"N
81°40'45"W
Project: No. 4 Combination Power Boiler

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

The operation rate of the No. 4 combination power boiler will be increased to the maximum bark burning rate that the boiler has always been physically capable of accommodating. The No. 4 combination power boiler will become subject to federally enforceable permit conditions.

The No. 4 combination power boiler is capable of accommodating a maximum heat input rate of 512.7 million Btu/hr. when burning wood waste/bark alone or in combination with No. 6 fuel oil. This is equivalent to a maximum wood waste/bark feed rate of ~115,704 lbs./hr. of wood waste/bark and a steam production rate of ~356,000 lbs./hr. @ 1275 psig and 900°F. The boiler is capable of accommodating a maximum heat input rate of 418.6 million Btu/hr. when burning only No. 6 fuel oil. This is equivalent to a No. 6 fuel oil feed rate of ~2,755 gallons/hr. and a steam production rate of ~349,000 lbs./hr. @ 1275 psig and 900°F.

The No. 4 combination power boiler is a front-fired spreader stoker type furnace that was manufactured by Babcock and Wilcox in 1965. A Detroit stoker introduces the bark/wood waste into the furnace. The boiler is equipped with six oil guns located on the front face of the furnace in a pattern two high by three wide. The No. 4 combination boiler is equipped with one Zurn and two UOP centrifugal collector systems connected in series followed by a custom designed Research-Cottrell IP-3355 electrostatic precipitator.

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

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

Attachments are listed below:

1. Permit application for No. 4 Combination Power Boiler Stack, received April 5, 1989.

2. Vernon Adams' letter to C. H. Fancy, dated May 5, 1989, received May 2, 1989.

3. Technical Evaluation and Preliminary Determination dated May 20, 1989.

4. Final Determination dated July 5, 1989.

GENERAL CONDITIONS:

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

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

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

GENERAL CONDITIONS:

other aspects of the total project which are not addressed in the permit.

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

13. This permit also constitutes:

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

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

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

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

c. Records of monitoring information shall include:

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

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or

GENERAL CONDITIONS:

were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The No. 4 combination power boiler is permitted to operate continuously (i.e., 8,760 hrs./yr.).

2. The maximum heat input rate to the No. 4 combination power boiler shall not exceed 512.7 million Btu per hour (MMBtu/hr.) when burning wood waste/bark either alone or in combination with No. 6 fuel oil. The maximum heat input rate to the No. 4 combination boiler shall not exceed 418.6 MMBtu/hr. when burning only No. 6 fuel oil. The maximum heat input shall be determined on the basis of F-factors pursuant to 40 CFR 60 revised as of July 1, 1988.

3. Particulate emissions from the No. 4 combination power boiler shall neither exceed:

a. 0.3 lb./MMBtu of heat input due to wood waste/bark plus 0.1 lb./MMBtu of heat input due to No. 6 fuel oil, nor

b. 125.6 lbs./hr. (550.1 tons/yr.) when wood waste/bark is burned either alone or in combination with No. 6 fuel oil, nor

c. 41.9 lbs./hr. (183.5 tons/yr.) when operated solely on No. 6 fuel oil.

Particulate emissions shall be determined by EPA Methods 1, 2, 3, and 5 (40 CFR 60 revised as of July 1, 1988).

4. Visible emissions from the No. 4 combination power boiler shall neither exceed:

a. a density of 30 percent opacity except that a density of 40 percent opacity is permissible for not more than two minutes in any one hour when burning wood waste/bark either alone or in combination with No. 6 fuel oil, nor

b. a density of 20 percent opacity except that a density of 40 percent opacity is permissible for not more than two minutes in any one hour when burning only No. 6 fuel oil.

Visible emissions shall be determined by EPA Method 9 (40 CFR 60 revised as of July 1, 1988).

5. Sulfur dioxide emissions from the No. 4 combination power boiler shall not exceed 1,151 lbs./hr. (5,041.4 tons/yr.) when burning only No. 6 fuel oil. Sulfur dioxide emissions shall be determined by EPA Methods 1, 2, 3, and 6 (40 CFR 60 revised as of July 1, 1988). Alternatively, sulfur dioxide emissions may be determined through the use of fuel sampling based on ASTM D1552-83 providing the sulfur content of the No. 6 fuel oil does not exceed 2.5%.

6. The permittee shall monitor and record the following parameters whenever the No. 4 combination power boiler is in operation:

a. The hourly steam production rate of the No. 4 combination power boiler in lbs./hr., the pressure of the steam in psig, and the temperature of the steam in °F.

b. The hourly feed rate of No. 6 fuel oil to the No. 4 combination power boiler.

c. The sulfur content of each shipment of oil that is to be burned in the No. 4 combination power boiler.

7. All excess emissions from the No. 4 combination power boiler shall be subject to the applicable requirements of F.A.C. Rules 17-2.240 [Circumvention], 17-2.250 [Excess Emissions], and 17-4.130 [Plant Operation Problems].

8. All monitoring and recording systems shall be regularly calibrated and maintained in proper working condition pursuant to written procedures and schedules based on the recommendations of the instrument manufacturer.

9. The No. 4 combination power boiler shall be equipped with the point source sampling facilities required by F.A.C. Rule 17-2.700.

10. Point source compliance testing shall be conducted pursuant to the following requirements:

a. Compliance testing shall initially be conducted prior to the expiration date of this permit and annually, thereafter.

b. Point source compliance testing shall be conducted with all sources operating at 90 to 100 percent of operation rates allowed by Specific Conditions No. 2.

c. Compliance test reports shall include all of the information required by F.A.C. Rule 17-2.700(7).

d. Compliance test reports shall be submitted within 45 days after completion of the testing.

e. Notification of testing shall be furnished to the DER Northeast District office at least 15 days prior to the date that testing is to commence.

f. Emission testing for the purpose of demonstrating compliance with specific conditions Nos. 3.c. and 4.b. shall not be required if the No. 4 combination power boiler was operated solely on No. 6 fuel oil for less than 400 hours during the year prior to the required testing.

11. The permanent source identification number assigned to the permitted source is 31JAX54000516 No. 4 combination power boiler. Please cite this number on all test reports and other correspondence for each permitted point source.

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

13. The application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit or within 45 days after the completion of compliance testing whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, and certification that construction was completed noting any deviations from the conditions in the construction permit, and

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

SPECIFIC CONDITIONS:

compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 7 day
of July, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann

Dale Twachtmann, Secretary

BEST AVAILABLE COPY

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

TO: Dale Twachtmann

for FROM: Steve Smallwood

SUBJ: Approval of Construction Permit No. AC 54-163040
Georgia-Pacific Corporation

DATE: July 5, 1989

Attached for your approval and signature is a permit prepared by Central Air Permitting for the above mentioned company to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler has always been physically capable of accommodating and to make the No. 4 combination power boiler subject to federally enforceable permit conditions. The project is located at Georgia-Pacific's kraft pulp mill on the north side of State Road 216 near Palatka, Putnam County, Florida.

This is not a controversial action.

I recommend your approval and signature.

SS/CH/h

attachments

RECEIVED
JUL 6 1989
Office of the Secretary

Check Sheet

Company Name: Georgia Pacific Corp
Permit Number: AC 54-163040
PSD Number:
Permit Engineer:

Application:

- [x] Initial Application
  - [x] Incompleteness Letters
  - [x] Responses
  - [ ] Waiver of Department Action
  - [ ] Department Response
  - [ ] Other

Cross References:

- [x] AO 54-58340
- [x] AC 54-43773
- [ ] AC 54-43791
  AC54-43795

Intent:

- [x] Intent to Issue
- [x] Notice of Intent to Issue
- [x] Technical Evaluation
- [ ] BACT Determination
- [x] Unsigned Permit
- Correspondence with:
  - [ ] EPA
  - [ ] Park Services
  - [ ] Other
- [x] Proof of Publication
  - [ ] Petitions - (Related to extensions, hearings, etc.)
  - [ ] Waiver of Department Action
  - [ ] Other

Final Determination:

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

Post Permit Correspondence:

- [x] Extensions/Amendments/Modifications
- [x] Other

PERMIT #: AC 54-163040 APPLICANT NAME: Georgia-Pacific Corp.

TYPE OF PERMIT: AC SUBTYPE: 1E

STATUS: ____ (IS, DE, GP, EX, WI) PERMIT PROCESSING [FORM #: DER-CA 01]

OFFICE: BAQ

DATE	TIME BEGIN	TIME END	TOTAL TIME (15 MIN)	TASK	POSITION TITLE
4-6-89	2:45	3:20	45 min	set up file, log in PATS, assign to engineer, complete cash listing, copy + distribute	Planner I
5-3-89	9:50	10:15	30 min	Copy & distribute additional information	Planner I
5-19-89	1:55	2:10	15 min	mail Prelim. Determination PATS entry	Planner I Sec. Spec
5-19-89	10:10	10:25	15 min	Copy TE/PD	
7-10-89	9:40	9:50	15 min.	Write & Type notice of Permit	Planner I

BEST AVAILABLE COPY

RMIT #: AC 54-1 40 APPLICANT NAME: Georgia-Pacific Corp.

PE OF PERMIT: AC SUBTYPE: 1E

STATUS: ____ (IS, DE, GP, EX, WI) PERMIT PROCESSING (FORM #: DER-CA 01

OFFICE: BAQ

DATE	TIME BEGIN	TIME END	TOTAL TIME (15 MIN)	TASK	POSITION TITLE
4/12	8:00			Review Air Quality Analysis	Met

BEST AVAILABLE COPY

PERMIT #: AC 54-163 APPLICANT NAME: Georgia-Pacific Corp.

TYPE OF PERMIT: AC SUBTYPE: 1E

STATUS: ____ (IS, DE, GP, EX, WI) PERMIT PROCESSING [FORM #: DER-CA 01]

OFFICE: BAQ

DATE	TIME BEGIN	TIME END	TOTAL TIME (15 MIN)	TASK	POSITION TITLE
4/10	9:45 A	11:30 A	1 3/4 HRS	REVIEW OF PERMIT APPLICATION	PE II
	1:30 P	2:30 P	2 HRS	" " " "	PE II
	3:00 P	4:30 P	1 1/2 HRS	" " " "	PE II
4/11	1:30 P	3:30 P	2 HRS	" " " "	PE II
	4:00 P	6:15 P	2 1/4 HRS	" " " "	PE II
4/12	11:00 A	12:00 P	1 HR	" " " "	PE II
4/14	[illegible]	[illegible] P	1/4 HR	TELECON WITH APPLICANT	PE II
4/14	2:30 P		1/4 HR	TELECON WITH NE DIST ENGR (J. COLE)	PE II
4/25	4:00 P	5:00 P	1 HR	DRAFT TECHNICAL EVALUATION	PE II
4/26	10:00 P	1:00 P	3 HR	DRAFT TECHNICAL "	
4/26	3:00 P	6:00 P	3 HR	DRAFT PERMIT	PE II
4/28	[illegible] A		1/4 HR	TELECON WITH APPLICANT	PE II
5/1	9:30 A	11:00 A	1 1/2 HR	DRAFT INCOMPLETENESS LETTER	PE II
5/2	4:00 P	6:00 P	2 HR	REVIEW 5/2 SUBMISSION & DRAFT PERMIT	PE II
5/3	11:00 P	1:00 P	2 HR	REVIEW 5/2 SUBMISSION & DRAFT TECHNICAL	PE II
5/3	3:00 P	6:00 P	2 HR	REVIEW 5/2 SUBMISSION, FIGS, & DRAFT TECHNICAL & PERMIT	PE II
5/4	9:30 A	10:30 A	1 HR	INTERNAL MEETING, RULE APPLICABILITY	PE II
5/4	2:45 P	6:00 P	3 1/4 HR	REVIEW OF PERMIT APPLICATION	PE II
5/8			1/2 HR	REVIEW OF PERMIT APPLICATION & DRAFT TECHNICAL	PE II
5/9			1 HR	" " " "	PE II
5/11			4 HR	REVIEW OF PERMIT APPLICATION & DRAFT PERMIT	PE II
5/12			3 HR	REVIEW OF PERMIT " & DRAFT TECH, PERMIT, PKG	PE II
5/15			1 HR	PREPARATION OF DRAFT TECH, PERMIT, PKG	PE II
5/16	5:30	6:30	1 HR	EDIT DRAFT TECH, PERMIT, & PKG	PE II
5/17			1 HR	CORRECT DRAFT	PE II
5/18			1 HR	EDITORIAL CORRECTIONS	PE II
6/23			2 HR	DRAFT FINAL PERMIT & FINAL DETERMINATION	PE II
6/29			2 HR	EDIT FINAL PERMIT & FINAL DETERMINATION	PE II

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

August 24, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
P. O. Box 919
Palatka, Florida 32078-0919

Dear Mr. Hirschman:

RE: Construction Permit Number AC 54-163040 for the No. 4 Combination Power Boiler

The Department has reviewed Mr. Adams' July 28, 1989, letter concerning the required monitoring and recording of the sulfur content of the oil burned in the No. 4 combination power boiler. Based on Mr. Adams' letter, Specific Condition No. 6.c. of the above referenced permit would require a change in your present fuel analysis practice that would substantially increase your analytical cost. This was not our intent. The Department grants the requested change to Specific Condition No. 6.c. However, the use of a fuel analysis in lieu of an EPA Method 6 test for SO_2 emissions, pursuant to Specific Condition No. 5, will require the oil being fed to the No. 4 combination power boiler to be analyzed at the time of compliance testing. Specific Condition No. 6.c. of the above referenced construction permit is amended as follows.

From:

6.c. The sulfur content of each shipment of oil that is to be burned in the No. 4 combination power boiler.

To:

6.c. The sulfur content of the oil burned in the No. 4 combination power boiler through monthly composites of daily samples.

P 938 762 662

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. Henry Hirschman, Georgia-Pacific Corp	
Street and No. P.O. Box 919	
P.O., State and ZIP Code Palatka, FL 32078-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 8-30-89 Permit: AC 54-163040	

PS Form 3800, June 1985

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

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: Mr. Henry Hirschman General Manager Georgia-Pacific Corp. P. O. Box 919 Palatka, FL 32078-0919	4. Article Number P 938 762 662 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X Ga-Pac Corp	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X Johnny Bitton	
7. Date of Delivery 8/31/89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address and ZIP Code in the space below.
- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RECEIVED

SEP 5 1989

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Print Sender's name, address, and ZIP Code in the space below.

DER - BAQ

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Attn: Patty Adams

Mr. Henry Hirschman
Page Two
August 24, 1989

Attachment to be Added:

5. Mr. V. Adams' letter to M. Harley dated July 28, 1989, and received August 2, 1989.

This letter shall be attached to the AC 54-163040 for the No. 4 combination power boiler and shall become a part of the permit.

Sincerely,

Dale Twachtmann
Secretary

DT/mdh

cc: M. Benjamin, NE District
D. Buff, P.E.
V. Adams

BEST AVAILABLE COPY

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

Please call Patty Adams when signed 8-1344

TO: Dale Twachtmann

for FROM: Steve Smallwood

SUBJ: Approval of a Construction Permit Amendment for Georgia-Pacific Corporation Construction Permit: AC 54-163040

DATE: August 24, 1989

Attached for your approval and signature is a letter prepared by Central Air Permitting that will amend the construction permit for the No. 4 combination boiler. The amendment will allow Georgia-Pacific to continue their present fuel sampling and analysis practice.

The facility is located near Palatka, Putnam County, Florida. The amendment is not controversial.

I recommend your approval and signature.

SS/mdh

attachments

RECEIVED
AUG 24 ...
Office of the Secretary

RECEIVED
JUL 24 1989
Dept. of Environmental Re
Office of General Counsel

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

GEORGIA-PACIFIC CORPORATION,

Petitioner,

vs.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION,

Defendant.

CASE NO.:

Permit Nos.: AC 54-142282
AC 54-142283
AC 54-142288
AC 54-142291

Expiration Date: 9/9/89

MOTION FOR EXTENSION OF TIME

Petitioner, GEORGIA-PACIFIC CORPORATION, moves for an extension of time of the expiration date of the Construction Permit issued for the source permits listed above on the following grounds:

1. The Construction Permit expiration date is currently September 9, 1989.

2. All construction has taken place as specified in the TRS rule and no compliance date required by the TRS rule would be extended by the granting of this motion.

3. Petitioner has applied for an operation permit for the above sources, but needs additional time to meet with the Department to discuss unforeseen problems with the construction permit specific conditions which are not requirements of the Department's TRS rule, prior to completing the application for operating permit.

Accordingly, Petitioner requests an extension of time of six (6) months of the permit expiration date of the Construction Permit for the source permits listed above.

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Mike Harley	DAQM 3d floor	Initial
		Date
2.		Initial
		Date
3.		Initial
		Date
4.		Initial
		Date

RECEIVED
AUG 7 1989
DER-BAQM

REMARKS:

Mike -
I'm sending these copies to you because they don't need legal action unless after we extend or deny they file a petition.

INFORMATION
- Review & Return
- Review & File
- Initial & Forward

DISPOSITION
- Review & Respond
- Prepare Response
- For My Signature
- For Your Signature
- Let's Discuss
- Set Up Meeting
- Investigate & Report
- Initial & Forward
- Distribute
- Concurrence
- For Processing
- Initial & Return

FROM: Carol Forthman

DATE 8/5/89

PHONE 8-9730

Petitioner hereby certifies that it has consulted with Mike Harley of the Division of Air Quality Management and Gary Smallridge, Assistant General Counsel, who neither object nor concur with the extension.

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by hand-delivery to MIKE HARLEY, Department of Environmental Regulation, Division of Air Quality, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, GARY SMALLRIDGE, Assistant General Counsel, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32300-2400 and by U.S. Mail to ERNIE FREY, District Manager, Department of Environmental Regulation, 3426 Bills Road, Jacksonville, Florida 32207 on this 24 day of July, 1989.

OERTEL, HOFFMAN, FERNANDEZ
& COLE, P.A.
2700 Blair Stone Road
Suite C
Post Office Box 6507
Tallahassee, Fl 32314-6507
(904) 877-0099

Terry Cole
TERRY COLE

Attorneys for Petitioner
GEORGIA-PACIFIC CORPORATION

LAW OFFICES
OERTEL, HOFFMAN, FERNANDEZ & COLE
A PROFESSIONAL ASSOCIATION
POST OFFICE BOX 6507
TALLAHASSEE, FLORIDA 32314-6507

BY HAND DELIVERY

MR. GARY SMALLRIDGE
OFFICE OF GENERAL COUNSEL
DEPARTMENT OF ENVIRONMENTAL REGULATION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

PM
7-31-89
Palatka, FL

File Copy

Georgia-Pacific Corporation
Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

RECEIVED
AUG 2 1989
DER - BAQM

July 28, 1989

Mr. Mike Harley
Florida Department of Environmental Regulation
2600 Blairstone Rd.
Tallahassee, Florida 32399-2400

Dear Mike:

As we discussed by phone, specific condition 6c of construction permit AC 54-163040 requires that Georgia-Pacific monitor and record the sulfur content of each shipment of oil that is burned in the No. 4 combination boiler. Georgia-Pacific monitors the sulfur content of the oil we burn through monthly composites of the oil fed to the boilers. Each day a sample is collected from the line which carries the oil from the two large oil storage tanks (combined capacity of 38,000 bbls.) to the day tanks which feed the boilers, these samples are combined into a monthly composite which is then analyzed. This procedure provides us with assurance that our supplier who blends oil to supply us with oil of less than 2.5% sulfur complies with their contract, and can be used to provide the state with assurance that we are burning oil of that quality. We receive approximately three barges of oil per week and it cost approximately $350.00 per sample to have that oil analyzed. If we are required to sample and analyze each oil shipment our analytical cost will increase by about $50,000.00 per year, without any subsequent improvement in the environment. We request that specific condition 6c be changed to read:

6. The permittee shall monitor and record the following parameters whenever the No. 4 combination power boiler is in operation:

c. The sulfur content of the oil burned in the No. 4 combination power boiler through monthly composites of daily samples.

Georgia-Pacific

P. O. Box 919
Palatka, Florida 32078-0919

PRESORTED
FIRST CLASS

PALATKA
JUL 31'69

U.S. POSTAGE
.25

Mr. Mike Harley
Florida Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32399-2400

If you have any questions or if I can be of service, please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Superintendent of
Environmental Affairs

cc: W. L. Baxter
D. Buff
L. Diehl
H. Hirschman
J. McKinley
E. Schmidt
Bill Stewart
CHF/BT/PA } 8-4-89 RGR
Mike Harley 8-4-89 MH

PM
5-31-89
Palatka, FL

file copy

Georgia-Pacific Corporation Palatka Operations
Southern Pulp & Paper Division

P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

RECEIVED
JUN 1 1989
DER-BAQM

May 31, 1989

Certified Mail

Mr. C. H. Fancy
Florida Department of Environmental Regulation
2600 Blairstone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Please find enclosed the certification of public notice of the intent to issue a permit for our #4 combination boiler.

If I can be of any assistance or if you have any questions, please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Superintendent of
Environmental Affairs

cc: W. L. Baxter
L. Diehl
H. Hirschman
E. Schmidt

copied: M. Harley
B. Stewart

Mike,
Off P/N - 6/13/89
Day 90 = 8/28/89

Georgia-Pacific
P. O. Box 919
Palatka, Florida 32078-0919

CERTIFIED MAIL

119

RETURN RECEIPT REQUESTED

CERTIFIED MAIL

PRESORTED FIRST CLASS
PALATKA
MAY 31 '89
FLA.
U.S. POSTAGE
2.00

Mr. C. H. Fancy
Florida Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32399-2400

PUBLIC NOTICE

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Georgia-Pacific Corporation, P.O. Box 919, Palatka, Florida 32078-0919, to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler is physically capable of accommodating and to make the No. 4 combination power boiler subject to federally enforceable permit conditions. The proposed change is not considered to be a modification that would require a full PSD review, because the No. 4 combination power boiler was capable of accommodating the proposed rate and there are no federally enforceable permit restrictions on the bark burning rate. The applicant has addressed the associated CO and VOC emission increases in order to provide reasonable assurance that ambient air quality standards will not be exceeded. Georgia-Pacific's kraft pulp mill is located on the north side of State Road 216 near Palatka, Putnam County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information:

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

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

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

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

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

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

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

STATE OF FLORIDA
County of Putnam } **ss:**

Personally appeared before me, a Notary Public for the State of Florida at Large, Joyce Guthrie who deposes and says that she is Business Office Manager of The Palatka Daily News, a daily newspaper printed in the English Language and of general circulation, published in the City of Palatka, in said County and State; and that the attached order, notice, publication and/or advertisement of Department of Environmental Regulation - Notice of Intent to Issue a permit to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate was published in said newspaper The Palatka Daily News, Inc. for a period of One Insertion consecutively, Beginning May 29, 1989 and ending May 29, 1989 said publication being made on the following dates:

May 29, 1989

And deponent further says that The Palatka Daily News has been continuously published as a daily newspaper, and has been entered as second class mail matter at the postoffice at the City of Palatka, Putnam County, Florida, each for a period of more than one year next preceding the date of the first publication of the above described order, notice, publication and/or advertisement.

Subscribed and sworn to before me this

31st day of May, A. D. 1989

Robin Symonds

Joyce Guthrie

Notary Public
State of Florida at Large
My Commission Expires March 17, 1992

No. 22037

ROBIN SYMONDS NOTARY PUBLIC STATE OF FLORIDA

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

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

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

Department of Environmental Regulation
Northeast District Office
3426 Bills Road
Jacksonville, Florida 32207

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

May29,1989 22037

PM
5-26-89
Palatka, FL

file copy

Georgia-Pacific Corporation Palatka Operations
Southern Pulp & Paper Division

P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

RECEIVED
MAY 30 1989
DER - BAQM

May 26, 1989

Certified Mail

Mr. C. H. Fancy
Florida Department of Environmental Regulation
2600 Blairstone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

We have received the Technical Evaluation and Preliminary Determination and proposed permit for our No. 4 combination boiler and have made arrangements to have the public notice published. We will forward the certification of publication to you as soon as it is available.

An issue of concern in the package is the requirement to install a continuous visible emission monitor on this boiler. The attached letter from Mr. David Buff describes a conversation he had with Mr. Mike Harley concerning this matter. As we understand Rule 17-2.710 and as Mr. Harley confirmed, there is no reason to require continuous monitoring at this time. Please remove this requirement from the package.

If I can be of any assistance or if you have any questions, please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Superintendent of
Environmental Affairs

cc: W. L. Baxter
H. Hirschman
E. Schmidt

copied: M. Harley
B. Stewart, NE Dist.
CHF/BT

Georgia-Pacific
P. O. Box 919
Palatka, Florida 32078-0919

MAY26'89
U.S. POSTAGE

CERTIFIED MAIL

118

RETURN RECEIPT REQUESTED

Mr. C. H. Fancy
State of Florida
Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32399-2400

KBN

May 24, 1989
88044

Mr. Vernon Adams
Georgia-Pacific Corporation
P.O. Box 919
Palatka, FL 32078-0919

Re: No. 4 Combination Boiler Draft Permit

Dear Vernon:

At your request, I spoke with Mr. Mike Harley of the Florida DER concerning the statement in the Technical Evaluation and Preliminary Determination that a continuous opacity monitor would be required on the boiler, pursuant to Rule 17-2.710. This statement conflicts with the actual draft permit, which contains no requirement for such a monitor. Mike clarified that indeed no opacity monitor would be required on the boiler, the rationale being that the boiler would have an annual capacity factor on oil of less than 30%. Rule 17-2.710(a) requires continuous monitors (including opacity) be installed on fossil fuel steam generators with more than 250 million Btu/hr heat input <u>and</u> have a capacity factor of greater than 30 percent based on the latest year of record.

I explained to Mike that we had reviewed G-P's 1988 operating data and the data showed that the capacity factor for oil was 7% based on maximum permitted fuel usage, and 18% based on actual fuel used in the boiler during 1988. He indicated he was aware that the actual boiler capacity on oil was less than the 30% level. However, Mike wanted G-P to be aware of this rule, and if they exceed the 30% capacity factor in the future, they may be subject to the continuous opacity monitoring requirement.

Please call if you have any questions concerning this issue.

Sincerely,

David A. Buff

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

KBN ENGINEERING AND APPLIED SCIENCES, INC.
P.O. Box 14288 5700 SW 34th Street Gainesville, FL 32604 904/375-8000 Telex: 984689 KBN ENG UD

P 274 010 389

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. Henry Hirschman, GP Corp.	
Street and No. P. O. Box 919	
P.O., State and ZIP Code Palatka, FL 32078-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 5-19-89 Permit: AC 54-163040	

PS Form 3800, June 1985 ☆ U.S.G.P.O. 1985-480-794

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

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: Mr. Henry Hirschman Georgia-Pacific Corp. P. O. Box 919 Palatka, FL 32078-0919	4. Article Number P 274 010 389 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X Georgia Pacific	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X S. K. Brown	
7. Date of Delivery 5/22/89	

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RECEIVED

MAY 25 1989

DER - BAQM

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Print Sender's name, address, and ZIP Code in the space below.

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Attn: Patty Adams

Florida Department of Environmental Regulation

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

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

May 18, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
P. O. Box 919
Palatka, Florida 32078-0919

Dear Mr. Hirschman:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler has always been physically capable of accommodating and to make the No. 4 combination power boiler subject to federally enforceable permit conditions.

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

Sincerely,

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

CHF/mdh

Attachments

cc: D. A. Buff, P.E.
V. L. Adams
W. P. Stewart

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Georgia-Pacific Corporation
P. O. Box 919
Palatka, Florida 32078-0919

DER File No. 54-163040

INTENT TO ISSUE

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

The applicant, Georgia-Pacific Corporation applied on April 5, 1989 to the Department of Environmental Regulation for a permit to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler is physically capable of accommodating. This boiler will also become subject to federally enforceable permit conditions. The proposed change is not considered to be a modification that would require a full PSD review, because the No. 4 combination power boiler was capable of accommodating the proposed rate and there are no federally enforceable permit restrictions on the bark burning rate. The applicant has addressed the associated CO and VOC emission increases in order to provide reasonable assurance that ambient air quality standards will not be exceeded.

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

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

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

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

The Petition shall contain the following information;

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

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

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

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

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

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

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

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

Executed in Tallahassee, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

D. A. Buff, P.E.
V. L. Adams
W. P. Stewart

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on May 19, 1989.

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

Martha Weise May 19, 1989
Clerk Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Georgia-Pacific Corporation, P. O. Box 919, Palatka, Florida 32078-0919, to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler is physically capable of accommodating and to make the No. 4 combination power boiler subject to federally enforceable permit conditions. The proposed change is not considered to be a modification that would require a full PSD review, because the No. 4 combination power boiler was capable of accommodating the proposed rate and there are no federally enforceable permit restrictions on the bark burning rate. The applicant has addressed the associated CO and VOC emission increases in order to provide reasonable assurance that ambient air quality standards will not be exceeded. Georgia-Pacific's kraft pulp mill is located on the north side of State Road 216 near Palatka, Putnam County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

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

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

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

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

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

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

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

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

Department of Environmental Regulation
Northeast District Office
3426 Bills Road
Jacksonville, Florida 32207

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

Technical Evaluation
and
Preliminary Determination

Georgia-Pacific Corporation

No. 4 Combination Power Boiler

Permit No. AC 54-163040

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

May 20, 1989

I. Project Description

A. Applicant

Georgia-Pacific Corporation
Post Office Box 919
Cantonment, Florida 32078-0919

B. Project and Location

The applicant proposes to increase the operation rate of the No. 4 combination power boiler to the maximum bark burning rate that the boiler was physically capable of accommodating prior to January 6, 1975. The previous limitation on the maximum operation rate of the No. 4 combination power boiler was due to the air pollution control equipment that had been installed prior to July 1, 1975. The applicant also proposes to make the No. 4 combination power boiler subject to federally enforceable permit conditions.

The Standard Industrial Classification Code (SIC) is Major Group 26, Industry 2621, Paper Mills. The Source Classification Codes for the No. 4 combination power boiler are 1-01-009-02, wood/bark-fired boiler, and 1-01-004-01, grade 6 oil normal firing (includes horizontally, opposed and front wall firing).

The project is located at the kraft pulp mill owned by Georgia-Pacific Corporation which is located on the north side of State Road 216 near Palatka, Putnam County, Florida. The universal transverse mercator (UTM) coordinates of the project are Zone 17, 434.0 km East, and 3283.4 km North.

The application was received on April 5, 1989, and the Department determined the application to be complete on May 2, 1989.

C. Project Description and Controls

The kraft pulping process uses wood and chemicals to produce paper. The economics of this process are heavily dependent upon the recovery of energy and chemicals.

Combination power boilers are used to recover energy from wood waste/bark, while at the same time reducing the quantity of material that would have to be disposed of by other means. These boilers are designed to be operated on either fossil fuel, wood waste/bark, or a combination of the two types of fuel. Combination boilers are sources of particulate matter (both total suspended particulate matter and PM_{10}), sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds. The use of wood waste/bark tends to result in lower emissions of sulfur dioxide, and nitrogen oxides than fossil fuel. The use of fossil fuel tends to result in lower emissions of particulate matter, carbon monoxide, and volatile organic compounds than wood waste/bark.

The No. 4 combination power boiler was manufactured by Babcock and Wilcox in 1965. This boiler is a front-fired spreader stoker type furnace. A Detroit stoker introduces the wood waste/bark into the furnace. The boiler is equipped with six oil guns located on the front face of the furnace in a pattern two high by three wide. The No. 4 combination power boiler is equipped with three centrifugal collector systems that are connected in series. The first stage is manufactured by Zurn and the next two stages are manufactured by UOP. In 1986, the No. 4 combination power boiler was equipped with a custom designed Research-Cottrell IP-3355 electrostatic precipitator. The electrostatic precipitator is designed to remove 96% of the particulate matter from the flue gas stream. The design is based on an inlet loading of 1.18 grains of particulate matter per actual cubic foot of flue gas (gr./ACF) and an outlet loading of 0.04 gr./ACF of particulate matter. The precipitator is designed to allow Georgia-Pacific to burn bark at the maximum rate that the No. 4 combination power boiler was capable of accommodating.

Prior to 1986, the operation rate of the No. 4 combination power boiler was limited by permit condition based on the effectiveness of the centrifugal collectors that were used to install particulate emissions. The maximum heat input rate to the boiler was limited to a total of 418.6 MMBtu/hr. as either No. 6 fuel oil (~2,755 gals./hr.), wood waste/bark (~93,022 lbs./hr.), or any combination of the two fuels. The installation of the electrostatic precipitator has made it possible for Georgia-Pacific to operate the boiler at the maximum bark burning rate that it is capable of accommodating. The maximum bark burning rate is 512.69 MMBtu/hr. (~115,704 lbs./hr.). The maximum steam production rate when burning bark is about 356,000 lbs./hr. of 1275 psig, 900°F steam. The company has asked that the maximum heat input rate for No. 6 fuel oil remain at the previously permitted rate of 418.6 MMBtu/hr. The company plans to continue using No. 6 fuel oil containing not more than 2.5% sulfur. The maximum steam production rate when burning oil at the requested rate is an estimated 349,000 lbs./hr. of 1275 psig, 900°F steam.

The applicant states that the changes will increase neither the operation rate nor the capacity of the mill. The applicant states that the project will not result in any PSD significant net emission increases or decreases.

II. Rule Applicability

The Georgia-Pacific Corporation's Palatka mill is a major facility pursuant to Florida Administrative Code (F.A.C.) Rule 17-2.100(111) [Definitions-Major Facility]. The facility is a kraft pulp mill which is one of the 28 major facility categories listed in Table 500-1 of F.A.C. Rule 17-2.500 [Prevention of Significant Deterioration].

Based on the applicant's statements, the Department presently does not believe that the proposed project is subject to the preconstruction review requirements of F.A.C. Rule 17-2.500(5) [PSD-Preconstruction Review Requirements]. The Department has relied upon the applicant's presentation that: (1) The No. 4 combination power boiler was capable of accommodating the proposed maximum heat input rate for bark prior to January 6, 1975; (2) The proposed heat input rate due to bark is not be prohibited by any federally enforceable restriction established after January 6, 1975; (3) The increase in mass emissions of pollutants listed in Table 500-2 of F.A.C. Chapter 17-2.500 [PSD] is limited to carbon monoxide and volatile organic compounds; and, (4) There will be no increase in either actual or allowable emissions of particulate matter, PM_{10}, sulfur dioxide, and nitrogen oxides.

Pursuant to the definitions in F.A.C. Rule 17-2.100 [Definitions] the project may be characterized as follows. Wood waste and tree bark are classified as carbonaceous fuels, pursuant to F.A.C. Rule 17-2.100(35) [Definitions-Carbonaceous Fuel]. The No. 4 combination power boiler may be categorized as carbonaceous fuel burning equipment, pursuant to F.A.C. Rule 17-2.100(36) [Definitions-Carbonaceous Fuel Burning Equipment] when wood waste and bark are burned. No. 6 fuel oil is classified as a fossil fuel, pursuant to F.A.C. Rule 17-2.100(80) [Definitions-Fossil Fuel]. The No. 4 combination power boiler may be categorized as a fossil fuel steam generator, pursuant to F.A.C. Rule 17-2.100(81) [Definitions-Fossil Fuel Steam Generators] when burning only No. 6 fuel oil for purposes other than startup or shutdown.

Based on the information supplied by the applicant, the following emission limiting standards are applicable. The particulate emissions from the No. 4 combination power boiler are subject to the requirements of F.A.C. Rule

17-2.600(10)(a)2.b. [Specific Source Emission Limiting Standards-Carbonaceous Fuel Burning Equipment, etc.]. This rule limits particulate emissions to 0.3 lb./MMBtu of heat input due to wood waste/bark and 0.1 lb./MMBtu of heat input due to No. 6 fuel oil. When steam is produced solely by the burning of No. 6 fuel oil, the particulate emissions from the boiler are subject to the provisions of F.A.C. Rule 17-2.600(5)(b)2. [Specific Source Emission Limiting Standards-Fossil Fuel Steam Generators With Greater Than 250 MMBtu/hr. Heat Input-Particulate Matter]. This rule limits particulate emissions to 0.1 lb./MMBtu of heat input due to No. 6 fuel oil. The visible emissions from the No. 4 Combination Boiler are subject to the requirements of F.A.C. Rule 17-2.600(10)(a)2.a. [Specific Source Emission Limiting Standards-Carbonaceous Fuel Burning Equipment, etc.]. Visible emissions are limited to 30 percent opacity (1.5 on the Ringlemann Chart) except that an opacity of not more than 40 percent (2 on the Ringlemann Chart) is allowed for not more than two minutes in any one hour. When steam is produced solely by the burning of No. 6 fuel oil, the sulfur dioxide emissions from the boiler are subject to the provisions of F.A.C. Rule 17-2.600(5)(b)3.a.(xi) [Specific Source Emission Limiting Standards-Fossil Fuel Steam Generators With Greater Than 250 MMBtu/hr. Heat Input-Sulfur Dioxide]. This rule limits sulfur dioxide emissions to 2.75 lb./MMBtu of heat input due to No. 6 fuel oil.

Pursuant to F.A.C. Rules 17-2.500(1) [PSD-General Prohibitions], 17-2.520 [Sources not Subject to PSD or Nonattainment Requirements], and 17-4.070(3) [Standards of Issuing or Denying Permits] the Department has placed limitations on the total mass emissions from and the operation rate of the No.4 combination power boiler. The applicant has proposed to accept a particulate emission cap of 125.6 lb./hr. and 550.1 tons/yr. Thus, the increase in heat input due to wood waste/bark will not consume any PSD particulate increment. The applicant has proposed to accept an operational limitation of 418.6 MMbtu/hr. when burning No. 6 fuel oil. The applicant has also proposed to limit maximum sulfur dioxide emissions to 1151.2 lbs./hr. and 5042.3 tons/yr. The limitation on heat input and sulfur dioxide emissions is equal to the previous maximum actual emissions that the No. 4 combination boiler was previously capable of when operating on No. 6 fuel oil. So, the increase in heat input due to wood waste/bark will not consume any PSD sulfur dioxide increment. These limitations are based on the maximum hourly operation rates supplied by the applicant.

The applicant is required to install a device to continuously monitor, record, and report the opacity of emissions from the No. 4 combination power boiler pursuant to the applicable provisions of F.A.C. Rule 17-2.710 [Continuous Monitoring Requirements].

The applicant's proposed project will also be subject to the applicable provisions of F.A.C. Rules 17-2.240 [Circumvention], 17-2.250 [Excess Emissions], and 17-4.130 [Plant Operation Problems]. For example, the limitations on the maximum operation rate will also be used as one basis to establish proper operation and maintenance pursuant to F.A.C. Rule 17-2.250(1) and (2) [Excess Emissions].

The applicant is also required to install source sampling facilities on the No. 4 combination power boiler and perform source testing for particulate, and SO_2 in accordance with the provisions of F.A.C. Rule 17-2.700 [Stationary Point Source Emissions Test Procedures]. The continuous monitoring equipment is to be certified in accordance with the applicable provisions of F.A.C. Rule 17-2.710 [Continuous Monitoring Requirements].

III. Summary of Emissions and Air Quality Analysis

A. Summary of Emissions

Based on the information supplied by the applicant, the Department expects the following the changes in maximum emissions (considering both wood/waste and No. 6 fuel oil) to occur. These rates will be used in future reviews to determine PSD applicability.

MAXIMUM EMISSIONS
(Considering both wood waste/bark & No. 6 fuel oil)

Pollutant	Pre-ESP		Post ESP		Change	
	lbs./hr.	T/Y	lbs./hr.	T/Y	lbs./hr.	T/Y
Particulate	125.6	550.1	125.6	550.1	0	0
PM_{10}	114.3	500.6	114.3	500.6	0	0
SO_2	1151.2	5042.3	1151.2	5042.3	0	0
NO_x	184.2	806.8	184.2	806.8	0	0
CO	1092.5	4785.2	1338.1	5860.9	+245.6	+1075.7
VOC	39.3	172.1	48.2	211.1	+8.9	+39.0

B. Air Quality

The increased burning of wood waste in Georgia-Pacific's No. 4 combination power boiler will result in emission increases of carbon monoxide and volatile organic compounds. Sulfur dioxide and nitrogen oxide emissions are limited by the No. 6 fuel oil burning rate, which is to remain unchanged. Actual particulate emissions will be substantially reduced, despite the increased burning of wood waste/bark, due to the addition of the electrostatic precipitator. The maximum allowable particulate emissions will not increase because of the emission cap accepted by the applicant.

The increased burning of wood waste is not considered to be a modification to either the source or the facility because there is no federally enforceable permit restriction. Thus, increased emissions of carbon monoxide and volatile organic compounds do not trigger a full PSD review. The applicant did, however, elect to address these increases in order to provide reasonable assurance that ambient air quality standards will not be exceeded.

The applicant evaluated the increased emissions of carbon monoxide by using an air quality dispersion model to estimate the maximum increase in ambient concentrations. The EPA-approved Industrial Source Complex Short-Term (ISCST) model was run using five years of National Weather Service meteorological data. The Department has reviewed the modeling and found it to conform to all proper procedures and guidelines. The results of the modeling show that the increased emissions of carbon monoxide result in an insignificant increase in maximum ambient concentrations. The highest, second-highest one- and eight-hour predicted concentration increases are 204 ug/m^3 and 22 ug/m^3, respectively. F.A.C. Rule 17-2.100(173)(d) defines the significant impact levels for carbon monoxide as 2,000 ug/m^3, one-hour average and 500 ug/m^3, eight-hour average. The predicted increase is less than the defined significance level, so no further ambient air quality impact analysis is necessary. The Department is reasonably assured that the increased burning of wood waste/bark will not cause or contribute to an exceedance of the ambient air quality standards.

Based on the information provided by Georgia-Pacific Corporation the Department has reasonable assurance that the proposed changes in the operation rate of the No. 4 combination power boiler as described in this evaluation and subject to the conditions proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment, or violate any other technical provision of Chapter 17-2 of the Florida Administrative Code.

Florida Department of Environmental Regulation

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

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

PERMITTEE:
Georgia-Pacific Corporation
P. O. Box 919
Palatka, Florida 32078-0919

Permit Number: AC 54-163040
Expiration Date: Dec. 31, 1989
County: Putnam
Latitude/Longitude: 29°41'00"N
81°40'45"W
Project: No. 4 Combination Power Boiler

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

The operation rate of the No. 4 combination power boiler will be increased to the maximum bark burning rate that the boiler has always been physically capable of accommodating. The No. 4 combination power boiler will become subject to federally enforceable permit conditions.

The No. 4 combination power boiler is capable of accommodating a maximum heat input rate of 512.7 million Btu/hr. when burning wood waste/bark alone or in combination with No. 6 fuel oil. This is equivalent to a maximum wood waste/bark feed rate of ~115,704 lbs./hr. of wood waste/bark and a steam production rate of ~356,000 lbs./hr. @ 1275 psig and 900°F. The boiler is capable of accommodating a maximum heat input rate of 418.6 million Btu/hr. when burning only No. 6 fuel oil. This is equivalent to a No. 6 fuel oil feed rate of ~2,755 gallons/hr. and a steam production rate of ~349,000 lbs./hr. @ 1275 psig and 900°F.

The No. 4 combination power boiler is a front-fired spreader stoker type furnace that was manufactured by Babcock and Wilcox in 1965. A Detroit stoker introduces the bark/wood waste into the furnace. The boiler is equipped with six oil guns located on the front face of the furnace in a pattern two high by three wide. The No. 4 combination boiler is equipped with one Zurn and two UOP centrifugal collector systems connected in series followed by a custom designed Research-Cottrell IP-3355 elctrostatic precipitator.

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

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

Attachments are listed below:

1. Permit application for No. 4 Combination Power Boiler Stack, received April 5, 1989.

2. Vernon Adams' letter to C. H. Fancy, dated May 5, 1989, received May 2, 1989.

3. Technical Evaluation and Preliminary Determination dated May 20, 1989.

GENERAL CONDITIONS:

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

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

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

4. This permit conveys no title to land or water, does not

GENERAL CONDITIONS:

constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

13. This permit also constitutes:

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

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

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention

GENERAL CONDITIONS:

period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

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

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The No. 4 combination power boiler is permitted to operate continuously (i.e., 8,760 hrs./yr.).

2. The maximum heat input rate to the No. 4 combination power boiler shall not exceed 512.7 million Btu per hour (MMBtu/hr.) when burning wood waste/bark either alone or in combination with No. 6 fuel oil. The maximum heat input rate to the No. 4 combination boiler shall not exceed 418.6 MMBtu/hr. when burning only No. 6 fuel oil. The maximum heat input shall be determined

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

SPECIFIC CONDITIONS:

on the basis of F-factors pursuant to 40 CFR 60 revised as of July 1, 1987.

3. Particulate emissions from the No. 4 combination power boiler shall neither exceed:

a. 0.3 lb./MMBtu of heat input due to wood waste/bark plus 0.1 lb./MMBtu of heat input due to No. 6 fuel oil, nor

b. 125.6 lbs./hr. (550.1 tons/yr.) when wood waste/bark is burned either alone or in combination with No. 6 fuel oil, nor

c. 41.9 lbs./hr. (183.5 tons/yr.) when operated solely on No. 6 fuel oil.

Particulate emissions shall be determined by EPA Methods 1, 2, 3, and 5 (40 CFR 60 revised as of July 1, 1987).

4. Visible emissions from the No. 4 combination power boiler shall neither exceed:

a. a density of Number 1.5 on the Ringlemann Chart (30 percent opacity) except that a density of Number 2 on the Ringlemann Chart (40 percent opacity) is permissible for not more than two minutes in any one hour when burning wood waste/bark either alone or in combination with No. 6 fuel oil, nor

b. a density of Number 1 on the Ringlemann Chart (20 percent opacity) except that a density of Number 2 (40 percent opacity) on the Ringlemann Chart is permissible for not more than two minutes in any one hour when burning only No. 6 fuel oil.

Visible emissions shall be determined by EPA Method 9 (40 CFR 60 revised as of July 1, 1987).

5. Sulfur dioxide emissions from the No. 4 combination power boiler shall not exceed 1,151 lbs./hr. (5,041.4 tons/yr.) when burning only No. 6 fuel oil. Sulfur dioxide emissions shall be determined by EPA Methods 1, 2, 3, and 6 (40 CFR 60 revised as of July 1, 1987). Alternatively, sulfur dioxide emissions may be determined through the use of fuel sampling based on ASTM D1552-83 providing the sulfur content of the No. 6 fuel oil does not exceed 2.5%.

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

SPECIFIC CONDITIONS:

6. The permittee shall monitor and record the following parameters whenever the No. 4 combination power boiler is in operation:

a. The hourly steam production rate of the No. 4 combination power boiler in lbs./hr., the pressure of the steam in psig, and the temperature of the steam in °F.

b. The hourly feed rate of No. 6 fuel oil to the No. 4 combination power boiler.

c. The sulfur content of each shipment of oil that is to be burned in the No. 4 combination power boiler.

7. All excess emissions from the No. 4 combination power boiler shall be subject to the applicable requirements of F.A.C. Rules 17-2.240 [Circumvention], 17-2.250 [Excess Emissions], and 17-4.130 [Plant Operation Problems].

8. All monitoring and recording systems shall be regularly calibrated and maintained in proper working condition pursuant to written procedures and schedules based on the recommendations of the instrument manufacturer.

9. The No. 4 combination power boiler shall be equipped with the point source sampling facilities required by F.A.C. Rule 17-2.700.

10. Point source compliance testing shall be conducted pursuant to the following requirements:

a. Compliance testing shall initially be conducted prior to the expiration date of this permit and annually, thereafter.

b. Point source compliance testing shall be conducted with all sources operating at 90 to 100 percent of operation rates allowed by Specific Conditions No. 2.

c. Compliance test reports shall include all of the information required by F.A.C. Rule 17-2.700(7).

d. Compliance test reports shall be submitted within 45 days after completion of the testing.

PERMITTEE:
Georgia-Pacific Corporation

Permit Number: AC 54-163040

Expiration Date: Dec. 31, 1989

SPECIFIC CONDITIONS:

e. Notification of testing shall be furnished to the DER Northeast District office at least 15 days prior to the date that testing is to commence.

f. Emission testing for the purpose of demonstrating compliance with specific conditions Nos. 3.c. and 4.b. shall not be required if the No. 4 combination power boiler was operated solely on No. 6 fuel oil for less than 400 hours during the year prior to the required testing.

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

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

13. The permanent source identification number assigned to the permitted source is 31JAX54000516 No. 4 combination power boiler. Please cite this number on all test reports and other correspondence for each permitted point source.

Issued this ______ day
of ______________, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

____
Dale Twachtmann, Secretary

Georgia Pacific

The increased burning of wood waste at the G-P No. 4 Combination boiler will result in emission increases of carbon monoxide and VOC. ~~All other pollutants~~ Sulfur dioxide and nitrogen oxide emissions are limited by the fuel oil burning rate which is remaining unchanged. Particulate emissions will be substantially reduced, despite the increased burning of wood waste, due to the addition of an electrostatic precipitator.

The increased burning of wood waste is not considered a modification to the facility because there ~~was~~ is no federally enforcable permit restriction. Thus, the increased emissions of carbon monoxide or VOC do not trigger PSD review. The applicant did, however, address these increases to provide reasonable assurance that ambient air quality standards are not exceeded.

The applicant evaluated the increased emissions of carbon monoxide by using an air quality dispersion model ~~to~~ to estimate the maximum ambient concentration increase. The EPA-approved Industrial Source Complex Short-Term (ISCST) model was run using five years of National Weather Service meteorology. ~~A~~ This modeling was reviewed ~~[illegible]~~ by the Department and was determined to comply with all proper procedures and guidelines. The results of the modeling show that the increased emissions of CO result in an insignificant increase in maximum ambient concentrations. The highest, second-highest one- and eight-hour predicted concentration increases are 204 $\mu g/m^3$ and 22 $\mu g/m^3$, respectively. The defined (Rule 17-2.100(173), FAC) significant impact levels for CO are 2000 $\mu g/m^3$, one-hour average, and 500 $\mu g/m^3$, eight-hour average. Since the predicted increase is less than significant, no further air analysis is necessary, and the Department is reasonably assured that the increased burning of wood waste will not cause or contribute to an exceedance of an air quality standard.

PM
5-1-89
Palatka, FL

file copy

Georgia-Pacific Corporation *Palatka Operations*
Southern Pulp & Paper Division

P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

RECEIVED

MAY 2 1989

DER - BAQM

May 5, 1989

Mr. Mike Harley
Florida Department of Environmental Regulation
2600 Blairstone Rd.
Tallahassee, Florida 32399-2400

Dear Mike:

Pursuant to our conversation of April 28th, please find enclosed the answers to the questions you had pertaining to our combination boiler application.

You requested a complete copy of one of our compliance tests on this unit, it is attached. Orsat readings show typical oxygen readings of 1.7% and typical CO2 readings of 5.9% during these tests.

The stack diameter on page 6 of 12 in the application should be 8.0 ft. This number is correct and the velocity calculation used in the application are figured using the 8 ft. diameter.

The drawing titled "No. 4 Combination Power Boiler Flue Gas Precipitator - Proposed" shows an "emergency crossover to adjacent precipitator". This was never constructed and we do not intend to build it.

The drawing titled "Locations of the Sources and Buildings at the Georgia-Pacific Facility" is one which shows not only the sources which currently exist but also some which have been shut down and are still appropriate for some modeling operations. It should be noted that Recovery Boilers 1, 2, and 3 and their associated smelt dissolving tanks have been demolished. The tall oil plant vent is now located where RB1 and Rb2 were.

The combination Boiler is of Babcock and Wilcox design Contract No. S10158 and was constructed in 1965. The Zurn dust collectors were installed at the same time as the boiler. The Universal Oil Products (UOP) dry particulate emission collecting system was installed in July of 1976. The boiler has 6 oil guns and a detroit stoker. Model numbers, etc., are inappropriate as all were custom designed.

FIRST CLASS MAIL

PALATKA
MAY-1'89

Georgia-Pacific

Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, FL 32078-0919

Mr. Mike Harley
Florida Department of
Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32399-2400

We are requesting a maximum heat input rating of 512.69 mm BTU's.

If you have additional questions, please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Superintendent of
Environmental Affairs

cc: W. L. Baxter
D. Buff

copied: M. Harley
H. Stewart, NE Dist.

G E O R G I A - P A C I F I C   C O R P O R A T I O N

P A L A T K A   O P E R A T I O N S

COMPLIANCE TESTS
NO. 4 COMBINATION BOILER
FEBRUARY 1987

TESTED BY:
J.   ALVARADO
A. D. DUMAS
G. M. SIMMONS

TABLE OF CONTENTS

INTRODUCTION

This report documents our EPA-RM 5 and 9 compliance testing of the No. 4 Combination Boiler located in Georgia-Pacific's plant at Palatka, Florida.

Normally, this boiler is powered by approximately 39 tph of hogged fuel in producing steam to supply our mill. Compliance testing is performed under the same conditions.

A primary set of Zurn cyclones and a secondary and tertiary set of VOP multicyclones are operated at approximately a 9" pressure drop both normally and during testing for dry control of particulate emissions. Remaining particulate is then removed by means of an electrostatic precipitator.

For the probe wash, acetone was used.

J. E. McKinley furnished the process variable data. J. Alvarado and A. D. Dumas conducted the tests and analyzed the samples. G. M. Simmons performed the visible emissions evaluation. A. D. Dumas prepared this booklet.

As per the May 11, 1984, letter from the FDER, a wood bark F-factor of 9600 DSCF per MM BTU was used in the calculations.

Barometric pressure readings were obtained by carrying our barometer up to the sampling platform. Therefore, no adjustment for elevation was necessary.

The Orsat Fo on runs no. 1 and no. 3 was slightly above the allowable range. The samples were carefully analyzed several times, but the results were the same. The values on the Dry Molecular Weight Determination Sheet were used in the calculations.

Visible emissions were observed during EPA-RM 5 compliance run no. 1.

In reference to the November 12, 1986, letter from the FDER, constant weight data were determined according to EPA RM-5, Section 4.3, which states, "The tester may also opt to oven dry the sample at 105 oC (220 oF) for 2 to 3 hours, weigh the sample, and use this weight as the final weight.". Additionally, please note that the "operating parameters for the subject precipitators" have been recorded at the bottom of the Boiler Operating Data sheets.

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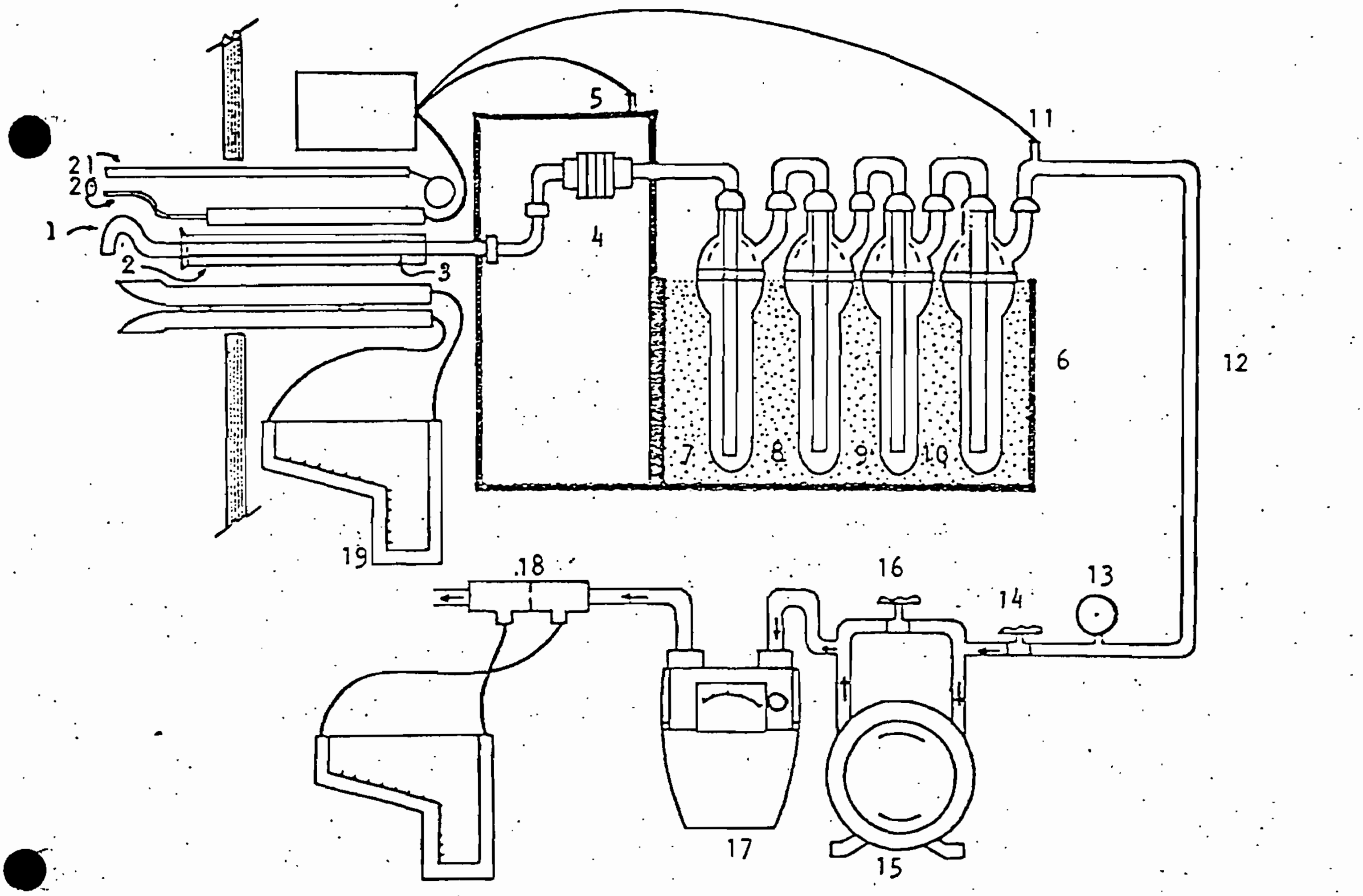
SUMMARY OF TEST PARAMETERS
NO. 4 COMBINATION BOILER

PARAMETER	RUN 1	RUN 2	RUN 3	AVERAGE		DESCRIPTION
DATE	2/17/87	2/19/87	2/19/87			
Vlc	253.83	228.50	243.30	241.88	ml	Volume of liquid collected
Vm	48.768	44.345	44.613	45.909	DCF	Volume of meter
Y	0.99	0.99	0.99	0.99		DGM calibration factor
Pbar	29.79	30.20	30.20	30.06	"Hg	Barometric pressure
delH	2.353	1.927	1.935	2.072	"H2O	dP across orifice meter
TmF	80.5	80.0	88.9	83.1	oF	Temperature of meter, Fahrenheit
TsF	482.3	457.3	461.4	467.0	oF	Temperature of stack, Fahrenheit
Ps	29.741	30.156	30.158	30.018	"Hg	Pressure of stack
A	50.27	50.27	50.27	50.27	ft^2	Area of stack
Mn	29.5	17.3	19.3	22.0	mg	Mass of particulate collected
Th	60	60	60	60	min.	Time of test, minutes
Dn	0.278	0.278	0.278	0.278	"	Diameter of the nozzle
%CO2	13.40	13.57	13.00	13.32	%	Orsat %CO2
%O2	4.40	6.13	5.00	5.18	%	Orsat %O2
%CO	0.00	0.27	0.00	0.09	%	Orsat %CO
%N2	82.20	80.03	82.00	81.41	%	Orsat %N2
dP	0.816	0.664	0.668	0.716	"H2O	Diff. pressure across Pitot
SRdP	0.903	0.815	0.817	0.845	"H2O	Square root of dP
OIL	0	0	0	0	Lb/Hr	Oil flow
BTU				0	BTU/Lb	Oil heat value from FOA
Md	30.32	30.4164	30.28	30.339	#/# Mole	Molecular weight of dry stack gas
Ts	942.3	917.3	921.4	927.0	oR	Stack temperature
Tm	540.5	540	548.9	543.1	oR	DGM temperature
VwSTD	11.948	10.755	11.452	11.385	SCF	Vlc corrected to std. conditions
VmSTD	47.2127	43.5135	43.0676	44.5979	DSCF	Vm corrected to std. conditions
An	0.000421	0.000421	0.000421	0.000422	Ft^2	Area of nozzle cross section
Bws	0.2020	0.1982	0.2101	0.2034	%	Moisture content of stack gas
Ms	27.8319	27.9556	27.7005	27.8293	#/# Mole	Mol. Wt. of wet stack gas
Vs	69.1875	61.0501	61.6163	63.9513	Ft/Sec	Stack velocity
Qsd	5565509	5139311	5087804	5264208	DSCFH	Dry, std. stack vol. flow rate
Cs	0.009641	0.006134	0.006914	0.007563	Gr/SCF	Particulate conc. in stack gas
Qa	208683	184139	185847	192890	ACFM	Stack velocity, actual
Qsf	92758	85655	84797	87737	SCFM	Dry, std. stack vol. flow rate
I	101.2	101.0	101.0	101.1	%	Isokinetics
Hi	457.690	378.327	403.190	413.069	MM BTU/Hr	Total heat input
Ho	0	0	0	0	MM BTU/Hr	Oil heat input
Hb	457.690	378.327	403.190	413.069	MM BTU/Hr	Bark heat input
Fd	9600	9600	9600	9600	DSCF/MM BTU	F factor
E	130.10	113.50	120.96	121.52	Lb/Hr	Allowable particulate emissions
E1	7.67	4.50	5.03	5.73	Lb/Hr	Actual particulate emissions
E2	0.017	0.012	0.012	0.014	Lb/MM BTU	Actual particulate emissions
E0	0.300	0.300	0.300	0.300	Lb/MM BTU	Allowable particulate emissions

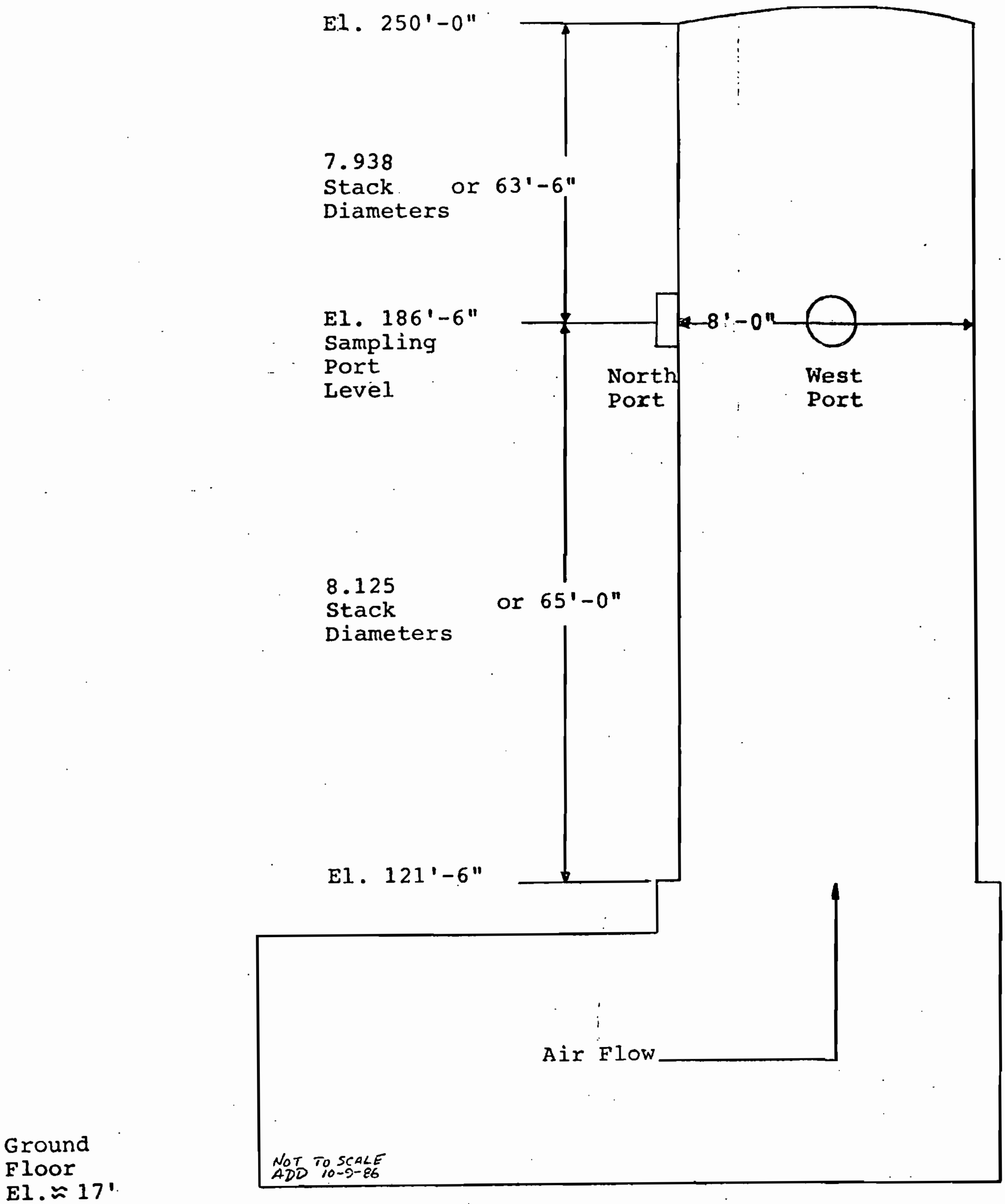
METHOD 5 PARTICULATE SAMPLING TRAIN



1. Sampling nozzle
2. Sampling probe sheath
3. Heated sample probe liner
4. Out of stack filter assembly
5. Heated filter compartment maintained $120^{\circ}C \pm 14^{\circ}C$ ($248^{\circ}F \pm 25^{\circ}F$) (or temperature specified in 40CFR subpart) with temperature sensor
6. Impinger case
7. First impinger filled with H_2O (200 ml)
8. Greenburg-Smith (or modified Greenburg-Smith) impinger filled with H_2O (200 ml)
9. Third impinger - dry
10. Fourth impinger - filled with H_2O absorption media (200-300 gm)
11. Impinger exit gas temperature sensor
12. Umbilical cord - vacuum line
13. Pressure gage
14. Coarse adjustment valve
15. Leak free pump
16. By-pass valve
17. Dry gas meter with thermometer for measuring avg. of inlet & outlet gas temperature
18. Orifice meter with manometer
19. Type S pitot tube with manometer
20. Stack temperature sensor
21. O_2 probe

SAMPLING PORT LOCATIONS

No. 4 Combination Boiler

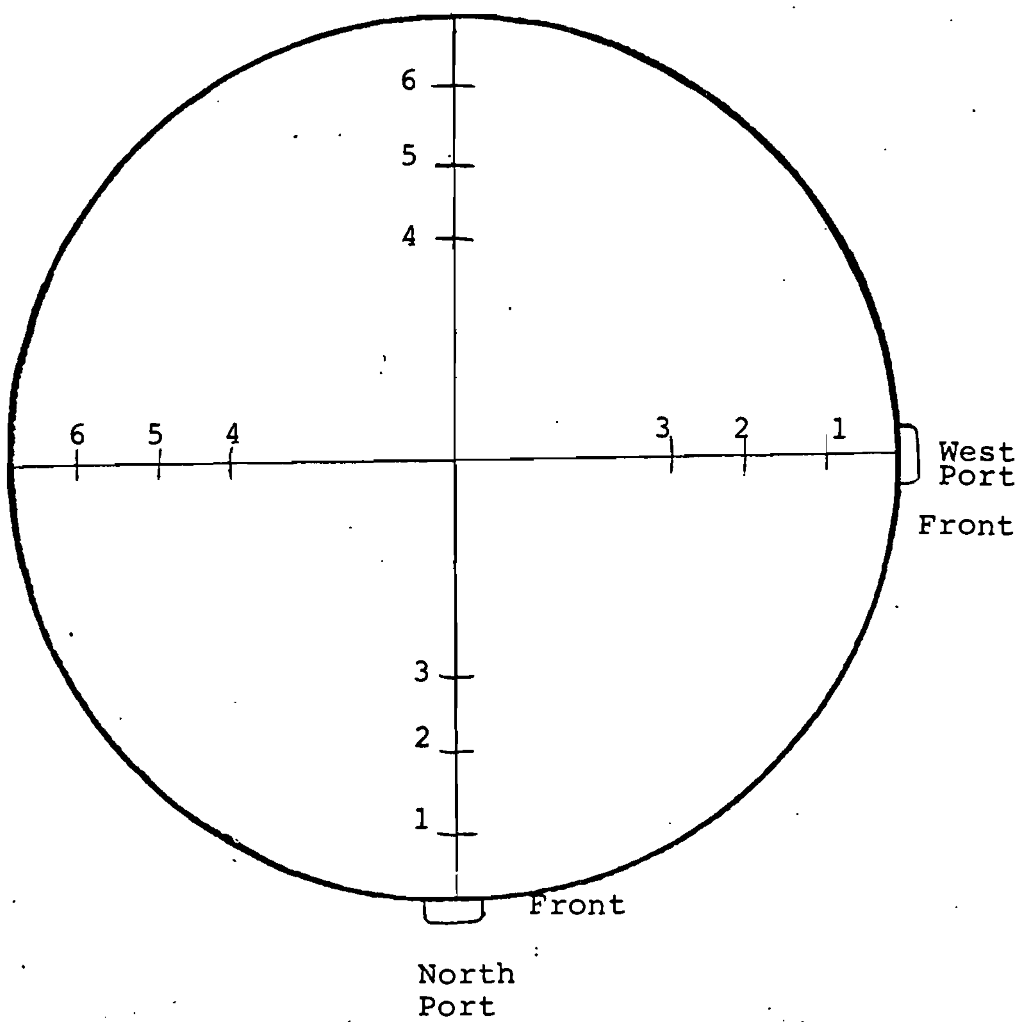


Sampling Point Locations

No. 4 Combination Boiler

Stack Inner Diameter	=	8'-0"
Area of Stack Cross Section	=	50.27 sq. ft.
Number of Sampling Ports	=	2

Sample Point No.	Distance from Inside Wall at Port Opening
1	4.2"
2	14.0"
3	28.4"
4	67.6"
5	82.0"
6	91.8"



NOT TO SCALE
ADD 10-9-86

NOZZLE CALIBRATION

Date 12 February 1987 Calibrated by A. D. Dumas

Nozzle identification #	D_1, in.	D_2, in.	D_3, in.	ΔD, in.	D_{avg}
9C	.278	.278	.278	.000	.278
9D	.278	.278	.278	.000	.278

where:

$D_{1, 2, 3,}$ = nozzle diameter measured on a different diameter, in. Tolerance = measure within 0.001 in.

ΔD = maximum difference in any two measurements, in. Tolerance = 0.004 in.

D_{avg} = average of D_1, D_2, and D_3.

Nozzle size was selected by means of a nomograph and evaluation of available nozzle sizes to sample at 0.75 ± .25 cu. ft. per minute.

TEMPERATURE SENSORS' CALIBRATION

NUTECH NO. 1 CONSOLE

THERMOCOUPLE: FOR STACK, FILTER, AND IMPINGER TEMPERATURES

	HG IN GLASS	THERMOCOUPLE
ICE BATH	32	32
ROOM TEMPERATURE	70	69
BOILING WATER	212	218
BOILING GLYCERIN	506	519

CALIBRATION BY: A.D. Dumas + J. Norwood, Jr.

DATE: September 25, 1986

NOTE: ALL UNITS ARE ^{o}F

Best Available Copy

ADJUSTED CALIBRATION

METER CONSOLE CALIBRATION FORM

Name Georgia-Pacific Corporation – Palatka Division Date March 22nd, 1984

Console No. 1 NuTech Dry Gas Meter No. 1 NuTech

Wet Test Meter No. 1 HP Correction Factor 0.99

Barometric Pressure, P_b 30.11 In Hg Leak Test @ 15" Hg for 10 min: .005 ft³

-2-4" Hg Vacuum during calibration

Orifice manometer setting ΔH, in. H_2O	Gas Volume wet test meter V_w, ft³	Gas Volume dry gas meter V_d, ft³	Temperature: Wet Test Meter t_w, °F	Temperature: Dry Gas Meter Average t_d, °F	Time θ, min	Y	ΔH@
0.5	3.901	4.060	73	93	10	0.996	1.777
1.00	5.473	5.705	73	93	10	0.993	1.806
1.50	6.522	6.767	73	91	10	0.993	1.914
2.00	7.472	7.743	74	89	10	0.987	1.969
				Average		0.99	1.86

A.D. Dumas 3/22/84

Calculations

H	$\frac{\Delta H}{13.6}$	Y	H@
		$\frac{V_w P_b (t_d + 460)}{V_d (P_b + \frac{\Delta H}{13.6})(t_w + 460)}$	$\frac{0.0317 \Delta H}{P_b (t_d + 460)} \left[\frac{(t_w + 460)\theta}{V_w}\right]^2$
0.5	0.0368		
1.00	0.0735		
1.50	0.1103		
2.00	0.1471		

Y = Ratio of accuracy of wet test meter to dry test meter. Tolerance = ± 0.02.

H@ = Orifice pressure differential that gives 0.75 cfm of air at 68°F and 29.92 inches of mercury, in H_2O. Tolerance = ± 0.15.

Orifice ΔH@ should fall between 1.59 – 2.09 or modification may be necessary for some sampling situations.

∞

CALCULATIONS

LEAK TEST: ~ 0.02 CFM

	WET	DRY	DRY-WET / 10	
	0.156	97.748		< .02 CFM
	0.000	97.587	$\frac{.161-.156}{10}$	?< .02 CFM
	0.156	.161	$\frac{.005}{10}$	?< .02 CFM
			.0005	< .02 CFM

	WET	DRY
END	3.901	97.462
START	- 0.000	- 93.402
ΔH = 0.5	3.901	4.060
TEMP.	23°C	93°F
°R	533	553

$\frac{3.901\,(30.11)\,553}{4.060\,(30.1468)\,533} = 0.996 = Y$

$\frac{.01585}{(30.11)\,553}\left(\frac{5330}{3.901}\right)^2 = 1.777 = \Delta H@$

	WET	DRY
END	5.473	93.093
START	- 0.000	- 87.388
ΔH = 1.0	5.473	5.705
TEMP.	23°C	93°F
°R	533	553

$\frac{5.473\,(30.11)\,553}{5.705\,(30.1835)\,533} = 0.993 = Y$

$\frac{.0317}{(30.11)\,553}\left(\frac{5330}{5.473}\right)^2 = 1.806 = \Delta H@$

	WET	DRY
END	6.522	81.267
START	- 0.000	- 74.500
ΔH = 1.5	6.522	6.767
TEMP.	23°C	91°F
°R	533	551

$\frac{6.522\,(30.11)\,551}{6.767\,(30.2203)\,533} = 0.993 = Y$

$\frac{.04755}{(30.11)\,551}\left(\frac{5330}{6.522}\right)^2 = 1.914 = \Delta H@$

	WET	DRY
END	7.472	74.027
START	- 0.000	- 66.284
ΔH = 2.0	7.472	7.743
TEMP.	23.4°C	89°F
°R	534	549

$\frac{7.472\,(30.11)\,549}{7.743\,(30.2571)\,534} = 0.987 = Y$

$\frac{.0634}{(30.11)\,549}\left(\frac{5340}{7.472}\right)^2 = 1.969 = \Delta H@$

POST-TEST INTERMEDIATE POINT CHECK
GEORGIA-PACIFIC CORPORATION, PALATKA OPERATIONS

DATE : 2/20/87
LAST SOURCE TESTED: #4 COMBINATION BOILER
CONSOLE # : 1 (NUTECH)
DRY GAS METER # : 1 (NUTECH)

WET TEST METER #: 1 (GP)
DATE OF LAST CAL: 3/22/84
Y FROM LAST CAL : 0.99
ANALYST : ADD

INPUT	UNITS	OUTPUT	COMMENTS
2.07	"H20		AVG delH FROM LAST TEST
-8	"Hg		MAX VACUUM FROM LAST TEST
30.18	"Hg		BAROMETRIC PRESSURE
0.222	CF		LEAK CHECK WET VOLUME *
0.233	CF		LEAK CHECK DRY VOLUME *
7.372	CF		RUN #1 WET VOLUME
7.356	CF		RUN #2 WET VOLUME
7.337	CF		RUN #3 WET VOLUME
8.112	CF		RUN #1 DRY VOLUME
8.118	CF		RUN #2 DRY VOLUME
8.125	CF		RUN #3 DRY VOLUME
24	oC		RUN #1 WET TEMPERATURE
24	oC		RUN #2 WET TEMPERATURE
24	oC		RUN #3 WET TEMPERATURE
109	oF		RUN #1 DRY TEMPERATURE
111	oF		RUN #2 DRY TEMPERATURE
113	oF		RUN #3 DRY TEMPERATURE
	"H20	2.07	ORIFICE MANOMETER SETTING
		0.96	RUN #1 Y
		0.96	RUN #2 Y
		0.96	RUN #3 Y
		0.96	AVERAGE Y
	"H20	2.02	RUN #1 delH@
	"H20	2.02	RUN #2 delH@
	"H20	2.02	RUN #3 delH@
	"H20	2.02	AVERAGE delH@ **
	CFM	0.0011	LEAK RATE *
+/-0.02	CFM		ALLOWABLE LEAK RATE
	%	-3	CHANGE IN DGM CALIBRATION SINCE LAST CALIBRATION
+/-5	%		ALLOWABLE CHANGE IN DGM CALIBRATION SINCE LAST CALIBRATION

* LEAK CHECK PERFORMED AT 0.02 CFM AND AT -15" Hg.

** ORIFICE delH@ SHOULD FALL BETWEEN 1.59 - 2.09 OR MODIFICATION MAY BE NECESSARY FOR SOME SAMPLING SITUATIONS.

Y = RATIO OF ACCURACY OF WET TEST METER TO DRY TEST METER. TOLERANCE = +/- 0.02. DIMENSIONLESS.

delH@ = ORIFICE PRESSURE DIFFERENTIAL THAT GIVES 0.75 CFM OF AIR AT 68 oF AND 29.92 INCHES OF MERCURY. TOLERANCE = +/- 0.15. INCHES H2O.

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#4 Comb. Bh.

METER CONSOLE CALIBRATION FORM
Post-test intermediate point check : ΔH = 2.072
Max. vacuum = -8" Hg

Georgia-Pacific Corporation – P[illegible] Division Date 20 February 1987
ole No. 1 (NuTech) Dry Gas Meter No. 1 (NuTech)
Test Meter No. 1 (GP) Correction Factor 0.99 (from last calibration 3/22/84)
metric Pressure, P_b 30.18 In Hg Leak Test @ 15" Hg for 10 min .0011 ft³

ifice meter tting H, . H2O	Gas Volume wet test meter V_w, ft³	Gas Volume dry gas meter V_d, ft³	Temperature Wet Test Meter t_w, °F	Temperature Dry Gas Meter Average t_d, °F	Time θ, min	Y	ΔH@
~~2.07~~	~~7.072~~	~~7.747~~	~~75.2~~	~~107~~	~~10~~	~~0.96~~	~~2.20~~
2.07	7.372	8.112	75.2	109	10	0.96	2.02
2.07	7.356	8.118	75.2	111	10	0.96	2.02
2.07	7.337	8.125	75.2	113	10	0.96	2.02
					Average	0.96	2.02

OK
ADD 2/20/87

Calculations

H	$\frac{\Delta H}{13.6}$	Y: $\frac{V_w P_b (t_d + 460)}{V_d (P_b + \frac{\Delta H}{13.6})(t_w + 460)}$	H@: $\frac{0.0317 \Delta H}{P_b (t_d + 460)} \left[\frac{(t_w + 460)\theta}{V_w}\right]^2$
2.07	0.1522		
0.5	0.0368		
1.0	0.0735		
1.5	0.1103		
2.0	0.1471		

atio of accuracy of wet test meter to dry test meter. Tolerance = ± 0.02.

Orifice pressure differential that gives 0.75 cfm of air at 68°F and 29.92 inches of mercury, in H_2O. Tolerance = ± 0.15.

ce ΔH@ should fall between 1.59 – 2.09 or modification may be necessary for some ing situations.

CALCULATIONS

LEAK TEST: 0.02 CFM @ -15" Hg

	WET	DRY	DRY-WET / 10	
	0.222	025.340		
	-0.000	-025.107	$\frac{.233-.222}{10}$	? .02
	0.222	0.233	$\frac{.011}{10}$	? < .02

.0011 < .02 CFM

	WET	DRY
~~END~~	~~7.072~~	~~34.228~~
~~START~~	~~-0.000~~	~~-26.481~~
~~ΔH = 2.07~~	~~7.072~~	~~7.747~~
~~TEMP.~~	~~24°C~~	~~107°F~~
~~°R~~	~~535.2~~	~~567~~

~~$\frac{7.072 (30.18) 567}{7.747 (30.3322) 535.2} = 0.96$~~

~~$\frac{.0656824}{(30.18) 567} \left(\frac{535.2}{7.072}\right)^2 = 2.20$~~

	WET	DRY
END	7.372	42.340
START	-0.000	-34.228
ΔH = 2.07	7.372	8.112
TEMP.	24°C	109°F
°R	535.2	569

$\frac{7.372 (30.18) 569}{8.112 (30.3322) 535.2} = 0.96$

$\frac{.0656824}{(30.18) 569} \left(\frac{535.2}{7.372}\right)^2 = 2.02$

	WET	DRY
END	7.356	50.458
START	-0.000	-42.340
ΔH = 2.07	7.356	8.118
TEMP.	24°C	111°F
°R.	535.2	571

$\frac{7.356 (30.18) 571}{8.118 (30.3322) 535.2} = 0.96$

$\frac{.0656824}{(30.18) 571} \left(\frac{535.2}{7.356}\right)^2 = 2.02$

	WET	DRY
END	7.337	58.583
START	-0.000	-50.458
ΔH = 2.07	7.337	8.125
TEMP.	24°C	113°F

$\frac{7.337 (30.18) 573}{8.125 (30.3322) 535.2} = 0.96$

$\frac{.0656824}{(30.18)(573)} \left(\frac{535.2}{7.337}\right)^2 = 2.02$

NO. 4 COMBINATION BOILER

INTEGRATOR CALIBRATION CHECK

(3 MINUTES)

INTEGRATOR	SCALE CALIBRATION POINT	ACTUAL COUNTS	TARGET COUNTS	% ERROR
STEAM	20%	40,075	40	+.0018
	80%	159,706	160	-.0018

CALIBRATED BY A Gowell

DATE 2-17-87

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Fuel Engineering Company of New York

30 CLAIRMONT AVENUE, THORNWOOD, NEW YORK 10594 • 914/769-7900
FUEL SAMPLING, ANALYSIS & CONSULTING

CERTIFICATE OF ANALYSIS

Sample Identification:

#6 Fuel Oil
Stack Test

Date: 03-0-87

Laboratory Report No.: 389499

Date Received: 02-20-87

Purchase Order No.: P64373

Date Sampled: 02-17-87

Sampled by:

Georgia Pacific
P.O. Box 919
Palatka, FL
32077
Attention: C.W. Sherwood

1000040

Degrees API @ 60°F	11.7 ASTM D-287	Asphaltene	11.33% IP 143-82	
Specific Gravity @ 60°F	0.9881 ASTM D-287	Water by Distillation		
Flash Point °F	190 ASTM D-56	Sediment by Extraction		
Bottom Sediment (incl water) %	0.20 ASTM D-96	Pour pt.		°F
Sulfur %	2.48 ASTM D-1552	Cloud pt.		°F
BTU per pound	18255 ASTM D-2382	CHEMICAL ANALYSIS		
BTU per gallon	150222 by calculation	Sodium IL 551 Manual	7.21	PPM
Viscosity @ 100°F	SUS	Vanadium	385.04	PPM
Viscosity @ 122°F	153.4 SFS	IL 551 Manual Potassium		PPM
Ash	0.056 % ASTM D-445	Iron		PPM
Carbon	85.81 % ASTM D-3178	Lead		PPM
Hydrogen	10.55 % ASTM D-3178	Nickel		PPM
Nitrogen	0.44 % ASTM D-3228	Copper		PPM
Oxygen	0.76 % by Calculation	Magnesium		PPM
Chlorine	%	Calcium		PPM
Carbon Residue	8.04% ASTM D-189	Manganese		PPM

Approved by:

AIHA ACCREDITATION CERTIFICATE XII CHEMICAL ANALYSES

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LAB DATA

SOURCE: #4 Combination Boiler DATE: 17 February 1987 RUN: 1

PARTICULATE

Test Filter

# 54	Filter Tare	.2844	g
# 1	Container Tare	52.6943	g
	Total Tare	52.9787	g
	Final Total	52.9913	g
	Mass Collected	.0126	g

Probe Wash

# 1	Container Tare	156.4046	g
	Final Total	156.4215	g
	Mass Collected	.0169	g

Total Particulate Collected .0295 g ✓

MOISTURE

Impingers

Original Impinger Volume	400.0 ml ADD
Final Impinger Volume	640.0 ml
Moisture Collected	240.0 ml

Dessicant

Original Dessicant Wt.	200.0 g ADD
Final Dessicant Wt.	213.83 g
Moisture Collected	13.83 g

Total Moisture Collected 253.83cc ✓

LAB DATA

SOURCE: #4 Combination Boiler DATE: 2/19/87 RUN: 2

PARTICULATE

Test Filter

# 55	Filter Tare	.2867	g
# 2	Container Tare	54.9555	g
	Total Tare	55.2422	g
	Final Total	55.2473	g
	Mass Collected	.0051	g

Probe Wash

# 2	Container Tare	142.1528	g
	Final Total	142.1650	g
	Mass Collected	.0122	g

Total Particulate Collected .0173 g

MOISTURE

Impingers

Original Impinger Volume	400.0 ml ADD
Final Impinger Volume	620.0 ml
Moisture Collected	220.0 ml

Dessicant

Original Dessicant Wt.	200.0 g ADD
Final Dessicant Wt.	208.5 g
Moisture Collected	8.5 g

Total Moisture Collected 228.5 cc

LAB DATA

SOURCE: #4 Combination Boiler DATE: 2/19/87 RUN: 3

PARTICULATE

Test Filter

# 52	Filter Tare	.2811	g
# 3	Container Tare	55.0218	g
	Total Tare	55.3029	g
	Final Total	55.3084	g
	Mass Collected	.0055	g

Acetone Blank
200 ml. aliquot

Final Total 101.7981 g
Blank Beaker Tare − 101.7990 g
Residue − 000.0009 g

Probe Wash

# 3	Container Tare	153.5135	g
	Final Total	153.5273	g
	Mass Collected	.0138	g

Total Particulate Collected .0193 g ✓

MOISTURE

Impingers

Original Impinger Volume	400.0 ml	ADD
Final Impinger Volume	633.0 ml	
Moisture Collected	233.0 ml	

Dessicant

Original Dessicant Wt.	200.0 g	ADD
Final Dessicant Wt.	210.3 g	
Moisture Collected	10.3 g	

Total Moisture Collected 243.3 cc ✓
243.3

Dry molecular weight determination

Plant Georgia-Pacific
Date 17 February 1987
Sampling time (24 hr clock) 1030 - 1140
Sampling location #4 Combination Boiler
Sample type (bag, integrated, continuous)
Analytical method Orsat
Ambient temperature 76°F
Operator Dumas

Comments: F_0 check is out of Range — Sample analyzed six times with same results. Both Orsat bag + sample system leak checked.

Blank

	Actual	Net
CO_2	0.0	0.0 %
O_2	20.9	20.9 %
CO	20.9	0.0 %
N_2	20.9	79.1 %

Gas \ Run 1	1 Reading Actual	1 Reading Net	2 Reading Actual	2 Reading Net	3 Reading Actual	3 Reading Net	Average net Volume	Multiplier	Molecular weight of stack gas (dry basis) M_d (lb/lb-mole)
CO_2	13.4	13.4	13.4	13.4	13.4	13.4	13.40	.44	5.896
O_2 (net is actual O_2 reading minus actual CO_2 reading)	17.8	4.4	17.8	4.4	17.8	4.4	4.40	.32	1.408
CO (net is actual CO reading minus actual O_2 reading	17.8	0.0	17.8	0.0	17.8	0.0	0.00	.28	0.000
N_2 (net is 100 minus actual CO reading	17.8	82.2	17.8	82.2	17.8	82.2	82.20	.28	23.016
								Total	30.32

$$M_d = .44(\%CO_2) + .32(\%O_2) + .28(\%CO + \%N_2)$$

$$F_0 = \frac{20.9 - 4.40\%O_2}{13.40\%CO_2} = 1.231$$ Out of Range

$F_{0\,Range} = 1.003 - 1.130$

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√

Dry molecular weight determination

Plant Georgia-Pacific
Date 2/19/87
Sampling time (24 hr clock) 0930 - 1046
Sampling location #4 Combination Boiler
Sample type (bag, integrated, continuous)
Analytical method Orsat
Ambient temperature 74°F
Operator Dumas

Comments:

Gas \ Run 2	1 Reading Actual	1 Reading Net	2 Reading Actual	2 Reading Net	3 Reading Actual	3 Reading Net	Average net Volume	Multiplier	Molecular weight of stack gas (dry basis) M_d (lb/lb-mole)
CO_2	13.5	13.5	13.6	13.6	13.6	13.6	13.57	.44	5.97
O_2 (net is actual O_2 reading minus actual CO_2 reading)	19.7	6.2	19.7	6.1	19.7	6.1	6.13	.32	1.96
CO (net is actual CO reading minus actual O_2 reading	20.1	0.4	20.0	0.3	19.8	0.1	0.27	.28	0.08
N_2 (net is 100 minus actual CO reading	20.1	79.9	20.0	80.0	19.8	80.2	80.03	.28	22.41
								Total	30.42 ✓

$$M_d = .44(\%CO_2) + .32(\%O_2) + .28(\%CO + \%N_2)$$

$$F_o = \frac{20.9\% - 6.13\ \%O_2}{13.57\ \%CO_2} = 1.088\ ✓$$

F_o Range = 1.003 – 1.130

OK ✓ in Range

17

Dry molecular weight determination

Plant Georgia - Pacific
Date 2/19/87
Sampling time (24 hr clock) 1128-1235
Sampling location # 4 Combination Boiler
Sample type (bag, integrated, continuous)
Analytical method Orsat
Ambient temperature 74°F
Operator Dumas

Comments: F_o check is out of range
sample analyzed 6 times with the same results.
Both Orsat bag + sample system passed leak checks.

Gas \ Run 3	1 Reading Actual	1 Reading Net	2 Reading Actual	2 Reading Net	3 Reading Actual	3 Reading Net	Average net Volume	Multiplier	Molecular weight of stack gas (dry basis) M_d (lb/lb-mole)
CO_2	13.0	13.0	13.0	13.0	13.0	13.0	13.00	.44	5.72
O_2 (net is actual O_2 reading minus actual CO_2 reading)	18.0	5.0	18.0	5.0	18.0	5.0	5.00	.32	1.60
CO (net is actual CO reading minus actual O_2 reading	18.0	0.0	18.0	0.0	18.0	0.0	0.00	.28	0.00
N_2 (net is 100 minus actual CO reading	18.0	82.0	18.0	82.0	18.0	82.0	82.00	.28	22.96
	100							Total	30.28 ✓

$$M_d = .44(\%CO_2) + .32(\%O_2) + .28(\%CO + \%N_2)$$

$$F_o = \frac{20.9\% - 5.00 \ \%O_2}{13.00 \ \%CO_2} = 1.223$$

Out of range

F_o Range = 1.003 – 1.130

✓

BOILER OPERATING DATA

NO. 4 Combination Boiler   DATE 17 February '87   RUN # 1

	END	START	DIFFERENCE
TIME	11:41 AM	10:31 AM	70 min ✓
STM - INT.	415924	412350	3574 ✓
- PSI	1300	1305	
- °F	900	910	
OIL - INT	12975207	12975204	3 ✓ no oil used (testing burner only)
WATER - INT	641889	638507	3382 ✓
- PSI	1500	1505	
- °F	460	460	

Steam Integrator Units = 100 lbs. Steam
Oil Integrator Units = 100 lbs. Oil
Water Integrator Units = 100 lbs. Water

STM#/HR	OIL#/HR	WATER#/HR
$\frac{70 \text{ Min.}}{3574 \times 100 \text{ lbs.}} = \frac{60 \text{ Min./Hr.}}{x}$	$\frac{70 \text{ Min.}}{x\ 100 \text{ lbs.}} = \frac{60 \text{ Min./Hr.}}{x}$	$\frac{70 \text{ Min.}}{3382 \times 100 \text{ lbs.}} = \frac{60 \text{ Min./}}{x}$
	no oil used for test	
X = 306,343 #STM/HR ✓	X = #OIL/HR ✓	X = 289,886 $\#H_2O$/HR ✓

Oil Sample ✓

Precipitator Parameters:

	END	START
inlet temp °F	475	480°
outlet temp °F	471	473°

modules/compartments out of service — one field dissst (#2 field)

BOILER OPERATING DATA

NO. 4 Combination Boiler DATE 2/19/87 RUN # 2

	END 1045	START 9:30 AM	DIFFERENCE
TIME			75 min
STM - INT.	539976	536273	3703
- PSI	1300	1300	
- °F	900	910	
OIL - INT	12992701	12992701	0
WATER - INT	763090	759599	3491
- PSI	1500	1500	
- °F	455	455	

Steam Integrator Units = 100 lbs. Steam
Oil Integrator Units = 100 lbs. Oil
Water Integrator Units = 100 lbs. Water

STM#/HR	OIL#/HR	WATER#/HR
$\frac{75 \text{ Min.}}{3703 \times 100 \text{ lbs.}} = \frac{60 \text{ Min./Hr.}}{x}$	$\frac{75 \text{ Min.}}{x\ 100 \text{ lbs.}} = \frac{60 \text{ Min./Hr.}}{x}$	$\frac{75 \text{ Min.}}{3491 \times 100 \text{ lbs.}} = \frac{60 \text{ Min./}}{x}$
	no oil used	
X = 296,240 #STM/HR	X = #OIL/HR	X = 279,280 #H_2O/HR

Precipitator Parameters

	10 45 AM END	9:30 AM START
Inlet Temp °F	455	455
Outlet Temp °F	451	452
Compartments out of service	#2 field	#2 field

BOILER OPERATING DATA

NO. 4 Combination Boiler DATE 2/19/87 RUN # 3

	END 12:36 PM	START 11:27 AM	DIFFERENCE
TIME			69 min
STM - INT.	545312	541958	3354
- PSI	1300	1300	
- °F	920	900	
OIL - INT	12992702	12992702	0
WATER - INT	768075	764968	3107
- PSI	1500	1500	
- °F	455	455	

Steam Integrator Units = 100 lbs. Steam
Oil Integrator Units = 100 lbs. Oil
Water Integrator Units = 100 lbs. Water

STM#/HR	OIL#/HR	WATER#/HR
$\frac{69\text{ Min.}}{3354 \times 100\text{ lbs.}} = \frac{60\text{ Min./Hr.}}{x}$	$\frac{69\text{ Min.}}{\_\_\_ \times 100\text{ lbs.}} = \frac{60\text{ Min./Hr.}}{x}$	$\frac{69\text{ Min.}}{3107 \times 100\text{ lbs.}} = \frac{60\text{ Min./}}{x}$
X = 291,652 #STM/HR	X = no oil used #OIL/HR	X = 270,174 $\#H_2O/HR$

Precipitator Parameters

	END 1236 PM	START 11:27 AM
Inlet Temp °F	464	459
Outlet temp °F	458	452
Compartments out of service	#2 field	#2 field

PRODUCTION RATE CERTIFICATION

I, JOHN E MCKINLEY,
(print name)

certify that the production rate

on the No. 4 COMBINATION BOILER

unit was 306,343 pounds

of steam per hour on FEBRUARY 17TH, 1987
(date)

between the hours of 10 31 AM and

11 41 AM.

John E. McKinley
(signature and title)
Operating Supt, utilities

PRODUCTION RATE CERTIFICATION

I, JOHN E. MCKINLEY,
(print name)

certify that the production rate

on the No. 4 COMBINATION BOILER

unit was 296,240 pounds

of steam per hour on FEBRUARY 19th, 1987
(date)

between the hours of 9:30 AM and

10:45 AM.

John E. McKinley
(signature and title)
Operating Supt, Utilities

PRODUCTION RATE CERTIFICATION

I, JOHN E. MCKINLEY,
(print name)

certify that the production rate

on the No. 4 COMBINATION BOILER

unit was 291,652 pounds

of steam per hour on FEBRUARY 19TH, 1987
(date)

between the hours of 11 27 AM and

12 36 AM.

John E. McKinley
(signature and title)
Operating Supt, Utilities

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#4 COMBINATION BOILER STACK TEST   FEBRUARY 17, 1987
COMPLIANCE RUN #1

INPUT	NAME	OUTPUT	UNIT	COMMENT
253.83	Vlc		ml	Volume of liquid collected
48.768	Vm		DCF	Volume of meter
0.99	Y			DGM calibration factor
29.79	Pbar		"Hg	Barometric pressure
2.353	delH		"H2O	dP across orifice meter
80.5	TmF		oF	Temperature of meter, Fahrenheit
482.3	TsF		oF	Temperature of stack, Fahrenheit
29.741	Ps		"Hg	Pressure of stack
50.27	A		ft^2	Area of stack
29.5	Mn		mg	Mass of particulate collected
60	Th		min.	Time of test, minutes
0.278	Dn		"	Diameter of the nozzle
13.40	%CO2		%	Orsat %CO2
4.40	%O2		%	Orsat %O2
0.00	%CO		%	Orsat %CO
82.20	%N2		%	Orsat %N2
0.816	dP		"H2O	Diff. pressure across Pitot
0.903	SRdP		"H2O	Square root of dP
0	OIL		Lb/Hr	Oil flow
	BTU		BTU/Lb	Oil heat value
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				Calculated data shown below:
	Md	30.32	#/# Mole	Molecular weight of dry stack gas
	Ts	942.3	oR	Stack temperature
	Tm	540.5	oR	DGM temperature
	VwSTD	11.948	SCF	Vlc corrected to std. conditions
	VmSTD	47.2127	DSCF	Vm corrected to std. conditions
	An	0.000421	Ft^2	Area of nozzle cross section
	Bws	0.2020	%	Moisture content of stack gas
	Ms	27.8319	#/# Mole	Mol. Wt. of wet stack gas
	Vs	69.1875	Ft/Sec	Stack velocity
	Qsd	5565509	DSCFH	Dry, std. stack vol. flow rate
	Cs	0.009641	Gr/SCF	Particulate conc. in stack gas
	Vsa	208683	ACFM	Stack velocity, actual
	Qmin	92758	SCFM	Dry, std. stack vol. flow rate
	I	101.2	%	Isokinetics
	Hi	457.690	MM BTU/Hr	Total heat input
	Ho	0	MM BTU/Hr	Oil heat input
	Hb	457.690	MM BTU/Hr	Bark heat input
	Fd	9600	DSCF/MM BTU	F factor
	E	130.10	Lb/Hr	Allowable particulate emissions
	E1	7.67	Lb/Hr	Actual particulate emissions
	E2	0.017	Lb/MM BTU	Actual particulate emissions
	E0	0.300	Lb/MM BTU	Allowable particulate emissions

#4 COMBINATION BOILER STACK TEST   FEBRUARY 19, 1987
COMPLIANCE RUN #2

INPUT	NAME	OUTPUT	UNIT	COMMENT
228.50	Vlc		ml	Volume of liquid collected
44.345	Vm		DCF	Volume of meter
0.99	Y			DGM calibration factor
30.20	Pbar		"Hg	Barometric pressure
1.927	delH		"H2O	dP across orifice meter
80.0	TmF		oF	Temperature of meter, Fahrenheit
457.3	TsF		oF	Temperature of stack, Fahrenheit
30.156	Ps		"Hg	Pressure of stack
50.27	A		ft^2	Area of stack
17.3	Mn		mg	Mass of particulate collected
60	Th		min.	Time of test, minutes
0.278	Dn		"	Diameter of the nozzle
13.57	%CO2		%	Orsat %CO2
6.13	%O2		%	Orsat %O2
0.27	%CO		%	Orsat %CO
80.03	%N2		%	Orsat %N2
0.664	dP		"H2O	Diff. pressure across Pitot
0.815	SRdP		"H2O	Square root of dP
0	OIL		Lb/Hr	Oil flow
	BTU		BTU/Lb	Oil heat value
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				Calculated data shown below:
	Md	30.4164	#/# Mole	Molecular weight of dry stack gas
	Ts	917.3	oR	Stack temperature
	Tm	540	oR	DGM temperature
	VwSTD	10.755	SCF	Vlc corrected to std. conditions
	VmSTD	43.5135	DSCF	Vm corrected to std. conditions
	An	0.000421	Ft^2	Area of nozzle cross section
	Bws	0.1982	%	Moisture content of stack gas
	Ms	27.9556	#/# Mole	Mol. Wt. of wet stack gas
	Vs	61.0501	Ft/Sec	Stack velocity
	Qsd	5139311	DSCFH	Dry, std. stack vol. flow rate
	Cs	0.006134	Gr/SCF	Particulate conc. in stack gas
	Vsa	184139	ACFM	Stack velocity, actual
	Qmin	85655	SCFM	Dry, std. stack vol. flow rate
	I	101.0	%	Isokinetics
	Hi	378.327	MM BTU/Hr	Total heat input
	Ho	0	MM BTU/Hr	Oil heat input
	Hb	378.327	MM BTU/Hr	Bark heat input
	Fd	9600	DSCF/MM BTU	F factor
	E	113.50	Lb/Hr	Allowable particulate emissions
	E1	4.50	Lb/Hr	Actual particulate emissions
	E2	0.012	Lb/MM BTU	Actual particulate emissions
	E0	0.300	Lb/MM BTU	Allowable particulate emissions

#4 COMBINATION BOILER STACK TEST   FEBRUARY 19, 1987
COMPLIANCE RUN #3

INPUT	NAME	OUTPUT	UNIT	COMMENT
243.30	Vlc		ml	Volume of liquid collected
44.613	Vm		DCF	Volume of meter
0.99	Y			DGM calibration factor
30.20	Pbar		"Hg	Barometric pressure
1.935	delH		"H2O	dP across orifice meter
88.9	TmF		oF	Temperature of meter, Fahrenheit
461.4	TsF		oF	Temperature of stack, Fahrenheit
30.158	Ps		"Hg	Pressure of stack
50.27	A		ft^2	Area of stack
19.3	Mn		mg	Mass of particulate collected
60	Th		min.	Time of test, minutes
0.278	Dn		"	Diameter of the nozzle
13.00	%CO2		%	Orsat %CO2
5.00	%O2		%	Orsat %O2
0.00	%CO		%	Orsat %CO
82.00	%N2		%	Orsat %N2
0.668	dP		"H2O	Diff. pressure across Pitot
0.817	SRdP		"H2O	Square root of dP
0	OIL		Lb/Hr	Oil flow
	BTU		BTU/Lb	Oil heat value
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				Calculated data shown below:
	Md	30.28	#/# Mole	Molecular weight of dry stack gas
	Ts	921.4	oR	Stack temperature
	Tm	548.9	oR	DGM temperature
	VwSTD	11.452	SCF	Vlc corrected to std. conditions
	VmSTD	43.0676	DSCF	Vm corrected to std. conditions
	An	0.000421	Ft^2	Area of nozzle cross section
	Bws	0.2101	%	Moisture content of stack gas
	Ms	27.7005	#/# Mole	Mol. Wt. of wet stack gas
	Vs	61.6163	Ft/Sec	Stack velocity
	Qsd	5087804	DSCFH	Dry, std. stack vol. flow rate
	Cs	0.006914	Gr/SCF	Particulate conc. in stack gas
	Vsa	185847	ACFM	Stack velocity, actual
	Qmin	84797	SCFM	Dry, std. stack vol. flow rate
	I	101.0	%	Isokinetics
	Hi	403.190	MM BTU/Hr	Total heat input
	Ho	0	MM BTU/Hr	Oil heat input
	Hb	403.190	MM BTU/Hr	Bark heat input
	Fd	9600	DSCF/MM BTU	F factor
	E	120.96	Lb/Hr	Allowable particulate emissions
	E1	5.03	Lb/Hr	Actual particulate emissions
	E2	0.012	Lb/MM BTU	Actual particulate emissions
	E0	0.300	Lb/MM BTU	Allowable particulate emissions

Date: FEB 17 1987 No. 4 Combination Boiler Run: 1

Summary of Results

Steam Production, Lb./Hr.	306,343
Allowable Emissions, Lb./Hr.	130.10
Actual Emissions, Lb./Hr.	7.67

Comments

Date: FEB 17 1987 Calculations Run: 1

Data Summary

V_{lc}	253.83	ml		
V_m	48.768	DCF		
Y	.99			
P_{bar}	29.79	"Hg	(at sampling height)	
$\overline{\Delta H}$	2.353	"H_2O		
$\overline{T_m}$	540.5	°R	80.5	°F
$\sqrt{\overline{\Delta P}}$	.903	"H_2O		
$\overline{\Delta P}$	.816	"H_2O		
T_s	942.3	°R	482.3	°F
P_s	29.741	"Hg		
A	50.27	ft^2		
M_n	29.5	mg		
A_n	.000421519	ft^2		
θ	60	min.		
O_2	4.40	% Orsat		
	4.92	% Teledyne		

Date: FEB 17 1987 Calculations Run: 1

1. $V_{w(std)} = (0.04707)(V_{1c}) = (.04707)(253.83)$ $= 11.948$ SCF

2. $V_{m(std)} = (17.64)(V_m)(Y)\left[\dfrac{P_{bar} + \dfrac{\Delta H}{13.6}}{\overline{T}m}\right]$

$= (17.64)(48.768)(.99)\left(\dfrac{29.79 + \dfrac{2.353}{13.6}}{540.5}\right)$ $= 47.2127$ DSCF

3. $B_{ws} = \dfrac{V_{w(std.)}}{V_{w(std.)} + V_{m(std.)}} = \dfrac{11.948}{11.948 + 47.2127}$ $= .2020$

4. M_d = 29.0 For Non-Combustion Sources $= 30.32$

30.0 For Combustion Sources

As per F.D.E.R. Method 3 (Orsat)

5. $M_s = M_d(1-B_{ws}) + 18.0(B_{ws}) = 30.32(.7980) + 18.0(.2020)$ $= 27.8319$

Date: FEB 17 1987 Calculations Run: 1

6. $\overline{V}_s = (71.8116)(\sqrt{\Delta P})\sqrt{\dfrac{\overline{T}_s}{P_s\ M_s}}$

$= (71.8116)(.903)\sqrt{\dfrac{942.3}{(29.741)(27.8319)}} = 69.1875$ Ft./Sec.

7. $\overline{Q}_{sd} = (63529.412)(1-B_{ws})(\overline{V}_s)(A)\left[\dfrac{P_s}{\overline{T}_s}\right]$

$= (63,529.412)(.7980)(69.1875)(50.27)\left(\dfrac{29.741}{942.3}\right) = 5,565,509$ D.S.C.F./Hr.

8. $c_s = \dfrac{(0.01543)(M_n)}{V_{m(std)}} = \dfrac{(.01543)(29.5)}{47.2127} = .009641163$ gr./S.C.F.

9. $E = \dfrac{(c_s)(\overline{Q}_{sd})}{7000} = \dfrac{(.009641163)(5,565,509)}{7000} = 7.67$ Lb./Hr.

10. $I = \dfrac{(0.09450)(\overline{T}_s)V_{m(std)}}{P_s\ \overline{V}_s\ A_n\ \theta\ (1-B_{ws})} = \dfrac{(.09450)(942.3)(47.2127)}{(29.741)(69.1875)(.000421519)(60)(.7980)} = 101.2$ %

No. 4 Combination Boiler

Date: FEB 17 1987 Calculations Run: 1

Total Heat Input, B.T.U./Hr.

$$H_I = \frac{\overline{Q}_{sd}\left(\frac{20.9 - \%O_2\,stack}{20.9}\right)}{9600} = \frac{5,565,509\left(\frac{20.9-4.40}{20.9}\right)}{9600} = 457.7\times10^6$$

Oil Heat Input, B.T.U./Hr.

$$H_O = \left[\frac{\text{Oil Lb.}}{\text{Hr.}}\right]\left[\frac{\text{B.T.U.}}{\text{Lb. Oil}}\right] = \quad = 0$$

Bark Heat Input, B.T.U./Hr.

$$H_B = H_I - H_O = \quad = H_I$$

Allowable Emissions, Lb./Hr.

$$A = \left[\frac{H_B(.300\text{Lb.})}{10^6\text{ B.T.U.}}\right] + \left[\frac{H_O(.100\text{Lb.})}{10^6\text{ B.T.U.}}\right] = \frac{(457.7\times10^6)(.3)}{10^6} = 137.31$$

But max = 130.1

Run 1

FEB 17 1987

F - Factor

$$F_d = (9600)\left(\frac{HB}{H_I}\right) + (9220)\left(\frac{H_o}{H_I}\right) = 9600$$

Emissions from Stack, $\#/10^6$BTU

$$E = \frac{(C_s)(F_d)\left(\frac{20.9}{20.9 - \%O_2}\right)}{7000} = \frac{(.00964163)(9600)\left(\frac{20.9}{20.9-4.40}\right)}{7000} = .017$$

Allowable Stack Emissions, lbs./10^6 BTU

$$A = \frac{(H_B)(.3) + (H_O)(.1)}{H_I} = \frac{(457.7)(.3)}{457.7} = .300$$

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PARTICUL[illegible]ELD DATA

VERY IMPORTANT - FILL IN ALL BLANKS

Plant GEORGIA-PACIFIC CORPORATION | Test Start Time: 1030 | Ambient Temp. °F 57
Run No. 1 | Stop Time: 1140 | Bar. Press in Hg. 29.79 sampling height
Location #4 Combination Boiler | Filter No. 54 | Assumed Moisture % 24
Date 17 February 1987 | Filter Tare Weight 0.2844 g | Heater Box Setting, °F 320
Operator Dumas / Alvarado | Orsat No. 1 (Hays) | Probe Tip Dia., In. .278
Sample Box No. NEW 1 OLD 2 | Date Rebuilt 2/16/87 | Probe Length 10' Probe #4
Meter Box No. 1 2 | Fyrite No. ——— | Probe Heater Setting high
Meter $\Delta H_@$ 1.86 1.90 | Date Rebuilt ——— | Avg. ΔP ~~.35~~ .60 Avg. ΔH ~~1.05~~ 1.75
Y Factor 0.99 1.00 | Nomograph ID. No. II | Leak Rate @ 15" Hg .001 Post-Test .000 @ ~8 " Hg

Ref to 0.64 K = 2.875

DGM Initial Reading: 873.200

Point	Clock Time (0)+(min)	Dry Gas Meter CF	Pitot in H_2O ΔP	Orifice ΔH in H_2O Desired	Orifice ΔH in H_2O Actual	Dry Gas Temp. °F Inlet	Dry Gas Temp. °F Outlet	Pump Vacuum In. Hg. Gauge	Box Temp. °F	Impinger Temp. °F	Stack Press. in Hg.	Stack Temp. °F	Teledy % O
North Port Front													
1	5	876.7	.58	1.67	1.67	6	5	-5	306	43		478	4.9
2	10	880.6	.77	2.21	2.21	6	9	-6	278	41	-.67	484	4.8
3	15	884.7	.83	239	239	7	3	-6	283	43		485	4.8
4	20	888.9	.89	2.56	2.56	7	7	-7	318	43		486	5.2
5	25	893.1	.91	2.62	2.62	7	9	-8	338	44		484	5.2
6	30	897.139	.77	2.21	2.21	8	1	-6	308	47		480	5.4
West Port Front													
1	5	901.1	.78	2.24	2.24	8	0	-6	320	58		480	4.8
2	10	905.3	.89	2.56	2.56	8	5	-7	310	45		483	4.8
3	15	909.4	.85	2.44	2.44	8	8	-7	320	48		483	4.8
4	20	913.7	.90	2.59	2.59	8	9	-7	299	50		483	3.9
5	25	917.9	.88	2.53	2.53	8	9	-8	320	51		482	4.6
6	30	921.968	.77	2.21	2.21	9	1	-7	296	53		480	5.8
	60	48.768	.903 .816		2.353		540.3 80.5				-.67 29.79 29.74	942.3 482.3	4.9

Comments: Bag sampler 800 ccm Bag #4 Orsat Bag Leak Check + Sample System leak check

Pitot leak check Pretest Posttest

Test Observers:

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PARTICULATE FIELD DATA

VERY IMPORTANT - FILL IN ALL BLANKS

Plant GEORGIA-PACIFIC CORPORATION | Test Start Time: 0930 | Ambient Temp. °F 50

Run No. 2 | Stop Time: 1046 | Bar. Press in Hg. 30.20 sampling height

Location #4 Combination Boiler | Filter No. 55 | Assumed Moisture % 24

Date 2/19/87 | Filter Tare Weight .2867 g | Heater Box Setting, °F 320

Operator Dumas / ~~[illegible]~~ Alvarado | Orsat No. 1 (Hays) | Probe Tip Dia., In. .278

Sample Box No. NEW 1 OLD 2 | Date Rebuilt 2/16/87 | Probe Length 10'

Meter Box No. 1 2 | Fyrite No. — | Probe Heater Setting high

Meter $\Delta H_@$ 1.86 1.90 | Date Rebuilt — | Avg. ΔP ~~.85~~ .60 Avg. ΔH ~~[illegible]~~ 1.75

Y Factor 0.99 1.00 | Nomograph ID. No. II | Leak Rate @ 15" Hg .001 Post-Test .000 @ -6 "Hg

Ref to 0.64 K = 2.875

DGM Initial Reading: 922.812

	Point	Clock Time (0)+(min)	Dry Gas Meter CF	Pitot in H_2O ΔP^2	Orifice ΔH in H_2O Desired	Orifice ΔH in H_2O Actual	Dry Gas Temp. °F AVG Inlet	Dry Gas Temp. °F Outlet	Pump Vacuum In. Hg. Gauge	Box Temp. °F	Impinger Temp. °F	Stack Press. in Hg.	Stack Temp. °F	Teledyne % O_2
North Port Front	1	5	926.0	.46	1.32	1.32	72		-4	319	44		456	
	2	10	929.3	.59	1.70	1.70	76		-4	317	38	-.60	459	
	3	15	933.0	.69	1.98	1.98	76		-5	315	40		461	
	4	20	936.9	.74	2.13	2.13	79		-5	314	42		463	
	5	25	941.	.83	2.39	2.39	81		-6	315	43		463	
	6	30	944.750	.66	1.90	1.90	83		-5	315	44		460	
West Port Front														
	1	5	947.8	.43	1.24	1.24	77		-4	318	46		427	
	2	10	951.6	.74	2.13	2.13	80		-6	313	40		448	
	3	15	955.8	.78	2.24	2.24	81		-6	313	45		463	
	4	20	959.6	.72	2.07	2.07	83		-6	314	46		463	
	5	25	963.3	.70	2.01	2.01	85		-6	315	49		463	
	6	30	967.157	.70 .815 .664	2.01	2.01 142.11	87		-6	316	50		462	

60 44.345 -.60 917.3

Comments: Bag sampler 1600 ccm Bag #T Orsat Bag Leak check Pitot leak check 540 80 Pretest Posttest 30.20 30.156 457.3

Test Observers:

35

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PARTICU[illegible] ELD DATA

VERY IMPORTANT - FILL IN ALL BLANKS

Plant GEORGIA-PACIFIC CORPORATION
Run No. 3
Location #4 Combination Boiler
Date 2/19/87
Operator ~~Dumas~~/~~Norwood~~ Alvarado
Sample Box No. NEW 1 OLD 2
Meter Box No. 1 2
Meter $\Delta H_@$ 1.86 1.80
Y Factor 0.99 1.00

Test Start Time: 1128
Stop Time: 1235
Filter No. 52
Filter Tare Weight .2811 g
Orsat No. 1 (Hays)
Date Rebuilt 2/16/87
Fyrite No. ———
Date Rebuilt ———
Nomograph ID. No. II

Ambient Temp. °F 70
Bar. Press in Hg. 30.20 sampling height
Assumed Moisture % 24
Heater Box Setting, °F 320
Probe Tip Dia., In. .278
Probe Length 10'
Probe Heater Setting high
Avg. ΔP ~~.85~~ .60 Avg. ΔH ~~1.05~~ 1.75
Leak Rate @ 15" Hg .002 Post-Test .001 @ -4 "Hg

Ref to 0.64 K = 2.875

DGM Initial Reading: 967.605

	Point	Clock Time (0)+(min)	Dry Gas Meter CF	Pitot in H_2O ΔP^2	Orifice ΔH in H_2O Desired	Orifice ΔH in H_2O Actual	Dry Gas Temp. °F AVG Inlet	Dry Gas Temp. °F Outlet	Pump Vacuum In. Hg. Gauge	Box Temp. °F	Impinger Temp. °F	Stack Press. in Hg.	Stack Temp. °F	Teledy[illegible] % O[illegible]
North Port Front	1	5	970.6	.39	1.12	1.12	78		-2	150	44		~~361~~	
	2	10	974.0	.57	1.64	1.64	82		-3	163	40	-.57	451	
	3	15	977.5	.61	1.75	1.75	84		-3	172	40		460	
	4	20	981.1	.66	1.90	1.90	87		-3	182	41		465	
	5	25	984.9	.69	1.98	1.98	90		-4	191	43		465	
	6	30	988.657	.71	2.04	2.04	92		-3	198	44		465	
West Port Front														
	1	5	992.2	.61	1.75	1.75	87		-3	209	49		~~349~~	
	2	10	996.0	.75	2.16	2.16	90		-4	217	42		440	
	3	15	1000.1	.78	2.24	2.24	93		-4	216	44		464	
	4	20	1004.1	.76	2.19	2.19	93		-4	215	46		467	
	5	25	1008.1	.77	2.21	2.21	95		-4	228	48		468	
	6	30 60	1012.218 44.613	.78 .817 .668	2.24	2.24 1.935	96	88.9 548.9	-4	234	50		469	

36

Comments: Bag #2 Bag sampler 800 ccm Orsat Bag Leak Check ✓ Pitot leak check Pretest ✓ Posttest ✓ Test Observers: -.57 30.20 30.158 921.4 461.4

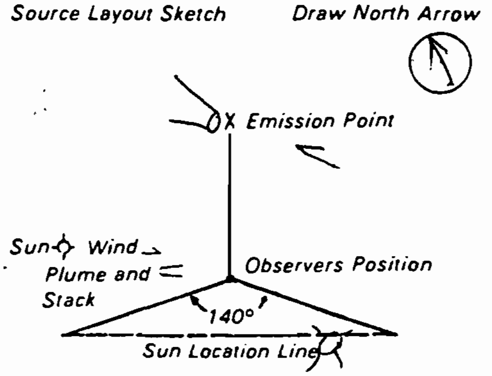
Performed simultaneously with EPA RM 5 Compliance Test Run # 1

Visible Emission Observation Form

SOURCE NAME	Georgia-Pacific Corp.
ADDRESS	POB 919
	SR 216
CITY	Palatka
STATE	FL
ZIP	32078-0919
PHONE	(904) 325-2001
SOURCE ID NUMBER	A054-58340
PROCESS EQUIPMENT	#4 Combination Boiler
OPERATING MODE	Full
CONTROL EQUIPMENT	Dry Collectors + ESP
OPERATING MODE	Standard
DESCRIBE EMISSION POINT	START Round stack STOP Same
HEIGHT ABOVE GROUND LEVEL	START 250' STOP 250'
HEIGHT RELATIVE TO OBSERVER	START 250' STOP 250
DISTANCE FROM OBSERVER	START 200 yds STOP Same
DIRECTION FROM OBSERVER	START NE STOP NE
DESCRIBE EMISSIONS	START Clear STOP Clear
EMISSION COLOR	START Clear STOP Clear
PLUME TYPE: CONTINUOUS ☑ FUGITIVE ☐ INTERMITTENT ☐	
WATER DROPLETS PRESENT:	NO ☑ YES ☐
IF WATER DROPLET PLUME:	ATTACHED ☐ DETACHED ☐
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED	START 1 stack diameter above stack outlet STOP same
DESCRIBE BACKGROUND	START overcast STOP overcast
BACKGROUND COLOR	START grey STOP grey
SKY CONDITIONS	START overcast STOP overcast
WIND SPEED	START CALM STOP CALM
WIND DIRECTION	START SE STOP SE
AMBIENT TEMP.	START 56 STOP 57
WET BULB TEMP.	—
RH, percent	—

Source Layout Sketch

Draw North Arrow



OBSERVATION DATE	START TIME	STOP TIME
2/17/87	10:25 AM	11:25 AM

MIN	0	15	30	45	MIN	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD 0 %

NUMBER OF READINGS ABOVE 20 % WERE 0

RANGE OF OPACITY READINGS MINIMUM 0 % MAXIMUM 0 %

OBSERVER'S NAME (PRINT) MARVIN SIMMONS

OBSERVER'S SIGNATURE M. Simmons DATE 2/17/87

ORGANIZATION Georgia-Pacific Corp.

CERTIFIED BY ETA DATE 12/86

VERIFIED BY DATE

COMMENTS

I HAVE RECEIVED A COPY OF THESE OP

SIGNATURE

TITLE

Summary of Aver. Opacity

Set Number	Opacity Sum	Opacity Average
1	0	0 (0)
2	0	0 (0)
3	0	0 (0)
4	0	0 (0)
5	0	0 (0)
6	0	0 (0)
7	0	0 (0)
8	0	0 (0)
9	0	0 (0)
10	0	0 (0)
AVG	0	

DATA CERTIFICATION BY OWNER OR HIS AUTHORIZED AGENT

I, Vernon L. Adams,
(print name)

certify that to my knowledge all data

submitted in this compliance test report

for the No. 4 Combination unit

on 17 and 19 February 1987
(date)

are true and correct.

Vernon L. Adams
(signature and title)
Supervisor of Env. Affairs

Georgia-Pacific Corporation Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

March 13, 1987

Mr. Johnny L. Cole
State of Florida
Department of Environmental Regulation
3426 Bills Road
Jacksonville, Florida 32207

Dear Mr. Cole:

Enclosed are the EPA-RM 5 and 9 compliance tests of our No. 4 Combination Boiler.

As always, if any questions or problems arise please feel free to let me know.

Sincerely,

Anthony D. Dumas

Anthony D. Dumas

mg

enclosure

cc V. L. Adams
W. L. Baxter

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200

March 24, 1987

RECEIVED
26 March '87

Mr. Anthony D. Dumas
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32078-0919

Dear Mr. Dumas:

Putnam County - AP
Georgia-Pacific Corporation
No. 4 Combination Boiler
PM,VE -2/17,19/87

Review of the particulate matter and visual emission test performed February 17-19, 1987 indicates compliance with permit conditions.

Sincerely,

W. P. Stewart

W. P. Stewart, P.E.
Supervisor Air Section

WPS:mbk

Georgia-Pacific Corporation *Palatka Operations*
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

April 4, 198RECEIVED

APR 5 1989

DER - BAQM

Mr. Mike Harley
Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mike:

Please find enclosed the application for a construction permit for our number 4 combination boiler. We are submitting a construction permit application for this existing boiler at your request. We understand that due to the fact that this is an existing boiler which has in fact reduced emissions it will retain its existing source designation and will not be subject to additional restrictions as a result of this application. A check for $200.00 as specified by Mr. Fancy is enclosed to cover the permit fee.

If you have any questions concerning the application, please contact me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Superintendent of
Environmental Affairs

cc: W. L. Baxter
D. Buff
J. Cole
H. Hirschman
E. Schmidt

1031

RECEIVED
DER - MAIL ROOM
1989 APR -6 AM 8: 27

Georgia-Pacific
Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, FL 32078-0919

Mr. Mike Harley
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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Georgia-Pacific

SOUTHERN PULP AND PAPER DIVISION
PALATKA OPERATIONS • PALATKA, FL 32077

First Interstate Bank
of Oregon, N.A.
Fifth & Salmon Branch
Portland, Oregon

24-12
1230 234

No. 236254

VOID AFTER 60 DAYS

CHECK NO.	VENDOR NO.	DATE
236254	D3290	03/15/89

PAY EXACTLY ******200 DOLLARS AND 00 CENTS

NET AMOUNT
$ ******200.00

PERSONAL SIGNATURE REQUIRED IF AMOUNT IS $25,000.00 OR OVER

TO THE ORDER OF DEPARTMENT OF ENVIRONMENTAL REGULATION

00000

Georgia-Pacific Corporation
SOUTHERN PULP AND PAPER DIVISION
PALATKA OPERATIONS • GENERAL ACCOUNT

Henry Hucckman
Roy B. Teotman

[redacted]

ACH BEFORE DEPOSITING

953 (10-87)

Georgia-Pacific
PALATKA OPERATIONS • PALATKA, FL 32077

No. 236254

DATE (DAY YEAR)	VENDOR INVOICE NUMBER	VENDOR NUMBER	INVOICE AMOUNT	DISCOUNT	AMOUNT PAID
31589	CR031089	D3290	200.00	.00	200.00
					200.00 **

DIVISION OF AIR RESOURCE MANAGEMENT

(For Internal Use Only)

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	
Larry	Initial Date
2.	Initial Date
3.	Initial Date
4.	Initial Date

REMARKS:

Mike would like for Tom to review the modeling with this application

INFORMATION

- Review & Return
- Review & File
- Initial & Forward

DISPOSITION

- Review & Respond
- Prepare Response
- For My Signature
- For Your Signature
- Let's Discuss
- Set Up Meeting
- Investigate & Report
- Initial & Forward
- Distribute
- Concurrence
- For Processing
- Initial & Return

FROM: Patty

DATE 4-6

PHONE

ARE RB'S 1-3 & SB7 4-13 PERMANENTLY SHUTDOWN?

- WHAT ARE THE LEVELS OF O_2 & CO_2 IN THE FLUE GAS.
- PLEASE PROVIDE THE MAKE, MODEL NO. & INITIAL CONSTRUCTION DATE OF THE BOILER.
- DESCRIBE THE BOILER, I.E. NO. OF O/C GUNS, SPREADER STOKER, GRATE, ETC

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- CORRECT STACK EXIT VELOCITY 91.4 FPS OR 71.8 FPS - 71.8 FPS IS INDICATIVE OF AN 8' DIA.
- HOW MANY NEW PRECIPITATORS ARE/HAVE BEEN INSTALLED & ON WHAT BOILERS? ARE ANY OF THE OTHER BOILERS ABLE TO INCREASE HEAT INPUT?
- THE PLOT-PLAN SHOWS WHAT APPEARS TO BE AN INTERCONNECTION BETWEEN THE DUCTS FOR THE NO. 4 COMB. BOILER & NO. 3 POWER BOILERS -- PLEASE EXPLAIN.

THE INTERCONNETION IS LABELED AS AN "EMERGENCY CROSSOVER TO ADJACENT PRECIPITATOR" TWO DIAGRAMS OVER.

- IDENTIFY & DESCRIBE THE PRIMARY, SECONDARY, & TERTIARY DUST COLLETORS FOR THE BOILER.
- SHOULD MAX HEAT INPUT RATE BE 512.69 OR 520.67 MBTU/HR?
- HOW WILL THE ESP AFFECT THE DISTRIBUTION OF PARTICULATE MATTER IN TERMS OF PM_{10} IT WOULD APPEAR THAT
  FOR OIL FIRED BOILERS WITH ESP PM_{10} WOULD BE 63% [illegible]
  P
- SEND A COMPLETE COPY OF THE PRE-ESP COMPLIANCE TEST

KBN

RECEIVED

APR 5 1989

D.. AQM

CONSTRUCTION PERMIT APPLICATION
GEORGIA-PACIFIC CORP.
NO. 4 COMBINATION BOILER

Prepared for:

Georgia-Pacific Corporation
Palatka, Florida

Prepared by:

KBN Engineering and Applied Sciences, Inc.
Gainesville, Florida

November 1988
88044

#200 pd.
4-5-89
Dept.# 117606

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

APR 5 1989

DER - BAQM

AC 54- 163040

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Combination Fuel Steam Power Boiler [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Georgia-Pacific Corporation COUNTY: Putnam

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) No. 4 Combination Power Boiler Stack

SOURCE LOCATION: Street State Road 216 (North Side) City Palatka

UTM: East 434.0 North 3283.4

Latitude 29° 41' 00"N Longitude 81° 40' 45"W

APPLICANT NAME AND TITLE: Georgia-Pacific Corporation

APPLICANT ADDRESS: P.O. Box 919, Palatka, Florida 32078-0919

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Georgia-Pacific Corp.

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

*Attach letter of authorization

Signed: Henry Hirschman

Henry Hirschman, General Manager
Name and Title (Please Type)

Date: 4-3-89 Telephone No. 904/325-2001

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

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

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

DER Form 17-1.202(1)
Effective October 31, 1982

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

DAVID A. BUFF CERTIFICATE NO. 19011 STATE OF FLORIDA REGISTERED ENGINEER

Signed David A. Buff

David A. Buff
Name (Please Type)

KBN Engineering and Applied Sciences, Inc.
Company Name (Please Type)

P.O. Box 14288, Gainesville, FL 32604
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 11/30/88 Telephone No. (904) 375-8000

SECTION II: GENERAL PROJECT INFORMATION

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

See Attachment A

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

Start of Construction upon permit issuance Completion of Construction 6 months after permit issuance

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

N/A - ESP already installed

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

Permit No. A054-58340 dated December 8, 1982, expires September 30, 1987

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52

if power plant, hrs/yr 8,760; if seasonal, describe: ______

F. If this is a new source or major modification, answer the following questions. (Yes or No) Not Applicable

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

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

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

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

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

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

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

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

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

   a. If yes, for what pollutants? ______

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

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

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

A. Raw Materials and Chemicals Used in your Process, if applicable:
Not applicable per definition - Rule 17-2.100 (153), Process Weight

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

1. Total Process Input Rate (lbs/hr): ______

2. Product Weight (lbs/hr): ______

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
PM (Oil)	41.9	183.5	0.1 lbs/M BTU	51.3	41.9	183.5	Stack
PM (Bark)	101.5	444.6	0.3 lbs/M BTU	153.8	101.5	444.6	Stack
SO_2 (Oil)	1,151	5,041	2.75 " " "	1,151	1,151	5,041	Stack
NO_x (Oil)	184.2	806.8	N/A	N/A	184.2	806.8	Stack
CO (Bark)	1,338	5,861	N/A	N/A	1,338	5,861	Stack
Volatile Org. Compounds	48.2	211.1	N/A	N/A	48.2	211.1	Stack

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic Precipitator	Particulates	96%	N/A	Inlet loading= 1.18 grains/ACF
Research-Cottrell				Outlet loading= 0.04 grains/ACF
Custom Design				
IP-3355				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 Fuel Oil	Supplemental-varies	2,755	418.6
Bark (wood)	94,549	115,704	512.69

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

Fuel Analysis:

Percent Sulfur: 2.5% (oil); 0% (bark) Percent Ash: 0.15 ± (Oil); 2.0 ± (bark)

Density: 8.28 (oil); 21 lbs/cf (bark) lbs/gal Typical Percent Nitrogen: 0.54 (oil) 0.1 (bark)

Heat Capacity: 18,350 (oil); 4500 (bark) BTU/lb 151,938 (oil) BTU/gal

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

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

Annual Average ______ Maximum ______

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

100-1064 lbs/hr. ash to be collected from the precipitator (excluding mechanical dust collector) and disposed of in a controlled landfill.

56.96
MAX TONS BARK/HR
2.755
MAX 10^3 GALLONS OIL/HR

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

Stack Height: 237 Above Grade ft. Stack Diameter: 7.09 ft.

Gas Flow Rate: 216,600 ACFM 104,062 DSCFM Gas Exit Temperature: 440 °F.

Water Vapor Content: 18-21 % Velocity: 71.8 FPS

SECTION IV: INCINERATOR INFORMATION

Not Applicable

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

Description of Waste ______

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

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

Manufacturer ______

Date Constructed ______ Model No. ______

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

Stack Height: ______ ft. Stack Diamter: ______ Stack Temp. ______

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

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

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) ______

Brief description of operating characteristics of control devices: ______________________

____

____

____

____

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

____

____

____

____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

NOT APPLICABLE

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

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

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

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

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

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

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

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

Not Applicable

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

*Explain method of determining

5. Useful Life: 6. Operating Costs:

7. Energy: 8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

Not Applicable

A. Company Monitored Data

1. ____________ no. sites ____________ TSP ____________ ( ) SO^2* ____________ Wind spd/dir

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

Other data recorded ____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)____________________

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

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

C. Computer Models Used

1. ____________________ Modified? If yes, attach description.

2. ____________________ Modified? If yes, attach description.

3. ____________________ Modified? If yes, attach description.

4. ____________________ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

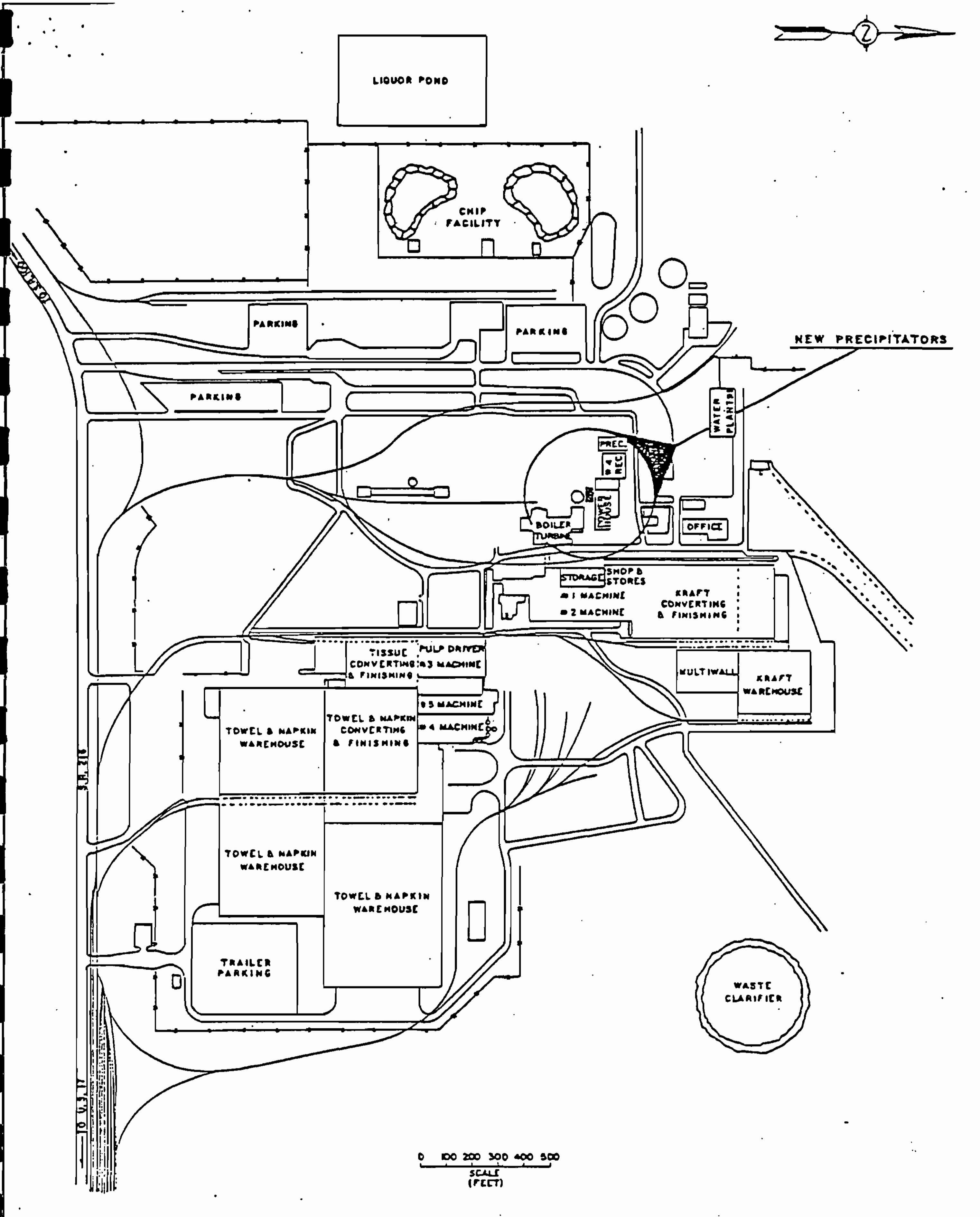
E. Emission Data Used in Modeling

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

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

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

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



SCALE NOTED		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE OVERALL PLOT PLAN OF MILL LOCATION
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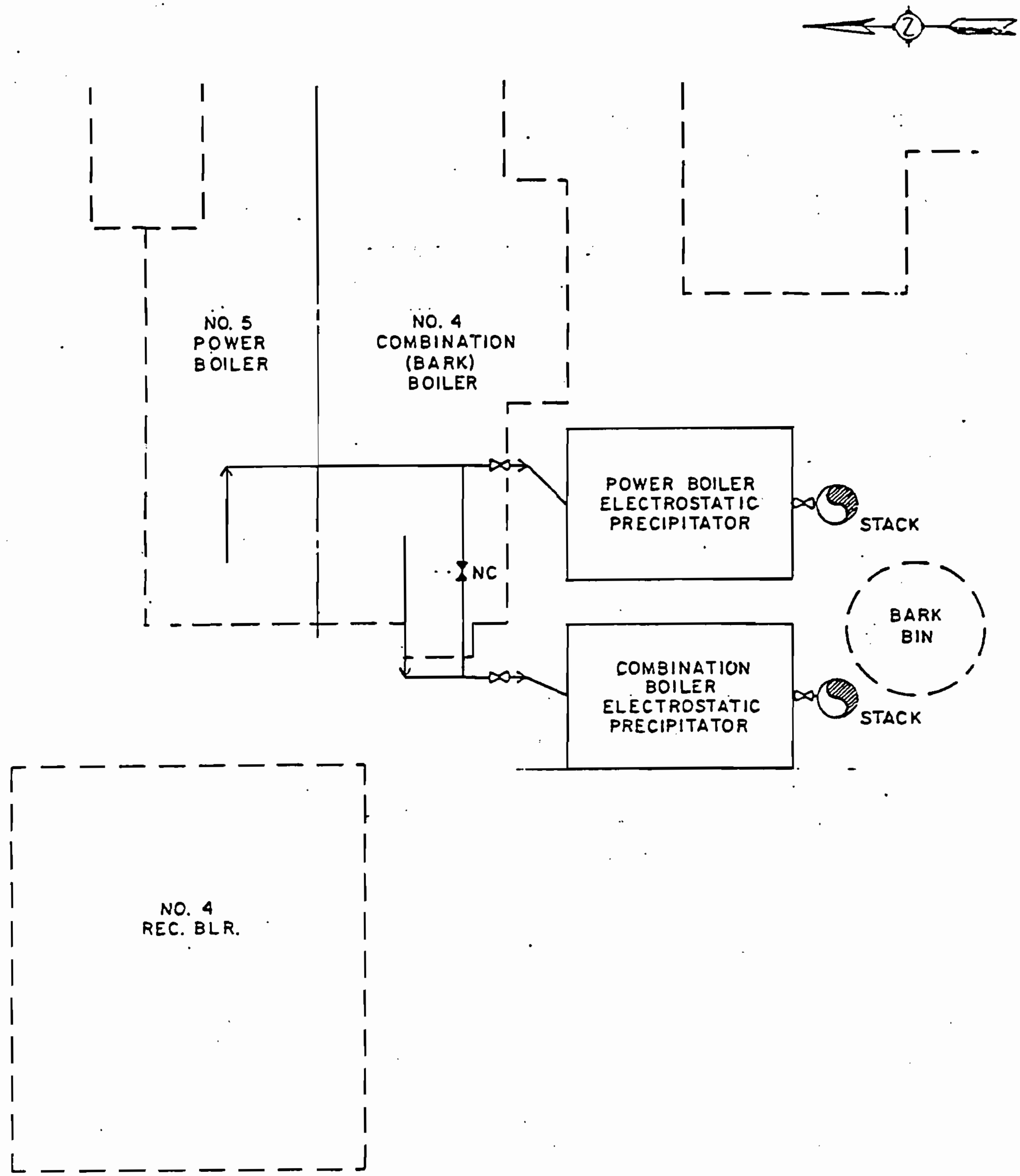

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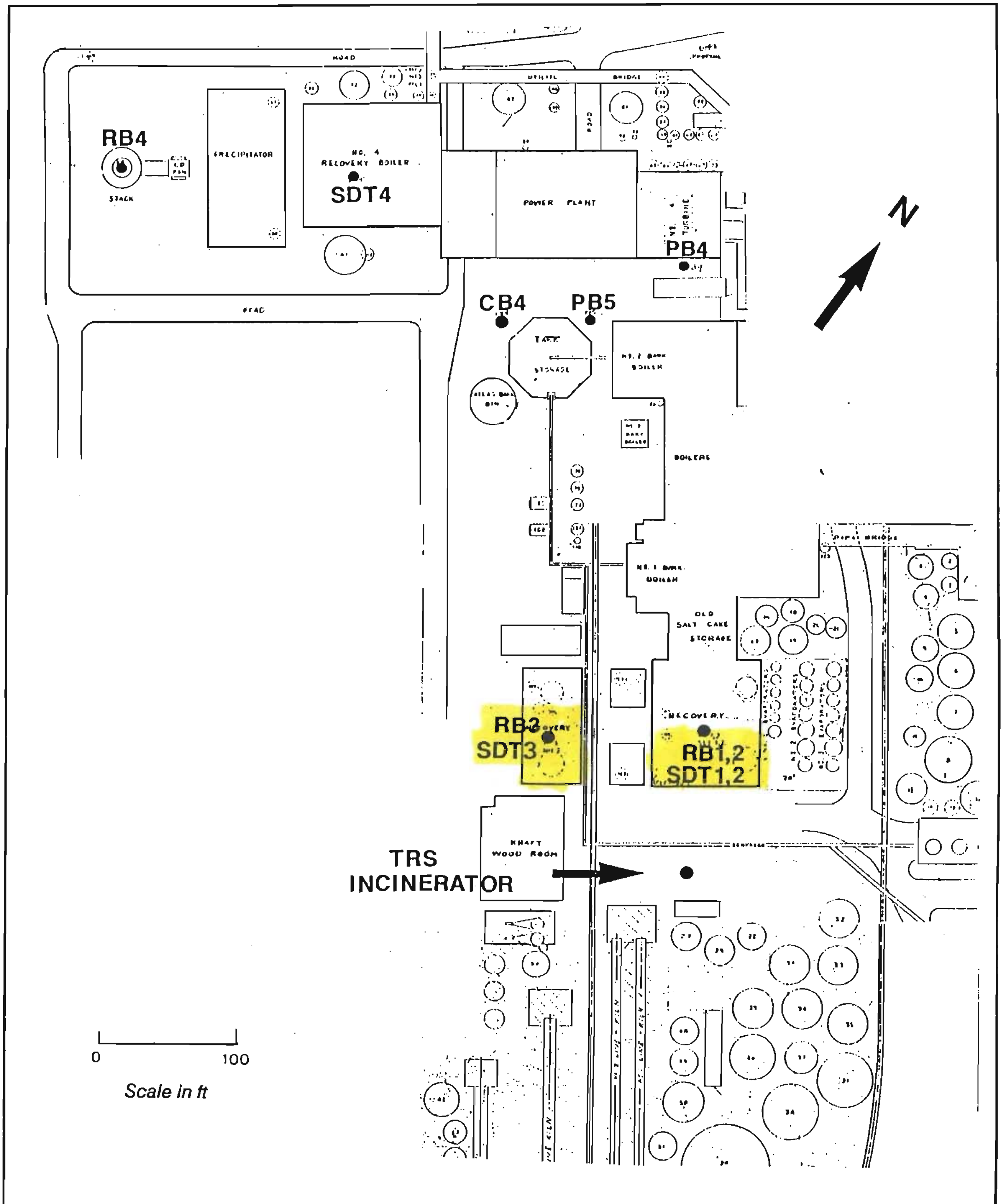
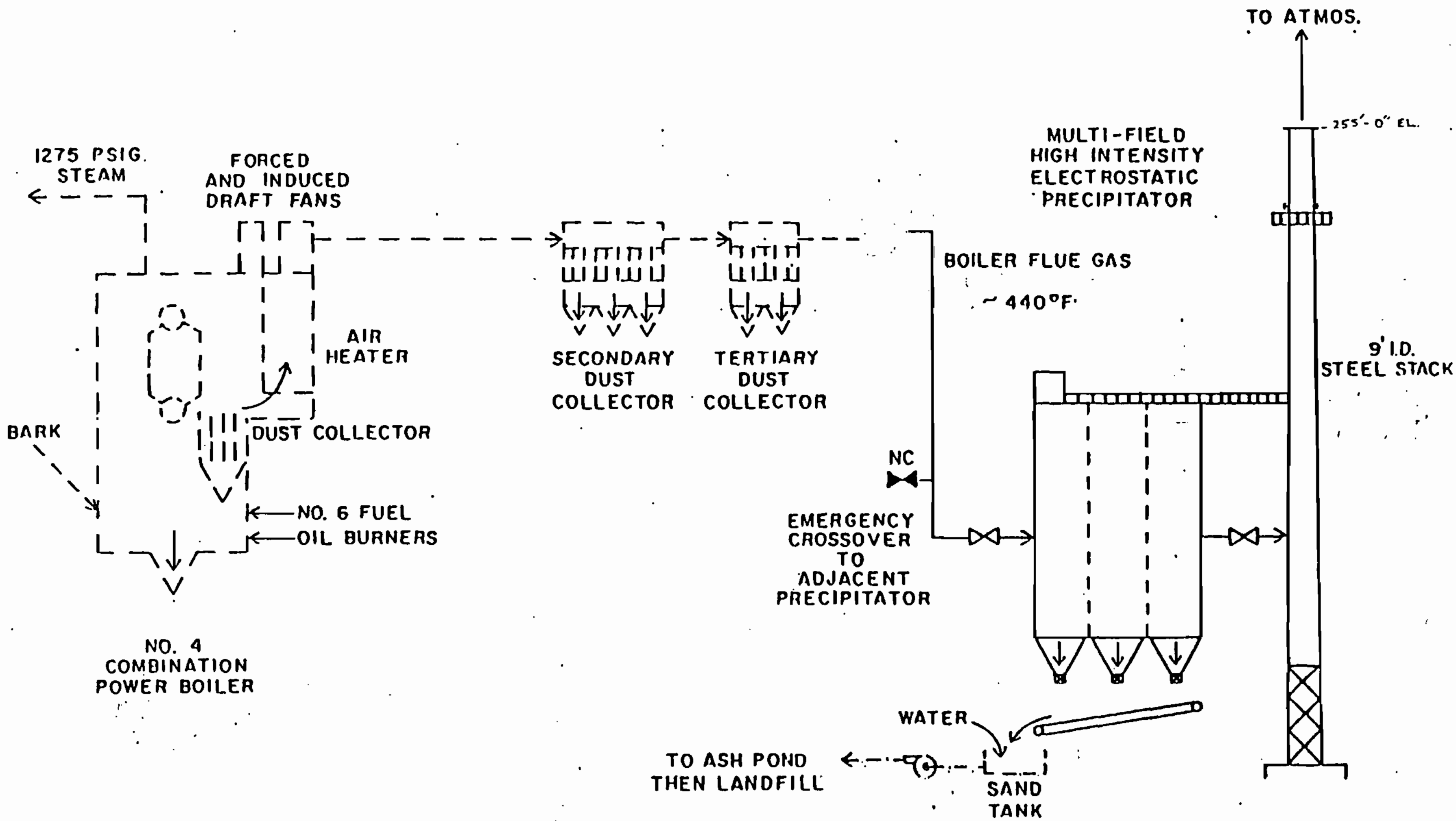
Ford, Bacon & Davis
Incorporated
MONROE, LOUISIANA

GEORGIA - PACIFIC

DRAWING TITLE
PLOT PLAN
OF
EQUIPMENT LAYOUT



Locations of the Sources and Buildings at the Georgia-Pacific Facility



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DRAWING TITLE
NO. 4 COMBINATION
POWER BOILER FLUE
GAS PRECIPITATOR-PROPOSED

ATTACHMENT A

PROJECT DESCRIPTION

Georgia-Pacific Corporation (G-P) of Palatka, Florida, has requested an operating permit to operate its existing No. 4 Combination Boiler (CB4) at a maximum heat input rate of 512.69×10^6 Btu/hr. G-P was issued a revision to Operating Permit No. AO54-58340 on June 19, 1987, which granted operation at this heat input rate. This permit expired on 9/30/87. Since G-P submitted its request for an operating permit renewal prior to this expiration date, they are allowed to operate under the conditions of AO54-58340 until such time as a new permit is issued.

The Florida Department of Environmental Regulation (FDER) has requested that G-P submit a construction permit application to operate at the requested rate. The stated purpose of this is to make the permit conditions federally enforceable, and to ensure that ambient air quality standards (AAQS) and Prevention of Significant Deterioration (PSD) allowable increments are not exceeded as a result of operation at the requested rate.

G-P added an electrostatic precipitator (ESP) to CB4 in 1986. Previously, CB4 was equipped with only multiclones for particulate matter (PM) control. Boiler operating parameters and air pollutant emission rates for operating rates before and after the installation of the ESP are presented in Table 1. Emission factors and emission calculations for the boiler are presented in Attachment B.

Prior to ESP installation, the maximum rate the boiler was operated at during any PM compliance test was 418.6×10^6 Btu/hr (burning all wood waste). Measured PM emissions during the test run were 101.5 lb/hr (excerpts of test report are provided in Attachment C). Pre-ESP emission rates are based upon this heat input rate and the appropriate emission factor. Since the boiler can burn either wood waste (normal operating mode) or No. 6 fuel oil, the emission rates are based upon the fuel producing the highest pollutant emissions.

Post-ESP emission rates are based upon the appropriate emission factor and a maximum heat input from wood waste of 512.69 x 10^6 Btu/hr and a maximum heat input from fuel oil of 418.6 x 10^6 Btu/hr. G-P is limiting post-ESP fuel oil burning to the pre-ESP rate of 418.8 x 10^6 Btu/hr, i.e., no increase in maximum fuel oil burning rate. The net change in maximum emissions from the pre- and post- ESP periods are also shown in Table 1.

Since the multicyclone/ESP controls PM emissions much more effectively than the multicyclones alone, there is no net increase in PM or PM10 emissions. This has been demonstrated through PM compliance tests on CB4 conducted after installation of the ESP. In addition, since G-P in not increasing its maximum fuel oil burning rate, emissions of SO_2 and NO_x do not increase, since maximum emissions of these pollutants occur when burning fuel oil. There are increases in emissions of CO and VOC based upon the higher maximum operating rate when burning wood waste.

An air quality analysis for CB4 has been conducted which addresses the increase in CO emissions when burning wood waste at the requested operating rate. This analysis is presented in Attachment D. The analysis shows that operation at the requested rate will cause virtually no increase in ground-level CO concentrations.

Table 1. Pre-ESP and Post-ESP Operating and Emission Rates, No. 4 Combination Boiler

Parameter	Pre-ESP Rates (multiclone)		Post-ESP Rate (multiclone w/ESP)		Net Increase in Maximum Rate
	Wood Waste	Fuel Oil	Wood Waste	Fuel Oil	
Maximum heat input rate (MM Btu/hr)	418.6	418.6	512.69	418.6	94.1
Maximum wood waste burning (lb/hr, wet)	93,022	N/A	115,704	N/A	22,682
Maximum fuel oil burning (gal/hr)	N/A	2,755	N/A	2,755	0.0
Pollutant Emissions (lb/hr)					
Particulate matter (TSP)	101.5 *	41.9	<<101.5	<41.9	<0
Particulate matter (PM10)	92.4	29.7	<<92.4	<<29.7	<0
Sulfur dioxide	9.2	1,151.2	11.3	1,151.2	0.0
Nitrogen oxides	65.3	184.2	80.0	184.2	0.0
Carbon monoxide	1,092.5	13.8	1,338.1	13.8	245.6
Volatile organic compounds	39.3	2.8	48.2	2.8	8.8

Note: ESP = electrostatic precipitator

WET WOODWASTE = 4500 BTU/lb PRE ESP
WET WOODWASTE = 4431 BTU/lb - POST-ESP] — MAX RATE. 512.69 or 520.67 MBTU/hr ?

ATTACHMENT B

EMISSION CALCULATIONS

1. **Emission Factors**

Emissions from No. 4 Combination Boiler were calculated from the allowable emission limits or from AP-42 emission factors. The only exception to this was the pre-ESP emission rate for PM, which was based on actual compliance tests. Emission factors and sample calculations are presented below. All factors were converted to a lb/10^6 Btu heat input basis, and then multiplied by the maximum heat input rate to the boiler.

Fuel data:

Fuel oil - 151,938 Btu/gal

Wood waste - 4,500 Btu/lb, wet

Emission factors:

✓ PM (fuel oil) = 0.1 lb/10^6 Btu (DER Rule 17-2.600(5)(b)2.)

✓ PM (wood waste) = 0.3 lb/10^6 Btu (DER Rule 17-2.600(10)(a)2.b.)

✓ PM_{10} (Fuel Oil) - from AP-42, uncontrolled PM_{10} emissions (pre-ESP condition) from fuel burning in boilers are 71% of the total PM emissions.

✓ PM_{10} (wood waste) - from AP-42, PM_{10} emissions for wood waste boilers with fly ash injection equipped with multicyclones (pre-ESP condition) are 91% of total PM emissions.

✓ SO_2 (fuel oil) = 2.75 lb/10^6 Btu (DER Rule 17-2.600(5)3.a.(xi))

SO_2 (wood waste) = 0.4 lb/ton (dry) = 0.2 lb/ton, wet @ 50% H_2O
= 0.022 lb/10^6 Btu

SO_3 (fuel oil) = (2.9)(2.5) = 7.25 lb/10^3gal = 0.048 lb/10^6Btu

✓ NO_x (fuel oil) = 67 lb/10^3 gal
= 0.44 lb/10^6 Btu

✓ NO_x (wood waste) = 2.8 lb/ton (dry) = 1.4 lb/ton, wet @ 50% H_2O
= 0.156 lb/10^6 Btu

✓ CO (fuel oil) = 5 lb/10^3 gal
= 0.033 lb/10^6 Btu

✓ CO (wood waste) = 47 lb/ton, dry = 23.5 lb/ton, wet
= 2.61 lb/10^6 Btu

✓ VOC (fuel oil) = (0.76 + 0.28) = 1.04 lb/10^3 gal
= 0.0068 lb/10^6 Btu

Non CH_4 = 0.0050
CH_4 = 0.0018
0.0068

✓ VOC (wood waste) = (1.4 + 0.3) = 1.7 lb/ton, dry
= 0.85 lb/ton, wet
= 0.094 lb/10^6 Btu

Non CH_4 = 0.0778
CH_4 = 0.0167
0.0945

2. <u>Sample Calculation</u>

Maximum heat input to boiler = 512.69 x 10^6 Btu/hr (wood waste)

Maximum CO emissions: due to wood waste burning - 2.61 lb/10^6 Btu

512.69 x 10^6 Btu/hr x 2.61 lb/10^6 Btu
= 1,338 lb/hr SO_2

1,338 lb/hr SO_2 x 8,760 hr/yr / 2,000 lb/ton
= 5,860.8 TPY

TABLE 1.3-1. UNCONTROLLED EMISSION FACTORS FOR FUEL OIL COMBUSTION

EMISSION FACTOR RATING: A

Boiler Type[a]	Particulate Matter[b]		Sulfur Dioxide[c]		Sulfur Trioxide		Carbon Monoxide[d]		Nitrogen Oxide[e]		Volatile Organics[f] Nonmethane		Volatile Organics[f] Methane	
	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal	kg/10^3l	lb/10^3gal
Utility Boilers														
Residual Oil	[g]	[g]	19S	157S	0.34S[h]	2.9S[h]	0.6	5	8.0 (12.6)(5)[i]	67 (105)(42)[i]	0.09	0.76	0.03	0.28
Industrial Boilers														
Residual Oil	[g]	[g]	19S	157S	0.24S	2S	0.6	5	6.6[j]	55[j]	0.034	0.28	0.12	1.0
Distillate Oil	0.24	2	17S	142S	0.24S	2S	0.6	5	2.4	20	0.024	0.2	0.006	0.052
Commercial Boilers														
Residual Oil	[g]	[g]	19S	157S	0.24S	2S	0.6	5	6.6	55	0.14	1.13	0.057	0.475
Distillate Oil	0.24	2	17S	142S	0.24S	2S	0.6	5	2.4	20	0.04	0.34	0.026	0.216
Residential Furnaces														
Distillate Oil	0.3	2.5	17S	142S	0.24S	2S	0.6	5	2.2	18	0.085	0.713	0.214	1.78

[a] Boilers can be approximately classified according to their gross (higher) heat rate as shown below:
- Utility (power plant) boilers: >106 x 10^9 J/hr (>100 x 10^6 Btu/hr)
- Industrial boilers: 10.6 x 10^9 to 106 x 10^9 J/hr (10 x 10^6 to 100 x 10^6 Btu/hr)
- Commercial boilers: 0.5 x 10^9 to 10.6 x 10^9 J/hr (0.5 x 10^6 to 10 x 10^6 Btu/hr)
- Residential furnaces: <0.5 x 10^9 J/hr (<0.5 x 10^6 Btu/hr)

[b] References 3-7 and 24-25. Particulate matter is defined in this section as that material collected by EPA Method 5 (front half catch).

[c] References 1-5. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

[d] References 3-5 and 8-10. Carbon monoxide emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

[e] Expressed as NO_2. References 1-5, 8-11, 17 and 26. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO.

[f] References 18-21. Volatile organic compound emissions are generally negligible unless boiler is improperly operated or not well maintained, in which case emissions may increase by several orders of magnitude.

[g] Particulate emission factors for residual oil combustion are, on average, a function of fuel oil grade and sulfur content:
- Grade 6 oil: 1.25(S) + 0.38 kg/10^3 liter [10(S) + 3 lb/10^3 gal] where S is the weight % of sulfur in the oil. This relationship is based on 81 individual tests and has a correlation coefficient of 0.65.
- Grade 5 oil: 1.25 kg/10^3 liter (10 lb/10^3 gal)
- Grade 4 oil: 0.88 kg/10^3 liter (7 lb/10^3 gal)

[h] Reference 25.

[i] Use 5 kg/10^3 liters (42 lb/10^3 gal) for tangentially fired boilers, 12.6 kg/10^3 liters (105 lb/10^3gal) for vertical fired boilers, and 8.0 kg/10^3 liters (67 lb/10^3 gal) for all others, at full load and normal (>15%) excess air. Several combustion modifications can be employed for NO_x reduction: (1) limited excess air can reduce NO_x emissions 5-20%, (2) staged combustion 20-40%, (3) using low NO_x burners 20-50%, and (4) ammonia injection can reduce NO_x emissions 40-70% but may increase emissions of ammonia. Combinations of these modifications have been employed for further reductions in certain boilers. See Reference 23 for a discussion of these and other NO_x reducing techniques and their operational and environmental impacts.

[j] Nitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are strongly related to fuel nitrogen content, estimated more accurately by the empirical relationship:
kg $NO_2/10^3$ liters = 2.75 + $50(N)^2$ [lb $NO_2/10^3$gal = 22 + $400(N)^2$] where N is the weight % of nitrogen in the oil. For residual oils having high (>0.5 weight %) nitrogen content, use 15 kg $NO_2/10^3$ liter (120 lb $NO_2/10^3$gal) as an emission factor.

TABLE 1.3-2. CUMULATIVE PARTICLE SIZE DISTRIBUTION AND SIZE SPECIFIC EMISSION FACTORS FOR UTILITY BOILERS FIRING RESIDUAL OIL[a]

EMISSION FACTOR RATING: C (uncontrolled)
E (ESP controlled)
D (scrubber controlled)

Particle size[b] (um)	Cumulative mass % ≤ stated size			Cumulative emission factor[c] [kg/10^3 l (lb/10^3 gal)]		
	Uncontrolled	Controlled		Uncontrolled	Controlled[d]	
		ESP	Scrubber		ESP	Scrubber
15	80	75	100	0.80A (6.7A)	0.0060A (0.05A)	0.06A (0.50A)
10	71	63	100	0.71A (5.9A)	0.0050A (0.042A)	0.06A (0.50A)
6	58	52	100	0.58A (4.8A)	0.0042A (0.035A)	0.06A (0.50A)
2.5	52	41	97	0.52A (4.3A)	0.0033A (0.028A)	0.058A (0.48A)
1.25	43	31	91	0.43A (3.6A)	0.0025A (0.021A)	0.055A (0.46A)
1.00	39	28	84	0.39A (3.3A)	0.0022A (0.018A)	0.050A (0.42A)
0.625	20	10	64	0.20A (1.7A)	0.0008A (0.007A)	0.038A (0.32A)
TOTAL	100	100	100	1A (8.3A)	0.008A (0.067A)	0.06A (0.50A)

[a] Reference 29. ESP = electrostatic precipitator.
[b] Expressed as aerodynamic equivalent diameter.
[c] Particulate emission factors for residual oil combustion without emission controls are, on average, a function of fuel oil grade and sulfur content:
Grade 6 Oil: A = 1.25(S) + 0.38
Where S is the weight % of sulfur in the oil
Grade 5 Oil: A = 1.25
Grade 4 Oil: A = 0.88
[d] Estimated control efficiency for scrubber, 94%; ESP, 99.2%.

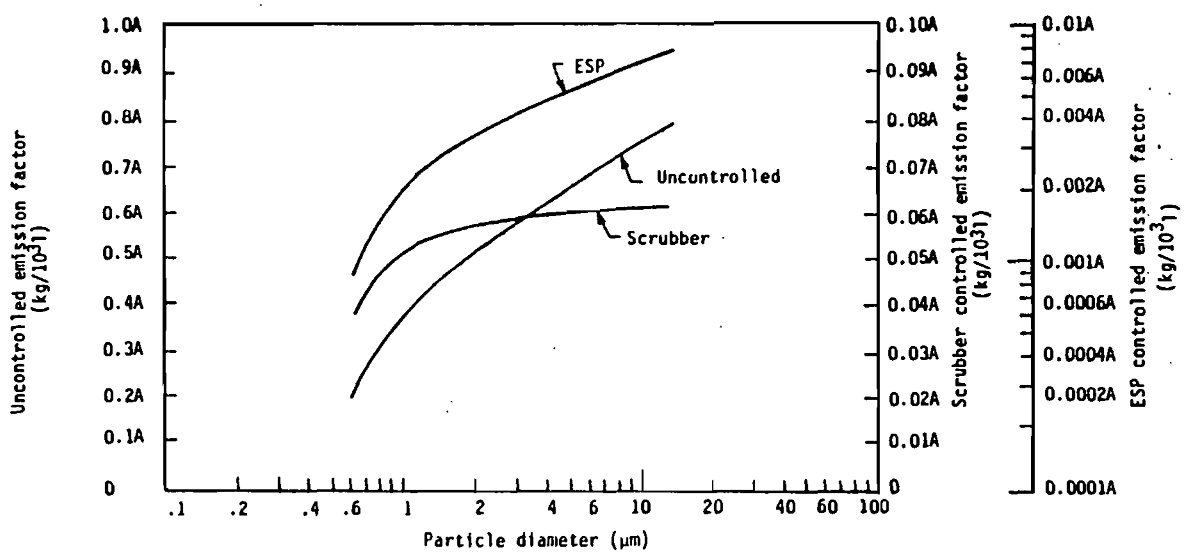

Figure 1.3-1. Cumulative size specific emission factors for utility boilers firing residual oil.

TABLE 1.6-1. EMISSION FACTORS FOR WOOD AND BARK COMBUSTION IN BOILERS

Pollutant/Fuel type	kg/Mg	lb/ton	Emission Factor Rating
Particulate[a]			
Bark[b]			
Multiclone, with flyash reinjection[c]	7	14	B
Multiclone, without flyash reinjection[c]	4.5	9	B
Uncontrolled	24	47	B
Wood/bark mixture[d]			
Multiclone, with flyash reinjection[c,e]	3	6	C
Multiclone, without flyash reinjection[c,e]	2.7	5.3	C
Uncontrolled[f]	3.6	7.2	C
Wood[g]			
Uncontrolled	4.4	8.8	C
Sulfur dioxide[h]	0.075 (0.01 - 0.2)	0.15 (0.02 - 0.4)	B
Nitrogen oxides (as NO_2)[j]			
50,000 - 400,000 lb steam/hr	1.4	2.8	B
<50,000 lb steam/hr	0.34	0.68	B
Carbon monoxide[k]	2 - 24	4 - 47	C
VOC			
Nonmethane[m]	0.7	1.4	D
Methane[n]	0.15	0.3	E

Dry weight

[a]References 2, 4, 9, 17-18, 20. With gas or oil as auxiliary fuel, all particulate assumed to result from only wood waste fuel. May include condensible hydrocarbons of pitches and tars, mostly from back half catch of EPA Method 5. Tests indicate condensible hydrocarbons about 4% of total particulate weight.
[b]Based on fuel moisture content about 50%.
[c]References 4,7-8. After control equipment, assuming an average collection efficiency of 80%. Data indicate that 50% flyash reinjection increases dust load at cyclone inlet 1.2 to 1.5 times, and 100% flyash reinjection increases the load 1.5 to 2 times.
[d]Based on fuel moisture content of 33%.
[e]Based on large dutch ovens and spreader stokers (avg. 23,430 kg steam/hr) with steam pressures 20 - 75 kpa (140 - 530 psi).
[f]Based on small dutch ovens and spreader stokers (usually $\leq$9075 kg steam/hr), with steam pressures 5 - 30 kpa (35 - 230 psi). Careful air adjustments and improved fuel separation and firing sometimes used, but effects can not be isolated.
[g]References 12-13, 19, 27. Wood waste includes cuttings, shavings, sawdust and chips, but not bark. Moisture content ranges 3 - 50 weight %. Based on small units ($\leq$3000 kg steam/hr).
[h]Reference 23. Based on dry weight of fuel. From tests of fuel sulfur content and SO_2 emissions at 4 mills burning bark. Lower limit of range (in parentheses) should be used for wood, and higher values for bark. Heating value of 5000 kcal/kg (9000 Btu/lb) is assumed.
[j]References 7, 24-26. Several factors can influence emission rates, including combustion zone, temperature, excess air, boiler operating conditions, fuel moisture and fuel nitrogen content.
[k]Reference 30.
[m]References 20, 30. Nonmethane VOC reportedly consists of compounds with high vapor pressure, such as alpha pinene.
[n]Reference 30. Based on approximation of methane/nonmethane ratio, quite variable. Methane, expressed as % total VOC, varied 0 - 74 weight %.

TABLE 1.6-3. CUMULATIVE PARTICLE SIZE DISTRIBUTION AND SIZE SPECIFIC EMISSION FACTORS FOR WOOD/BARK FIRED BOILERS[a]

EMISSION FACTOR RATING: E (A for dry electrostatic granular filter [DEGF])

Particle size[b] (µm)	Cumulative mass % ≤ stated size					Cumulative emission factors [kg/Mg (lb/ton) wood/bark, as fired]				
	Uncontrolled[c]	Controlled				Uncontrolled[c]	Controlled			
		Multiple cyclone[d]	Multiple cyclone[e]	Scrubber[f]	DEGF		Multiple cyclone[d]	Multiple cyclone[e]	Scrubber[f]	DEGF[d]
15	94	96	35	98	77	3.38 (6.77)	2.88 (5.76)	0.95 (1.90)	0.216 (0.431)	0.123 (0.246)
10	90	91	32	98	74	3.24 (6.48)	2.73 (5.46)	0.86 (1.72)	0.216 (0.432)	0.118 (0.236)
6	86	80	27	98	69	3.10 (6.20)	2.40 (4.80)	0.73 (1.46)	0.216 (0.432)	0.110 (0.220)
2.5	76	54	16	98	65	2.74 (5.47)	1.62 (3.24)	0.43 (0.86)	0.216 (0.432)	0.104 (0.208)
1.25	69	30	8	96	61	2.48 (4.97)	0.90 (1.80)	0.22 (0.44)	0.211 (0.422)	0.098 (0.196)
1.00	67	24	6	95	58	2.41 (4.82)	0.72 (1.44)	0.16 (0.32)	0.209 (0.418)	0.093 (0.186)
0.625	-	16	3	-	51	-	0.48 (0.96)	0.081 (0.162)	-	0.082 (0.164)
TOTAL	100	100	100	100	100	3.6 (7.2)	3.0 (6.0)	2.7 (5.4)	0.22 (0.44)	0.16 (0.32)

[a]Reference 31. Dash = insufficient data.
[b]Expressed as aerodynamic equivalent diameter.
[c]From data on underfeed stokers. May also be used as size distribution for wood fired boilers.
[d]From data on spreader stokers. With fly ash reinjection.
[e]From data on spreader stokers. Without fly ash reinjection.
[f]From data on dutch ovens. Estimated control efficiency, 94%.

ATTACHMENT C

PRE-ESP COMPLIANCE TEST

(Maximum Boiler Operating Rate)

GEORGIA-PACIFIC CORPORATION

PALATKA DIVISION

Compliance Tests

No. 4 Combination Boiler

March 1983

Tests by:

A. D. Dumas
S. K. Frederick

Observed by:

J. L. Cole, FDER
S. B. Mazur, FDER

Summary of Test Parameters

Parameter	Run 1	Run 2	Run 3	Average
Date	3/1/83	3/2/83	3/3/83	
V_{lc}	206.48	229.5	210.5	215.5
V_m	38.016	38.933	38.043	38.331
P_{bar} *	29.36	29.65	29.71	29.57
$\overline{\Delta H}$	1.00	1.05	0.99	1.01
$\overline{T_m}$, °F	61	71	73	68
$\sqrt{\overline{\Delta P}}$	.486	.495	.480	.487
$\overline{\Delta P}$	.24	.25	.23	.24
$\overline{T}_s$, °F	389	399	403	397
P_s	29.34	29.62	29.69	29.55
M_n	359.3	277.8	346.1	327.7
V_w(std)	9.719	10.803	9.908	10.143
V_m(std)	38.2641	38.8327	37.8733	38.3234
B_{ws}	.2026	.2176	.2074	.2092
M_d	30.168	30.304	30.072	30.181
M_s	27.7028	27.6267	27.5683	27.6326
$\overline{V}_s$	35.6692	36.4200	35.3941	35.8278
$\overline{Q}_{sd}$	4,901,923.3	4,900,102.5	4,813,143.8	4,871,723.2
C_s	.14489	.11038	.14101	.13209
E, #/Hr.	101.5	77.3	97.0	91.9
% Isokinetic	95.6	97.1	96.4	96.4
A, #/Hr.	125.6	118.5	120.1	121.4

* At sampling height.

No. 4 Combination Boiler

Date: MAR 01 1983 Calculations Run: 1

Total Heat Input, B.T.U./Hr.

$$H_I = \left[\frac{\text{Steam Lb.}}{\text{Hr.}}\right]\left[\frac{1554\ \text{B.T.U.}}{\text{Lb. Steam}}\right] = (269,368)\ (1554) = 418.6 \times 10^6$$

Oil Heat Input, B.T.U./Hr.

$$H_O = \left[\frac{\text{Oil Lb.}}{\text{Hr.}}\right]\left[\frac{\text{B.T.U.}}{\text{Lb. Oil}}\right] = \quad = 0$$

Bark Heat Input, B.T.U./Hr.

$$H_B = H_I - H_O = \quad = H_I$$

Allowable Emissions, Lb./Hr.

$$A = \left[\frac{H_B(.300\text{Lb.})}{10^6\ \text{B.T.U.}}\right] + \left[\frac{H_O(.100\text{Lb.})}{10^6\ \text{B.T.U.}}\right] = (418.6)(.3) = 125.6$$

ATTACHMENT D

CARBON MONOXIDE (CO)
AIR QUALITY IMPACT ANALYSIS
GEORGIA-PACIFIC CORPORATION
Palatka, Florida
November 1988

Prepared by:

KBN Engineering and Applied Sciences, Inc.
P.O. Box 14288
Gainesville, Florida 32604
(904) 375-8000

November 1988
88044

1.0 INTRODUCTION

This report presents the results of an evaluation of carbon monoxide (CO) emissions from No. 4 Combination Boiler (CB4) located at the Georgia Pacific (G-P) facility in Palatka, Florida (see Figure 1-1). The study evaluated the impacts of CO emissions due to a proposed increase in heat input rate to the boiler when burning wood waste. The analysis was conducted to determine if the associated increase in CO emissions would cause a significant impact. Presented in this report are the methodology, results and conclusions of the analysis.

2.0 METHODOLOGY

The Industrial Source Complex Short-Term (ISCST) model was used to conduct the modeling analysis. The ISCST model is a steady-state Gaussian dispersion model used to calculate ground-level concentrations for continuous sources. The model requires the following inputs: source data, meteorological data, receptor data, and program control parameters. The modeling analysis was performed in screening and refined phases which effectively identified the magnitudes, locations, and time periods of the maximum predicted concentrations.

G-P provided design parameters for the CB4, including stack and operating parameters (i.e., stack diameter, and gas exit velocity and temperature) for the pre-ESP and post-ESP operating conditions of the boiler. The parameters used in the modeling analysis were as follows:

PARAMETER	PRE-ESP OPERATION	POST-ESP OPERATION
Stack height:	232 ft (70.70 m)	237 ft (72.20 m)
Stack diameter:	10.0 ft (3.05 m)	7.09 ft (2.16 m)
Gas exit velocity:	35.70 ft/s (10.88 m/s)	71.78 ft/s (21.88 m/s)
Gas exit temperature:	388°F (471 K)	441°F (500k)
CO emission rate:	1,093 lb/hr (137.7 g/s)	1,338 lb/hr (168.6 g/s)

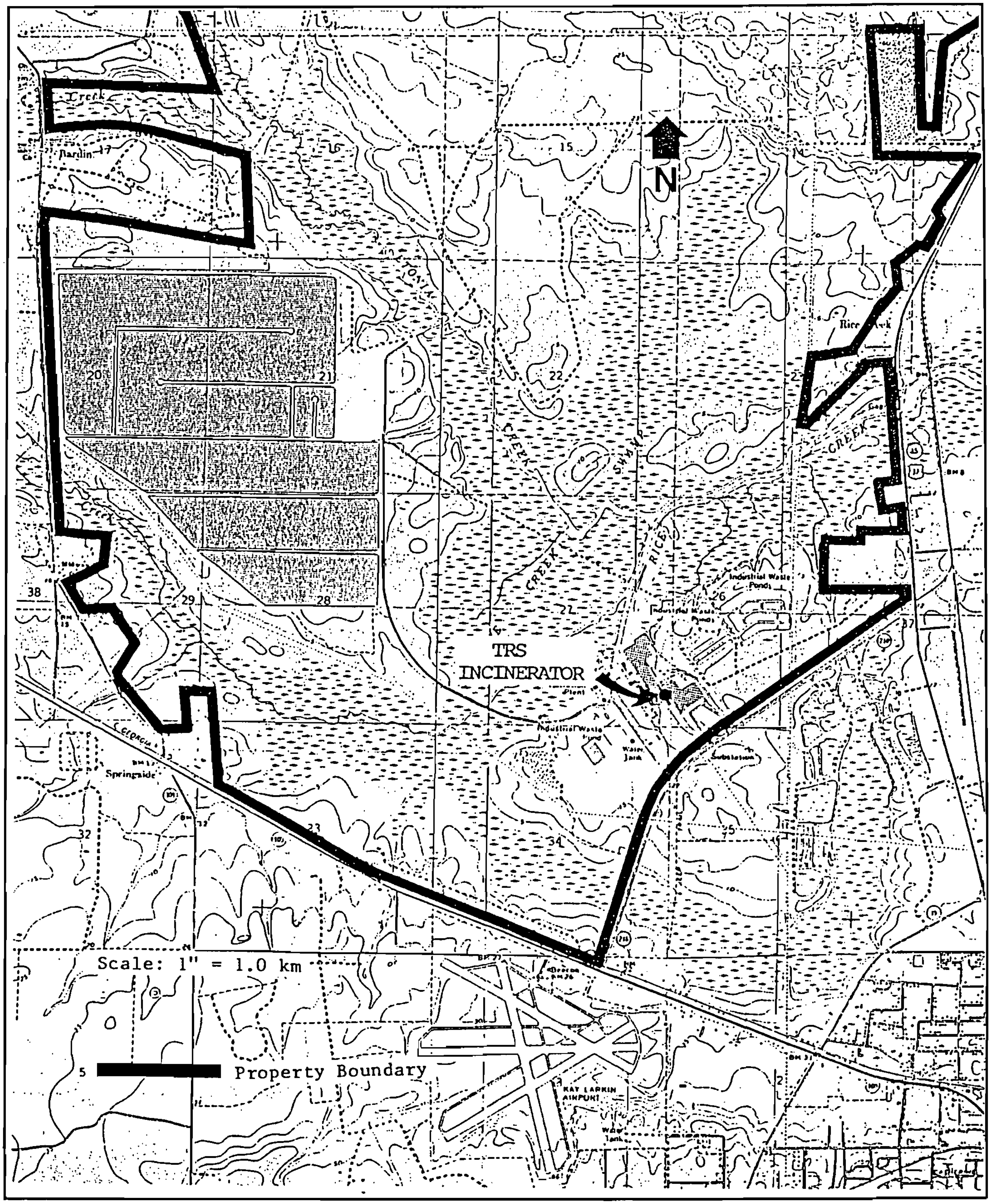

Figure 1-1. Location of the Georgia-Pacific Facility, Palatka, Florida

KBN

The effect of downwash from nearby buildings was addressed in the modeling. A nearby building is defined as a building located at a distance up to 5 times the lesser of the height or width of the building, but not greater than 0.8 km from the stack. From a review of the buildings at the G-P facility and the location of the CB4 stack (see Figure 2-1), the major nearby buildings at the existing G-P facility that could produce building downwash conditions include the following:

Building	Approximate Building Dimensions (ft) Height	Length	Width	Maximum Projected Width (ft)	GEP Height (ft)	Maximum Area of Influence (ft)
Recovery Boiler No. 4	212	100	90	135	415	450-675
Combination Boiler No. 4/Power Boiler No. 5 (includes building length of Recovery Boiler No.4)	110	240	80	253	275	400-550

These structures are located between 45 to 85 ft from the CB4 stack. For the directions that align these buildings with CB4, the areas of potential influence (i.e., 5 times the lesser dimension of the height or projected width) for Recovery Boiler No. 4 and Combination Boiler No. 4/Power Boiler No. 5 buildings extend out to approximately 600 and 550 ft, respectively, from these buildings. Because the CB4 stack is located at a distance that is within the area of potential influence of these buildings, there is the potential for building downwash of emissions from the stack to occur. The structure associated with the highest GEP stack height (Recovery Boiler No. 4) has the greatest potential to adversely influence emissions from CB4 and was conservatively considered to effect emissions in all directions.

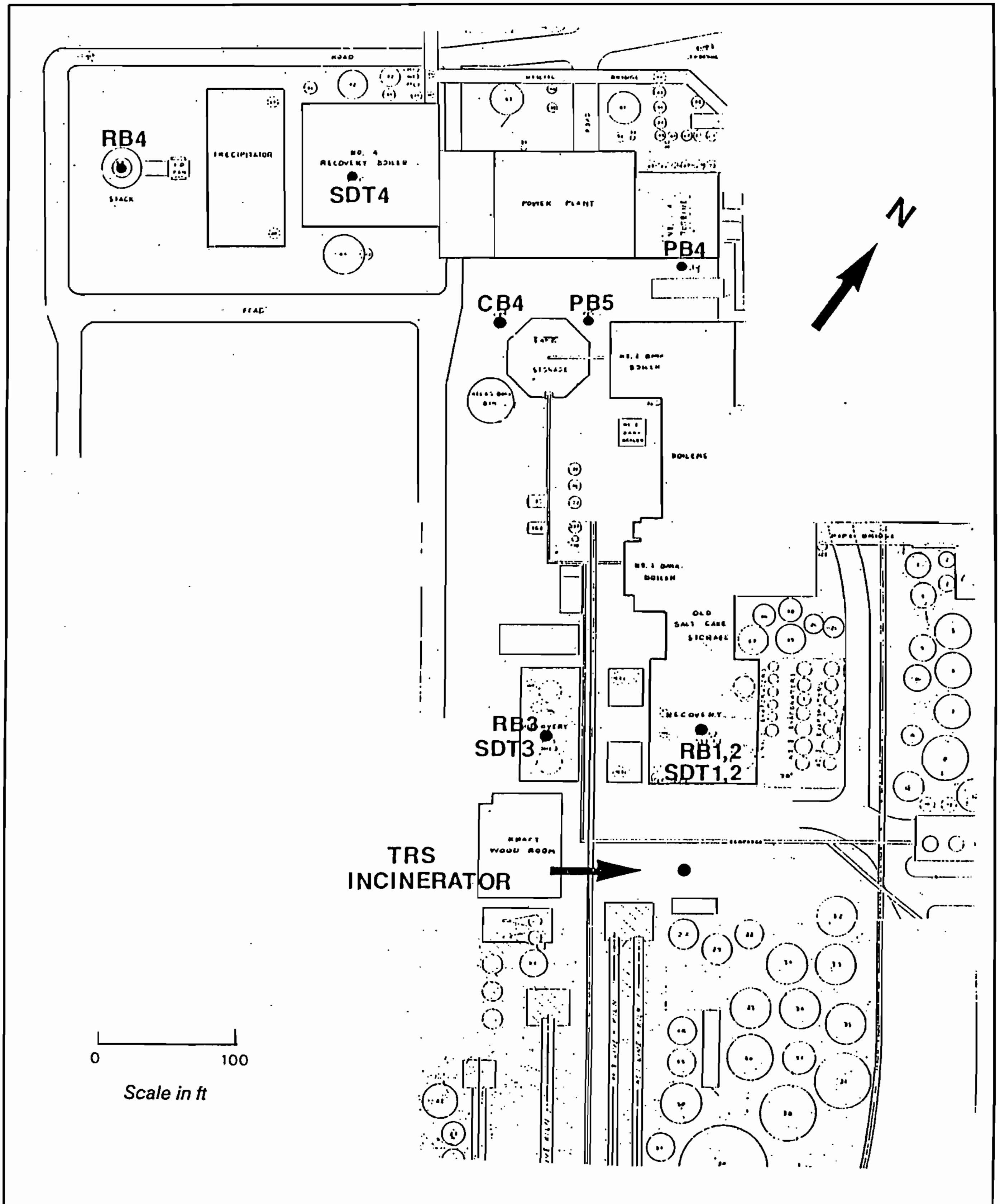

Figure 2-1. Locations of the Sources and Buildings at the Georgia-Pacific Facility

KBN

To address the impacts due only to the proposed changes in operating conditions, pre-ESP CO emissions from CB4 were considered negative, and post-ESP emissions were considered positive. When these two sources are modeled together, the model will produce the net change in CO impacts.

The meteorological data used in the ISCST model consisted of a concurrent 5-year (1981-1985) period of hourly surface weather observations from the National Weather Service (NWS) station at Jacksonville International Airport and twice daily mixing heights based upon radiosonde soundings from the NWS station in Waycross, Georgia. These meteorological data were selected due to the proximity of the weather stations to G-P. These data have also been used in previous air quality impact analysis conducted for G-P.

For the analysis a total of 285 receptors were located along 36 radials spaced every 10^{o} in a polar grid centered on the location of CB4. One hundred and five (105) of these receptors were discrete receptors placed along the radials at the plant property boundary and spaced at 700, 1,100, 1,500 and 2,000 m. The remainder of the receptors were located at downwind distances of 2,000, 2,500, 3,000, 3,500 and 4,000 m. The maximum predicted ground-level concentrations occurred within the boundaries of this grid. Based on the locations of these receptors, many of the receptors are located on G-P property, particularly in directions to the south clockwise to the northeast (see Figure 1 for G-P plant property). Therefore, the maximum concentrations predicted in those areas could be excluded from comparison to ambient standards since these areas are not considered ambient air. A summary of direction specific distances from CB4 to plant property boundaries is presented in Table 2-1.

Because most of the highest, second-highest CO concentrations occurred at plant property boundaries, and were less than 12% of the 1- and 8-hour significant impact levels, no refined analysis was performed.

The final model inputs required are program control parameters. For regulatory analysis, USEPA recommends the selection of certain model

Table 2-1. Summary of Direction Specific Distances from Number 4 Combination Boiler to G-P Plant Property Boundaries.

Direction (Degrees)	Distance (m)	Direction (Degrees)	Distance (m)
10	5,000	190	750
20	4,500	200	1,829
30	2,500	210	1,829
40	2,500	220	1,981
50	1,500	230	2,134
60	1,500	240	2,438
70	1,500	250	2,896
80	838	260	3,048
90	686	270	3,658
100	533	280	3,962
110	457	290	4,572
120	457	300	5,182
130	457	310	4,801
140	457	320	4,875
150	457	330	6,000
160	488	340	5,500
170	533	350	5,250
180	610	360	5,125

options. These are referred to as the "Regulatory Default" options in the ISCST model:

1. Final plume rise only;
2. Stack tip downwash;
3. Buoyancy-induced dispersion;
4. Default windspeed profile coefficients;
5. Default temperature gradients;
6. Calm wind processing; and
7. A decay half-life of 4 hours for SO_2 in urban areas.

In this analysis, the regulatory options were used to address impacts from the G-P facility. Based on a review of land use around G-P, the rural mode was selected because of minimal residential, industrial and commercial development in the area surrounding the plant.

3.0 RESULTS

To avoid further modeling analysis, predicted impacts must be less than significant impact levels. The significant impact levels for CO are 2,000 and 500 ug/m^3 for 1- and 8-hour averaging periods, respectively. The 1-hour and 8-hour significant levels can be exceeded once per year at each receptor point.

CB4 was modeled in its pre-ESP configuration and its post-ESP configuration, and the net change was calculated by the ISCST model. A summary of the results for each year of meteorology considered and for each averaging time is presented in Table 3-1. The maximum total 1-hour and 8-hour CO concentrations are predicted to be 204 and 22 ug/m^3, respectively. These maximum predicted concentrations are well below the 1-hour and 8-hour significance levels of 2,000 and 500 ug/m^3 respectively.

4.0 CONCLUSIONS

The air dispersion modeling analysis demonstrates that the increase in CO emissions from CB4 results in predicted ground-level concentrations well

Table 3-1. Predicted Maximum Net Change in CO Concentrations Due to CB4

Averaging Period	Year	Concentration (ug/m^3)	Location		Period	
			Direction (°)	Distance (km)	Julian Day	Hour Ending
1-Hour*	1981	193	110	0.457	52	7
	1982	147	140	0.457	67	3
	1983	169	110	0.457	298	3
	1984	150	140	0.457	152	3
	1985	204	150	0.457	38	2
8-Hour*	1981	22	110	0.457	337	8
	1982	10	230	3.500	56	24
	1983	16	140	0.457	320	8
	1984	9	90	2.000	59	16
	1985	20	150	0.457	38	8

* Highest, second-highest concentration for this averaging period.

Note: Significant impact levels for CO are 2,000 ug/m^3, 1-hour average, and 500 ug/m^3, 8-hour average below the significance impact levels. As a result, no further modeling analysis is necessary.

MODEL PRINTOUTS
CO ANALYSIS

```
ISCSTK6C MODEL, A VERSION OF
  ISCST (VERSION 88207)
  AN AIR QUALITY DISPERSION MODEL IN
  SECTION 1.  GUIDELINE MODELS.
  IN UNAMAP (VERSION 6) JULY 1988.
  SOURCE: FILE 6  ON UNAMAP MAGNETIC TAPE FROM NTIS.
  (Based on Change 7 to UNAMAP, July 27, 1988)


          CONVERTED BY :
KBN ENGINEERING AND APPLIED SCIENCES, INC.
       GAINESVILLE, FLORIDA
           (904)375-8000

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  CARD INPUT File is          gcoinc81.in
  SUMMARY OUTPUT File is      gcoinc81.out
  METEOROLOGICAL FILE is      jaxpre81.bin
  TITLE OF RUN is             1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4
```

*** ISCST BY KBN 7/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

```
CALCULATE (CONCENTRATION=1,DEPOSITION=2)                             ISW(1) =   1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)              ISW(2) =   4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                     ISW(3) =   2
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                             ISW(4) =   0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                        ISW(5) =   0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                     ISW(6) =   1

COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
WITH THE FOLLOWING TIME PERIODS:
  HOURLY (YES=1,NO=0)                                                ISW(7) =   1
  2-HOUR (YES=1,NO=0)                                                ISW(8) =   0
  3-HOUR (YES=1,NO=0)                                                ISW(9) =   0
  4-HOUR (YES=1,NO=0)                                               ISW(10) =   0
  6-HOUR (YES=1,NO=0)                                               ISW(11) =   0
  8-HOUR (YES=1,NO=0)                                               ISW(12) =   1
  12-HOUR (YES=1,NO=0)                                              ISW(13) =   0
  24-HOUR (YES=1,NO=0)                                              ISW(14) =   0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                                 ISW(15) =   0

PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
SPECIFIED BY ISW(7) THROUGH ISW(14):
  DAILY TABLES (YES=1,NO=0)                                         ISW(16) =   0
  HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                      ISW(17) =   1
  MAXIMUM 50 TABLES (YES=1,NO=0)                                    ISW(18) =   0
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)           ISW(19) =   1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3)   ISW(20) =   0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)           ISW(21) =   1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3)    ISW(22) =   1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                   ISW(23) =   0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)               ISW(24) =   1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)         ISW(25) =   2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)               ISW(26) =   1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)             ISW(27) =   1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                             ISW(28) =   1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                    ISW(29) =   1
DEBUG OPTION CHOSEN (YES=1,NO=2)                                    ISW(30) =   2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)                 ISW(31) =   0

NUMBER OF INPUT SOURCES                                             NSOURC =   2
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                            NGROUP =   0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)                IPERD =   0
NUMBER OF X (RANGE) GRID VALUES                                     NXPNTS =   5
NUMBER OF Y (THETA) GRID VALUES                                     NYPNTS =  36
NUMBER OF DISCRETE RECEPTORS                                        NXWYPT = 105
SOURCE EMISSION RATE UNITS CONVERSION FACTOR                            TK =.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                    ZR =   6.10  METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                            IMET =   9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION                 DECAY =0.000000E+00
SURFACE STATION NO.                                                    ISS = 13889
YEAR OF SURFACE DATA                                                   ISY = 81
UPPER AIR STATION NO.                                                  IUS = 13861
YEAR OF UPPER AIR DATA                                                 IUY = 81
ALLOCATED DATA STORAGE                                               LIMIT = 25000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                           MIMIT =  4245 WORDS
```

*** ISCST BY KBN 7/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.50, 3.10, 5.10, 8.20, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** ISCST BY KBN 7/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

2000.0, 2500.0, 3000.0, 3500.0, 4000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** RANGE,THETA COORDINATES OF DISCRETE RECEPTORS ***
(METERS,DEGREES)

(5000.0, 10.0),	(5500.0, 10.0),	(4500.0, 20.0),	(5000.0, 20.0),	(2500.0, 30.0),
(3000.0, 30.0),	(2500.0, 40.0),	(3000.0, 40.0),	(1500.0, 50.0),	(2000.0, 50.0),
(1500.0, 60.0),	(2000.0, 60.0),	(1500.0, 70.0),	(2000.0, 70.0),	(838.0, 80.0),
(1100.0, 80.0),	(1500.0, 80.0),	(2000.0, 80.0),	(686.0, 90.0),	(1100.0, 90.0),
(1500.0, 90.0),	(2000.0, 90.0),	(533.0, 100.0),	(700.0, 100.0),	(1100.0, 100.0),
(1500.0, 100.0),	(2000.0, 100.0),	(457.0, 110.0),	(700.0, 110.0),	(1100.0, 110.0),
(1500.0, 110.0),	(2000.0, 110.0),	(457.0, 120.0),	(700.0, 120.0),	(1100.0, 120.0),
(1500.0, 120.0),	(2000.0, 120.0),	(457.0, 130.0),	(700.0, 130.0),	(1100.0, 130.0),
(1500.0, 130.0),	(2000.0, 130.0),	(457.0, 140.0),	(700.0, 140.0),	(1100.0, 140.0),
(1500.0, 140.0),	(2000.0, 140.0),	(457.0, 150.0),	(700.0, 150.0),	(1100.0, 150.0),
(1500.0, 150.0),	(2000.0, 150.0),	(488.0, 160.0),	(700.0, 160.0),	(1100.0, 160.0),
(1500.0, 160.0),	(2000.0, 160.0),	(533.0, 170.0),	(700.0, 170.0),	(1100.0, 170.0),
(1500.0, 170.0),	(2000.0, 170.0),	(610.0, 180.0),	(700.0, 180.0),	(1100.0, 180.0),
(1500.0, 180.0),	(2000.0, 180.0),	(750.0, 190.0),	(1100.0, 190.0),	(1500.0, 190.0),
(2000.0, 190.0),	(1829.0, 200.0),	(2000.0, 200.0),	(1829.0, 210.0),	(2000.0, 210.0),
(1981.0, 220.0),	(2000.0, 220.0),	(2134.0, 230.0),	(2500.0, 230.0),	(2438.0, 240.0),
(2500.0, 240.0),	(2896.0, 250.0),	(3000.0, 250.0),	(3048.0, 260.0),	(3500.0, 260.0),
(3658.0, 270.0),	(4000.0, 270.0),	(3962.0, 280.0),	(4000.0, 280.0),	(4572.0, 290.0),
(5000.0, 290.0),	(5182.0, 300.0),	(5500.0, 300.0),	(4801.0, 310.0),	(5000.0, 310.0),
(4875.0, 320.0),	(5000.0, 320.0),	(6000.0, 330.0),	(6500.0, 330.0),	(5500.0, 340.0),
(6000.0, 340.0),	(5250.0, 350.0),	(5500.0, 350.0),	(5125.0, 360.0),	(5500.0, 360.0),
(				

*** SOURCE DATA ***

SOURCE NUMBER	T Y P E	W A K E	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
88020	0	0	0	-.13770E+03	-104.0	78.0	0.0	70.70	471.00	10.88	3.05	-64.60	36.30	36.30
88010	0	0	0	0.16860E+03	-104.0	78.0	0.0	72.20	500.00	21.88	2.16	-64.60	36.30	36.30

*** ISCST BY KBN 7/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE 1

IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE
1	64.6,	41.0,	0	2	64.6,	41.0,	0	3	64.6,	41.0,	0	4	64.6,	41.0,	0	5	64.6,	41.0,	0	6	64.6,	41.0,	0
7	64.6,	41.0,	0	8	64.6,	41.0,	0	9	64.6,	41.0,	0	10	64.6,	41.0,	0	11	64.6,	41.0,	0	12	64.6,	41.0,	0
13	64.6,	41.0,	0	14	64.6,	41.0,	0	15	64.6,	41.0,	0	16	64.6,	41.0,	0	17	64.6,	41.0,	0	18	64.6,	41.0,	0
19	64.6,	41.0,	0	20	64.6,	41.0,	0	21	64.6,	41.0,	0	22	64.6,	41.0,	0	23	64.6,	41.0,	0	24	64.6,	41.0,	0
25	64.6,	41.0,	0	26	64.6,	41.0,	0	27	64.6,	41.0,	0	28	64.6,	41.0,	0	29	64.6,	41.0,	0	30	64.6,	41.0,	0
31	64.6,	41.0,	0	32	64.6,	41.0,	0	33	64.6,	41.0,	0	34	64.6,	41.0,	0	35	64.6,	41.0,	0	36	64.6,	41.0,	0

SOURCE 2

IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE
1	64.6,	41.0,	0	2	64.6,	41.0,	0	3	64.6,	41.0,	0	4	64.6,	41.0,	0	5	64.6,	41.0,	0	6	64.6,	41.0,	0
7	64.6,	41.0,	0	8	64.6,	41.0,	0	9	64.6,	41.0,	0	10	64.6,	41.0,	0	11	64.6,	41.0,	0	12	64.6,	41.0,	0
13	64.6,	41.0,	0	14	64.6,	41.0,	0	15	64.6,	41.0,	0	16	64.6,	41.0,	0	17	64.6,	41.0,	0	18	64.6,	41.0,	0
19	64.6,	41.0,	0	20	64.6,	41.0,	0	21	64.6,	41.0,	0	22	64.6,	41.0,	0	23	64.6,	41.0,	0	24	64.6,	41.0,	0
25	64.6,	41.0,	0	26	64.6,	41.0,	0	27	64.6,	41.0,	0	28	64.6,	41.0,	0	29	64.6,	41.0,	0	30	64.6,	41.0,	0
31	64.6,	41.0,	0	32	64.6,	41.0,	0	33	64.6,	41.0,	0	34	64.6,	41.0,	0	35	64.6,	41.0,	0	36	64.6,	41.0,	0

* CALM HOURS (=1) FOR DAY 1 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 2 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 3 *	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 4 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 8 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 9 *	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 10 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 11 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 15 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 16 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 17 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 19 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 20 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 24 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 25 *	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 26 *	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 27 *	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 28 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 29 *	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 30 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 32 *	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 34 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 35 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 36 *	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 37 *	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 38 *	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 39 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 40 *	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 41 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 49 *	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 50 *	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 52 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1

* CALM HOURS (=1) FOR DAY 53 *	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 55 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 56 *	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 57 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 58 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 59 *	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 62 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 63 *	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 65 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 66 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 67 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 68 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 69 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 70 *	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 71 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 72 *	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 73 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 74 *	1	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 79 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 80 *	1	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 81 *	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 83 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 84 *	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 85 *	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 86 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 87 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 89 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 90 *	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 91 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 92 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 93 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 96 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 97 *	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 98 *	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 99 *	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 100 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 101 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR OAY 102 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 103 *	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 104 *	0	0	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 105 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 106 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 107 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 108 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 109 *	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 110 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 111 *	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 112 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 113 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 114 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR OAY 115 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 116 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 117 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 118 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 119 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 120 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 122 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 123 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 124 *	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 125 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1

* CALM HOURS (=1) FOR DAY 126 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 127 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 129 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 130 *	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 132 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 133 *	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 134 *	1	0	1	1	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 135 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 136 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 137 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 138 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 139 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 140 *	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 141 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 142 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 143 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 144 *	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 145 *	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 148 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 149 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 150 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 152 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 153 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 155 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 156 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 158 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 159 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 160 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 161 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 162 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 163 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 164 *	1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 165 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 166 *	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 167 *	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 168 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 169 *	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 170 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 171 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 172 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 175 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 176 *	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 177 *	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 178 *	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 179 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 180 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 181 *	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 182 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 183 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 184 *	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 185 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 186 *	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 187 *	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 188 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 189 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 190 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 191 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 192 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

* CALM HOURS (=1) FOR DAY 193 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 194 *	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 195 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 199 *	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 200 *	0	0	1	1	1	1	0	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 201 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 203 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 204 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 205 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 206 *	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 207 *	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 208 *	0	0	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 209 *	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 210 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 211 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 212 *	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 213 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
* CALM HOURS (=1) FOR DAY 214 *	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 215 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 216 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 217 *	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 218 *	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 221 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 222 *	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 223 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 224 *	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 225 *	1	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 226 *	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 227 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 228 *	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 229 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 231 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 232 *	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 234 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 235 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 236 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 237 *	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 238 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 240 *	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 241 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 243 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 244 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 245 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 246 *	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1
* CALM HOURS (=1) FOR DAY 247 *	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 248 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 249 *	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 250 *	1	1	0	1	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 251 *	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 252 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 253 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 254 *	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 255 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 256 *	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 257 *	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 258 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 260 *	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 262 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 263 *	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 264 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

* CALM HOURS (=1) FOR DAY 265 *	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 266 *	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 267 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 268 *	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 269 *	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 270 *	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 271 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 272 *	1	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 273 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 274 *	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 276 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 277 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 278 *	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 279 *	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 280 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 281 *	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 282 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 283 *	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 288 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 289 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 290 *	1	1	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 291 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 292 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 293 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 294 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 295 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 296 *	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 298 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 300 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 301 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 302 *	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 307 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 311 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 312 *	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 313 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 314 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 317 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 318 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 319 *	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 320 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 322 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 323 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 325 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 326 *	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 327 *	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 328 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 329 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 330 *	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 331 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 332 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 333 *	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 334 *	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 335 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 337 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 338 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 339 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
* CALM HOURS (=1) FOR DAY 340 *	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 341 *	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 345 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 346 *	1	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0

* CALM HOURS (=1) FOR DAY 348 * 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 350 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 351 * 1 1 1 1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 354 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 355 * 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0
* CALM HOURS (=1) FOR DAY 356 * 1 1 1 1 0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 357 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 358 * 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1 0 0 1
* CALM HOURS (=1) FOR DAY 359 * 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 361 * 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 362 * 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 365 * 0 0 0 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 47.07716 AND OCCURRED AT (2500.0, 200.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	28.14594 (95,13)	23.40775 (138,12)	24.55459 (333,11)	23.10540 (333,11)	21.00266 (333,11)
350.0 /	26.36809 (41,15)	23.60515 (138,11)	20.64227 (41,15)	18.27277 (333,11)	16.02551 (41,15)
340.0 /	23.86806 (81,11)	23.02335 (153,14)	21.69310 (81,11)	19.99599 (81,11)	18.49624 (205, 7)
330.0 /	27.39500 (41,11)	23.27234 (41,12)	21.23246 (41,12)	19.10146 (41,12)	17.75298 (205, 7)
320.0 /	29.05338 (205,17)	23.94238 (330,12)	20.74017 (330,12)	18.14375 (213,15)	16.44395 (213,15)
310.0 /	28.13554 (41,10)	24.72864 (41,10)	22.31892 (41,10)	20.01643 (41,10)	17.95552 (41,10)
300.0 /	27.89241 (106,13)	24.58492 (258,16)	21.13853 (169,16)	18.22034 (169,16)	16.25080 (118,17)
290.0 /	26.70139 (257,15)	24.35475 (155,16)	20.99709 (155,16)	18.08235 (277,14)	16.07835 (170,16)
280.0 /	28.00410 (271,13)	24.11298 (226,14)	20.67306 (226,14)	18.21441 (209,16)	17.73312 (271,15)
270.0 /	27.91174 (97,12)	24.44783 (226,13)	21.08249 (167,14)	18.20995 (239, 9)	16.27270 (295,12)
260.0 /	28.31421 (179,14)	24.32434 (244,15)	20.68482 (244,16)	17.92379 (268,13)	16.15003 (268,13)
250.0 /	26.91553 (168,12)	24.25096 (168,12)	20.73351 (168,16)	17.99790 (255,16)	17.53271 (235,15)
240.0 /	25.92053 (124,13)	23.80067 (253,10)	20.53216 (178,16)	18.10362 (234,13)	17.10200 (58,13)
230.0 /	27.72652 (122,13)	23.48227 (43,12)	22.51553 (105,11)	29.75777 (105,11)	31.94507 (105,11)
220.0 /	26.00018 (303,12)	22.39030 (303,12)	20.79091 (43,13)	19.50264 (287, 9)	18.09393 (287, 9)
210.0 /	23.91699 (304, 9)	21.88913 (304, 9)	25.79765 (232, 8)	27.87555 (232, 8)	27.04291 (232, 8)
200.0 /	43.48755 (58,10)	47.07716 (58,10)	43.49480 (58,10)	38.92995 (58,10)	34.91910 (58,10)
190.0 /	26.22157 (171,17)	24.90863 (105,10)	28.33286 (105,10)	27.89900 (105,10)	26.13656 (105,10)
180.0 /	20.98500 (141,12)	21.15958 (71,10)	19.33150 (96, 9)	18.81371 (92, 8)	18.27417 (92, 8)
170.0 /	23.40286 (12,13)	21.90182 (12,13)	20.71425 (343, 9)	25.17892 (343, 9)	26.11656 (343, 9)
160.0 /	24.51888 (316,13)	22.36765 (316,13)	19.99792 (122, 7)	20.17702 (122, 7)	21.01443 (19,10)
150.0 /	34.10308 (247, 8)	38.64815 (247, 8)	38.35378 (247, 8)	36.41449 (247, 8)	34.20542 (247, 8)
140.0 /	25.76320 (121,12)	21.84805 (161,16)	20.76544 (161,16)	19.28718 (161,16)	17.74744 (161,16)
130.0 /	26.12782 (261,13)	23.40202 (75,12)	21.03867 (75,12)	18.86855 (75,12)	16.95393 (75,12)
120.0 /	25.98456 (149,13)	24.60165 (27,11)	25.02809 (27,11)	23.70187 (27,11)	21.87930 (27,11)
110.0 /	26.38770 (161,13)	22.46184 (198,10)	23.12872 (182,12)	23.09525 (182,12)	21.79687 (182,12)
100.0 /	26.53191 (121,15)	22.50822 (121,15)	19.54945 (64,15)	18.56218 (64,15)	17.33674 (64,15)
90.0 /	26.42287 (196,13)	35.66457 (27, 9)	41.75206 (27, 9)	41.19466 (27, 9)	38.35001 (27, 9)
80.0 /	25.08946 (131,16)	22.98013 (131,16)	19.63056 (283,10)	17.31140 (283,10)	17.52317 (27,10)
70.0 /	26.34947 (140,11)	22.08320 (140,11)	20.81244 (210,18)	19.42247 (210,18)	17.83508 (210,18)
60.0 /	27.36006 (131,13)	22.63965 (152,11)	21.36316 (162, 6)	27.59488 (162, 6)	30.83469 (162, 6)
50.0 /	27.42422 (216, 8)	32.03703 (216, 8)	32.69518 (216, 8)	31.97001 (216, 8)	30.77904 (216, 8)
40.0 /	26.28418 (77,16)	23.10977 (220,10)	20.35146 (220,16)	17.56329 (157, 9)	16.54123 (77,14)
30.0 /	27.30107 (219,15)	23.43977 (219,15)	20.20843 (86,13)	17.91356 (259,16)	17.30399 (220,17)
20.0 /	25.45825 (349, 9)	23.57161 (349, 9)	21.48540 (335,13)	19.30560 (335,13)	17.19026 (335,13)
10.0 /	23.60484 (146,11)	20.43748 (146,11)	18.05033 (171,15)	17.44101 (335,12)	17.40620 (335,12)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	16.19340	(146,10)	5500.0	10.0	15.38091	(146,10)
4500.0	20.0	15.29471	(335,13)	5000.0	20.0	14.57869	(77,12)
2500.0	30.0	23.43977	(219,15)	3000.0	30.0	20.20843	(86,13)
2500.0	40.0	23.10977	(220,10)	3000.0	40.0	20.35146	(220,16)
1500.0	50.0	30.69377	(131,12)	2000.0	50.0	27.42422	(216, 8)
1500.0	60.0	29.90202	(131,13)	2000.0	60.0	27.36006	(131,13)
1500.0	70.0	24.92218	(140,11)	2000.0	70.0	26.34947	(140,11)
838.0	80.0	28.87401	(177,12)	1100.0	80.0	25.28021	(349,15)
1500.0	80.0	27.84645	(110,14)	2000.0	80.0	25.08946	(131,16)
686.0	90.0	27.81868	(177,11)	1100.0	90.0	20.72887	(64,14)
1500.0	90.0	24.86667	(196,13)	2000.0	90.0	26.42287	(196,13)
533.0	100.0	129.73315	(310,19)	700.0	100.0	30.21408	(125,11)
1100.0	100.0	22.24005	(261,12)	1500.0	100.0	27.68228	(160,14)
2000.0	100.0	26.53191	(121,15)	457.0	110.0	197.31711	(258, 1)
700.0	110.0	30.60034	(176,13)	1100.0	110.0	25.44925	(161,13)
1500.0	110.0	30.91185	(161,13)	2000.0	110.0	26.38770	(161,13)
457.0	120.0	74.66495	(18, 4)	700.0	120.0	32.00250	(349,13)
1100.0	120.0	31.77155	(349,13)	1500.0	120.0	29.62666	(114,14)
2000.0	120.0	25.98456	(149,13)	457.0	130.0	188.66046	(61,24)
700.0	130.0	27.06584	(75,17)	1100.0	130.0	27.10832	(75,17)
1500.0	130.0	30.17714	(261,13)	2000.0	130.0	26.12782	(261,13)
457.0	140.0	198.57098	(261, 5)	700.0	140.0	30.24168	(200,13)
1100.0	140.0	19.92024	(193,12)	1500.0	140.0	25.25095	(121,12)
2000.0	140.0	25.76320	(121,12)	457.0	150.0	202.58929	(62, 5)
700.0	150.0	30.28096	(109,12)	1100.0	150.0	19.79755	(198,12)
1500.0	150.0	22.82719	(78,12)	2000.0	150.0	34.10308	(247, 8)
488.0	160.0	18.38022	(42,21)	700.0	160.0	25.70012	(109,12)
1100.0	160.0	18.37999	(132,15)	1500.0	160.0	20.53198	(96,13)
2000.0	160.0	24.51888	(316,13)	533.0	170.0	18.91162	(102,12)
700.0	170.0	29.35274	(102,12)	1100.0	170.0	19.97506	(115,11)
1500.0	170.0	20.83917	(192,13)	2000.0	170.0	23.40286	(12,13)
610.0	180.0	88.75931	(288, 3)	700.0	180.0	37.52621	(285, 2)
1100.0	180.0	21.17125	(115,11)	1500.0	180.0	21.01334	(166,13)
2000.0	180.0	20.98500	(141,12)	750.0	190.0	29.21523	(115,14)
1100.0	190.0	28.58156	(194,15)	1500.0	190.0	25.61600	(194,15)
2000.0	190.0	26.22157	(171,17)	1829.0	200.0	38.13148	(58,10)
2000.0	200.0	43.48755	(58,10)	1829.0	210.0	24.91071	(304, 9)
2000.0	210.0	23.91699	(304, 9)	1981.0	220.0	26.05957	(303,12)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	26.00018	(303,12)	2134.0	230.0	26.03290	(122,13)
2500.0	230.0	23.48227	(43,12)	2438.0	240.0	24.16190	(253,10)
2500.0	240.0	23.80067	(253,10)	2896.0	250.0	21.47864	(168,16)
3000.0	250.0	20.73351	(168,16)	3048.0	260.0	20.34331	(244,16)
3500.0	260.0	17.92379	(268,13)	3658.0	270.0	17.55243	(190,15)
4000.0	270.0	16.27270	(295,12)	3962.0	280.0	17.75470	(271,15)
4000.0	280.0	17.73312	(271,15)	4572.0	290.0	16.14512	(170,16)
5000.0	290.0	15.82146	(170,16)	5182.0	300.0	14.71352	(169,18)
5500.0	300.0	14.35090	(269,12)	4801.0	310.0	15.93242	(145,17)
5000.0	310.0	15.62856	(88,10)	4875.0	320.0	18.43091	(146, 7)
5000.0	320.0	18.96661	(146, 7)	6000.0	330.0	15.49722	(205, 7)
6500.0	330.0	14.30846	(205, 7)	5500.0	340.0	19.24817	(205, 7)
6000.0	340.0	18.29966	(205, 7)	5250.0	350.0	15.33749	(163,15)
5500.0	350.0	15.03288	(163,15)	5125.0	360.0	17.11740	(333,11)
5500.0	360.0	16.12617	(333,11)				

2ND HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 28.95764 AND OCCURRED AT (2000.0, 320.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	26.48933 (211,15)	22.53786 (333,11)	19.78696 (113,10)	17.93406 (113,10)	16.13768 (126,11)
350.0 /	23.62215 (138,11)	23.14209 (41,15)	20.54854 (138,11)	18.19373 (41,15)	15.91106 (333,11)
340.0 /	20.00089 (153,14)	22.87294 (81,11)	21.03568 (153,14)	18.13435 (153,14)	18.23872 (81,11)
330.0 /	26.06447 (41,12)	23.23135 (41,11)	20.18354 (41,11)	17.61498 (107,15)	17.13012 (41,12)
320.0 /	28.95764 (217,16)	23.81561 (205,17)	19.85532 (183,15)	17.77364 (183,15)	16.29624 (209,18)
310.0 /	27.81592 (146,14)	24.51222 (209,15)	21.12117 (191,16)	18.44889 (247,11)	16.80443 (145,17)
300.0 /	27.11566 (258,16)	23.48839 (104,17)	20.79671 (107,16)	17.93902 (107,16)	16.24072 (188,17)
290.0 /	25.02113 (100,13)	23.71059 (94,15)	20.98090 (277,14)	17.97913 (295,11)	16.03080 (144,17)
280.0 /	27.92093 (106,12)	24.03534 (106,12)	20.59062 (270,15)	17.88683 (175,17)	17.51385 (167,15)
270.0 /	27.73856 (180,14)	23.45519 (97,12)	20.91992 (181,14)	18.16343 (167,14)	16.26206 (106,10)
260.0 /	26.97034 (244,15)	24.01595 (244,16)	20.45659 (227,14)	17.90468 (137,17)	16.13690 (137,17)
250.0 /	25.48946 (168,13)	24.10497 (168,16)	20.50268 (226,16)	17.95161 (244,17)	16.24826 (166,17)
240.0 /	25.60352 (229,14)	23.60359 (124,13)	20.25530 (253,10)	17.72136 (58,13)	16.56374 (238,15)
230.0 /	26.02267 (43,12)	22.73070 (303, 9)	21.15977 (303, 9)	19.07684 (303, 9)	17.53894 (287, 6)
220.0 /	23.11496 (181,13)	22.04295 (122,12)	20.49760 (287, 9)	19.28506 (43,13)	17.85358 (303,14)
210.0 /	22.82816 (364,21)	21.84152 (364,21)	21.00729 (305, 9)	19.61942 (305, 9)	17.98616 (305, 9)
200.0 /	21.69769 (286,11)	20.45940 (305,11)	20.40858 (305,11)	19.30537 (305,11)	17.86298 (305,11)
190.0 /	25.39653 (167,11)	23.01447 (171,17)	19.84022 (271,11)	19.98291 (8,12)	19.43254 (8,12)
180.0 /	20.00742 (71,10)	20.22183 (96, 9)	19.15701 (71,10)	17.16290 (96, 9)	15.82623 (311,10)
170.0 /	18.00481 (192,13)	21.00262 (193, 9)	19.70522 (193, 9)	18.41187 (116, 8)	20.05435 (116, 8)
160.0 /	18.98033 (52,11)	19.96638 (184, 9)	18.98927 (184, 9)	19.06155 (19,10)	19.18351 (122, 7)
150.0 /	23.93484 (261,10)	22.60611 (78,12)	20.90326 (78,12)	19.06362 (78,12)	17.31368 (78,12)
140.0 /	23.17921 (73,11)	21.83315 (121,12)	20.12875 (55,12)	18.86581 (177,16)	17.70877 (177,16)
130.0 /	25.70529 (75,12)	21.17888 (343,13)	19.87391 (27,11)	18.24931 (27,11)	16.82135 (79,15)
120.0 /	25.85307 (120,13)	22.42991 (349,13)	19.66409 (349,13)	17.32749 (349,13)	16.49148 (343,11)
110.0 /	24.13608 (322,12)	22.40906 (139,14)	20.06595 (75, 9)	18.77444 (75, 9)	17.72456 (22, 9)
100.0 /	24.64951 (160,14)	22.26141 (174,10)	19.45446 (174,10)	17.39462 (148,18)	16.09341 (42,14)
90.0 /	25.10329 (185,15)	23.07019 (64,16)	20.86265 (64,16)	18.70490 (64,16)	21.52231 (189, 7)
80.0 /	24.38716 (201,14)	22.62881 (201,14)	19.45720 (131,16)	17.26177 (91,10)	15.68674 (186,12)
70.0 /	21.16801 (158,12)	21.42935 (210,18)	19.84977 (174, 7)	17.90221 (174, 7)	15.99864 (174, 7)
60.0 /	23.26495 (157,13)	22.25134 (157,13)	20.10483 (77,19)	18.68256 (61,13)	17.63891 (61,13)
50.0 /	27.09547 (131,12)	22.43204 (173,16)	19.98526 (160,18)	18.00067 (324,12)	17.27263 (324,12)
40.0 /	25.18661 (220,10)	22.58768 (220,16)	19.92790 (157, 9)	17.47784 (220,16)	15.90609 (259, 9)
30.0 /	26.69067 (95,12)	22.29359 (95,12)	20.02905 (259,16)	17.84085 (59,17)	15.79546 (361,15)
20.0 /	25.44362 (6,14)	23.29379 (59,15)	21.46586 (349, 9)	19.09090 (349, 9)	16.88056 (349, 9)
10.0 /	18.53580 (213,12)	16.32367 (171,15)	17.38171 (218,16)	16.93307 (146,10)	17.21869 (146,10)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	15.91425	(335,12)	5500.0	10.0	14.95017	(335,12)
4500.0	20.0	14.94335	(349, 9)	5000.0	20.0	14.05264	(356,13)
2500.0	30.0	22.29359	(95,12)	3000.0	30.0	20.02905	(259,16)
2500.0	40.0	22.58768	(220,16)	3000.0	40.0	19.92790	(157, 9)
1500.0	50.0	28.52295	(220,14)	2000.0	50.0	27.09547	(131,12)
1500.0	60.0	19.93596	(219,14)	2000.0	60.0	23.26495	(157,13)
1500.0	70.0	20.84183	(199,14)	2000.0	70.0	21.16801	(158,12)
838.0	80.0	28.81059	(184,14)	1100.0	80.0	24.94901	(132,11)
1500.0	80.0	22.16925	(197,11)	2000.0	80.0	24.38716	(201,14)
686.0	90.0	26.47350	(115,12)	1100.0	90.0	19.77554	(194,13)
1500.0	90.0	24.71184	(135,13)	2000.0	90.0	25.10329	(185,15)
533.0	100.0	127.92593	(70,22)	700.0	100.0	29.90503	(132,14)
1100.0	100.0	19.51495	(218,14)	1500.0	100.0	26.66362	(261,12)
2000.0	100.0	24.64951	(160,14)	[redacted]			
700.0	110.0	30.10715	(136,12)	1100.0	110.0	19.67720	(197,15)
1500.0	110.0	23.66785	(322,14)	2000.0	110.0	24.13608	(322,12)
457.0	120.0	42.77930	(349,13)	700.0	120.0	25.99686	(176,13)
1100.0	120.0	24.22467	(75,10)	1500.0	120.0	29.54704	(349,13)
2000.0	120.0	25.85307	(120,13)	457.0	130.0	184.99777	(2, 7)
700.0	130.0	26.56345	(200,13)	1100.0	130.0	26.90205	(75,12)
1500.0	130.0	27.87369	(75,12)	2000.0	130.0	25.70529	(75,12)
457.0	140.0	150.63101	(315,21)	700.0	140.0	29.07915	(165,11)
1100.0	140.0	19.47148	(198,13)	1500.0	140.0	21.45268	(193,12)
2000.0	140.0	23.17921	(73,11)	457.0	150.0	139.95865	(140,24)
700.0	150.0	28.70448	(165,11)	1100.0	150.0	16.48006	(109,12)
1500.0	150.0	21.36961	(198,12)	2000.0	150.0	23.93484	(261,10)
488.0	160.0	10.44391	(109,12)	700.0	160.0	19.74844	(102,12)
1100.0	160.0	15.02575	(26,12)	1500.0	160.0	20.06648	(132,15)
2000.0	160.0	18.98033	(52,11)	533.0	170.0	8.48048	(109,12)
700.0	170.0	18.19266	(115,11)	1100.0	170.0	17.78876	(102,12)
1500.0	170.0	20.75252	(172,13)	2000.0	170.0	18.00481	(192,13)
610.0	180.0	80.95203	(285, 2)	700.0	180.0	35.39432	(317, 2)
1100.0	180.0	19.09053	(134,14)	1500.0	180.0	19.51047	(166,12)
2000.0	180.0	20.00742	(71,10)	750.0	190.0	28.68716	(104,13)
1100.0	190.0	20.18323	(134,14)	1500.0	190.0	22.84723	(171,17)
2000.0	190.0	25.39653	(167,11)	1829.0	200.0	20.13887	(286,11)
2000.0	200.0	21.69769	(286,11)	1829.0	210.0	23.00070	(188,15)
2000.0	210.0	22.82816	(364,21)	1981.0	220.0	23.12871	(181,13)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	23.11496	(181,13)	2134.0	230.0	25.26637	(36,14)
2500.0	230.0	22.73070	(303, 9)	2438.0	240.0	24.04626	(124,13)
2500.0	240.0	23.60359	(124,13)	2896.0	250.0	21.12067	(226,16)
3000.0	250.0	20.50268	(226,16)	3048.0	260.0	20.16220	(227,14)
3500.0	260.0	17.90468	(137,17)	3658.0	270.0	17.48096	(239, 9)
4000.0	270.0	16.26206	(106,10)	3962.0	280.0	17.52821	(167,15)
4000.0	280.0	17.51385	(167,15)	4572.0	290.0	14.79353	(209,17)
5000.0	290.0	14.53226	(209,17)	5182.0	300.0	14.49394	(269,12)
5500.0	300.0	14.34892	(169,18)	4801.0	310.0	15.92941	(88,10)
5000.0	310.0	15.62637	(145,17)	4875.0	320.0	15.82333	(221,17)
5000.0	320.0	15.71172	(221,17)	6000.0	330.0	14.90172	(170, 7)
6500.0	330.0	14.02688	(170, 7)	5500.0	340.0	14.12653	(201,16)
6000.0	340.0	13.37014	(201,16)	5250.0	350.0	14.11927	(41,24)
5500.0	350.0	14.01283	(41,24)	5125.0	360.0	15.24712	(163, 8)
5500.0	360.0	15.64173	(163, 8)				

HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 13.85744 AND OCCURRED AT (2000.0, 250.0) *

DIRECTION /	RANGE (METERS)				
(DEGREES) /	2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	6.78776 (153, 2)	6.93844 (138, 2)	6.78861 (138, 2)	6.05573 (138, 2)	5.24801 (138, 2)
350.0 /	6.46119 (138, 2)	7.50892 (138, 2)	6.74895 (138, 2)	5.70791 (138, 2)	5.25455 (63, 2)
340.0 /	4.50573 (153, 2)	4.33563 (153, 2)	3.69763 (312, 2)	3.35708 (312, 2)	3.40757 (41, 3)
330.0 /	11.04955 (41, 2)	9.32781 (41, 2)	8.15932 (41, 2)	7.13410 (41, 2)	6.26556 (41, 2)
320.0 /	10.50357 (215, 2)	10.76485 (215, 2)	9.24867 (215, 2)	7.65111 (215, 2)	6.31133 (215, 2)
310.0 /	6.61224C(208, 2)	6.19592 (312, 2)	6.55342 (312, 2)	6.14139 (155, 2)	6.03606 (155, 2)
300.0 /	6.59582 (143, 2)	6.06324 (143, 2)	5.99128 (101, 2)	5.36449 (101, 2)	4.65412 (101, 2)
290.0 /	6.63929 (100, 2)	8.54635 (100, 2)	8.06390 (100, 2)	7.06160 (100, 2)	6.07630 (100, 2)
280.0 /	4.52640 (137, 2)	6.36075 (137, 2)	6.07781 (137, 2)	5.31629 (137, 2)	4.54964 (137, 2)
270.0 /	9.03131 (180, 2)	8.17231 (180, 2)	7.04163 (180, 2)	5.98960 (180, 2)	5.76690 (230, 2)
260.0 /	10.34898 (179, 2)	8.48414 (179, 2)	7.22807 (179, 2)	6.16228 (179, 2)	5.70183 (87, 2)
250.0 /	13.85744 (168, 2)	12.43266 (168, 2)	10.29094 (168, 2)	8.40758 (168, 2)	6.90852 (168, 2)
240.0 /	8.90526 (124, 2)	7.91845 (124, 2)	6.54391 (124, 2)	6.51171 (238, 2)	6.68190 (238, 2)
230.0 /	11.30422 (304, 2)	9.73702 (304, 2)	8.60914 (304, 2)	8.11090 (294, 2)	7.57789 (294, 2)
220.0 /	9.12741 (303, 2)	9.83416 (303, 2)	9.90482 (364, 3)	10.16260 (364, 3)	9.91257 (364, 3)
210.0 /	5.07918 (304, 1)	7.33214 (304, 1)	8.73756 (304, 1)	9.08285 (304, 1)	8.91641 (304, 1)
200.0 /	5.43594 (58, 2)	5.88465 (58, 2)	5.43685 (58, 2)	5.76265 (305, 2)	5.77442 (305, 2)
190.0 /	4.44838 (192, 2)	5.75065 (111, 2)	6.67250 (111, 2)	6.86242 (111, 2)	6.70473 (111, 2)
180.0 /	6.54778 (166, 2)	5.06826 (166, 2)	6.30529 (17, 2)	6.93105 (17, 2)	6.93078 (17, 2)
170.0 /	5.69691 (193, 2)	6.58794 (193, 2)	6.13801 (193, 2)	5.38037 (193, 2)	5.32777 (339, 2)
160.0 /	4.90652 (52, 2)	5.66038 (57, 2)	5.47623 (52, 2)	4.92287 (52, 2)	4.32302 (52, 2)
150.0 /	5.54623C(247, 1)	6.28575C(247, 1)	6.21837C(247, 1)	5.89425C(247, 1)	5.52943C(247, 1)
140.0 /	9.48447 (195, 2)	8.85532 (195, 2)	7.51593 (195, 2)	6.82444 (73, 2)	6.14465 (73, 2)
130.0 /	7.61242 (149, 2)	6.81079 (195, 2)	5.66805 (149, 2)	5.65517 (114, 2)	5.56927 (114, 2)
120.0 /	10.16787 (75, 2)	9.40302 (75, 2)	8.48201 (75, 2)	7.59355 (75, 2)	6.79452 (75, 2)
110.0 /	6.33370 (174, 2)	7.41088 (219, 2)	7.08921 (219, 2)	7.29919 (22, 2)	7.72825 (22, 2)
100.0 /	5.83189 (121, 2)	5.94230 (135, 2)	6.32857 (135, 2)	6.10253 (135, 2)	6.67089 (332, 2)
90.0 /	6.45397 (110, 2)	7.09985 (158, 2)	7.77057 (64, 2)	7.88095 (64, 2)	7.62054 (64, 2)
80.0 /	5.68737 (132, 2)	5.00714 (140, 2)	4.98943 (148, 2)	5.02497 (60, 2)	5.24666 (27, 2)
70.0 /	6.19271 (199, 2)	7.21941 (139, 2)	6.69809 (139, 2)	5.88132 (199, 2)	5.22389 (199, 2)
60.0 /	6.73344 (201, 2)	6.39277 (201, 2)	5.54763 (201, 2)	5.23822 (161, 2)	5.03198 (161, 2)
50.0 /	10.11642 (131, 2)	10.10728 (220, 2)	8.87837 (220, 2)	7.53466 (220, 2)	6.55453 (91, 2)
40.0 /	8.03359 (220, 2)	7.42416 (220, 2)	6.17413 (77, 2)	5.79156 (259, 2)	5.51838 (259, 2)
30.0 /	8.32533 (113, 2)	6.55588 (113, 2)	5.37928 (86, 2)	4.53766 (86, 2)	4.15917 (335, 2)
20.0 /	4.24100 (113, 2)	4.44130 (335, 2)	4.21186 (335, 2)	4.64005C(351, 2)	4.81786C(351, 2)
10.0 /	5.43170 (117, 2)	5.11580 (117, 2)	5.62848 (146, 2)	5.67270 (146, 2)	5.45710 (146, 2)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	4.78385	(146, 2)	5500.0	10.0	4.43491	(146, 2)
4500.0	20.0	4.74302C	(351, 2)	5000.0	20.0	4.55050C	(351, 2)
2500.0	30.0	6.55588	(113, 2)	3000.0	30.0	5.37928	(86, 2)
2500.0	40.0	7.42416	(220, 2)	3000.0	40.0	6.17413	(77, 2)
1500.0	50.0	9.27108	(131, 2)	2000.0	50.0	10.11642	(131, 2)
1500.0	60.0	4.82828	(201, 2)	2000.0	60.0	6.73344	(201, 2)
1500.0	70.0	4.75705	(205, 2)	2000.0	70.0	6.19271	(199, 2)
838.0	80.0	5.47717	(132, 2)	1100.0	80.0	6.60418	(132, 2)
1500.0	80.0	6.63218	(132, 2)	2000.0	80.0	5.68737	(132, 2)
686.0	90.0	4.03765	(132, 2)	1100.0	90.0	5.23376	(132, 2)
1500.0	90.0	6.85743	(110, 2)	2000.0	90.0	6.45397	(110, 2)
533.0	100.0	13.05558	(70, 3)	700.0	100.0	4.28595C	(125, 2)
1100.0	100.0	3.30445	(194, 2)	1500.0	100.0	4.09913	(149, 2)
2000.0	100.0	5.83189	(121, 2)	457.0	110.0	32.83135C	(258, 1)
700.0	110.0	4.69496C	(176, 2)	1100.0	110.0	4.00128	(257, 2)
1500.0	110.0	6.03564	(149, 2)	2000.0	110.0	6.33370	(174, 2)
457.0	120.0	5.26027	(349, 2)	700.0	120.0	5.25420C	(176, 2)
1100.0	120.0	8.88313	(75, 2)	1500.0	120.0	10.52722	(75, 2)
2000.0	120.0	10.16787	(75, 2)	457.0	130.0	29.88372C	(8, 1)
700.0	130.0	5.05183C	(176, 2)	1100.0	130.0	5.11302	(198, 2)
1500.0	130.0	7.79454	(198, 2)	2000.0	130.0	7.61242	(149, 2)
457.0	140.0	22.58713	(17, 1)	700.0	140.0	5.03937C	(200, 2)
1100.0	140.0	4.71253	(198, 2)	1500.0	140.0	6.36809	(121, 2)
2000.0	140.0	9.48447	(195, 2)	457.0	150.0	17.71076	(62, 1)
700.0	150.0	3.58806	(165, 2)	1100.0	150.0	3.46147	(198, 2)
1500.0	150.0	5.04058	(195, 2)	2000.0	150.0	5.54623C	(247, 1)
488.0	160.0	1.38697C	(109, 2)	700.0	160.0	3.64677C	(109, 2)
1100.0	160.0	2.38921	(132, 2)	1500.0	160.0	4.34078	(194, 2)
2000.0	160.0	4.90652	(52, 2)	533.0	170.0	2.36395	(102, 2)
700.0	170.0	3.66909	(102, 2)	1100.0	170.0	3.62037C	(115, 2)
1500.0	170.0	4.16990	(166, 2)	2000.0	170.0	5.69691	(193, 2)
610.0	180.0	3.79374C	(115, 2)	700.0	180.0	4.88932C	(115, 2)
1100.0	180.0	4.82308C	(115, 2)	1500.0	180.0	7.28178	(166, 2)
2000.0	180.0	6.54778	(166, 2)	750.0	190.0	6.35970C	(115, 2)
1100.0	190.0	5.27002	(194, 2)	1500.0	190.0	3.97165	(192, 2)
2000.0	190.0	4.44838	(192, 2)	1829.0	200.0	4.76644	(58, 2)
2000.0	200.0	5.43594	(58, 2)	1829.0	210.0	3.95998	(364, 3)
2000.0	210.0	5.07918	(304, 1)	1981.0	220.0	9.12609	(303, 2)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	9.12741	(303, 2)	2134.0	230.0	10.53220	(304, 2)
2500.0	230.0	9.73702	(304, 2)	2438.0	240.0	8.08486	(124, 2)
2500.0	240.0	7.91845	(124, 2)	2896.0	250.0	10.72694	(168, 2)
3000.0	250.0	10.29094	(168, 2)	3048.0	260.0	7.11680	(179, 2)
3500.0	260.0	6.16228	(179, 2)	3658.0	270.0	5.70761	(230, 2)
4000.0	270.0	5.76690	(230, 2)	3962.0	280.0	4.60449	(137, 2)
4000.0	280.0	4.54964	(137, 2)	4572.0	290.0	5.11739	(100, 2)
5000.0	290.0	4.52191	(100, 2)	5182.0	300.0	3.55931C	(169, 3)
5500.0	300.0	3.50207C	(169, 3)	4801.0	310.0	5.46502	(155, 2)
5000.0	310.0	5.29910	(155, 2)	4875.0	320.0	4.60142	(215, 2)
5000.0	320.0	4.41085	(215, 2)	6000.0	330.0	3.96996	(41, 2)
6500.0	330.0	3.59527	(41, 2)	5500.0	340.0	3.51440	(41, 3)
6000.0	340.0	3.38537	(41, 3)	5250.0	350.0	4.77676	(63, 2)
5500.0	350.0	4.64981	(63, 2)	5125.0	360.0	3.77124	(299, 2)
5500.0	360.0	3.53763	(299, 2)				

2ND HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 10.05748 AND OCCURRED AT (2000.0, 50.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.50664 (222, 2)	5.97901 (222, 2)	5.37226 (222, 2)	4.71045 (299, 2)	4.49189 (299, 2)
350.0 /	6.16814 (153, 2)	5.09593 (222, 2)	4.88294 (63, 2)	5.23148 (63, 2)	4.76496 (138, 2)
340.0 /	3.33823 (102, 2)	3.73830 (102, 2)	3.66120 (153, 2)	3.01269 (153, 2)	2.94880 (312, 2)
330.0 /	4.26418 (215, 2)	4.38537 (215, 2)	3.76531 (215, 2)	3.97535 (146, 3)	4.09944 (146, 3)
320.0 /	8.25411C(217, 2)	7.72265C(217, 2)	6.59201C(217, 2)	5.48713C(217, 2)	4.57111C(217, 2)
310.0 /	5.14161 (215, 2)	5.82537C(208, 2)	5.69983 (155, 2)	6.02709 (312, 2)	5.30791 (312, 2)
300.0 /	5.02634 (150, 2)	6.02948 (101, 2)	5.19869 (93, 2)	4.61470 (93, 2)	3.98734 (93, 2)
290.0 /	5.62686 (93, 2)	5.71282 (93, 2)	4.97798 (93, 2)	4.18429 (93, 2)	4.03345C(290, 2)
280.0 /	4.44677 (106, 2)	4.66680 (100, 2)	4.37823 (271, 2)	4.07016 (271, 2)	3.94986 (269, 2)
270.0 /	6.87255 (97, 2)	6.59878 (137, 2)	6.28426 (137, 2)	5.62254 (230, 2)	5.19880 (340, 2)
260.0 /	9.57175 (244, 2)	8.40586 (244, 2)	6.84985 (244, 2)	5.85683 (87, 2)	5.29193 (179, 2)
250.0 /	6.44227 (244, 2)	6.33523C(272, 2)	6.74932 (268, 2)	6.72552 (268, 2)	6.34794 (268, 2)
240.0 /	6.13390C(256, 2)	6.61880 (227, 2)	6.04422 (253, 2)	6.08205 (253, 2)	5.81786 (253, 2)
230.0 /	5.54763 (294, 2)	7.56551 (294, 2)	8.30542 (294, 2)	7.58434 (304, 2)	7.08441 (31, 2)
220.0 /	6.38226 (364, 3)	8.57862 (364, 3)	9.85900 (303, 2)	9.37714 (303, 2)	8.72048 (303, 2)
210.0 /	4.44567 (364, 3)	5.65730 (305, 2)	6.58059 (305, 2)	7.86720 (305, 3)	8.57322 (305, 3)
200.0 /	4.82309 (286, 2)	4.87700 (286, 2)	5.35938 (305, 2)	5.16050 (303, 3)	5.49628 (303, 3)
190.0 /	4.37026C(171, 3)	3.98458 (167, 2)	3.90204C(62, 2)	3.98491C(62, 2)	3.86575 (318, 2)
180.0 /	4.18734 (192, 2)	4.41593 (96, 2)	4.52483 (96, 2)	4.16076 (96, 2)	4.05092 (12, 2)
170.0 /	3.98676 (166, 2)	3.29268 (96, 2)	4.24368 (339, 2)	5.11692 (339, 2)	4.63283 (193, 2)
160.0 /	4.73073 (57, 2)	5.66002 (52, 2)	5.46398 (57, 2)	4.91028 (57, 2)	4.30065 (57, 2)
150.0 /	4.99016 (195, 2)	5.16064 (73, 2)	4.93656 (73, 2)	4.37523 (73, 2)	4.02446 (52, 2)
140.0 /	6.84176 (73, 2)	7.65447 (73, 2)	7.43847 (73, 2)	6.45568 (343, 2)	6.04278 (343, 2)
130.0 /	7.58105 (195, 2)	6.78959 (149, 2)	5.63485 (195, 2)	5.05289 (354, 2)	4.95978 (21, 2)
120.0 /	6.90907 (149, 2)	6.28018 (79, 2)	6.51943 (79, 2)	6.34832 (79, 2)	6.00804 (79, 2)
110.0 /	6.09768 (219, 2)	6.10590 (174, 2)	6.13772 (22, 2)	6.32010 (219, 2)	5.75027 (33, 2)
100.0 /	5.26551 (174, 2)	5.94051 (121, 2)	5.41790 (349, 3)	5.88346 (332, 2)	5.68165 (135, 2)
90.0 /	6.03982 (158, 2)	6.83324 (64, 2)	6.89167 (158, 2)	6.23604 (158, 2)	5.52118 (158, 2)
80.0 /	5.59493 (140, 2)	4.82331 (148, 2)	4.98013 (110, 2)	4.98143 (110, 2)	5.04084 (60, 2)
70.0 /	5.91211 (139, 2)	6.81501 (199, 2)	6.52044 (199, 2)	5.78959 (139, 2)	4.90789 (139, 2)
60.0 /	5.04602 (131, 2)	4.52876 (77, 3)	5.13831 (161, 2)	4.76587 (77, 3)	4.52393 (77, 3)
50.0 /	10.05748 (220, 2)	8.73859 (131, 2)	7.18979 (131, 2)	6.98683 (91, 2)	6.36382 (220, 2)
40.0 /	7.21418 (77, 2)	6.75792 (77, 2)	6.15548 (220, 2)	5.54068 (77, 2)	4.95096 (77, 2)
30.0 /	5.67608 (86, 2)	6.06964 (86, 2)	5.01671 (113, 2)	4.15653 (335, 2)	3.83408 (95, 2)
20.0 /	3.82366 (335, 2)	4.30252C(59, 2)	3.94613C(351, 2)	3.75251 (335, 2)	3.32089 (357, 2)
10.0 /	4.49999 (213, 2)	5.00205 (146, 2)	4.21298 (117, 2)	4.20092 (95, 2)	4.22198 (95, 2)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	3.87477	(95, 2)	5500.0	10.0	3.64069	(95, 2)
4500.0	20.0	3.20515	(357, 2)	5000.0	20.0	3.02701	(357, 2)
2500.0	30.0	6.06964	(86, 2)	3000.0	30.0	5.01671	(113, 2)
2500.0	40.0	6.75792	(77, 2)	3000.0	40.0	6.15548	(220, 2)
1500.0	50.0	4.88528	(220, 2)	2000.0	50.0	10.05748	(220, 2)
1500.0	60.0	4.81833	(131, 2)	2000.0	60.0	5.04602	(131, 2)
1500.0	70.0	4.50330	(132, 2)	2000.0	70.0	5.91211	(139, 2)
838.0	80.0	4.11580C	(184, 2)	1100.0	80.0	2.89824C	(184, 2)
1500.0	80.0	4.42060	(140, 2)	2000.0	80.0	5.59493	(140, 2)
686.0	90.0	3.54717	(194, 2)	1100.0	90.0	3.75558	(194, 2)
1500.0	90.0	4.61323	(132, 2)	2000.0	90.0	6.03982	(158, 2)
533.0	100.0	4.32053	(310, 3)	700.0	100.0	3.57043	(257, 2)
1100.0	100.0	3.30257	(257, 2)	1500.0	100.0	3.98802	(110, 2)
2000.0	100.0	5.26551	(174, 2)	[redacted]			
700.0	110.0	4.48485	(257, 2)	1100.0	110.0	3.89443	(149, 2)
1500.0	110.0	4.31637	(322, 2)	2000.0	110.0	6.09768	(219, 2)
457.0	120.0	3.87910	(75, 2)	700.0	120.0	3.95887	(349, 2)
1100.0	120.0	3.95534	(349, 2)	1500.0	120.0	7.23007	(149, 2)
2000.0	120.0	6.90907	(149, 2)	457.0	130.0	20.38468	(311, 1)
700.0	130.0	4.35247C	(200, 2)	1100.0	130.0	4.22278	(75, 2)
1500.0	130.0	6.14995	(149, 2)	2000.0	130.0	7.58105	(195, 2)
457.0	140.0	18.50827	(24, 1)	700.0	140.0	4.80492	(17, 1)
1100.0	140.0	2.93371C	(176, 2)	1500.0	140.0	6.30933	(195, 2)
2000.0	140.0	6.84176	(73, 2)	457.0	150.0	15.73293	(140, 3)
700.0	150.0	3.49418C	(200, 2)	1100.0	150.0	2.98681C	(244, 1)
1500.0	150.0	3.75118	(198, 2)	2000.0	150.0	4.99016	(195, 2)
488.0	160.0	0.82446C	(224, 2)	700.0	160.0	2.46856	(102, 2)
1100.0	160.0	2.09915C	(115, 2)	1500.0	160.0	3.43740C	(115, 2)
2000.0	160.0	4.73073	(57, 2)	533.0	170.0	1.21085C	(109, 2)
700.0	170.0	1.88337C	(228, 2)	1100.0	170.0	2.22360	(102, 2)
1500.0	170.0	3.59819	(194, 2)	2000.0	170.0	3.98676	(166, 2)
610.0	180.0	3.25433	(102, 2)	700.0	180.0	3.17552	(102, 2)
1100.0	180.0	3.41629	(166, 2)	1500.0	180.0	3.96255	(192, 2)
2000.0	180.0	4.18734	(192, 2)	750.0	190.0	3.50789C	(134, 2)
1100.0	190.0	4.37352C	(115, 2)	1500.0	190.0	3.80787C	(171, 3)
2000.0	190.0	4.37026C	(171, 3)	1829.0	200.0	4.15105	(286, 2)
2000.0	200.0	4.82309	(286, 2)	1829.0	210.0	3.09468	(304, 2)
2000.0	210.0	4.44567	(364, 3)	1981.0	220.0	6.19835	(364, 3)

*** ISCST BY KBN 3/88 *** 1981 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	6.38226	(364, 3)	2134.0	230.0	6.37730	(294, 2)
2500.0	230.0	7.56551	(294, 2)	2438.0	240.0	6.64122	(227, 2)
2500.0	240.0	6.61880	(227, 2)	2896.0	250.0	6.66514	(268, 2)
3000.0	250.0	6.74932	(268, 2)	3048.0	260.0	6.71054	(244, 2)
3500.0	260.0	5.85683	(87, 2)	3658.0	270.0	5.69232	(180, 2)
4000.0	270.0	5.19880	(340, 2)	3962.0	280.0	3.89401	(269, 2)
4000.0	280.0	3.94986	(269, 2)	4572.0	290.0	3.80168C	(290, 2)
5000.0	290.0	3.58426C	(290, 2)	5182.0	300.0	3.32939	(48, 2)
5500.0	300.0	3.32861	(48, 2)	4801.0	310.0	4.25412	(48, 2)
5000.0	310.0	4.23844	(48, 2)	4875.0	320.0	4.05343	(88, 2)
5000.0	320.0	3.99863	(88, 2)	6000.0	330.0	3.48828	(146, 3)
6500.0	330.0	3.30174	(41, 3)	5500.0	340.0	2.74974C	(205, 1)
6000.0	340.0	2.61424C	(205, 1)	5250.0	350.0	3.49333	(41, 3)
5500.0	350.0	3.45308	(41, 3)	5125.0	360.0	3.75317	(138, 2)
5500.0	360.0	3.42935	(63, 3)				

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ISCSTK6C MODEL, A VERSION OF
  ISCST (VERSION 88207)
  AN AIR QUALITY DISPERSION MODEL IN
  SECTION 1.  GUIDELINE MODELS.
  IN UNAMAP (VERSION 6) JULY 1988.
  SOURCE: FILE 6  ON UNAMAP MAGNETIC TAPE FROM NTIS.
  (Based on Change 7 to UNAMAP, July 27, 1988)


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  CARD INPUT File is          gcoinc82.in
  SUMMARY OUTPUT File is      gcoinc82.out
  METEOROLOGICAL FILE is      jaxpre82.bin
  TITLE OF RUN is             1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4
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*** ISCST BY KBN 7/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

CALCULATE (CONCENTRATION=1,DEPOSITION=2)	ISW(1) =	1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) =	4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)	ISW(3) =	2
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)	ISW(4) =	0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)	ISW(5) =	0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)	ISW(6) =	1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:		
HOURLY (YES=1,NO=0)	ISW(7) =	1
2-HOUR (YES=1,NO=0)	ISW(8) =	0
3-HOUR (YES=1,NO=0)	ISW(9) =	0
4-HOUR (YES=1,NO=0)	ISW(10) =	0
6-HOUR (YES=1,NO=0)	ISW(11) =	0
8-HOUR (YES=1,NO=0)	ISW(12) =	1
12-HOUR (YES=1,NO=0)	ISW(13) =	0
24-HOUR (YES=1,NO=0)	ISW(14) =	0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)	ISW(15) =	0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):		
DAILY TABLES (YES=1,NO=0)	ISW(16) =	0
HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)	ISW(17) =	1
MAXIMUM 50 TABLES (YES=1,NO=0)	ISW(18) =	0
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)	ISW(19) =	1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3)	ISW(20) =	0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)	ISW(21) =	1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3)	ISW(22) =	1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)	ISW(23) =	0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)	ISW(24) =	1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)	ISW(25) =	2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)	ISW(26) =	1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)	ISW(27) =	1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)	ISW(28) =	1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)	ISW(29) =	1
DEBUG OPTION CHOSEN (YES=1,NO=2)	ISW(30) =	2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)	ISW(31) =	0
NUMBER OF INPUT SOURCES	NSOURC =	2
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)	NGROUP =	0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)	IPERD =	0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS =	5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS =	36
NUMBER OF DISCRETE RECEPTORS	NXWYPT =	105
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =	.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR =	6.10 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET =	9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =	0.000000E+00
SURFACE STATION NO.	ISS =	13889
YEAR OF SURFACE DATA	ISY =	82
UPPER AIR STATION NO.	IUS =	13861
YEAR OF UPPER AIR DATA	IUY =	82
ALLOCATED DATA STORAGE	LIMIT =	25000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN	MIMIT =	4245 WORDS

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.50, 3.10, 5.10, 8.20, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

2000.0, 2500.0, 3000.0, 3500.0, 4000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** RANGE,THETA COORDINATES OF DISCRETE RECEPTORS ***
(METERS,DEGREES)

(5000.0, 10.0),	(5500.0, 10.0),	(4500.0, 20.0),	(5000.0, 20.0),	(2500.0, 30.0),
(3000.0, 30.0),	(2500.0, 40.0),	(3000.0, 40.0),	(1500.0, 50.0),	(2000.0, 50.0),
(1500.0, 60.0),	(2000.0, 60.0),	(1500.0, 70.0),	(2000.0, 70.0),	(838.0, 80.0),
(1100.0, 80.0),	(1500.0, 80.0),	(2000.0, 80.0),	(686.0, 90.0),	(1100.0, 90.0),
(1500.0, 90.0),	(2000.0, 90.0),	(533.0, 100.0),	(700.0, 100.0),	(1100.0, 100.0),
(1500.0, 100.0),	(2000.0, 100.0),	(457.0, 110.0),	(700.0, 110.0),	(1100.0, 110.0),
(1500.0, 110.0),	(2000.0, 110.0),	(457.0, 120.0),	(700.0, 120.0),	(1100.0, 120.0),
(1500.0, 120.0),	(2000.0, 120.0),	(457.0, 130.0),	(700.0, 130.0),	(1100.0, 130.0),
(1500.0, 130.0),	(2000.0, 130.0),	(457.0, 140.0),	(700.0, 140.0),	(1100.0, 140.0),
(1500.0, 140.0),	(2000.0, 140.0),	(457.0, 150.0),	(700.0, 150.0),	(1100.0, 150.0),
(1500.0, 150.0),	(2000.0, 150.0),	(488.0, 160.0),	(700.0, 160.0),	(1100.0, 160.0),
(1500.0, 160.0),	(2000.0, 160.0),	(533.0, 170.0),	(700.0, 170.0),	(1100.0, 170.0),
(1500.0, 170.0),	(2000.0, 170.0),	(610.0, 180.0),	(700.0, 180.0),	(1100.0, 180.0),
(1500.0, 180.0),	(2000.0, 180.0),	(750.0, 190.0),	(1100.0, 190.0),	(1500.0, 190.0),
(2000.0, 190.0),	(1829.0, 200.0),	(2000.0, 200.0),	(1829.0, 210.0),	(2000.0, 210.0),
(1981.0, 220.0),	(2000.0, 220.0),	(2134.0, 230.0),	(2500.0, 230.0),	(2438.0, 240.0),
(2500.0, 240.0),	(2896.0, 250.0),	(3000.0, 250.0),	(3048.0, 260.0),	(3500.0, 260.0),
(3658.0, 270.0),	(4000.0, 270.0),	(3962.0, 280.0),	(4000.0, 280.0),	(4572.0, 290.0),
(5000.0, 290.0),	(5182.0, 300.0),	(5500.0, 300.0),	(4801.0, 310.0),	(5000.0, 310.0),
(4875.0, 320.0),	(5000.0, 320.0),	(6000.0, 330.0),	(6500.0, 330.0),	(5500.0, 340.0),
(6000.0, 340.0),	(5250.0, 350.0),	(5500.0, 350.0),	(5125.0, 360.0),	(5500.0, 360.0),
(				

*** ISCST BY KBN 7/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** SOURCE DATA ***

SOURCE NUMBER	T Y P E	W A K E	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
88020	0	0	0	-.13770E+03	-104.0	78.0	0.0	70.70	471.00	10.88	3.05	-64.60	36.30	36.30
88010	0	0	0	0.16860E+03	-104.0	78.0	0.0	72.20	500.00	21.88	2.16	-64.60	36.30	36.30

*** ISCST BY KBN 7/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

```
SOURCE    1
IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE
  1  64.6,  41.0,    0   2  64.6,  41.0,    0   3  64.6,  41.0,    0   4  64.6,  41.0,    0   5  64.6,  41.0,    0   6  64.6,  41.0,    0
  7  64.6,  41.0,    0   8  64.6,  41.0,    0   9  64.6,  41.0,    0  10  64.6,  41.0,    0  11  64.6,  41.0,    0  12  64.6,  41.0,    0
 13  64.6,  41.0,    0  14  64.6,  41.0,    0  15  64.6,  41.0,    0  16  64.6,  41.0,    0  17  64.6,  41.0,    0  18  64.6,  41.0,    0
 19  64.6,  41.0,    0  20  64.6,  41.0,    0  21  64.6,  41.0,    0  22  64.6,  41.0,    0  23  64.6,  41.0,    0  24  64.6,  41.0,    0
 25  64.6,  41.0,    0  26  64.6,  41.0,    0  27  64.6,  41.0,    0  28  64.6,  41.0,    0  29  64.6,  41.0,    0  30  64.6,  41.0,    0
 31  64.6,  41.0,    0  32  64.6,  41.0,    0  33  64.6,  41.0,    0  34  64.6,  41.0,    0  35  64.6,  41.0,    0  36  64.6,  41.0,    0


SOURCE    2
IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE IFV   BH    BW    IWAKE
  1  64.6,  41.0,    0   2  64.6,  41.0,    0   3  64.6,  41.0,    0   4  64.6,  41.0,    0   5  64.6,  41.0,    0   6  64.6,  41.0,    0
  7  64.6,  41.0,    0   8  64.6,  41.0,    0   9  64.6,  41.0,    0  10  64.6,  41.0,    0  11  64.6,  41.0,    0  12  64.6,  41.0,    0
 13  64.6,  41.0,    0  14  64.6,  41.0,    0  15  64.6,  41.0,    0  16  64.6,  41.0,    0  17  64.6,  41.0,    0  18  64.6,  41.0,    0
 19  64.6,  41.0,    0  20  64.6,  41.0,    0  21  64.6,  41.0,    0  22  64.6,  41.0,    0  23  64.6,  41.0,    0  24  64.6,  41.0,    0
 25  64.6,  41.0,    0  26  64.6,  41.0,    0  27  64.6,  41.0,    0  28  64.6,  41.0,    0  29  64.6,  41.0,    0  30  64.6,  41.0,    0
 31  64.6,  41.0,    0  32  64.6,  41.0,    0  33  64.6,  41.0,    0  34  64.6,  41.0,    0  35  64.6,  41.0,    0  36  64.6,  41.0,    0


* CALM HOURS (=1) FOR DAY   1 *  0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY   3 *  0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY   5 *  0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0
* CALM HOURS (=1) FOR DAY   6 *  1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY   7 *  1 1 0 0 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  12 *  0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  13 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  15 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0
* CALM HOURS (=1) FOR DAY  16 *  0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY  17 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0
* CALM HOURS (=1) FOR DAY  18 *  1 1 1 1 1 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  19 *  1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  20 *  0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  21 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 1
* CALM HOURS (=1) FOR DAY  22 *  1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  23 *  0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  24 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY  25 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  28 *  0 0 0 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  29 *  1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY  30 *  0 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  34 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  35 *  0 0 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY  36 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  37 *  1 1 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  38 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY  39 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY  41 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY  42 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  43 *  0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  44 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  45 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
```

* CALM HOURS (=1) FOR DAY 46 *	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 49 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 50 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 51 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 53 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 54 *	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 61 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 62 *	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 63 *	1	0	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 64 *	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 65 *	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 67 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 68 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 69 *	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 70 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 71 *	1	0	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 72 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 73 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 74 *	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 75 *	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 76 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 77 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 78 *	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 81 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 82 *	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 83 *	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 84 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 85 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 89 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 90 *	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 91 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 92 *	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 94 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 95 *	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 97 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 98 *	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 100 *	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 101 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 102 *	1	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 103 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 104 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 105 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 106 *	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 107 *	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 108 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 109 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 110 *	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 111 *	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 112 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 116 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 117 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 121 *	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 122 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 123 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 124 *	1	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 125 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 126 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 127 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 128 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* CALM HOURS (=1) FOR DAY 129 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 130 *	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 131 *	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	.0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 132 *	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 133 *	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 134 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 135 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 136 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 137 *	1	0	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 138 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 139 *	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 140 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 141 *	1	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 142 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 143 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 144 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 145 *	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 146 *	1	1	1	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 147 *	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 148 *	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 149 *	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 150 *	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 154 *	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 155 *	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 156 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 157 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 158 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 159 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 160 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 162 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 163 *	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 164 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 165 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 166 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 167 *	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 169 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 171 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 174 *	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 175 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 176 *	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 177 *	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 178 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 179 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 181 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 183 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 184 *	1	1	0	1	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 186 *	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 187 *	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 188 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 189 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 190 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 191 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 192 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 193 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR DAY 194 *	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 195 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 196 *	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	1	0	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 198 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0

* CALM HOURS (=1) FOR DAY 199 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 200 * 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 201 * 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 202 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 203 * 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 204 * 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 205 * 1 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 206 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 207 * 1 1 1 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 208 * 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 209 * 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY 212 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 213 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 214 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 215 * 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0
* CALM HOURS (=1) FOR DAY 216 * 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 217 * 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 218 * 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1
* CALM HOURS (=1) FOR DAY 219 * 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 220 * 0 0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 221 * 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 222 * 0 1 1 0 0 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0 0 1
* CALM HOURS (=1) FOR DAY 223 * 1 1 1 1 0 1 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 224 * 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 225 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY 226 * 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 227 * 0 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 228 * 1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 229 * 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 230 * 0 0 1 1 0 0 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 231 * 1 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 232 * 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 233 * 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 234 * 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 235 * 0 1 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 236 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 237 * 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 238 * 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 239 * 1 1 1 1 1 0 1 0 0 0 0 1 1 0 0 0 0 0 0 1 1 1 1 0
* CALM HOURS (=1) FOR DAY 240 * 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 0 1
* CALM HOURS (=1) FOR DAY 241 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 243 * 0 0 0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 244 * 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 245 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 246 * 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 247 * 0 0 1 1 1 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 248 * 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 249 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 250 * 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 251 * 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 252 * 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0
* CALM HOURS (=1) FOR DAY 253 * 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1
* CALM HOURS (=1) FOR DAY 254 * 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0
* CALM HOURS (=1) FOR DAY 255 * 1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 256 * 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 257 * 0 0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1
* CALM HOURS (=1) FOR DAY 258 * 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 259 * 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0
* CALM HOURS (=1) FOR DAY 260 * 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 261 * 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

* CALM HOURS (=1) FOR DAY 262 *	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 263 *	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 265 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 266 *	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 267 *	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 268 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 269 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 270 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1
* CALM HOURS (=1) FOR DAY 271 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 272 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 274 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 275 *	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 276 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 277 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 278 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 279 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 280 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 281 *	1	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 282 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 283 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 284 *	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 285 *	0	0	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 286 *	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 287 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 289 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 290 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 293 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 294 *	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 295 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 298 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
* CALM HOURS (=1) FOR DAY 299 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 300 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 302 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 303 *	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 304 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 305 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 306 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 307 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 309 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 310 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 313 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 314 *	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 315 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 316 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 317 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
* CALM HOURS (=1) FOR DAY 318 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 319 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 325 *	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 326 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 327 *	1	1	0	1	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 328 *	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 330 *	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 331 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 332 *	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 333 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 334 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 335 *	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 336 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 337 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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* CALM HOURS (=1) FOR DAY 338 *  0  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0
* CALM HOURS (=1) FOR DAY 340 *  0  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 344 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 345 *  0  1  1  1  1  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 349 *  1  1  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 352 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 353 *  1  0  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 355 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 356 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  1  0  1  1  1
* CALM HOURS (=1) FOR DAY 357 *  1  1  0  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  0
* CALM HOURS (=1) FOR DAY 358 *  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 359 *  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 360 *  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 361 *  1  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 362 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  0  0
* CALM HOURS (=1) FOR DAY 363 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0
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*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 53.71707 AND OCCURRED AT (2500.0, 120.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	26.46085 (334,14)	24.01534 (334,14)	20.54083 (172,16)	19.22375 (362, 9)	18.40455 (362, 9)
350.0 /	20.38217 (13, 8)	19.51562 (13, 8)	19.77228 (132, 9)	19.99894 (132, 9)	18.74847 (132, 9)
340.0 /	23.91132 (126,16)	23.26906 (126,16)	20.22351 (307,15)	18.26069 (307,15)	17.63062 (188,10)
330.0 /	27.85199 (126,14)	23.90407 (155,13)	20.64575 (133,16)	18.01588 (229,16)	16.23692 (30,11)
320.0 /	27.34213 (153,14)	24.66051 (153,14)	20.47985 (153,14)	19.13039 (359,13)	18.12955 (359,13)
310.0 /	29.14177 (220,15)	23.37851 (218,14)	20.82773 (134,15)	18.35319 (315,12)	18.93584 (188, 8)
300.0 /	24.05159 (228,14)	21.79073 (127,17)	19.91687 (127,17)	17.85955 (155,16)	16.88564 (114,13)
290.0 /	24.26062 (187,15)	23.82187 (187,15)	20.87927 (243,14)	18.34056 (163,12)	16.35204 (92,16)
280.0 /	25.61090 (125,12)	23.59164 (125,12)	20.80442 (196,15)	18.43438 (206,18)	16.64017 (278,11)
270.0 /	26.69905 (123,14)	23.77376 (280,13)	27.53508 (198, 9)	32.44028 (198, 9)	32.96365 (198, 9)
260.0 /	27.91374 (302,14)	27.57663 (198,10)	24.71118 (198,10)	21.81652 (198,10)	19.48293 (198,10)
250.0 /	27.67189 (129,14)	23.86172 (216,12)	20.65367 (270,15)	17.87591 (91,15)	17.11371 (88,16)
240.0 /	27.05551 (216,11)	23.99141 (216,11)	20.67949 (255,14)	19.17014 (272,20)	17.78787 (272,20)
230.0 /	26.30032 (56,22)	22.72380 (68,12)	20.44617 (257,11)	19.19724 (56,19)	17.85392 (56,19)
220.0 /	27.25540 (49,13)	22.53564 (49,13)	20.81865 (272,17)	19.75159 (272,17)	18.28919 (272,17)
210.0 /	23.93127 (290,15)	22.77722 (325,11)	21.07034 (290,15)	18.98100 (290,15)	16.99256 (347,12)
200.0 /	24.44762 (49,14)	22.90102 (49,14)	22.60456 (315, 9)	22.52952 (315, 9)	21.31724 (315, 9)
190.0 /	20.87556 (67,10)	19.79636 (86, 8)	24.21399 (86, 8)	23.67236 (86, 8)	21.51312 (86, 8)
180.0 /	20.31563 (299,12)	21.35843 (299,12)	19.28353 (299,12)	17.94770 (86, 8)	17.51418 (86, 8)
170.0 /	21.89714 (298,14)	21.00728 (112,15)	23.56364 (348, 9)	23.88316 (348, 9)	24.93677 (347, 8)
160.0 /	22.58502 (53,12)	20.12679 (288, 9)	19.05305 (288, 9)	16.99422 (288, 9)	15.92558 (351,14)
150.0 /	25.09308 (283,15)	22.50591 (283,15)	20.89019 (310, 9)	21.15213 (310, 9)	20.27648 (310, 9)
140.0 /	25.24337 (96,13)	22.10141 (161,11)	18.81647 (112,16)	17.61541 (309, 4)	16.79854 (96,18)
130.0 /	24.75197 (192,16)	22.57449 (160,15)	19.77628 (160,15)	18.37331 (85,14)	16.99755 (85,14)
120.0 /	51.60898 (4,16)	53.71707 (4,16)	51.88416 (4,16)	48.67358 (4,16)	45.10756 (4,16)
110.0 /	25.13368 (76,15)	22.69765 (76,15)	19.27779 (51,14)	17.98085 (201,11)	17.22782 (201,11)
100.0 /	25.68056 (66,14)	22.58012 (55,13)	19.87806 (14,14)	17.60580 (14,14)	17.28283 (162, 7)
90.0 /	26.87404 (180,11)	22.47301 (180,12)	19.70559 (180,12)	16.93025 (25,15)	16.96867 (162, 7)
80.0 /	26.09656 (128,13)	22.23863 (7,12)	19.68172 (7,12)	16.91496 (237,16)	15.49671 (263,17)
70.0 /	21.73761 (74,11)	22.34459 (74,11)	19.86810 (74,11)	17.45606 (161,17)	15.47936 (21,11)
60.0 /	27.40523 (180,15)	23.02155 (74,14)	19.94437 (211,16)	17.67049 (211,16)	15.97738 (4,12)
50.0 /	25.94304 (213,11)	23.10126 (213,11)	19.97466 (170, 9)	19.06641 (23,17)	17.89095 (23,17)
40.0 /	25.02243 (179,13)	23.53255 (179,13)	20.33134 (211,13)	17.79143 (181,17)	17.33716 (95,19)
30.0 /	23.08611 (212,10)	22.26999 (335,12)	20.24453 (335,12)	20.53741 (203, 7)	21.80009 (203, 7)
20.0 /	23.14202 (186,18)	20.30066 (209, 7)	32.84100 (209, 7)	37.28738 (209, 7)	37.35867 (209, 7)
10.0 /	28.04247 (174,13)	23.68292 (179,16)	20.46545 (179,16)	17.14807 (179,16)	16.19092 (339,11)

HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	15.30725	(4, 5)	5500.0	10.0	14.80535	(4, 5)
4500.0	20.0	35.56770	(209, 7)	5000.0	20.0	33.22296	(209, 7)
2500.0	30.0	22.26999	(335,12)	3000.0	30.0	20.24453	(335,12)
2500.0	40.0	23.53255	(179,13)	3000.0	40.0	20.33134	(211,13)
1500.0	50.0	24.42728	(66,11)	2000.0	50.0	25.94304	(213,11)
1500.0	60.0	28.69954	(180,15)	2000.0	60.0	27.40523	(180,15)
1500.0	70.0	21.49606	(179,14)	2000.0	70.0	21.73761	(74,11)
838.0	80.0	28.31546	(236,14)	1100.0	80.0	27.29250	(212,14)
1500.0	80.0	30.55167	(128,13)	2000.0	80.0	26.09656	(128,13)
686.0	90.0	46.44907	(353,21)	1100.0	90.0	23.14005	(180,11)
1500.0	90.0	30.59409	(180,11)	2000.0	90.0	26.87404	(180,11)
533.0	100.0	66.17960	(52, 7)	700.0	100.0	52.26581	(295, 1)
1100.0	100.0	30.44835	(66,14)	1500.0	100.0	29.59268	(66,14)
2000.0	100.0	25.68056	(66,14)	457.0	110.0	43.99548	(14,13)
700.0	110.0	32.30521	(14,13)	1100.0	110.0	29.05139	(14,13)
1500.0	110.0	25.34988	(14,13)	2000.0	110.0	25.13368	(76,15)
457.0	120.0	79.28165	(94, 1)	700.0	120.0	30.47330	(112,12)
1100.0	120.0	24.90381	(201,12)	1500.0	120.0	43.25943	(4,16)
2000.0	120.0	51.60898	(4,16)	457.0	130.0	167.33377	(118, 3)
700.0	130.0	30.00337	(235,12)	1100.0	130.0	23.71030	(192,16)
1500.0	130.0	28.78802	(192,16)	2000.0	130.0	24.75197	(192,16)
457.0	140.0	201.88223	(185,23)	700.0	140.0	30.68286	(226,13)
1100.0	140.0	28.42284	(96,13)	1500.0	140.0	30.70018	(96,13)
2000.0	140.0	25.24337	(96,13)	457.0	150.0	151.25592	(100, 2)
700.0	150.0	25.40236	(205,14)	1100.0	150.0	19.40644	(238,11)
1500.0	150.0	20.33279	(283,15)	2000.0	150.0	25.09308	(283,15)
488.0	160.0	97.36450	(310, 1)	700.0	160.0	23.04382	(184,12)
1100.0	160.0	20.33659	(53,14)	1500.0	160.0	24.68236	(53,14)
2000.0	160.0	22.58502	(53,12)	533.0	170.0	144.65488	(85,22)
700.0	170.0	30.25111	(184,12)	1100.0	170.0	18.66435	(112,14)
1500.0	170.0	21.32957	(85,13)	2000.0	170.0	21.89714	(298,14)
610.0	180.0	81.30432	(257, 7)	700.0	180.0	23.13083	(184,12)
1100.0	180.0	14.14393	(247,10)	1500.0	180.0	17.65974	(226,14)
2000.0	180.0	20.31563	(299,12)	750.0	190.0	26.86200	(166,11)
1100.0	190.0	17.68753	(166,11)	1500.0	190.0	17.32428	(216,10)
2000.0	190.0	20.87556	(67,10)	1829.0	200.0	23.43695	(49,14)
2000.0	200.0	24.44762	(49,14)	1829.0	210.0	22.14078	(325,11)
2000.0	210.0	23.93127	(290,15)	1981.0	220.0	27.39156	(49,13)

HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	27.25540	(49,13)	2134.0	230.0	24.39758	(56,22)
2500.0	230.0	22.72380	(68,12)	2438.0	240.0	24.50757	(216,11)
2500.0	240.0	23.99141	(216,11)	2896.0	250.0	21.31723	(216,12)
3000.0	250.0	20.65367	(270,15)	3048.0	260.0	24.41295	(198,10)
3500.0	260.0	21.81652	(198,10)	3658.0	270.0	32.93581	(198, 9)
4000.0	270.0	32.96365	(198, 9)	3962.0	280.0	16.67176	(278,11)
4000.0	280.0	16.64017	(278,11)	4572.0	290.0	14.66409	(244,16)
5000.0	290.0	14.25093	(244,16)	5182.0	300.0	15.43393	(114,13)
5500.0	300.0	14.90050	(114,13)	4801.0	310.0	22.20412	(188, 8)
5000.0	310.0	22.33347	(188, 8)	4875.0	320.0	16.06573	(359,13)
5000.0	320.0	15.77227	(359,13)	6000.0	330.0	13.53532	(144, 8)
6500.0	330.0	12.90616	(144, 8)	5500.0	340.0	15.34198	(146, 8)
6000.0	340.0	15.80374	(146, 8)	5250.0	350.0	15.08265	(132, 9)
5500.0	350.0	14.48374	(132, 9)	5125.0	360.0	15.60098	(362, 9)
5500.0	360.0	14.81808	(66, 3)				

2ND HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 27.89561 AND OCCURRED AT (2000.0, 260.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	19.21738 (334,12)	20.90822 (167,15)	20.03225 (334,14)	18.33642 (172,16)	16.14592 (204,10)
350.0 /	18.96340 (235,15)	19.40967 (107,11)	18.62964 (13, 8)	17.23971 (63,15)	15.50987 (13, 8)
340.0 /	18.73495 (138,11)	20.07565 (307,15)	19.81519 (126,16)	18.06158 (134,16)	16.36407 (134,16)
330.0 /	26.21729 (133,14)	23.13123 (126,14)	20.14169 (229,16)	17.78915 (225,15)	16.06058 (219, 9)
320.0 /	26.90373 (195,14)	24.43790 (195,14)	20.38921 (195,14)	18.34045 (106,11)	17.35771 (359,15)
310.0 /	25.98308 (218,14)	23.33268 (228,12)	20.31245 (315,12)	18.21601 (145,15)	16.89465 (337,15)
300.0 /	21.57915 (315,14)	21.37247 (315,14)	19.15012 (279,14)	17.81734 (357,15)	16.22477 (357,15)
290.0 /	23.26318 (260,13)	22.88690 (187,14)	20.44292 (139,15)	18.30560 (188,13)	16.33087 (147,14)
280.0 /	23.23492 (218,16)	23.37453 (218,16)	20.48768 (206,18)	17.81355 (196,15)	16.11371 (281,10)
270.0 /	26.53656 (118,14)	23.72903 (123,14)	20.66292 (280,13)	18.28033 (140,13)	16.14161 (154,13)
260.0 /	27.89561 (239,15)	24.23265 (142,13)	20.75475 (105,13)	18.26366 (148,16)	16.31380 (229, 8)
250.0 /	25.56343 (124,14)	22.94389 (140,16)	20.59636 (305,11)	17.79102 (88,16)	16.11652 (91,15)
240.0 /	26.63773 (122,15)	23.19592 (122,15)	20.64122 (216,16)	18.98593 (241,17)	17.45068 (248,17)
230.0 /	25.31683 (87,11)	22.51234 (257,11)	20.10030 (56,19)	18.71658 (241,14)	17.63486 (113,11)
220.0 /	23.96518 (68,10)	22.52112 (68,10)	19.35742 (314,13)	17.80582 (120,12)	17.18216 (120,12)
210.0 /	23.53044 (325,11)	22.69643 (290,15)	19.71745 (293,10)	18.00608 (57,17)	16.97842 (342, 2)
200.0 /	17.65274 (352,13)	20.00520 (101,10)	19.43745 (49,14)	17.22746 (305,14)	15.35435 (49,11)
190.0 /	17.37586 (101,13)	19.56105 (101,12)	18.54147 (205,16)	17.42659 (205,16)	16.59481 (296,17)
180.0 /	20.08366 (44,13)	21.20891 (44,13)	19.18844 (44,13)	17.41688 (258,13)	15.64245 (258,13)
170.0 /	21.09402 (85,13)	19.97229 (348, 9)	18.88010 (112,15)	20.50452 (347, 8)	22.75951 (348, 9)
160.0 /	20.03808 (53,14)	20.12397 (53,12)	18.23340 (51,13)	16.95411 (51,13)	15.85683 (309,10)
150.0 /	19.48871 (85,12)	18.97609 (85,12)	18.90765 (283,15)	17.08138 (265,16)	16.51769 (43,20)
140.0 /	24.72151 (161,11)	21.30023 (112,16)	18.55859 (161,11)	16.99426 (96,18)	16.71641 (309, 4)
130.0 /	23.09389 (160,15)	22.46834 (161,12)	19.71046 (161,12)	16.94115 (181, 8)	16.12469 (309, 1)
120.0 /	26.52139 (201,12)	22.55441 (233,11)	22.49371 (24, 9)	22.65742 (24, 9)	21.54404 (24, 9)
110.0 /	24.93150 (165,15)	22.57883 (165,15)	19.18250 (76,15)	17.30528 (185,10)	15.86733 (11,12)
100.0 /	25.05984 (14,14)	22.44212 (14,14)	19.66174 (161,10)	17.33833 (161,10)	16.05083 (66,16)
90.0 /	22.66426 (180,12)	22.20235 (201,10)	19.68150 (201,10)	16.85436 (201,10)	15.31304 (225,16)
80.0 /	21.92628 (7,12)	20.34319 (128,13)	18.41506 (237,16)	16.79536 (7,12)	15.33402 (37,16)
70.0 /	20.68523 (213,13)	20.46907 (161,17)	19.60068 (161,17)	17.37402 (202,11)	15.19482 (161,17)
60.0 /	26.32841 (213,12)	22.61156 (72,15)	19.88486 (72,15)	17.52355 (103,17)	15.73872 (182,15)
50.0 /	24.12022 (232,11)	22.88298 (117,11)	19.71767 (23,17)	18.39778 (209,15)	17.78049 (21, 9)
40.0 /	24.98019 (210,12)	23.50783 (210,12)	20.24074 (110,15)	17.75026 (107,15)	17.11980 (346, 4)
30.0 /	21.70035 (6,13)	21.79562 (6,13)	19.22717 (6,13)	17.45382 (335,12)	16.71992 (233,15)
20.0 /	18.81996 (192,14)	20.14082 (6,16)	19.92855 (6,16)	22.01318 (204, 9)	23.37187 (204, 9)
10.0 /	26.18636 (203,14)	23.08329 (174,13)	18.66205 (263,15)	17.03758 (263,15)	15.85710 (208,12)

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	14.32933	(339,11)	5500.0	10.0	14.70495	(111, 8)
4500.0	20.0	22.96911	(204, 9)	5000.0	20.0	21.85473	(204, 9)
2500.0	30.0	21.79562	(6,13)	3000.0	30.0	19.22717	(6,13)
2500.0	40.0	23.50783	(210,12)	3000.0	40.0	20.24074	(110,15)
1500.0	50.0	21.45770	(213,11)	2000.0	50.0	24.12022	(232,11)
1500.0	60.0	28.50201	(213,12)	2000.0	60.0	26.32841	(213,12)
1500.0	70.0	20.86630	(192,12)	2000.0	70.0	20.68523	(213,13)
838.0	80.0	26.51186	(136,11)	1100.0	80.0	24.16414	(14,16)
1500.0	80.0	22.04651	(204,14)	2000.0	80.0	21.92628	(7,12)
686.0	90.0	28.91214	(184,13)	1100.0	90.0	19.29291	(180,13)
1500.0	90.0	21.32582	(180,13)	2000.0	90.0	22.66426	(180,12)
533.0	100.0	62.41302	(12, 3)	700.0	100.0	30.44135	(165,12)
1100.0	100.0	30.39908	(66,12)	1500.0	100.0	28.10149	(66,12)
2000.0	100.0	25.05984	(14,14)	457.0	110.0	11.05664	(14,17)
700.0	110.0	25.08852	(165,12)	1100.0	110.0	17.91145	(14,17)
1500.0	110.0	22.18414	(14,17)	2000.0	110.0	24.93150	(165,15)
457.0	120.0	7.66455	(112,12)	700.0	120.0	28.97412	(112,13)
1100.0	120.0	20.87811	(4,16)	1500.0	120.0	30.65692	(201,12)
2000.0	120.0	26.52139	(201,12)	457.0	130.0	18.21033	(351, 5)
700.0	130.0	28.49692	(112,13)	1100.0	130.0	20.25859	(247,12)
1500.0	130.0	21.19569	(185,12)	2000.0	130.0	23.09389	(160,15)
[redacted]				700.0	140.0	30.26620	(215,11)
1100.0	140.0	19.77768	(145,11)	1500.0	140.0	21.47850	(99,13)
2000.0	140.0	24.72151	(161,11)	457.0	150.0	32.13040	(53, 5)
700.0	150.0	25.40236	(238,11)	1100.0	150.0	19.26799	(205,14)
1500.0	150.0	18.54854	(185,13)	2000.0	150.0	19.48871	(85,12)
488.0	160.0	6.04120	(184,12)	700.0	160.0	17.92964	(205,14)
1100.0	160.0	14.09138	(184,12)	1500.0	160.0	20.01382	(215,13)
2000.0	160.0	20.03808	(53,14)	533.0	170.0	96.90906	(10,24)
700.0	170.0	10.92249	(206,13)	1100.0	170.0	17.13939	(184,12)
1500.0	170.0	20.88628	(157,14)	2000.0	170.0	21.09402	(85,13)
610.0	180.0	23.78357	(184,12)	700.0	180.0	12.62136	(194,12)
1100.0	180.0	13.83259	(238,10)	1500.0	180.0	17.46773	(1,12)
2000.0	180.0	20.08366	(44,13)	750.0	190.0	10.95289	(158,13)
1100.0	190.0	14.92551	(177,10)	1500.0	190.0	15.97545	(101,13)
2000.0	190.0	17.37586	(101,13)	1829.0	200.0	18.30852	(352,13)
2000.0	200.0	17.65274	(352,13)	1829.0	210.0	22.02422	(290,15)
2000.0	210.0	23.53044	(325,11)	1981.0	220.0	23.89523	(68,10)

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	23.96518	(68,10)	2134.0	230.0	24.25346	(68,12)
2500.0	230.0	22.51234	(257,11)	2438.0	240.0	23.74298	(122,15)
2500.0	240.0	23.19592	(122,15)	2896.0	250.0	21.20812	(270,15)
3000.0	250.0	20.59636	(305,11)	3048.0	260.0	20.48386	(105,13)
3500.0	260.0	18.26366	(148,16)	3658.0	270.0	17.54540	(140,13)
4000.0	270.0	16.14161	(154,13)	3962.0	280.0	16.24806	(281,10)
4000.0	280.0	16.11371	(281,10)	4572.0	290.0	14.22067	(147,14)
5000.0	290.0	13.20367	(336,10)	5182.0	300.0	14.17178	(114,16)
5500.0	300.0	14.05946	(114,16)	4801.0	310.0	15.77068	(332,15)
5000.0	310.0	15.60785	(332,15)	4875.0	320.0	15.81135	(359,15)
5000.0	320.0	15.56660	(359,15)	6000.0	330.0	13.39458	(30,14)
6500.0	330.0	12.69614	(40, 5)	5500.0	340.0	15.30320	(188,10)
6000.0	340.0	14.33672	(3,13)	5250.0	350.0	14.23452	(199,11)
5500.0	350.0	14.35029	(199,11)	5125.0	360.0	15.22091	(66, 3)
5500.0	360.0	14.68097	(362, 9)				

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 11.35961 AND OCCURRED AT (2000.0, 40.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	6.16946 (334, 2)	7.08164 (334, 2)	6.70638 (334, 2)	5.97278 (334, 2)	5.52569 (316, 2)
350.0 /	3.19914C(176, 2)	4.27207 (107, 2)	4.31450 (107, 2)	4.81369 (334, 2)	5.09073 (339, 2)
340.0 /	6.30887 (126, 2)	6.60735 (126, 2)	5.78848 (126, 2)	4.86235 (126, 2)	4.05812 (126, 2)
330.0 /	7.87785C(133, 2)	10.69409C(133, 2)	10.60649C(133, 2)	9.61163C(133, 2)	8.44257C(133, 2)
320.0 /	6.96583 (359, 2)	9.36420 (359, 2)	10.25292 (359, 2)	10.26496 (359, 2)	9.87233 (359, 2)
310.0 /	6.60140 (132, 2)	6.36853 (337, 2)	7.85353 (337, 2)	8.24783 (337, 2)	8.13658 (337, 2)
300.0 /	8.43537C(137, 2)	7.90057C(137, 2)	6.27467 (279, 2)	5.41981 (261, 2)	5.86864 (114, 2)
290.0 /	8.23074C(137, 2)	8.15312C(137, 2)	6.89112C(137, 2)	5.65606C(137, 2)	4.91191C(92, 2)
280.0 /	6.83673 (39, 2)	7.80361 (39, 2)	7.11212 (39, 2)	6.12226 (39, 2)	5.20973 (39, 2)
270.0 /	7.10313 (142, 2)	7.98162 (303, 2)	8.10367 (198, 2)	8.35114 (198, 2)	7.93973 (198, 2)
260.0 /	7.52901 (142, 2)	7.57969 (142, 2)	7.66571 (356, 2)	7.36540 (356, 2)	6.64063 (356, 2)
250.0 /	9.04004C(124, 2)	7.30428C(124, 2)	6.05404 (305, 2)	5.46757 (243, 2)	4.90284 (243, 2)
240.0 /	8.86511 (216, 2)	8.16788 (216, 2)	6.86487 (216, 2)	5.66156 (216, 2)	4.67994 (216, 2)
230.0 /	10.49166 (56, 3)	10.54961 (56, 3)	10.44547 (56, 3)	9.93604 (113, 2)	9.63131 (113, 2)
220.0 /	4.97599 (271, 2)	6.08395 (314, 2)	8.16964 (57, 2)	9.14819 (57, 2)	9.38529 (57, 2)
210.0 /	3.86176 (347, 2)	4.55574 (342, 2)	6.67694 (342, 2)	7.53814 (342, 2)	7.73880 (342, 2)
200.0 /	3.70443 (101, 2)	4.16807 (299, 2)	4.10320 (299, 2)	3.68493 (299, 2)	3.60203 (329, 3)
190.0 /	4.95617 (299, 2)	5.33938 (299, 2)	6.47452 (296, 2)	7.00999 (296, 2)	7.07272 (296, 2)
180.0 /	5.14956 (299, 2)	5.31646 (299, 2)	4.76583 (299, 2)	4.66535 (317, 2)	5.22106 (296, 1)
170.0 /	6.15741 (112, 2)	5.70293 (112, 2)	4.82138 (112, 2)	3.99753 (112, 2)	4.06609 (317, 2)
160.0 /	6.35706 (53, 2)	6.29252 (283, 2)	5.50405 (283, 2)	5.00488 (94, 2)	4.82535 (94, 2)
150.0 /	6.58352C(207, 2)	6.13499C(207, 2)	5.10903C(207, 2)	4.44854 (53, 2)	3.97683 (53, 2)
140.0 /	8.24822C(207, 2)	9.25465C(207, 2)	8.42287C(207, 2)	7.56252 (346, 2)	7.53105 (346, 2)
130.0 /	7.48343 (104, 2)	7.35399 (104, 2)	7.79567 (66, 3)	8.49755 (66, 3)	8.64144 (66, 3)
120.0 /	5.80912 (4, 2)	6.26054 (4, 2)	7.28955 (24, 2)	8.51719 (24, 2)	8.92325 (24, 2)
110.0 /	7.06625 (165, 2)	6.57070 (185, 2)	6.23301 (14, 3)	6.52473 (14, 3)	6.46123 (14, 3)
100.0 /	7.41339 (66, 2)	7.16590 (66, 2)	6.64463 (66, 2)	6.06904 (66, 2)	5.51622 (66, 2)
90.0 /	8.32305 (180, 2)	7.17615 (180, 2)	5.91362 (180, 2)	5.45136 (328, 2)	5.29649 (328, 2)
80.0 /	4.31512 (164, 2)	4.58995 (237, 2)	4.32832 (237, 2)	3.78731 (237, 2)	3.64037 (282, 2)
70.0 /	8.02852 (170, 2)	7.44949 (170, 2)	6.26637 (170, 2)	5.33951 (179, 2)	4.56172 (179, 2)
60.0 /	8.15287 (213, 2)	6.68633 (180, 2)	5.53346 (74, 2)	4.96894 (20, 2)	4.59503 (20, 2)
50.0 /	9.24070 (213, 2)	8.62997 (213, 2)	7.39994 (213, 2)	7.31189 (23, 3)	7.19715 (23, 3)
40.0 /	11.35961 (178, 2)	9.94360 (178, 2)	8.86986 (211, 2)	8.06839 (211, 2)	8.23178 (93, 2)
30.0 /	7.79004 (210, 2)	6.57096 (210, 2)	5.19701 (167, 2)	4.13081 (167, 2)	3.85179 (16, 2)
20.0 /	6.10847C(63, 2)	6.52661 (127, 2)	6.16644 (127, 2)	6.13358C(209, 1)	6.13092C(209, 1)
10.0 /	7.31437 (127, 2)	6.70225 (127, 2)	5.63564C(174, 2)	4.63874C(174, 2)	4.15168 (31, 2)

HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	4.40873	(346, 1)	5500.0	10.0	4.39602	(346, 1)
4500.0	20.0	5.82373C	(209, 1)	5000.0	20.0	5.42914C	(209, 1)
2500.0	30.0	6.57096	(210, 2)	3000.0	30.0	5.19701	(167, 2)
2500.0	40.0	9.94360	(178, 2)	3000.0	40.0	8.86986	(211, 2)
1500.0	50.0	6.73555	(213, 2)	2000.0	50.0	9.24070	(213, 2)
1500.0	60.0	8.71004	(213, 2)	2000.0	60.0	8.15287	(213, 2)
1500.0	70.0	5.21317	(170, 2)	2000.0	70.0	8.02852	(170, 2)
838.0	80.0	4.67432	(14, 2)	1100.0	80.0	4.62783	(14, 2)
1500.0	80.0	5.00976	(212, 2)	2000.0	80.0	4.31512	(164, 2)
686.0	90.0	4.81859C	(184, 2)	1100.0	90.0	2.58152C	(184, 2)
1500.0	90.0	7.78026	(180, 2)	2000.0	90.0	8.32305	(180, 2)
533.0	100.0	8.27192	(52, 1)	700.0	100.0	4.65678C	(184, 2)
1100.0	100.0	4.92325	(66, 2)	1500.0	100.0	7.12664	(66, 2)
2000.0	100.0	7.41339	(66, 2)	457.0	110.0	5.06823	(14, 2)
700.0	110.0	6.51509	(112, 2)	1100.0	110.0	4.09528	(112, 2)
1500.0	110.0	6.64732	(165, 2)	2000.0	110.0	7.06625	(165, 2)
457.0	120.0	0.83337C	(239, 1)	700.0	120.0	6.37428	(112, 2)
1100.0	120.0	5.37445	(112, 2)	1500.0	120.0	5.65570	(182, 2)
2000.0	120.0	5.80912	(4, 2)	457.0	130.0	18.04108	(118, 1)
700.0	130.0	3.53644C	(135, 2)	1100.0	130.0	3.90732	(236, 2)
1500.0	130.0	5.15660C	(111, 2)	2000.0	130.0	7.48343	(104, 2)
457.0	140.0	25.23528	(185, 3)	700.0	140.0	3.81178C	(247, 2)
1100.0	140.0	3.63164C	(247, 2)	1500.0	140.0	4.40306	(215, 2)
2000.0	140.0	8.24822C	(207, 2)	457.0	150.0	21.60799C	(100, 1)
700.0	150.0	3.62343C	(238, 2)	1100.0	150.0	2.86632	(206, 2)
1500.0	150.0	4.50149	(215, 2)	2000.0	150.0	6.58352C	(207, 2)
488.0	160.0	0.81237C	(184, 2)	700.0	160.0	2.83904C	(184, 2)
1100.0	160.0	3.23333	(206, 2)	1500.0	160.0	4.93098	(53, 2)
2000.0	160.0	6.35706	(53, 2)	533.0	170.0	19.55878C	(85, 3)
700.0	170.0	4.87600C	(184, 2)	1100.0	170.0	2.50623C	(184, 2)
1500.0	170.0	4.30116	(112, 2)	2000.0	170.0	6.15741	(112, 2)
610.0	180.0	13.55072C	(257, 1)	700.0	180.0	3.85030C	(184, 2)
1100.0	180.0	2.11637C	(238, 2)	1500.0	180.0	2.85747	(216, 2)
2000.0	180.0	5.14956	(299, 2)	750.0	190.0	3.35775	(166, 2)
1100.0	190.0	2.26515C	(238, 2)	1500.0	190.0	2.88779	(216, 2)
2000.0	190.0	4.95617	(299, 2)	1829.0	200.0	3.18539	(101, 2)
2000.0	200.0	3.70443	(101, 2)	1829.0	210.0	3.19206	(347, 2)
2000.0	210.0	3.86176	(347, 2)	1981.0	220.0	4.88666	(271, 2)

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	4.97599	(271, 2)	2134.0	230.0	10.14685	(56, 3)
2500.0	230.0	10.54961	(56, 3)	2438.0	240.0	8.31449	(216, 2)
2500.0	240.0	8.16788	(216, 2)	2896.0	250.0	6.21001	(305, 2)
3000.0	250.0	6.05404	(305, 2)	3048.0	260.0	7.67511	(356, 2)
3500.0	260.0	7.36540	(356, 2)	3658.0	270.0	8.26506	(198, 2)
4000.0	270.0	7.93973	(198, 2)	3962.0	280.0	5.27378	(39, 2)
4000.0	280.0	5.20973	(39, 2)	4572.0	290.0	4.14907C	(92, 2)
5000.0	290.0	3.65532C	(92, 2)	5182.0	300.0	6.30619	(114, 2)
5500.0	300.0	6.24012	(114, 2)	4801.0	310.0	7.54099	(337, 2)
5000.0	310.0	7.36236	(337, 2)	4875.0	320.0	8.87529	(359, 2)
5000.0	320.0	8.72567	(359, 2)	6000.0	330.0	5.82003C	(30, 2)
6500.0	330.0	5.47243C	(30, 2)	5500.0	340.0	2.61851	(134, 2)
6000.0	340.0	2.81498	(115, 3)	5250.0	350.0	5.65410	(339, 2)
5500.0	350.0	5.62366	(339, 2)	5125.0	360.0	5.73441	(316, 2)
5500.0	360.0	5.63435	(316, 2)				

2ND HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 9.82437 AND OCCURRED AT (3500.0, 230.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.30198 (172, 2)	5.56025 (172, 2)	5.01828 (362, 2)	5.38874 (362, 2)	5.32151 (362, 2)
350.0 /	3.05382C(139, 2)	3.34091C(176, 2)	4.17281 (334, 2)	4.18806 (339, 2)	4.81385 (334, 2)
340.0 /	4.63878 (134, 2)	5.53837 (134, 2)	5.19091 (134, 2)	4.56555 (134, 2)	3.95155 (134, 2)
330.0 /	6.34602 (134, 2)	5.27428 (134, 2)	6.23556C(30, 2)	6.86121C(30, 2)	6.96044C(30, 2)
320.0 /	6.07985 (153, 2)	6.66288 (153, 2)	6.27658 (153, 2)	5.88542 (195, 2)	5.71902 (358, 2)
310.0 /	6.55830C(149, 2)	6.32584C(102, 2)	6.09228C(102, 2)	5.41032C(102, 2)	4.69551C(102, 2)
300.0 /	6.25526 (279, 2)	6.97986 (279, 2)	6.00844C(137, 2)	5.35265 (279, 2)	4.85402 (261, 2)
290.0 /	7.21591C(187, 2)	6.97222C(187, 2)	6.13577C(92, 2)	5.61641C(92, 2)	4.70127C(137, 2)
280.0 /	5.06948 (125, 2)	5.67035C(196, 2)	5.20581C(196, 2)	4.49850C(196, 2)	3.82943C(196, 2)
270.0 /	6.62389C(187, 2)	7.21001 (142, 2)	7.58951 (303, 2)	6.59209 (303, 2)	5.74234 (122, 2)
260.0 /	7.20125 (243, 2)	7.47444 (243, 2)	7.29582 (121, 2)	6.78868 (121, 2)	6.17199 (121, 2)
250.0 /	7.03306 (216, 2)	6.56373 (305, 2)	5.90912 (243, 2)	5.21469 (305, 2)	4.54059 (290, 2)
240.0 /	6.66900C(227, 2)	6.80722 (109, 2)	6.13478 (109, 2)	5.31387 (109, 2)	4.56342 (109, 2)
230.0 /	8.02530 (241, 2)	9.21671 (241, 2)	9.81015 (113, 2)	[redacted]	.04800 (56, 3)
220.0 /	3.63091 (109, 2)	5.78118 (57, 2)	7.57954 (314, 2)	7.53162 (314, 2)	6.97981 (314, 2)
210.0 /	3.34232 (162, 2)	3.98899 (347, 2)	4.59266 (312, 2)	5.97033 (312, 2)	6.64650 (312, 2)
200.0 /	3.03099 (162, 2)	3.90125 (101, 2)	3.43112 (101, 2)	3.02803 (329, 3)	3.21391 (299, 2)
190.0 /	4.79723C(82, 2)	5.02368 (296, 2)	4.77142 (299, 2)	5.34528 (296, 3)	6.00649 (296, 3)
180.0 /	4.81899C(82, 2)	4.60410C(82, 2)	3.79237 (317, 2)	4.36171 (296, 1)	4.98603 (317, 2)
170.0 /	4.63481 (283, 2)	4.07754 (283, 2)	3.53748 (348, 2)	3.81558 (317, 2)	3.84352C(247, 2)
160.0 /	6.19925 (283, 2)	5.56220 (53, 2)	4.87858 (94, 2)	4.63717 (283, 2)	4.06536 (85, 2)
150.0 /	5.81386 (53, 2)	5.42439 (53, 2)	4.95941 (53, 2)	4.15797C(207, 2)	3.43383 (283, 2)
140.0 /	5.82849 (104, 2)	5.98108 (346, 2)	7.18206 (346, 2)	7.24878C(207, 2)	6.88915 (309, 1)
130.0 /	6.95120C(207, 2)	7.17755C(207, 2)	6.33258C(207, 2)	5.36023C(207, 2)	4.50227 (104, 2)
120.0 /	5.78029 (160, 2)	5.64446 (10, 2)	6.47309 (10, 2)	6.63450 (10, 2)	6.47981 (10, 2)
110.0 /	6.50085 (185, 2)	6.05429 (165, 2)	5.80792 (185, 2)	4.97512 (185, 2)	4.25319 (185, 2)
100.0 /	7.09338 (165, 2)	6.37594 (50, 2)	5.78339 (50, 2)	4.98895 (50, 2)	4.25037 (50, 2)
90.0 /	6.22071 (165, 2)	5.32674 (165, 2)	5.17537 (328, 2)	4.85093 (180, 2)	4.00959 (180, 2)
80.0 /	4.14253 (212, 2)	3.93371 (164, 2)	3.84116 (175, 2)	3.50875 (282, 2)	3.59829 (209, 2)
70.0 /	7.71886 (179, 2)	7.22613 (179, 2)	6.26542 (179, 2)	5.16117 (170, 2)	4.45897 (202, 2)
60.0 /	7.56830 (180, 2)	6.60645 (74, 2)	5.47652 (180, 2)	4.56234 (74, 2)	4.04642 (211, 2)
50.0 /	7.18600 (170, 2)	7.20872 (170, 2)	7.08344 (23, 3)	6.21723 (213, 2)	5.22317 (213, 2)
40.0 /	6.60299 (110, 2)	8.80178 (211, 2)	8.02834 (178, 2)	7.83824 (93, 2)	7.10237 (211, 2)
30.0 /	7.08874 (167, 2)	6.41860 (167, 2)	5.16211 (210, 2)	4.08445C(335, 2)	3.58387C(335, 2)
20.0 /	6.03063 (167, 2)	5.26508C(63, 2)	5.41293C(209, 1)	5.52790 (127, 2)	4.87475 (127, 2)
10.0 /	6.79432C(174, 2)	6.64049C(174, 2)	5.50401 (127, 2)	4.43726 (127, 2)	3.88276 (346, 1)

2ND HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	3.64928	(31, 2)	5500.0	10.0	3.37941	(31, 2)
4500.0	20.0	4.28471	(127, 2)	5000.0	20.0	3.77406	(127, 2)
2500.0	30.0	6.41860	(167, 2)	3000.0	30.0	5.16211	(210, 2)
2500.0	40.0	8.80178	(211, 2)	3000.0	40.0	8.02834	(178, 2)
1500.0	50.0	4.74984	(159, 2)	2000.0	50.0	7.18600	(170, 2)
1500.0	60.0	5.81796	(180, 2)	2000.0	60.0	7.56830	(180, 2)
1500.0	70.0	5.02193	(179, 2)	2000.0	70.0	7.71886	(179, 2)
838.0	80.0	4.26619C	(186, 2)	1100.0	80.0	4.16924	(212, 2)
1500.0	80.0	4.07199	(14, 2)	2000.0	80.0	4.14253	(212, 2)
686.0	90.0	1.68914C	(145, 2)	1100.0	90.0	2.55142C	(186, 2)
1500.0	90.0	5.53995	(156, 2)	2000.0	90.0	6.22071	(165, 2)
533.0	100.0	3.34750C	(184, 2)	700.0	100.0	3.55811	(112, 2)
1100.0	100.0	2.99838	(14, 2)	1500.0	100.0	6.77837	(165, 2)
2000.0	100.0	7.09338	(165, 2)	457.0	110.0	0.79802C	(136, 1)
700.0	110.0	3.72118	(14, 2)	1100.0	110.0	3.46646	(14, 2)
1500.0	110.0	5.74022	(237, 2)	2000.0	110.0	6.50085	(185, 2)
457.0	120.0	0.73018C	(136, 1)	700.0	120.0	2.13208C	(135, 2)
1100.0	120.0	3.58512C	(181, 2)	1500.0	120.0	5.53101C	(181, 2)
2000.0	120.0	5.78029	(160, 2)	457.0	130.0	1.89595	(14, 3)
700.0	130.0	2.62708C	(145, 2)	1100.0	130.0	2.96379	(192, 2)
1500.0	130.0	4.66388	(160, 2)	2000.0	130.0	6.95120C	(207, 2)
457.0	140.0	0.59427	(65, 1)	700.0	140.0	3.65601C	(145, 2)
1100.0	140.0	3.20354	(185, 2)	1500.0	140.0	4.27077	(185, 2)
2000.0	140.0	5.82849	(104, 2)	457.0	150.0	0.53058	(65, 1)
700.0	150.0	3.17474	(205, 2)	1100.0	150.0	2.78253C	(238, 2)
1500.0	150.0	4.13357	(53, 2)	2000.0	150.0	5.81386	(53, 2)
488.0	160.0	0.72339C	(78, 1)	700.0	160.0	2.68314C	(238, 2)
1100.0	160.0	2.41859	(215, 2)	1500.0	160.0	4.09028	(215, 2)
2000.0	160.0	6.19925	(283, 2)	533.0	170.0	3.24959C	(184, 2)
700.0	170.0	2.15351	(206, 2)	1100.0	170.0	2.44547	(206, 2)
1500.0	170.0	3.00162	(283, 2)	2000.0	170.0	4.63481	(283, 2)
610.0	180.0	3.95930C	(184, 2)	700.0	180.0	1.80305C	(194, 2)
1100.0	180.0	1.98109C	(184, 2)	1500.0	180.0	2.31642	(299, 2)
2000.0	180.0	4.81899C	(82, 2)	750.0	190.0	1.59344C	(184, 2)
1100.0	190.0	2.21094	(166, 2)	1500.0	190.0	2.09615C	(82, 2)
2000.0	190.0	4.79723C	(82, 2)	1829.0	200.0	2.78041	(162, 2)
2000.0	200.0	3.03099	(162, 2)	1829.0	210.0	3.06730	(162, 2)
2000.0	210.0	3.34232	(162, 2)	1981.0	220.0	3.66925	(109, 2)

*** ISCST BY KBN 3/88 *** 1982 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	3.63091	(109, 2)	2134.0	230.0	8.23180	(241, 2)
2500.0	230.0	9.21671	(241, 2)	2438.0	240.0	6.85316	(109, 2)
2500.0	240.0	6.80722	(109, 2)	2896.0	250.0	6.02857C	(124, 2)
3000.0	250.0	5.90912	(243, 2)	3048.0	260.0	7.25892	(121, 2)
3500.0	260.0	6.78868	(121, 2)	3658.0	270.0	6.26387	(303, 2)
4000.0	270.0	5.74234	(122, 2)	3962.0	280.0	3.87697C	(196, 2)
4000.0	280.0	3.82943C	(196, 2)	4572.0	290.0	3.91080C	(137, 2)
5000.0	290.0	3.46762C	(137, 2)	5182.0	300.0	3.65296	(261, 2)
5500.0	300.0	3.39663	(261, 2)	4801.0	310.0	4.31128	(338, 2)
5000.0	310.0	4.25431	(338, 2)	4875.0	320.0	5.75678	(115, 2)
5000.0	320.0	5.82615	(115, 2)	6000.0	330.0	4.89585C	(133, 2)
6500.0	330.0	4.32350C	(133, 2)	5500.0	340.0	2.55700C	(146, 1)
6000.0	340.0	2.63396C	(146, 1)	5250.0	350.0	3.99563	(334, 2)
5500.0	350.0	3.81280	(334, 2)	5125.0	360.0	4.65929	(362, 2)
5500.0	360.0	4.40667	(362, 2)				

ISCSTK6C MODEL, A VERSION OF
ISCST (VERSION 88207)
AN AIR QUALITY DISPERSION MODEL IN
SECTION 1. GUIDELINE MODELS.
IN UNAMAP (VERSION 6) JULY 1988.
SOURCE: FILE 6 ON UNAMAP MAGNETIC TAPE FROM NTIS.
(Based on Change 7 to UNAMAP, July 27, 1988)

CONVERTED BY :
KBN ENGINEERING AND APPLIED SCIENCES, INC.
GAINESVILLE, FLORIDA
(904)375-8000

CARD INPUT File is	gcoinc83.in
SUMMARY OUTPUT File is	gcoinc83.out
METEOROLOGICAL FILE is	jaxpre83.bin
TITLE OF RUN is	1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4

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*** ISCST BY KBN  7/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4                    ***

          CALCULATE (CONCENTRATION=1,DEPOSITION=2)                                  ISW(1) =   1
          RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)                   ISW(2) =   4
          DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                          ISW(3) =   2
          TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                                  ISW(4) =   0
          CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                             ISW(5) =   0
          LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                          ISW(6) =   1

          COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
          WITH THE FOLLOWING TIME PERIODS:
            HOURLY (YES=1,NO=0)                                                     ISW(7) =   1
            2-HOUR (YES=1,NO=0)                                                     ISW(8) =   0
            3-HOUR (YES=1,NO=0)                                                     ISW(9) =   0
            4-HOUR (YES=1,NO=0)                                                    ISW(10) =   0
            6-HOUR (YES=1,NO=0)                                                    ISW(11) =   0
            8-HOUR (YES=1,NO=0)                                                    ISW(12) =   1
            12-HOUR (YES=1,NO=0)                                                   ISW(13) =   0
            24-HOUR (YES=1,NO=0)                                                   ISW(14) =   0
          PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                                      ISW(15) =   0

          PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
          SPECIFIED BY ISW(7) THROUGH ISW(14):
            DAILY TABLES (YES=1,NO=0)                                              ISW(16) =   0
            HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                           ISW(17) =   1
            MAXIMUM 50 TABLES (YES=1,NO=0)                                         ISW(18) =   0
          METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)                ISW(19) =   1
          RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3)        ISW(20) =   0
          WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)                ISW(21) =   1
          VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3)         ISW(22) =   1
          SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                        ISW(23) =   0
          PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)                    ISW(24) =   1
          PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)              ISW(25) =   2
          PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)                    ISW(26) =   1
          CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)                  ISW(27) =   1
          REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                                  ISW(28) =   1
          TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                         ISW(29) =   1
          DEBUG OPTION CHOSEN (YES=1,NO=2)                                         ISW(30) =   2
          ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)                      ISW(31) =   0

          NUMBER OF INPUT SOURCES                                                   NSOURC =   2
          NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                                  NGROUP =   0
          TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)                      IPERD =   0
          NUMBER OF X (RANGE) GRID VALUES                                           NXPNTS =   5
          NUMBER OF Y (THETA) GRID VALUES                                           NYPNTS =  36
          NUMBER OF DISCRETE RECEPTORS                                              NXWYPT = 105
          SOURCE EMISSION RATE UNITS CONVERSION FACTOR                                  TK =.10000E+07
          HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                          ZR =   6.10  METERS
          LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                                  IMET =   9
          DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION                       DECAY =0.000000E+00
          SURFACE STATION NO.                                                          ISS = 13889
          YEAR OF SURFACE DATA                                                         ISY = 83
          UPPER AIR STATION NO.                                                        IUS = 13861
          YEAR OF UPPER AIR DATA                                                       IUY = 83
          ALLOCATED DATA STORAGE                                                     LIMIT = 25000 WORDS
          REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                                 MIMIT =  4245 WORDS
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*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.50, 3.10, 5.10, 8.20, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

2000.0, 2500.0, 3000.0, 3500.0, 4000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** RANGE,THETA COORDINATES OF DISCRETE RECEPTORS ***
(METERS,DEGREES)

(5000.0, 10.0),	(5500.0, 10.0),	(4500.0, 20.0),	(5000.0, 20.0),	(2500.0, 30.0),
(3000.0, 30.0),	(2500.0, 40.0),	(3000.0, 40.0),	(1500.0, 50.0),	(2000.0, 50.0),
(1500.0, 60.0),	(2000.0, 60.0),	(1500.0, 70.0),	(2000.0, 70.0),	(838.0, 80.0),
(1100.0, 80.0),	(1500.0, 80.0),	(2000.0, 80.0),	(686.0, 90.0),	(1100.0, 90.0),
(1500.0, 90.0),	(2000.0, 90.0),	(533.0, 100.0),	(700.0, 100.0),	(1100.0, 100.0),
(1500.0, 100.0),	(2000.0, 100.0),	(457.0, 110.0),	(700.0, 110.0),	(1100.0, 110.0),
(1500.0, 110.0),	(2000.0, 110.0),	(457.0, 120.0),	(700.0, 120.0),	(1100.0, 120.0),
(1500.0, 120.0),	(2000.0, 120.0),	(457.0, 130.0),	(700.0, 130.0),	(1100.0, 130.0),
(1500.0, 130.0),	(2000.0, 130.0),	(457.0, 140.0),	(700.0, 140.0),	(1100.0, 140.0),
(1500.0, 140.0),	(2000.0, 140.0),	(457.0, 150.0),	(700.0, 150.0),	(1100.0, 150.0),
(1500.0, 150.0),	(2000.0, 150.0),	(488.0, 160.0),	(700.0, 160.0),	(1100.0, 160.0),
(1500.0, 160.0),	(2000.0, 160.0),	(533.0, 170.0),	(700.0, 170.0),	(1100.0, 170.0),
(1500.0, 170.0),	(2000.0, 170.0),	(610.0, 180.0),	(700.0, 180.0),	(1100.0, 180.0),
(1500.0, 180.0),	(2000.0, 180.0),	(750.0, 190.0),	(1100.0, 190.0),	(1500.0, 190.0),
(2000.0, 190.0),	(1829.0, 200.0),	(2000.0, 200.0),	(1829.0, 210.0),	(2000.0, 210.0),
(1981.0, 220.0),	(2000.0, 220.0),	(2134.0, 230.0),	(2500.0, 230.0),	(2438.0, 240.0),
(2500.0, 240.0),	(2896.0, 250.0),	(3000.0, 250.0),	(3048.0, 260.0),	(3500.0, 260.0),
(3658.0, 270.0),	(4000.0, 270.0),	(3962.0, 280.0),	(4000.0, 280.0),	(4572.0, 290.0),
(5000.0, 290.0),	(5182.0, 300.0),	(5500.0, 300.0),	(4801.0, 310.0),	(5000.0, 310.0),
(4875.0, 320.0),	(5000.0, 320.0),	(6000.0, 330.0),	(6500.0, 330.0),	(5500.0, 340.0),
(6000.0, 340.0),	(5250.0, 350.0),	(5500.0, 350.0),	(5125.0, 360.0),	(5500.0, 360.0),
(				

*** ISCST BY KBN 7/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** SOURCE DATA ***

SOURCE NUMBER	T Y P E	W A K E	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
88020	0	0	0	-.13770E+03	-104.0	78.0	0.0	70.70	471.00	10.88	3.05	-64.60	36.30	36.30
88010	0	0	0	0.16860E+03	-104.0	78.0	0.0	72.20	500.00	21.88	2.16	-64.60	36.30	36.30

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*** ISCST BY KBN  7/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4              ***

                              *** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE    1
IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE
  1  64.6,  41.0,   0   2  64.6,  41.0,   0   3  64.6,  41.0,   0   4  64.6,  41.0,   0   5  64.6,  41.0,   0   6  64.6,  41.0,   0
  7  64.6,  41.0,   0   8  64.6,  41.0,   0   9  64.6,  41.0,   0  10  64.6,  41.0,   0  11  64.6,  41.0,   0  12  64.6,  41.0,   0
 13  64.6,  41.0,   0  14  64.6,  41.0,   0  15  64.6,  41.0,   0  16  64.6,  41.0,   0  17  64.6,  41.0,   0  18  64.6,  41.0,   0
 19  64.6,  41.0,   0  20  64.6,  41.0,   0  21  64.6,  41.0,   0  22  64.6,  41.0,   0  23  64.6,  41.0,   0  24  64.6,  41.0,   0
 25  64.6,  41.0,   0  26  64.6,  41.0,   0  27  64.6,  41.0,   0  28  64.6,  41.0,   0  29  64.6,  41.0,   0  30  64.6,  41.0,   0
 31  64.6,  41.0,   0  32  64.6,  41.0,   0  33  64.6,  41.0,   0  34  64.6,  41.0,   0  35  64.6,  41.0,   0  36  64.6,  41.0,   0

SOURCE    2
IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE IFV   BH    BW   IWAKE
  1  64.6,  41.0,   0   2  64.6,  41.0,   0   3  64.6,  41.0,   0   4  64.6,  41.0,   0   5  64.6,  41.0,   0   6  64.6,  41.0,   0
  7  64.6,  41.0,   0   8  64.6,  41.0,   0   9  64.6,  41.0,   0  10  64.6,  41.0,   0  11  64.6,  41.0,   0  12  64.6,  41.0,   0
 13  64.6,  41.0,   0  14  64.6,  41.0,   0  15  64.6,  41.0,   0  16  64.6,  41.0,   0  17  64.6,  41.0,   0  18  64.6,  41.0,   0
 19  64.6,  41.0,   0  20  64.6,  41.0,   0  21  64.6,  41.0,   0  22  64.6,  41.0,   0  23  64.6,  41.0,   0  24  64.6,  41.0,   0
 25  64.6,  41.0,   0  26  64.6,  41.0,   0  27  64.6,  41.0,   0  28  64.6,  41.0,   0  29  64.6,  41.0,   0  30  64.6,  41.0,   0
 31  64.6,  41.0,   0  32  64.6,  41.0,   0  33  64.6,  41.0,   0  34  64.6,  41.0,   0  35  64.6,  41.0,   0  36  64.6,  41.0,   0

* CALM HOURS (=1) FOR DAY   1 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1
* CALM HOURS (=1) FOR DAY   2 *  1  0  1  1  0  0  0  1  1  1  1  1  1  0  0  0  1  0  0  0  0  1  0  0
* CALM HOURS (=1) FOR DAY   3 *  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY   6 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  0  0
* CALM HOURS (=1) FOR DAY   7 *  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  1  1  1  0  0  1  1
* CALM HOURS (=1) FOR DAY   8 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY   9 *  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  10 *  0  0  0  0  0  0  0  0  0  0  0  1  1  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  13 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY  14 *  1  1  1  1  1  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  15 *  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  16 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  18 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1  1
* CALM HOURS (=1) FOR DAY  21 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1
* CALM HOURS (=1) FOR DAY  22 *  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  23 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  1  1  0  0
* CALM HOURS (=1) FOR DAY  24 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  0  0  1
* CALM HOURS (=1) FOR DAY  25 *  0  1  0  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  1
* CALM HOURS (=1) FOR DAY  26 *  1  1  0  1  0  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  27 *  1  0  1  1  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  28 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  1  1
* CALM HOURS (=1) FOR DAY  29 *  1  0  0  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1
* CALM HOURS (=1) FOR DAY  30 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  1
* CALM HOURS (=1) FOR DAY  31 *  1  0  1  1  0  0  0  0  0  1  0  0  1  1  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY  32 *  1  1  1  1  1  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  35 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1
* CALM HOURS (=1) FOR DAY  36 *  0  0  0  0  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  37 *  0  0  0  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  39 *  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  40 *  1  1  1  1  1  1  0  0  0  1  0  0  0  0  0  1  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY  41 *  0  0  0  1  1  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  43 *  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
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* CALM HOURS (=1) FOR DAY  45 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  46 *  1 1 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  47 *  1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  48 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  49 *  0 0 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY  50 *  1 0 1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  51 *  0 0 0 0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  53 *  0 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  62 *  0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1 0 1 0
* CALM HOURS (=1) FOR DAY  63 *  1 0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  66 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  67 *  1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  73 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY  74 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  78 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY  79 *  0 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  81 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  82 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  85 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  88 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY  89 *  1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY  91 *  0 0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY  94 *  0 1 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY  95 *  1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  96 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  97 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY  98 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY  99 *  0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 100 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0
* CALM HOURS (=1) FOR DAY 102 *  0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 103 *  0 0 0 1 1 0 1 0 0 0 0 0 0 D 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 106 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 108 *  0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 109 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 110 *  0 0 0 0 1 1 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 1 1 1
* CALM HOURS (=1) FOR DAY 111 *  1 1 1 0 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 112 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 116 *  0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 117 *  1 1 1 1 1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 118 *  1 0 1 1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 119 *  1 1 0 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 120 *  0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 121 *  0 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 122 *  0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 124 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 125 *  0 1 0 1 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 126 *  1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 127 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 128 *  0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 129 *  0 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 130 *  1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 131 *  1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 132 *  1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 1
* CALM HOURS (=1) FOR DAY 133 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 134 *  0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 136 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 141 *  0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 142 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0
* CALM HOURS (=1) FOR DAY 143 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 144 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
```

* CALM HOURS (=1) FOR DAY 145 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 146 *	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 147 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 148 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 149 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 150 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 152 *	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 153 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 154 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 155 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 156 *	1	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 158 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 159 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 160 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 161 *	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 164 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 165 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 166 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 167 *	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 168 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 169 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 170 *	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 171 *	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 172 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 174 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 175 *	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 176 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 177 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 178 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 179 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 180 *	0	1	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 181 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 182 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 183 *	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 184 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 185 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 187 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 188 *	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 190 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 191 *	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 193 *	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 194 *	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 195 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 199 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 200 *	1	1	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 201 *	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 202 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 207 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 208 *	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 209 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 210 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 211 *	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 212 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 213 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 214 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 215 *	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 216 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

```
* CALM HOURS (=1) FOR DAY 217 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 218 *  0 1 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 219 *  0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0
* CALM HOURS (=1) FOR DAY 220 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 221 *  0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 222 *  0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 223 *  0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 226 *  0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 227 *  1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0
* CALM HOURS (=1) FOR DAY 228 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 229 *  1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 230 *  0 0 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 231 *  1 1 0 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 233 *  0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 234 *  0 0 0 0 1 1 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 235 *  0 0 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 236 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 237 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 238 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 239 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 1 1 0 1
* CALM HOURS (=1) FOR DAY 240 *  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 241 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0
* CALM HOURS (=1) FOR DAY 242 *  1 0 0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY 243 *  0 0 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 244 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 1 0 0
* CALM HOURS (=1) FOR DAY 245 *  1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 1
* CALM HOURS (=1) FOR DAY 246 *  1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0
* CALM HOURS (=1) FOR DAY 247 *  0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 248 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 249 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 250 *  0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0
* CALM HOURS (=1) FOR DAY 251 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 252 *  1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 253 *  1 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 254 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 255 *  0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 256 *  0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 258 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 259 *  0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY 260 *  0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 261 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 262 *  1 1 1 1 1 0 0 1 0 0 0 0 0 0 0 0 1 0 0 1 0 1 1 0
* CALM HOURS (=1) FOR DAY 263 *  1 1 1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 264 *  0 0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 267 *  1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 270 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 271 *  0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 272 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 273 *  0 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 274 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 275 *  1 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 276 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 277 *  1 1 1 0 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 278 *  0 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 279 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0
* CALM HOURS (=1) FOR DAY 280 *  1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 281 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 283 *  1 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 284 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 285 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
```

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* CALM HOURS (=1) FOR DAY 286 *  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 287 *  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  0
* CALM HOURS (=1) FOR DAY 288 *  0  0  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 291 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 292 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 295 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0
* CALM HOURS (=1) FOR DAY 296 *  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 297 *  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 298 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  0  0  0
* CALM HOURS (=1) FOR DAY 299 *  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 300 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  1  1
* CALM HOURS (=1) FOR DAY 301 *  0  1  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY 302 *  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 303 *  1  1  1  0  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 306 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY 307 *  0  0  0  0  1  0  1  0  0  1  0  0  0  0  0  0  0  1  0  1  1  1  1  0
* CALM HOURS (=1) FOR DAY 308 *  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 309 *  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 310 *  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  1  1  0  1  1
* CALM HOURS (=1) FOR DAY 311 *  1  1  1  1  1  1  0  1  0  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 313 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 316 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 317 *  1  0  0  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 318 *  1  1  1  1  0  1  1  1  0  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 319 *  0  0  0  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0
* CALM HOURS (=1) FOR DAY 320 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0
* CALM HOURS (=1) FOR DAY 321 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 322 *  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 323 *  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0
* CALM HOURS (=1) FOR DAY 324 *  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 325 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 326 *  1  1  1  1  0  1  1  1  1  1  0  0  0  0  0  0  0  0  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 327 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 329 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 330 *  0  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 331 *  1  1  1  1  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 333 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 334 *  1  0  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 335 *  1  1  1  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 336 *  1  0  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 339 *  0  0  0  0  0  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 341 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0  0  1  1  1
* CALM HOURS (=1) FOR DAY 342 *  1  0  0  0  0  0  1  0  0  1  0  0  0  0  0  1  1  1  1  1  1  0  1  1
* CALM HOURS (=1) FOR DAY 343 *  0  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY 344 *  1  0  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 345 *  0  0  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0
* CALM HOURS (=1) FOR DAY 349 *  0  1  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 350 *  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0
* CALM HOURS (=1) FOR DAY 356 *  0  0  1  1  1  0  0  0  0  1  0  0  0  0  0  0  0  0  0  1  1  1  0  0
* CALM HOURS (=1) FOR DAY 357 *  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 360 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 361 *  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 362 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  0  0
* CALM HOURS (=1) FOR DAY 363 *  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
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HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 45.21225 AND OCCURRED AT (2000.0, 20.0) *

DIRECTION /	RANGE (METERS)				
(DEGREES) /	2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	27.78522 (140,11)	24.37176 (150,11)	19.84012 (134,10)	18.01900 (247,10)	16.21638 (247,10)
350.0 /	27.50021 (141,12)	24.01643 (179,16)	20.68030 (179,16)	20.10214 (150,13)	19.59985 (150,13)
340.0 /	27.25418 (149,15)	22.27798 (135,12)	22.80109 (150,13)	25.46867 (141, 7)	30.37129 (141, 7)
330.0 /	26.74356 (121,11)	24.35286 (121,11)	20.60603 (122,14)	19.05665 (65, 2)	17.89263 (65, 2)
320.0 /	28.28700 (103,13)	24.45232 (200,16)	21.75111 (64,12)	20.07538 (64,12)	18.35208 (64,12)
310.0 /	27.51277 (64,15)	24.55977 (64,15)	22.44562 (64,15)	20.29193 (64,15)	18.30383 (64,15)
300.0 /	28.85852 (103,12)	24.33485 (213,13)	20.83696 (133,14)	18.25642 (145,17)	17.68437 (177,16)
290.0 /	29.24103 (210,13)	24.38718 (119,14)	20.81863 (178,12)	18.38490 (261,13)	16.42022 (193,17)
280.0 /	28.00050 (94,13)	23.86864 (94,13)	20.64491 (210,10)	18.74034 (85,21)	17.77856 (85,21)
270.0 /	26.72496 (58,13)	24.04002 (58,13)	21.80773 (58,13)	19.50098 (58,13)	17.83855 (85,14)
260.0 /	28.14824 (130,13)	24.20985 (168,12)	20.79385 (190,15)	19.38544 (51,17)	21.15740 (212, 8)
250.0 /	27.17593 (130,14)	23.93578 (189,11)	25.37405 (172,13)	24.70924 (172,13)	22.99866 (172,13)
240.0 /	27.01616 (188,14)	23.96945 (188,14)	22.04898 (237,11)	20.41528 (237,11)	18.59851 (237,11)
230.0 /	27.39819 (91,12)	22.50417 (91,12)	21.46019 (268,13)	20.00923 (268,13)	18.31203 (268,13)
220.0 /	26.13521 (44,20)	22.51886 (44,14)	20.72785 (44,14)	22.66669 (189, 8)	22.15129 (189, 8)
210.0 /	32.99413 (305, 8)	38.11473 (305, 8)	34.95964 (305, 8)	30.36600 (305, 8)	26.28981 (305, 8)
200.0 /	24.63809 (271,12)	22.48164 (271,12)	19.13268 (18,12)	17.11943 (312,17)	17.04877 (312,17)
190.0 /	38.03088 (39,11)	33.43159 (39,11)	29.96739 (39,11)	27.03723 (39,11)	24.51018 (39,11)
180.0 /	27.28609 (39,11)	24.17136 (39,11)	23.77211 (365, 9)	22.37444 (365, 9)	20.61411 (365, 9)
170.0 /	19.92636 (125,12)	20.73505 (125,12)	18.70752 (125,12)	17.02602 (300, 9)	15.58653 (300, 9)
160.0 /	24.26942 (106,13)	26.85654 (360, 9)	29.93758 (360, 9)	29.07330 (360, 9)	26.89127 (360, 9)
150.0 /	24.50565 (298,13)	22.16441 (298,13)	23.75174 (316, 9)	28.03577 (316, 9)	28.58035 (316, 9)
140.0 /	23.27290 (56,14)	22.37724 (56,14)	20.76686 (56,14)	19.01356 (56,14)	17.33283 (56,14)
130.0 /	26.48317 (146,11)	22.38942 (207,11)	19.66150 (207,11)	18.14965 (320,14)	16.82135 (320,14)
120.0 /	27.39163 (72,11)	27.76147 (72,11)	24.81529 (72,11)	21.89407 (72,11)	21.35641 (72,10)
110.0 /	25.17107 (225,11)	29.29523 (27,14)	29.83348 (27,14)	28.71623 (27,14)	27.13387 (27,14)
100.0 /	25.37753 (240,16)	23.15847 (27,14)	22.44142 (27,14)	20.67352 (241,10)	18.85546 (241,10)
90.0 /	24.61848 (155,13)	21.70018 (81,15)	19.66559 (278,15)	18.66611 (87, 7)	22.44536 (87, 7)
80.0 /	25.87608 (224,13)	23.80763 (242,10)	27.97038 (242,10)	28.90468 (242,10)	27.98531 (242,10)
70.0 /	26.27374 (93,12)	23.21454 (203,15)	20.04092 (34,15)	19.82082 (206, 7)	20.32176 (206, 7)
60.0 /	27.36981 (244, 9)	26.55861 (244, 9)	23.23743 (244, 9)	20.21064 (244, 9)	19.10372 (39,12)
50.0 /	24.97615 (123,15)	23.28667 (143,13)	21.75412 (244,10)	20.05208 (244,10)	17.83884 (244,10)
40.0 /	22.60213 (201,17)	22.35611 (143,12)	20.20684 (143,12)	17.38499 (143,12)	16.84730 (340,13)
30.0 /	26.51979 (185,16)	23.67663 (150,14)	23.34625 (286, 8)	22.10722 (286, 8)	20.19579 (286, 8)
20.0 /	45.21225 (150,14)	37.84370 (150,14)	31.60219 (150,14)	27.05328 (150,14)	25.64386 (150,10)
10.0 /	33.26529 (150,11)	39.83792 (150,11)	38.21823 (150,11)	34.83521 (150,11)	31.60002 (150,11)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	26.51521	(150,11)	5500.0	10.0	24.54120	(150,11)
4500.0	20.0	28.73065	(150,10)	5000.0	20.0	30.19022	(150,10)
2500.0	30.0	23.67663	(150,14)	3000.0	30.0	23.34625	(286, 8)
2500.0	40.0	22.35611	(143,12)	3000.0	40.0	20.20684	(143,12)
1500.0	50.0	18.03128	(123,12)	2000.0	50.0	24.97615	(123,15)
1500.0	60.0	23.57474	(224,12)	2000.0	60.0	27.36981	(244, 9)
1500.0	70.0	29.86807	(93,12)	2000.0	70.0	26.27374	(93,12)
838.0	80.0	27.78958	(149,13)	1100.0	80.0	28.81104	(223,14)
1500.0	80.0	27.81276	(223,14)	2000.0	80.0	25.87608	(224,13)
686.0	90.0	31.66205	(115, 4)	1100.0	90.0	25.54698	(108,11)
1500.0	90.0	26.38490	(108,11)	2000.0	90.0	24.61848	(155,13)
533.0	100.0	95.56110	(315,24)	700.0	100.0	29.77417	(235,12)
1100.0	100.0	29.54372	(87,12)	1500.0	100.0	29.37755	(115,12)
2000.0	100.0	25.37753	(240,16)	457.0	110.0	168.69278	(87,21)
700.0	110.0	30.55653	(222,11)	1100.0	110.0	30.55688	(114,17)
1500.0	110.0	28.76706	(114,17)	2000.0	110.0	25.17107	(225,11)
457.0	120.0	184.21057	(186,21)	700.0	120.0	30.35352	(129,11)
1100.0	120.0	31.40114	(115,11)	1500.0	120.0	31.17719	(115,11)
2000.0	120.0	27.39163	(72,11)	457.0	130.0	47.26117	(320,23)
700.0	130.0	25.62669	(181,11)	1100.0	130.0	28.47714	(241,11)
1500.0	130.0	30.59093	(146,11)	2000.0	130.0	26.48317	(146,11)
457.0	140.0	196.48242	(125, 1)	700.0	140.0	25.78117	(192,11)
1100.0	140.0	19.94935	(185,11)	1500.0	140.0	22.74442	(56,14)
2000.0	140.0	23.27290	(56,14)	457.0	150.0	147.08188	(16, 5)
700.0	150.0	30.27100	(192,11)	1100.0	150.0	18.81647	(191,11)
1500.0	150.0	20.35229	(191,11)	2000.0	150.0	24.50565	(298,13)
488.0	160.0	98.04105	(36, 3)	700.0	160.0	21.43864	(192,11)
1100.0	160.0	20.77051	(358,20)	1500.0	160.0	24.00597	(358,20)
2000.0	160.0	24.26942	(106,13)	533.0	170.0	17.51689	(109,12)
700.0	170.0	27.40395	(109,12)	1100.0	170.0	20.36439	(184,11)
1500.0	170.0	21.81845	(147,13)	2000.0	170.0	19.92636	(125,12)
610.0	180.0	161.66010	(267, 6)	700.0	180.0	43.01697	(267, 6)
1100.0	180.0	23.50676	(358,22)	1500.0	180.0	28.10957	(39,11)
2000.0	180.0	27.28609	(39,11)	750.0	190.0	29.46355	(180,13)
1100.0	190.0	33.59005	(39,11)	1500.0	190.0	42.51913	(39,11)
2000.0	190.0	38.03088	(39,11)	1829.0	200.0	25.91249	(39,11)
2000.0	200.0	24.63809	(271,12)	1829.0	210.0	26.68892	(305, 8)
2000.0	210.0	32.99413	(305, 8)	1981.0	220.0	26.24094	(44,20)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	26.13521	(44,20)	2134.0	230.0	26.19308	(91,12)
2500.0	230.0	22.50417	(91,12)	2438.0	240.0	24.48396	(188,14)
2500.0	240.0	23.96945	(188,14)	2896.0	250.0	25.24567	(172,13)
3000.0	250.0	25.37405	(172,13)	3048.0	260.0	20.54047	(51,17)
3500.0	260.0	19.38544	(51,17)	3658.0	270.0	18.80814	(58,13)
4000.0	270.0	17.83855	(85,14)	3962.0	280.0	17.86127	(85,21)
4000.0	280.0	17.77856	(85,21)	4572.0	290.0	16.08990	(213,15)
5000.0	290.0	15.77408	(213,15)	5182.0	300.0	16.14581	(177,16)
5500.0	300.0	15.58881	(177,16)	4801.0	310.0	19.09245	(242,11)
5000.0	310.0	18.92148	(242,11)	4875.0	320.0	16.41885	(119,15)
5000.0	320.0	16.22661	(119,15)	6000.0	330.0	14.10359	(65, 6)
6500.0	330.0	13.39416	(65, 6)	5500.0	340.0	30.24586	(141, 7)
6000.0	340.0	28.61000	(141, 7)	5250.0	350.0	16.41209	(150,13)
5500.0	350.0	15.81084	(150,13)	5125.0	360.0	15.28445	(76,15)
5500.0	360.0	14.87417	(76,15)				

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 30.41785 AND OCCURRED AT (2500.0, 10.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	25.48927 (150,11)	22.89420 (140,11)	19.84012 (141, 9)	17.96146 (135,15)	16.17693 (135,15)
350.0 /	24.39621 (179,16)	23.60178 (141,10)	20.08737 (141,10)	18.14260 (331,14)	16.74959 (65,12)
340.0 /	26.72420 (119,12)	22.05701 (135,13)	20.01342 (135,12)	22.91945 (150,13)	21.00607 (150,13)
330.0 /	22.00879 (133,13)	22.67230 (122,14)	20.32913 (121,11)	17.87658 (327,14)	17.03507 (53,18)
320.0 /	26.52245 (119,13)	24.22536 (119,13)	21.71449 (64,16)	20.04763 (64,16)	18.33054 (64,16)
310.0 /	27.07692 (151,17)	24.11000 (202,18)	21.00647 (140,15)	18.32157 (125,17)	18.24021 (242,11)
300.0 /	28.62439 (213,13)	23.99919 (140,13)	20.74732 (140,13)	18.07043 (260,15)	16.86433 (95,18)
290.0 /	28.29535 (103,11)	23.90545 (210,13)	20.64834 (122,16)	18.33720 (127,15)	16.03993 (120,16)
280.0 /	25.61090 (182,14)	23.59164 (182,14)	20.56627 (148,16)	18.03256 (274,12)	17.09798 (79,20)
270.0 /	25.39696 (211,14)	23.95665 (303,14)	20.62843 (303,14)	18.73911 (85,14)	17.39299 (58,13)
260.0 /	27.02237 (168,14)	23.98798 (168,14)	20.63423 (51,17)	19.07651 (59, 1)	17.95688 (59, 1)
250.0 /	26.35794 (189,11)	23.31049 (236,13)	21.86874 (132, 9)	22.82925 (132, 9)	21.95849 (132, 9)
240.0 /	26.02132 (227,11)	23.09004 (153,15)	20.58941 (236,14)	18.04353 (274,14)	17.47909 (165,16)
230.0 /	26.58795 (255,14)	22.16658 (167,14)	21.02383 (20, 8)	19.46108 (20, 8)	17.72636 (20, 8)
220.0 /	23.97087 (44,14)	22.32242 (44,20)	20.50169 (355, 7)	19.26979 (355, 7)	17.73609 (355, 7)
210.0 /	22.43581 (188,13)	22.01153 (188,13)	19.64892 (111, 9)	17.46066 (289, 9)	16.72256 (354,20)
200.0 /	23.83017 (39,11)	22.38797 (18,12)	19.01395 (272,14)	16.35236 (228, 9)	15.50607 (351, 7)
190.0 /	24.71625 (227,10)	27.10994 (365, 9)	24.29649 (365, 9)	20.66515 (365, 9)	21.09121 (169, 8)
180.0 /	25.08983 (107,12)	23.31363 (365, 9)	21.38850 (39,11)	20.79968 (18,10)	19.56219 (18,10)
170.0 /	17.70975 (199,12)	18.24642 (358,21)	18.05748 (325,10)	16.92043 (325,10)	15.58476 (358,21)
160.0 /	22.29657 (358,20)	22.22061 (106,13)	18.84355 (106,13)	15.72639 (106,13)	14.57686 (320, 9)
150.0 /	21.70203 (18,13)	20.34958 (18,13)	18.70118 (298,13)	17.10976 (6,10)	16.00069 (6,10)
140.0 /	22.56256 (61,11)	20.27801 (61,11)	18.98295 (321,16)	17.55491 (12,16)	16.56391 (12,16)
130.0 /	24.50427 (124,13)	22.26328 (107,13)	19.40682 (203,11)	16.77363 (207,11)	16.51736 (28, 2)
120.0 /	25.25003 (199,13)	22.66313 (199,13)	20.89752 (15,14)	21.01526 (72,10)	20.99776 (182, 8)
110.0 /	24.85118 (114,17)	22.71942 (225,11)	20.59094 (114,16)	18.74571 (114, 6)	17.33866 (114, 6)
100.0 /	24.27457 (78,10)	22.74363 (240,16)	21.92664 (241,10)	20.67228 (27,14)	18.73001 (27,14)
90.0 /	24.53302 (87,13)	21.59986 (155,13)	19.22476 (81,15)	17.64674 (34,12)	16.91187 (186, 8)
80.0 /	21.69008 (224,10)	21.54208 (224,13)	20.36652 (114,14)	20.42441 (194, 7)	24.11351 (194, 7)
70.0 /	26.22389 (93,13)	22.76537 (123,11)	19.70924 (203,15)	19.20840 (223, 8)	19.38751 (223, 8)
60.0 /	23.93127 (224,12)	21.05594 (187,11)	19.69235 (338,13)	19.49071 (39,12)	17.82578 (244, 9)
50.0 /	24.96034 (143,13)	22.76797 (123,15)	19.71021 (143,13)	17.04151 (73,13)	16.72725 (206,17)
40.0 /	20.67882 (143,12)	19.67296 (206,14)	18.05134 (142,17)	17.16590 (123, 9)	16.28240 (340,14)
30.0 /	25.82690 (150,14)	22.47539 (286, 8)	21.04921 (150,14)	18.86756 (150,14)	17.64752 (113,15)
20.0 /	25.11345 (157,13)	22.59267 (142,14)	20.52303 (142,14)	20.11722 (150,10)	23.64110 (150,14)
10.0 /	27.25320 (142,12)	30.41785 (150,12)	28.73239 (150,12)	25.04085 (150,12)	26.09607 (256,12)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	24.84514	(256,12)	5500.0	10.0	23.32542	(256,12)
4500.0	20.0	20.99245	(150,14)	5000.0	20.0	18.87865	(150,14)
2500.0	30.0	22.47539	(286, 8)	3000.0	30.0	21.04921	(150,14)
2500.0	40.0	19.67296	(206,14)	3000.0	40.0	18.05134	(142,17)
1500.0	50.0	17.02315	(123,15)	2000.0	50.0	24.96034	(143,13)
1500.0	60.0	20.72015	(123,12)	2000.0	60.0	23.93127	(224,12)
1500.0	70.0	25.98679	(108,12)	2000.0	70.0	26.22389	(93,13)
838.0	80.0	25.05701	(126,11)	1100.0	80.0	19.11463	(149,13)
1500.0	80.0	25.15971	(224,13)	2000.0	80.0	21.69008	(224,10)
686.0	90.0	27.17667	(196,13)	1100.0	90.0	24.67875	(241,13)
1500.0	90.0	23.81297	(87,13)	2000.0	90.0	24.53302	(87,13)
533.0	100.0	27.33234	(34,11)	700.0	100.0	29.63036	(196,13)
1100.0	100.0	29.19519	(115,14)	1500.0	100.0	27.60942	(115,14)
2000.0	100.0	24.27457	(78,10)	[redacted]			
700.0	110.0	29.31755	(202,12)	1100.0	110.0	29.71187	(241,11)
1500.0	110.0	25.40875	(241,11)	2000.0	110.0	24.85118	(114,17)
457.0	120.0	75.86551	(15,22)	700.0	120.0	29.06779	(241,14)
1100.0	120.0	30.08591	(241,11)	1500.0	120.0	28.13617	(241,11)
2000.0	120.0	25.25003	(199,13)	457.0	130.0	33.99283	(68, 5)
700.0	130.0	24.90025	(231,12)	1100.0	130.0	27.61705	(124,13)
1500.0	130.0	29.74188	(124,13)	2000.0	130.0	24.50427	(124,13)
457.0	140.0	126.88040	(320, 6)	700.0	140.0	25.44334	(126,12)
1100.0	140.0	19.65944	(115,13)	1500.0	140.0	22.74138	(250,14)
2000.0	140.0	22.56256	(61,11)	457.0	150.0	136.49857	(56,22)
700.0	150.0	22.53340	(185,11)	1100.0	150.0	17.63332	(185,11)
1500.0	150.0	19.35797	(298,13)	2000.0	150.0	21.70203	(18,13)
488.0	160.0	27.28824	(105,20)	700.0	160.0	16.19790	(109,12)
1100.0	160.0	15.45117	(360,15)	1500.0	160.0	21.21332	(240,12)
2000.0	160.0	22.29657	(358,20)	533.0	170.0	13.08765	(239,12)
700.0	170.0	23.56100	(239,12)	1100.0	170.0	18.43341	(147,13)
1500.0	170.0	21.78172	(229,11)	2000.0	170.0	17.70975	(199,12)
610.0	180.0	28.87628	(239,12)	700.0	180.0	29.53296	(239,12)
1100.0	180.0	21.56593	(184,11)	1500.0	180.0	24.33315	(107,12)
2000.0	180.0	25.08983	(107,12)	750.0	190.0	29.01341	(230,11)
1100.0	190.0	27.21129	(181,13)	1500.0	190.0	21.79606	(181,13)
2000.0	190.0	24.71625	(227,10)	1829.0	200.0	23.90977	(271,12)
2000.0	200.0	23.83017	(39,11)	1829.0	210.0	21.01501	(188,13)
2000.0	210.0	22.43581	(188,13)	1981.0	220.0	23.97310	(44,18)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	23.97087	(44,14)	2134.0	230.0	25.32956	(255,14)
2500.0	230.0	22.16658	(167,14)	2438.0	240.0	23.49171	(153,15)
2500.0	240.0	23.09004	(153,15)	2896.0	250.0	21.25761	(132, 9)
3000.0	250.0	21.86874	(132, 9)	3048.0	260.0	20.52124	(190,15)
3500.0	260.0	19.07651	(59, 1)	3658.0	270.0	18.49608	(85,14)
4000.0	270.0	17.39299	(58,13)	3962.0	280.0	17.10979	(79,20)
4000.0	280.0	17.09798	(79,20)	4572.0	290.0	15.71257	(112,15)
5000.0	290.0	15.44968	(112,15)	5182.0	300.0	15.45222	(121,16)
5500.0	300.0	15.07993	(121,16)	4801.0	310.0	16.11487	(154,18)
5000.0	310.0	15.80067	(154,18)	4875.0	320.0	16.15161	(104,16)
5000.0	320.0	15.95059	(104,16)	6000.0	330.0	13.31854	(324, 9)
6500.0	330.0	12.57243	(324, 9)	5500.0	340.0	15.03027	(345,12)
6000.0	340.0	14.30404	(345,14)	5250.0	350.0	14.58303	(63,11)
5500.0	350.0	14.35265	(63,11)	5125.0	360.0	15.15788	(92,10)
5500.0	360.0	14.76244	(92,10)				

HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 11.99957 AND OCCURRED AT (3000.0, 90.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.66348 (113, 2)	6.02639 (141, 2)	5.46424 (141, 2)	5.01764 (96, 2)	4.40861 (96, 2)
350.0 /	8.69466 (141, 2)	7.61672 (141, 2)	6.15780 (141, 2)	5.28740 (331, 2)	4.70741 (331, 2)
340.0 /	7.55400 (135, 2)	7.21607 (135, 2)	6.06423 (135, 2)	5.26266 (345, 2)	6.55466 (345, 2)
330.0 /	6.85204 (122, 2)	7.04793 (121, 2)	7.55519 (121, 2)	7.74247 (65, 1)	7.75462 (65, 1)
320.0 /	8.27476 (112, 2)	7.79030 (112, 2)	7.90096 (53, 2)	7.71843 (53, 2)	7.29745 (53, 2)
310.0 /	6.67099 (140, 2)	7.44363 (140, 2)	6.65833 (140, 2)	5.67314 (64, 3)	5.82568C(326, 2)
300.0 /	8.37290 (213, 2)	8.68547 (213, 2)	7.68803 (213, 2)	6.51599 (213, 2)	5.47213 (213, 2)
290.0 /	6.90036 (154, 2)	8.89826 (154, 2)	8.28201 (154, 2)	8.83020 (213, 2)	8.80873 (213, 2)
280.0 /	6.56037C(50, 2)	8.93040C(50, 2)	8.75049 (85, 3)	9.63915 (85, 3)	9.78871 (85, 3)
270.0 /	6.97673 (275, 2)	6.70520 (275, 2)	6.98619 (58, 3)	8.26060 (58, 3)	8.70401 (58, 3)
260.0 /	6.79779 (253, 2)	8.03537 (253, 2)	7.30673 (253, 2)	6.23127 (253, 2)	5.62526 (59, 1)
250.0 /	10.22214 (167, 2)	8.80762 (167, 2)	7.21099 (167, 2)	6.32595 (58, 2)	6.40496 (58, 2)
240.0 /	7.18950 (227, 2)	7.38632 (227, 2)	6.56345 (227, 2)	5.62446 (227, 2)	5.05469 (58, 1)
230.0 /	6.61894 (20, 1)	8.24977 (20, 1)	9.13499 (20, 1)	9.28364 (267, 3)	9.24132 (267, 3)
220.0 /	10.06689 (44, 2)	10.64278 (44, 2)	10.35631 (44, 2)	9.61066 (44, 2)	9.36669 (294, 3)
210.0 /	4.12852 (365, 2)	4.16468 (354, 2)	5.85384 (354, 2)	6.68057 (355, 1)	7.53475 (289, 2)
200.0 /	8.38094 (166, 2)	7.14828 (166, 2)	6.46719 (271, 2)	5.57589 (271, 2)	4.71878 (271, 2)
190.0 /	7.19612C(39, 2)	9.24086 (365, 2)	9.33953 (365, 2)	8.58608 (365, 2)	7.68162 (365, 2)
180.0 /	5.33675 (341, 2)	6.13707 (341, 2)	6.06752 (341, 2)	5.59366 (341, 2)	5.03433 (341, 2)
170.0 /	6.52420C(125, 2)	6.70900C(125, 2)	5.90823C(125, 2)	5.24196 (325, 2)	4.71761 (325, 2)
160.0 /	5.85623 (358, 3)	6.11474 (358, 3)	5.96034 (360, 2)	5.79451 (360, 2)	5.41244 (360, 2)
150.0 /	5.16561 (298, 2)	5.31328 (333, 2)	5.51153 (333, 2)	5.09529 (333, 2)	4.52773 (333, 2)
140.0 /	6.85348 (250, 2)	7.21469 (250, 2)	6.53209 (250, 2)	6.83789 (61, 2)	6.75593 (61, 2)
130.0 /	6.16543 (106, 2)	6.29897 (106, 2)	6.61448 (28, 1)	7.48595 (28, 1)	7.74829 (28, 1)
120.0 /	6.43559 (241, 2)	6.27782 (68, 2)	6.36205 (68, 2)	6.46328 (71, 2)	6.49898 (71, 2)
110.0 /	7.74154 (100, 2)	7.24092 (100, 2)	6.27605 (100, 2)	6.03021 (69, 3)	5.83423 (69, 3)
100.0 /	9.18179 (124, 2)	8.67133 (124, 2)	7.60089 (124, 2)	6.55682 (124, 2)	5.66086 (124, 2)
90.0 /	7.33964 (78, 2)	10.71077 (78, 2)	11.99957 (78, 2)	11.96885 (78, 2)	11.41746 (78, 2)
80.0 /	5.96108 (206, 2)	6.71512 (206, 2)	6.17040 (206, 2)	7.35610 (77, 2)	8.14395 (77, 2)
70.0 /	7.79633 (93, 2)	7.57597 (205, 2)	7.15407 (205, 2)	6.30488 (205, 2)	5.44356 (205, 2)
60.0 /	7.82754 (205, 2)	7.54203 (205, 2)	6.34884 (205, 2)	5.19365 (205, 2)	4.42891 (223, 2)
50.0 /	9.07724 (143, 2)	9.98241 (143, 2)	9.06090 (143, 2)	7.79931 (143, 2)	6.62400 (143, 2)
40.0 /	6.81124 (143, 2)	6.64934 (143, 2)	5.70997 (340, 2)	6.85689 (340, 2)	7.25950 (340, 2)
30.0 /	5.31917 (128, 2)	5.38284 (128, 2)	5.31262 (128, 2)	5.00406 (128, 2)	4.72659 (113, 2)
20.0 /	10.44771 (142, 2)	10.29070 (142, 2)	8.95745 (142, 2)	8.27113 (150, 2)	8.38406 (150, 2)
10.0 /	9.06301 (142, 2)	10.24614 (150, 2)	9.52994 (150, 2)	8.41042 (150, 2)	7.39185 (150, 2)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	5.88034	(150, 2)	5500.0	10.0	5.32788	(150, 2)
4500.0	20.0	8.27952	(150, 2)	5000.0	20.0	8.05135	(150, 2)
2500.0	30.0	5.38284	(128, 2)	3000.0	30.0	5.31262	(128, 2)
2500.0	40.0	6.64934	(143, 2)	3000.0	40.0	5.70997	(340, 2)
1500.0	50.0	4.42167C	(202, 2)	2000.0	50.0	9.07724	(143, 2)
1500.0	60.0	4.62738	(232, 2)	2000.0	60.0	7.82754	(205, 2)
1500.0	70.0	5.96767	(93, 2)	2000.0	70.0	7.79633	(93, 2)
838.0	80.0	3.47370	(149, 2)	1100.0	80.0	3.86975	(223, 2)
1500.0	80.0	5.15365	(223, 2)	2000.0	80.0	5.96108	(206, 2)
686.0	90.0	4.38795	(241, 2)	1100.0	90.0	2.69352	(115, 2)
1500.0	90.0	6.06601	(155, 2)	2000.0	90.0	7.33964	(78, 2)
533.0	100.0	3.36553C	(202, 2)	700.0	100.0	6.50507C	(202, 2)
1100.0	100.0	5.27773	(115, 2)	1500.0	100.0	6.97950	(124, 2)
2000.0	100.0	9.18179	(124, 2)	457.0	110.0	12.03621	(87, 3)
700.0	110.0	6.31386C	(202, 2)	1100.0	110.0	4.56912C	(202, 2)
1500.0	110.0	5.26050	(15, 2)	2000.0	110.0	7.74154	(100, 2)
457.0	120.0	23.02632	(186, 3)	700.0	120.0	4.34238C	(200, 2)
1100.0	120.0	4.28665	(241, 2)	1500.0	120.0	5.73857	(241, 2)
2000.0	120.0	6.43559	(241, 2)	457.0	130.0	6.16147C	(320, 3)
700.0	130.0	3.47909C	(231, 2)	1100.0	130.0	5.66913	(241, 2)
1500.0	130.0	5.81364	(241, 2)	2000.0	130.0	6.16543	(106, 2)
457.0	140.0	32.74707C	(125, 1)	700.0	140.0	3.92220	(126, 2)
1100.0	140.0	4.26337	(126, 2)	1500.0	140.0	5.70147C	(191, 2)
2000.0	140.0	6.85348	(250, 2)	457.0	150.0	15.59457	(56, 3)
700.0	150.0	3.78827	(126, 2)	1100.0	150.0	3.29249C	(191, 2)
1500.0	150.0	4.48066	(298, 2)	2000.0	150.0	5.16561	(298, 2)
488.0	160.0	15.93264C	(36, 1)	700.0	160.0	1.88808C	(307, 2)
1100.0	160.0	3.31068C	(307, 2)	1500.0	160.0	4.60866	(358, 3)
2000.0	160.0	5.85623	(358, 3)	533.0	170.0	1.14756	(109, 2)
700.0	170.0	2.54180C	(307, 2)	1100.0	170.0	4.39002C	(307, 2)
1500.0	170.0	4.67987	(199, 2)	2000.0	170.0	6.52420C	(125, 2)
610.0	180.0	22.69529C	(267, 1)	700.0	180.0	5.79023C	(267, 1)
1100.0	180.0	4.12452	(358, 3)	1500.0	180.0	5.04688	(358, 3)
2000.0	180.0	5.33675	(341, 2)	750.0	190.0	4.58481	(230, 2)
1100.0	190.0	3.91745	(253, 2)	1500.0	190.0	5.49915C	(39, 2)
2000.0	190.0	7.19612C	(39, 2)	1829.0	200.0	8.36767	(166, 2)
2000.0	200.0	8.38094	(166, 2)	1829.0	210.0	4.16377	(365, 2)
2000.0	210.0	4.12852	(365, 2)	1981.0	220.0	10.10230	(44, 2)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	10.06689	(44, 2)	2134.0	230.0	6.86491	(20, 1)
2500.0	230.0	8.24977	(20, 1)	2438.0	240.0	7.44980	(227, 2)
2500.0	240.0	7.38632	(227, 2)	2896.0	250.0	7.52069	(167, 2)
3000.0	250.0	7.21099	(167, 2)	3048.0	260.0	7.20705	(253, 2)
3500.0	260.0	6.23127	(253, 2)	3658.0	270.0	8.46738	(58, 3)
4000.0	270.0	8.70401	(58, 3)	3962.0	280.0	9.79361	(85, 3)
4000.0	280.0	9.78871	(85, 3)	4572.0	290.0	8.43640	(213, 2)
5000.0	290.0	8.05815	(213, 2)	5182.0	300.0	3.96913	(177, 2)
5500.0	300.0	3.73107	(177, 2)	4801.0	310.0	6.22249C	(326, 2)
5000.0	310.0	6.17768C	(326, 2)	4875.0	320.0	6.41055	(53, 2)
5000.0	320.0	6.28409	(53, 2)	6000.0	330.0	6.35590	(65, 1)
6500.0	330.0	5.96394	(65, 1)	5500.0	340.0	7.49147	(345, 2)
6000.0	340.0	7.37475	(345, 2)	5250.0	350.0	4.04747	(150, 2)
5500.0	350.0	3.95782	(150, 2)	5125.0	360.0	3.24371	(65, 2)
5500.0	360.0	3.26869	(105, 1)				

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 9.17265 AND OCCURRED AT (3500.0, 230.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.22447 (141, 2)	4.97871 (96, 2)	5.42702 (96, 2)	4.66467 (141, 2)	3.92508 (141, 2)
350.0 /	6.81002 (179, 2)	6.23731 (179, 2)	5.73079 (331, 2)	4.93429 (141, 2)	4.35441 (150, 2)
340.0 /	3.91676 (149, 2)	4.63444 (119, 2)	4.64219 (150, 2)	4.96801 (135, 2)	4.52213 (150, 2)
330.0 /	5.03222 (133, 2)	6.15060 (122, 2)	7.20248 (65, 1)	6.97490 (121, 2)	6.24540 (32, 3)
320.0 /	6.42340 (53, 2)	7.49800 (53, 2)	7.00884 (64, 2)	6.77081 (64, 2)	6.35926 (64, 2)
310.0 /	4.82796 (141, 2)	5.10303 (141, 2)	5.52240 (64, 3)	5.65290 (140, 2)	5.53119 (64, 3)
300.0 /	7.04044 (177, 2)	6.93006 (177, 2)	6.35727 (177, 2)	5.69884 (177, 2)	5.09278 (177, 2)
290.0 /	6.28075 (121, 2)	6.11647 (213, 2)	8.19779 (213, 2)	7.13116 (154, 2)	6.02032 (154, 2)
280.0 /	6.39385 (169, 2)	7.93811 (169, 2)	8.55700C(50, 2)	7.52709C(50, 2)	6.46082C(50, 2)
270.0 /	4.31965 (210, 2)	5.89127C(50, 2)	6.44729C(50, 2)	7.27801 (20, 3)	7.83745 (20, 3)
260.0 /	6.78603 (275, 2)	6.70925 (275, 2)	6.41938 (164, 2)	5.83490 (164, 2)	5.23684 (253, 2)
250.0 /	7.43483 (131, 2)	6.73495 (131, 2)	5.85633 (102, 2)	5.92865 (167, 2)	4.95669 (167, 2)
240.0 /	6.25648 (167, 2)	5.59328 (274, 2)	5.73579 (274, 2)	5.27214 (274, 2)	4.87394 (291, 2)
230.0 /	5.60630 (167, 2)	6.12963 (352, 1)	8.51933 (267, 3)	9.17265 (20, 1)	8.82844 (20, 1)
220.0 /	5.78857 (44, 3)	5.55594 (44, 3)	7.67659 (294, 3)	8.95278 (294, 3)	8.76048 (44, 2)
210.0 /	4.07215 (244, 2)	3.91782 (244, 2)	5.75098 (355, 1)	6.56950 (354, 2)	7.02224 (355, 1)
200.0 /	5.81210 (271, 2)	6.99895 (271, 2)	5.65031 (166, 2)	4.43162 (166, 2)	3.69293 (355, 2)
190.0 /	6.66437 (166, 2)	6.82007C(39, 2)	6.10003C(39, 2)	5.38194C(39, 2)	4.75308C(39, 2)
180.0 /	5.17953C(39, 2)	5.21095C(39, 2)	5.06891 (18, 2)	4.83912 (18, 2)	4.48925 (18, 2)
170.0 /	4.88208 (199, 2)	5.28898 (325, 2)	5.59533 (325, 2)	4.99511C(125, 2)	4.18983C(125, 2)
160.0 /	3.93927 (146, 2)	5.48468 (360, 2)	5.87370 (358, 3)	5.46520 (358, 3)	5.01933 (358, 3)
150.0 /	3.75192 (250, 2)	4.45837 (298, 2)	4.32342 (12, 2)	4.52589 (12, 2)	4.48332 (12, 2)
140.0 /	5.62158 (151, 2)	5.33261 (61, 2)	6.51680 (61, 2)	5.65941 (250, 2)	4.84716 (250, 2)
130.0 /	5.89577 (203, 2)	6.09070 (198, 2)	5.77276 (106, 2)	5.96570 (340, 3)	5.96234 (340, 3)
120.0 /	6.05330 (203, 2)	6.08590 (11, 2)	6.02903 (71, 2)	6.03460 (68, 2)	5.59872 (68, 2)
110.0 /	6.33678 (15, 2)	6.50429 (15, 2)	6.22093 (15, 2)	5.78682 (15, 2)	5.38958 (329, 1)
100.0 /	7.32876 (197, 2)	6.67834 (197, 2)	6.06038 (278, 2)	5.53517 (278, 2)	4.88625 (278, 2)
90.0 /	6.05723 (155, 2)	6.35361 (114, 2)	6.46251 (93, 2)	6.26366 (93, 2)	5.91207 (93, 2)
80.0 /	5.06579 (186, 2)	5.11333 (224, 2)	5.64557 (77, 2)	5.36228 (206, 2)	5.53561 (45, 1)
70.0 /	6.59341 (232, 2)	7.07553 (93, 2)	6.38384 (93, 2)	5.66289 (93, 2)	5.01109 (93, 2)
60.0 /	6.75785 (232, 2)	6.03165 (232, 2)	5.55453 (223, 2)	5.03288 (223, 2)	4.38199 (338, 2)
50.0 /	4.33467C(202, 2)	4.48360 (123, 2)	4.49813 (123, 2)	4.87168 (33, 3)	5.37007 (33, 3)
40.0 /	3.93176C(202, 2)	3.63749 (92, 3)	5.64674 (143, 2)	5.18211 (92, 3)	5.63631 (86, 3)
30.0 /	4.94966 (123, 2)	4.50937 (123, 2)	4.34876 (113, 2)	4.67461 (113, 2)	4.62553 (128, 2)
20.0 /	5.42666 (157, 2)	6.67757 (150, 2)	7.78350 (150, 2)	7.55776 (142, 2)	6.35164 (142, 2)
10.0 /	8.77525 (150, 2)	7.23050 (142, 2)	5.61139 (142, 2)	4.94697 (92, 2)	4.52138 (92, 2)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	3.79964	(327, 2)	5500.0	10.0	3.75323	(327, 2)
4500.0	20.0	5.36657	(142, 2)	5000.0	20.0	4.57278	(142, 2)
2500.0	30.0	4.50937	(123, 2)	3000.0	30.0	4.34876	(113, 2)
2500.0	40.0	3.63749	(92, 3)	3000.0	40.0	5.64674	(143, 2)
1500.0	50.0	2.28399	(183, 2)	2000.0	50.0	4.33467C	(202, 2)
1500.0	60.0	3.93009	(224, 2)	2000.0	60.0	6.75785	(232, 2)
1500.0	70.0	4.48205	(232, 2)	2000.0	70.0	6.59341	(232, 2)
838.0	80.0	2.43626	(241, 2)	1100.0	80.0	2.38933	(149, 2)
1500.0	80.0	3.81585	(186, 2)	2000.0	80.0	5.06579	(186, 2)
686.0	90.0	2.68783	(195, 2)	1100.0	90.0	2.45085	(195, 2)
1500.0	90.0	4.21415	(197, 2)	2000.0	90.0	6.05723	(155, 2)
533.0	100.0	2.89196	(235, 2)	700.0	100.0	5.30930	(241, 2)
1100.0	100.0	4.27162	(196, 2)	1500.0	100.0	6.45537	(115, 2)
2000.0	100.0	7.32876	(197, 2)	457.0	110.0	0.87857C	(230, 1)
700.0	110.0	3.58541C	(200, 2)	1100.0	110.0	3.87804	(241, 2)
1500.0	110.0	4.90692	(100, 2)	2000.0	110.0	6.33678	(15, 2)
457.0	120.0	0.93985	(129, 2)	700.0	120.0	3.85978	(176, 2)
1100.0	120.0	3.74928C	(202, 2)	1500.0	120.0	5.72668	(203, 2)
2000.0	120.0	6.05330	(203, 2)	457.0	130.0	4.24903	(68, 1)
700.0	130.0	3.17270	(176, 2)	1100.0	130.0	3.47021	(126, 2)
1500.0	130.0	[redacted]		2000.0	130.0	5.89577	(203, 2)
[redacted]				700.0	140.0	3.36679C	(231, 2)
1100.0	140.0	3.86851	(241, 2)	1500.0	140.0	4.81537	(151, 2)
2000.0	140.0	5.62158	(151, 2)	457.0	150.0	15.30960	(16, 1)
700.0	150.0	2.81662	(185, 2)	1100.0	150.0	3.24481	(173, 2)
1500.0	150.0	4.07099C	(191, 2)	2000.0	150.0	3.75192	(250, 2)
488.0	160.0	2.82978	(105, 3)	700.0	160.0	1.60838C	(202, 2)
1100.0	160.0	2.42454C	(339, 2)	1500.0	160.0	4.32243	(146, 2)
2000.0	160.0	3.93927	(146, 2)	533.0	170.0	0.77278	(230, 2)
700.0	170.0	2.32058	(184, 2)	1100.0	170.0	2.68321C	(339, 2)
1500.0	170.0	2.39674	(146, 2)	2000.0	170.0	4.88208	(199, 2)
610.0	180.0	3.39227	(109, 2)	700.0	180.0	3.59698	(109, 2)
1100.0	180.0	3.44427C	(307, 2)	1500.0	180.0	3.74474C	(39, 2)
2000.0	180.0	5.17953C	(39, 2)	750.0	190.0	4.20908C	(180, 2)
1100.0	190.0	3.70801	(230, 2)	1500.0	190.0	3.62079	(166, 2)
2000.0	190.0	6.66437	(166, 2)	1829.0	200.0	4.64181	(365, 2)
2000.0	200.0	5.81210	(271, 2)	1829.0	210.0	3.85687	(244, 2)
2000.0	210.0	4.07215	(244, 2)	1981.0	220.0	5.50280	(44, 3)

*** ISCST BY KBN 3/88 *** 1983 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	5.78857	(44, 3)	2134.0	230.0	5.54674	(167, 2)
2500.0	230.0	6.12963	(352, 1)	2438.0	240.0	5.55333	(167, 2)
2500.0	240.0	5.59328	(274, 2)	2896.0	250.0	5.94143	(102, 2)
3000.0	250.0	5.85633	(102, 2)	3048.0	260.0	6.37327	(164, 2)
3500.0	260.0	5.83490	(164, 2)	3658.0	270.0	7.52528	(20, 3)
4000.0	270.0	7.83745	(20, 3)	3962.0	280.0	6.53819C	(50, 2)
4000.0	280.0	6.46082C	(50, 2)	4572.0	290.0	4.95729	(154, 2)
5000.0	290.0	4.53345	(138, 2)	5182.0	300.0	3.73460	(103, 2)
5500.0	300.0	3.52533	(103, 2)	4801.0	310.0	5.07391	(64, 3)
5000.0	310.0	4.94536	(64, 3)	4875.0	320.0	6.05455	(66, 2)
5000.0	320.0	6.05934	(66, 2)	6000.0	330.0	5.23935	(32, 3)
6500.0	330.0	4.92430	(32, 3)	5500.0	340.0	5.84973	(324, 1)
6000.0	340.0	5.85050	(324, 1)	5250.0	350.0	3.41870	(331, 2)
5500.0	350.0	3.21122	(331, 2)	5125.0	360.0	3.17153	(96, 2)
5500.0	360.0	3.18515	(65, 2)				

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ISCSTK6C MODEL, A VERSION OF
  ISCST (VERSION 88207)
  AN AIR QUALITY DISPERSION MODEL IN
  SECTION 1.  GUIDELINE MODELS.
  IN UNAMAP (VERSION 6) JULY 1988.
  SOURCE: FILE 6  ON UNAMAP MAGNETIC TAPE FROM NTIS.
  (Based on Change 7 to UNAMAP, July 27, 1988)


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       GAINESVILLE, FLORIDA
            (904)375-8000

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  CARD INPUT File is          gcoinc84.in
  SUMMARY OUTPUT File is      gcoinc84.out
  METEOROLOGICAL FILE is      jaxpre84.bin
  TITLE OF RUN is             1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4
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*** ISCST BY KBN  7/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4              ***

        CALCULATE (CONCENTRATION=1,DEPOSITION=2)                             ISW(1) =   1
        RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)              ISW(2) =   4
        DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)                     ISW(3) =   2
        TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)                             ISW(4) =   0
        CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)                        ISW(5) =   0
        LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)                     ISW(6) =   1

        COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)
        WITH THE FOLLOWING TIME PERIODS:
          HOURLY (YES=1,NO=0)                                                ISW(7) =   1
          2-HOUR (YES=1,NO=0)                                                ISW(8) =   0
          3-HOUR (YES=1,NO=0)                                                ISW(9) =   0
          4-HOUR (YES=1,NO=0)                                               ISW(10) =   0
          6-HOUR (YES=1,NO=0)                                               ISW(11) =   0
          8-HOUR (YES=1,NO=0)                                               ISW(12) =   1
          12-HOUR (YES=1,NO=0)                                              ISW(13) =   0
          24-HOUR (YES=1,NO=0)                                              ISW(14) =   0
        PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)                                 ISW(15) =   0

        PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE
        SPECIFIED BY ISW(7) THROUGH ISW(14):
          DAILY TABLES (YES=1,NO=0)                                         ISW(16) =   0
          HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)                      ISW(17) =   1
          MAXIMUM 50 TABLES (YES=1,NO=0)                                    ISW(18) =   0
        METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)           ISW(19) =   1
        RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3)   ISW(20) =   0
        WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)           ISW(21) =   1
        VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3)    ISW(22) =   1
        SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)                   ISW(23) =   0
        PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)               ISW(24) =   1
        PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)         ISW(25) =   2
        PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)               ISW(26) =   1
        CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)             ISW(27) =   1
        REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)                             ISW(28) =   1
        TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)                    ISW(29) =   1
        DEBUG OPTION CHOSEN (YES=1,NO=2)                                    ISW(30) =   2
        ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)                 ISW(31) =   0

        NUMBER OF INPUT SOURCES                                              NSOURC =   2
        NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)                             NGROUP =   0
        TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)                 IPERD =   0
        NUMBER OF X (RANGE) GRID VALUES                                      NXPNTS =   5
        NUMBER OF Y (THETA) GRID VALUES                                      NYPNTS =  36
        NUMBER OF DISCRETE RECEPTORS                                         NXWYPT = 105
        SOURCE EMISSION RATE UNITS CONVERSION FACTOR                             TK =.10000E+07
        HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED                     ZR =   6.10  METERS
        LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA                             IMET =   9
        DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION                  DECAY =0.000000E+00
        SURFACE STATION NO.                                                     ISS = 13889
        YEAR OF SURFACE DATA                                                    ISY = 84
        UPPER AIR STATION NO.                                                   IUS = 13861
        YEAR OF UPPER AIR DATA                                                  IUY = 84
        ALLOCATED DATA STORAGE                                                LIMIT = 25000 WORDS
        REQUIRED DATA STORAGE FOR THIS PROBLEM RUN                            MIMIT =  4245 WORDS
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*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.50, 3.10, 5.10, 8.20, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

2000.0, 2500.0, 3000.0, 3500.0, 4000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** RANGE,THETA COORDINATES OF DISCRETE RECEPTORS ***
(METERS,DEGREES)

(5000.0, 10.0),	(5500.0, 10.0),	(4500.0, 20.0),	(5000.0, 20.0),	(2500.0, 30.0),
(3000.0, 30.0),	(2500.0, 40.0),	(3000.0, 40.0),	(1500.0, 50.0),	(2000.0, 50.0),
(1500.0, 60.0),	(2000.0, 60.0),	(1500.0, 70.0),	(2000.0, 70.0),	(838.0, 80.0),
(1100.0, 80.0),	(1500.0, 80.0),	(2000.0, 80.0),	(686.0, 90.0),	(1100.0, 90.0),
(1500.0, 90.0),	(2000.0, 90.0),	(533.0, 100.0),	(700.0, 100.0),	(1100.0, 100.0),
(1500.0, 100.0),	(2000.0, 100.0),	(457.0, 110.0),	(700.0, 110.0),	(1100.0, 110.0),
(1500.0, 110.0),	(2000.0, 110.0),	(457.0, 120.0),	(700.0, 120.0),	(1100.0, 120.0),
(1500.0, 120.0),	(2000.0, 120.0),	(457.0, 130.0),	(700.0, 130.0),	(1100.0, 130.0),
(1500.0, 130.0),	(2000.0, 130.0),	(457.0, 140.0),	(700.0, 140.0),	(1100.0, 140.0),
(1500.0, 140.0),	(2000.0, 140.0),	(457.0, 150.0),	(700.0, 150.0),	(1100.0, 150.0),
(1500.0, 150.0),	(2000.0, 150.0),	(488.0, 160.0),	(700.0, 160.0),	(1100.0, 160.0),
(1500.0, 160.0),	(2000.0, 160.0),	(533.0, 170.0),	(700.0, 170.0),	(1100.0, 170.0),
(1500.0, 170.0),	(2000.0, 170.0),	(610.0, 180.0),	(700.0, 180.0),	(1100.0, 180.0),
(1500.0, 180.0),	(2000.0, 180.0),	(750.0, 190.0),	(1100.0, 190.0),	(1500.0, 190.0),
(2000.0, 190.0),	(1829.0, 200.0),	(2000.0, 200.0),	(1829.0, 210.0),	(2000.0, 210.0),
(1981.0, 220.0),	(2000.0, 220.0),	(2134.0, 230.0),	(2500.0, 230.0),	(2438.0, 240.0),
(2500.0, 240.0),	(2896.0, 250.0),	(3000.0, 250.0),	(3048.0, 260.0),	(3500.0, 260.0),
(3658.0, 270.0),	(4000.0, 270.0),	(3962.0, 280.0),	(4000.0, 280.0),	(4572.0, 290.0),
(5000.0, 290.0),	(5182.0, 300.0),	(5500.0, 300.0),	(4801.0, 310.0),	(5000.0, 310.0),
(4875.0, 320.0),	(5000.0, 320.0),	(6000.0, 330.0),	(6500.0, 330.0),	(5500.0, 340.0),
(6000.0, 340.0),	(5250.0, 350.0),	(5500.0, 350.0),	(5125.0, 360.0),	(5500.0, 360.0),
(				

*** ISCST BY KBN 7/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
88020	0	0	0	-.13770E+03	-104.0	78.0	0.0	70.70	471.00	10.88	3.05	-64.60	36.30	36.30
88010	0	0	0	0.16860E+03	-104.0	78.0	0.0	72.20	500.00	21.88	2.16	-64.60	36.30	36.30

*** ISCST BY KBN 7/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE 1

IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE
1	64.6,	41.0,	0	2	64.6,	41.0,	0	3	64.6,	41.0,	0	4	64.6,	41.0,	0	5	64.6,	41.0,	0	6	64.6,	41.0,	0
7	64.6,	41.0,	0	8	64.6,	41.0,	0	9	64.6,	41.0,	0	10	64.6,	41.0,	0	11	64.6,	41.0,	0	12	64.6,	41.0,	0
13	64.6,	41.0,	0	14	64.6,	41.0,	0	15	64.6,	41.0,	0	16	64.6,	41.0,	0	17	64.6,	41.0,	0	18	64.6,	41.0,	0
19	64.6,	41.0,	0	20	64.6,	41.0,	0	21	64.6,	41.0,	0	22	64.6,	41.0,	0	23	64.6,	41.0,	0	24	64.6,	41.0,	0
25	64.6,	41.0,	0	26	64.6,	41.0,	0	27	64.6,	41.0,	0	28	64.6,	41.0,	0	29	64.6,	41.0,	0	30	64.6,	41.0,	0
31	64.6,	41.0,	0	32	64.6,	41.0,	0	33	64.6,	41.0,	0	34	64.6,	41.0,	0	35	64.6,	41.0,	0	36	64.6,	41.0,	0

SOURCE 2

IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE	IFV	BH	BW	IWAKE
1	64.6,	41.0,	0	2	64.6,	41.0,	0	3	64.6,	41.0,	0	4	64.6,	41.0,	0	5	64.6,	41.0,	0	6	64.6,	41.0,	0
7	64.6,	41.0,	0	8	64.6,	41.0,	0	9	64.6,	41.0,	0	10	64.6,	41.0,	0	11	64.6,	41.0,	0	12	64.6,	41.0,	0
13	64.6,	41.0,	0	14	64.6,	41.0,	0	15	64.6,	41.0,	0	16	64.6,	41.0,	0	17	64.6,	41.0,	0	18	64.6,	41.0,	0
19	64.6,	41.0,	0	20	64.6,	41.0,	0	21	64.6,	41.0,	0	22	64.6,	41.0,	0	23	64.6,	41.0,	0	24	64.6,	41.0,	0
25	64.6,	41.0,	0	26	64.6,	41.0,	0	27	64.6,	41.0,	0	28	64.6,	41.0,	0	29	64.6,	41.0,	0	30	64.6,	41.0,	0
31	64.6,	41.0,	0	32	64.6,	41.0,	0	33	64.6,	41.0,	0	34	64.6,	41.0,	0	35	64.6,	41.0,	0	36	64.6,	41.0,	0

```
* CALM HOURS (=1) FOR DAY  1 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0
* CALM HOURS (=1) FOR DAY  2 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY  3 * 0 1 1 1 0 0 1 1 0 0 0 0 0 1 0 0 0 0 0 1 1 1 0 1
* CALM HOURS (=1) FOR DAY  4 * 1 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY  5 * 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  6 * 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  7 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1
* CALM HOURS (=1) FOR DAY  8 * 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  9 * 1 1 1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 1 1 0 0
* CALM HOURS (=1) FOR DAY 10 * 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 16 * 0 0 0 0 0 0 0 1 0 0 0 0 0 0 1 1 0 0 0 0 1 1 1 0
* CALM HOURS (=1) FOR DAY 17 * 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 18 * 0 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 19 * 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 24 * 0 0 0 1 0 0 0 0 1 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 25 * 0 0 0 1 1 1 0 1 0 0 0 0 0 0 1 1 1 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 27 * 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 29 * 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 30 * 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 32 * 1 1 1 0 1 1 0 1 0 0 0 0 0 0 0 1 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 33 * 1 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 34 * 1 1 1 0 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1
* CALM HOURS (=1) FOR DAY 35 * 1 1 0 0 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 38 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0
* CALM HOURS (=1) FOR DAY 39 * 1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 40 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 41 * 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 42 * 1 1 1 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 43 * 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 44 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 45 * 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 46 * 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
```

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* CALM HOURS (=1) FOR DAY  47 *  1 1 1 1 0 1 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY  48 *  0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 1 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  49 *  1 1 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1
* CALM HOURS (=1) FOR DAY  50 *  0 0 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY  51 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY  52 *  1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 1 0 1 1
* CALM HOURS (=1) FOR DAY  53 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY  55 *  0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  56 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY  57 *  1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  61 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY  62 *  0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0
* CALM HOURS (=1) FOR DAY  63 *  0 0 1 1 1 1 1 1 1 1 0 0 0 1 1 1 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  64 *  1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  68 *  0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  69 *  0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY  70 *  1 1 1 1 1 1 1 1 0 0 0 0 1 1 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  71 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  72 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  73 *  0 0 0 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 0
* CALM HOURS (=1) FOR DAY  74 *  0 1 1 1 1 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY  75 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 0 1 1
* CALM HOURS (=1) FOR DAY  76 *  1 1 1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY  77 *  0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY  78 *  1 1 1 1 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY  79 *  0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  80 *  0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  82 *  0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0
* CALM HOURS (=1) FOR DAY  83 *  0 1 1 1 1 0 1 1 0 1 1 0 0 0 0 0 0 0 0 0 1 0 1 1
* CALM HOURS (=1) FOR DAY  84 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  86 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY  87 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  90 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY  91 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  92 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY  93 *  0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  94 *  0 0 0 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY  98 *  0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 1
* CALM HOURS (=1) FOR DAY  99 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 101 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 102 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 103 *  1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 104 *  1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 105 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 108 *  0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 109 *  0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 110 *  0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 111 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 112 *  0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 113 *  1 1 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 115 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 116 *  0 1 1 1 1 1 1 0 1 1 0 1 0 1 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 117 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 118 *  0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 119 *  0 0 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 120 *  0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 121 *  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 122 *  0 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 123 *  0 1 1 1 1 0 0 1 0 0 0 0 1 1 0 0 0 0 1 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 124 *  1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

* CALM HOURS (=1) FOR DAY 126 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 127 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 128 *	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 130 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 131 *	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 132 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 133 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 134 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 136 *	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 137 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 138 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 139 *	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 140 *	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 142 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 144 *	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 145 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 146 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 147 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 148 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 149 *	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 150 *	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 152 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 153 *	1	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 154 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 155 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 156 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 157 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 158 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 159 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 160 *	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 161 *	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 162 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 163 *	1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 164 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 165 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 166 *	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 167 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 168 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 169 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 170 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 171 *	0	0	1	1	1	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 172 *	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 173 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 174 *	0	1	0	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 175 *	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 176 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 177 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 178 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 179 *	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 180 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 183 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 184 *	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 185 *	1	1	1	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 186 *	0	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 187 *	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 188 *	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 189 *	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 190 *	0	1	1	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 191 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 192 *	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1

* CALM HOURS (=1) FOR DAY 193 *	1	1	1	0	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 194 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 195 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 196 *	0	1	1	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 197 *	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 198 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 199 *	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 200 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 201 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 202 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 203 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 204 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 205 *	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 206 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 207 *	1	1	1	1	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 208 *	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 209 *	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 210 *	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 211 *	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 212 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 213 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 214 *	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 215 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 216 *	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 217 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 218 *	0	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 219 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 220 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 221 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 222 *	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 223 *	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 224 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 225 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 226 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 227 *	1	1	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 228 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 229 *	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 230 *	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 231 *	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 232 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 233 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 234 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 235 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 237 *	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 238 *	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 239 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 240 *	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 241 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 242 *	1	1	1	1	1	0	1	1	1	1	0	1	0	0	1	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 243 *	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 244 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 245 *	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 246 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 247 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 248 *	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 249 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 251 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 252 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 255 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 256 *	1	1	0	0	1	1	0	1	0	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0

* CALM HOURS (=1) FOR DAY 257 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 258 *	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 259 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 260 *	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 263 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 265 *	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 266 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 267 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 268 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 269 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 270 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 271 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 273 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 274 *	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 275 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 276 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 277 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 278 *	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 279 *	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 280 *	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 281 *	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 282 *	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
* CALM HOURS (=1) FOR DAY 283 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 285 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 286 *	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 287 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 288 *	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 289 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 290 *	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 291 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 292 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 293 *	1	1	1	1	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 294 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 295 *	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 296 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 297 *	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 298 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 299 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 301 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 302 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 303 *	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 304 *	1	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 305 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 306 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 307 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 308 *	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 309 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 310 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 311 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 314 *	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 315 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 318 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 319 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 320 *	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 321 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 322 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 323 *	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 329 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 330 *	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0

```
* CALM HOURS (=1) FOR DAY 331 *  1  1  1  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 332 *  1  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 333 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0
* CALM HOURS (=1) FOR DAY 334 *  0  0  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 335 *  0  1  1  1  1  1  0  1  0  1  0  0  0  0  0  0  0  1  1  1  0  0  1  1
* CALM HOURS (=1) FOR DAY 336 *  1  0  1  1  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY 337 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 338 *  1  1  1  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 339 *  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 340 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1  1  1  1  0  0
* CALM HOURS (=1) FOR DAY 342 *  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  1  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 343 *  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 344 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  1  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY 345 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 346 *  0  0  0  0  0  1  1  0  0  0  1  1  0  0  0  0  1  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY 347 *  1  1  0  0  0  1  0  1  1  0  0  0  1  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 348 *  0  0  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY 349 *  1  0  1  1  0  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  1  0
* CALM HOURS (=1) FOR DAY 350 *  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 351 *  0  0  0  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY 352 *  0  0  1  0  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  1  0  1  0
* CALM HOURS (=1) FOR DAY 353 *  0  1  1  1  0  1  1  1  1  0  0  0  0  0  0  1  0  0  0  1  1  0  0  0
* CALM HOURS (=1) FOR DAY 354 *  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  1  0  0  1  1  1  0
* CALM HOURS (=1) FOR DAY 355 *  1  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 356 *  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  1  0  1  1  0  0
* CALM HOURS (=1) FOR DAY 357 *  1  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  1  1  0  1  0  0
* CALM HOURS (=1) FOR DAY 358 *  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1
* CALM HOURS (=1) FOR DAY 359 *  1  1  1  1  1  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY 360 *  1  1  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  1  1  0  1  1  1  1
* CALM HOURS (=1) FOR DAY 361 *  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY 363 *  0  1  0  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 364 *  1  1  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 365 *  1  1  1  1  1  1  1  1  1  1  1  1  1  1  0  0  0  1  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY 366 *  1  1  1  1  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
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HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 47.67795 AND OCCURRED AT (2000.0, 230.0) *

DIRECTION /	RANGE (METERS)				
(DEGREES) /	2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	20.98634 (123, 9)	22.59889 (323,12)	25.58252 (99, 8)	24.81710 (99, 8)	22.57390 (99, 8)
350.0 /	27.17923 (231,15)	24.71767 (231,15)	22.44918 (231,15)	20.06139 (231,15)	17.87052 (231,15)
340.0 /	28.32805 (214,12)	21.98106 (166,10)	19.57498 (215,15)	18.93034 (215,15)	18.47665 (144,10)
330.0 /	27.21049 (199,13)	24.61298 (199,13)	20.48068 (199,13)	19.86051 (211, 8)	19.32273 (211, 8)
320.0 /	21.48283 (187,15)	21.54162 (187,15)	19.78356 (169,15)	17.84509 (43,14)	17.24493 (43,14)
310.0 /	28.21390 (160,16)	24.51732 (140,17)	21.17082 (217,16)	18.24282 (217,16)	17.41576 (64,15)
300.0 /	26.83740 (111,16)	24.35567 (218,16)	21.03633 (218,16)	19.51067 (143,16)	18.41650 (143,16)
290.0 /	26.70139 (193,15)	23.68294 (117,16)	20.34477 (117,16)	17.75066 (120,17)	16.92296 (87,18)
280.0 /	26.81653 (99,13)	24.18436 (168,13)	20.91292 (168,13)	18.09497 (188,15)	16.72379 (147,13)
270.0 /	27.11392 (178,14)	24.40112 (178,14)	20.83100 (120,12)	18.19118 (205,16)	16.58432 (299,13)
260.0 /	24.60455 (120,14)	23.76395 (120,14)	20.28338 (264,14)	18.12538 (240,17)	16.87641 (212, 8)
250.0 /	27.77904 (93,14)	23.51537 (93,14)	20.84765 (157,16)	17.89918 (157,16)	16.85709 (72,13)
240.0 /	25.69810 (138,13)	23.61943 (264,11)	25.04947 (191, 9)	25.01855 (191, 9)	23.54836 (191, 9)
230.0 /	47.67795 (361, 9)	38.53511 (361, 9)	32.79622 (361, 9)	27.40669 (361, 9)	22.91870 (361, 9)
220.0 /	26.44063 (272, 3)	24.11787 (272, 3)	23.75086 (339, 9)	20.99757 (339, 9)	18.96755 (339,10)
210.0 /	25.70778 (234, 9)	24.28133 (234, 9)	28.69312 (339, 9)	28.86678 (339, 9)	27.31770 (339, 9)
200.0 /	24.60468 (252,12)	23.68953 (252,12)	21.38748 (252,12)	18.95100 (252,12)	16.72944 (252,12)
190.0 /	37.96455 (325, 9)	43.29097 (325, 9)	39.16187 (325, 9)	35.02328 (1, 9)	31.36530 (1, 9)
180.0 /	27.32190 (61, 9)	30.82069 (61, 9)	29.35248 (61, 9)	26.17665 (61, 9)	23.42681 (325, 9)
170.0 /	25.48737 (152,13)	29.82697 (61, 9)	30.97454 (61, 9)	29.57458 (61, 9)	27.44787 (61, 9)
160.0 /	17.41516 (145,13)	17.69385 (221,10)	18.64385 (221,10)	18.77145 (19,15)	19.24955 (19,15)
150.0 /	23.46397 (255,12)	21.43893 (151,11)	19.09071 (151,11)	17.06486 (71,14)	15.28858 (71,14)
140.0 /	25.03535 (90,13)	22.20232 (311,14)	18.85858 (311,14)	21.61586 (201,12)	26.14030 (201,12)
130.0 /	22.60059 (155,16)	22.15271 (155,16)	20.25494 (19,14)	19.11588 (19,14)	17.74928 (19,14)
120.0 /	25.60664 (224,14)	21.88371 (224,14)	19.30933 (86,14)	17.88813 (272,23)	18.39082 (191, 8)
110.0 /	26.83966 (244,13)	22.91130 (89,11)	20.29285 (180, 9)	21.24318 (180, 9)	20.46908 (180, 9)
100.0 /	26.32686 (109,13)	22.50398 (230,16)	19.79366 (230,16)	18.50467 (291, 9)	22.13939 (291, 9)
90.0 /	23.98792 (96,12)	22.35707 (59,15)	20.47407 (59,15)	18.82082 (60,17)	17.35796 (60,17)
80.0 /	22.99878 (85,17)	22.89171 (85,17)	21.36647 (85,17)	19.48878 (85,17)	17.63739 (85,17)
70.0 /	26.55257 (62,15)	22.00982 (62,15)	19.78131 (113,13)	17.48841 (113,13)	17.75903 (232, 8)
60.0 /	24.45361 (88,12)	22.59644 (88,17)	20.15745 (88,17)	19.41364 (196, 8)	19.28284 (196, 8)
50.0 /	24.92307 (110,14)	23.07375 (321,13)	25.10004 (182, 9)	26.57338 (182, 9)	25.42102 (182, 9)
40.0 /	26.83463 (124,14)	30.25746 (200, 9)	29.81654 (200, 9)	27.45645 (200, 9)	24.79982 (200, 9)
30.0 /	25.54538 (105,15)	23.27818 (55,16)	19.91854 (123,10)	17.84183 (123,10)	15.79163 (6,15)
20.0 /	20.96085 (87,12)	22.56358 (141, 9)	20.25163 (141, 9)	18.50056 (87,12)	17.37994 (324,11)
10.0 /	25.03084 (124,12)	22.44630 (356,13)	20.49031 (356,13)	19.63374 (112, 8)	22.60183 (112, 8)

HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	27.34418	(112, 8)	5500.0	10.0	28.99436	(112, 8)
4500.0	20.0	16.78172	(324,11)	5000.0	20.0	15.92078	(324,11)
2500.0	30.0	23.27818	(55,16)	3000.0	30.0	19.91854	(123,10)
2500.0	40.0	30.25746	(200, 9)	3000.0	40.0	29.81654	(200, 9)
1500.0	50.0	29.63692	(110,14)	2000.0	50.0	24.92307	(110,14)
1500.0	60.0	27.84839	(85,13)	2000.0	60.0	24.45361	(88,12)
1500.0	70.0	28.34610	(109,14)	2000.0	70.0	26.55257	(62,15)
838.0	80.0	20.62483	(172,12)	1100.0	80.0	15.26655	(76,10)
1500.0	80.0	20.57478	(135,14)	2000.0	80.0	22.99878	(85,17)
686.0	90.0	26.34369	(255, 2)	1100.0	90.0	31.02945	(96,12)
1500.0	90.0	30.82198	(96,12)	2000.0	90.0	23.98792	(96,12)
533.0	100.0	124.36185	(61, 1)	700.0	100.0	18.44800	(194,12)
1100.0	100.0	18.87032	(89,10)	1500.0	100.0	27.62085	(109,13)
2000.0	100.0	26.32686	(109,13)	457.0	110.0	168.69278	(90,20)
700.0	110.0	32.95410	(89,15)	1100.0	110.0	31.16884	(115,13)
1500.0	110.0	30.26488	(115,13)	2000.0	110.0	26.83966	(244,13)
457.0	120.0	180.62964	(56, 7)	700.0	120.0	29.67751	(119,12)
1100.0	120.0	22.72060	(155,14)	1500.0	120.0	24.86977	(224,14)
2000.0	120.0	25.60664	(224,14)	457.0	130.0	187.46820	(91, 2)
700.0	130.0	29.88400	(145,12)	1100.0	130.0	29.75285	(115,12)
1500.0	130.0	26.93983	(115,12)	2000.0	130.0	22.60059	(155,16)
457.0	140.0	195.87427	(76, 6)	700.0	140.0	25.84798	(229,11)
1100.0	140.0	19.52302	(229,11)	1500.0	140.0	23.94101	(90,13)
2000.0	140.0	25.03535	(90,13)	457.0	150.0	139.61438	(251, 3)
700.0	150.0	30.56450	(220,12)	1100.0	150.0	18.37923	(228,11)
1500.0	150.0	23.38589	(255,12)	2000.0	150.0	23.46397	(255,12)
488.0	160.0	27.62402	(310,19)	700.0	160.0	30.00537	(310,19)
1100.0	160.0	18.54300	(228,11)	1500.0	160.0	17.93840	(145,13)
2000.0	160.0	17.41516	(145,13)	533.0	170.0	169.49414	(286, 7)
700.0	170.0	30.11372	(219,11)	1100.0	170.0	22.18036	(152,12)
1500.0	170.0	29.63310	(152,12)	2000.0	170.0	25.48737	(152,13)
610.0	180.0	82.99710	(238, 3)	700.0	180.0	39.32751	(238, 3)
1100.0	180.0	24.14223	(242,14)	1500.0	180.0	27.05481	(151,14)
2000.0	180.0	27.32190	(61, 9)	750.0	190.0	30.35690	(184,11)
1100.0	190.0	20.40791	(130,13)	1500.0	190.0	16.29114	(241,11)
2000.0	190.0	37.96455	(325, 9)	1829.0	200.0	25.83533	(252,13)
2000.0	200.0	24.60468	(252,12)	1829.0	210.0	24.25438	(234, 9)
2000.0	210.0	25.70778	(234, 9)	1981.0	220.0	26.43546	(272, 3)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	26.44063	(272, 3)	2134.0	230.0	46.72375	(361, 9)
2500.0	230.0	38.53511	(361, 9)	2438.0	240.0	23.96811	(264,11)
2500.0	240.0	23.61943	(264,11)	2896.0	250.0	21.42214	(157,16)
3000.0	250.0	20.84765	(157,16)	3048.0	260.0	19.99683	(264,14)
3500.0	260.0	18.12538	(240,17)	3658.0	270.0	17.41950	(205,16)
4000.0	270.0	16.58432	(299,13)	3962.0	280.0	16.75674	(147,13)
4000.0	280.0	16.72379	(147,13)	4572.0	290.0	15.95750	(87,18)
5000.0	290.0	15.17661	(265,16)	5182.0	300.0	16.10810	(239,16)
5500.0	300.0	15.55515	(239,16)	4801.0	310.0	15.98608	(64,15)
5000.0	310.0	15.79411	(169,16)	4875.0	320.0	15.58097	(43,14)
5000.0	320.0	15.32546	(43,14)	6000.0	330.0	14.85175	(211, 8)
6500.0	330.0	13.86472	(211, 8)	5500.0	340.0	23.47368	(144,10)
6000.0	340.0	24.33335	(144,10)	5250.0	350.0	13.69711	(149, 8)
5500.0	350.0	13.63216	(149, 8)	5125.0	360.0	17.50408	(99, 8)
5500.0	360.0	16.16763	(99, 8)				

2ND HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 38.14232 AND OCCURRED AT (3000.0, 190.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	20.82269 (80,10)	21.73331 (99, 8)	20.31197 (323,12)	18.91596 (158, 9)	17.69749 (158, 9)
350.0 /	24.26656 (95,13)	20.17249 (208,16)	20.22935 (208,16)	18.25112 (208,16)	16.07396 (121,10)
340.0 /	23.02170 (166,10)	21.61958 (214,12)	18.98226 (209,16)	17.86816 (42,12)	17.83736 (215,15)
330.0 /	23.31448 (211, 9)	23.47498 (211, 9)	20.46349 (211, 9)	18.39802 (205,13)	16.50947 (128,18)
320.0 /	19.70092 (169,11)	20.38644 (168,12)	19.66524 (274,15)	17.72719 (169,15)	16.10557 (112,17)
310.0 /	26.97786 (140,17)	24.20496 (117,15)	20.95068 (117,15)	18.10674 (207,16)	16.74800 (166,17)
300.0 /	24.56351 (218,16)	24.34056 (111,16)	20.71456 (57,12)	18.33150 (366,14)	17.62494 (239,16)
290.0 /	25.63844 (141,14)	23.02059 (193,15)	19.81932 (163,15)	17.41331 (87,18)	16.29150 (299,12)
280.0 /	24.36739 (168,13)	24.18127 (99,13)	20.77994 (264,13)	18.00157 (78,14)	16.61246 (117,17)
270.0 /	22.94884 (164,14)	22.93700 (120,12)	20.80003 (161,16)	17.98391 (161,16)	15.77087 (205,16)
260.0 /	20.15620 (264,14)	22.57890 (264,14)	20.20318 (120,14)	17.94053 (188,16)	16.40221 (173,17)
250.0 /	25.41356 (139,11)	22.98146 (157,16)	20.75009 (178,13)	17.83835 (351,14)	16.31007 (272, 5)
240.0 /	24.63528 (260,10)	23.47575 (138,13)	22.60909 (322,11)	21.30446 (322,11)	19.14035 (322,11)
230.0 /	28.15135 (241,13)	23.71871 (241,12)	20.04872 (280,15)	18.28328 (300,12)	16.80659 (251,12)
220.0 /	24.82861 (271,16)	23.12035 (339, 9)	21.65405 (272, 3)	19.62693 (272, 2)	18.19142 (272, 2)
210.0 /	22.21240 (270,12)	23.75465 (339, 9)	20.65645 (234, 9)	18.38651 (328,15)	16.85882 (252,19)
200.0 /	23.83951 (235,11)	21.22658 (235,11)	19.66691 (304,10)	18.51009 (304,10)	16.63523 (304,10)
190.0 /	25.80328 (1, 9)	37.61534 (1, 9)	38.14232 (1, 9)	33.60440 (325, 9)	28.80157 (325, 9)
180.0 /	24.77940 (151,14)	26.60866 (325, 9)	27.07534 (325, 9)	25.43143 (325, 9)	22.93074 (61, 9)
170.0 /	25.44119 (152,12)	20.51747 (152,13)	18.13664 (235,13)	17.70333 (235,13)	16.79024 (235,17)
160.0 /	16.81718 (190,12)	15.11126 (229,10)	16.47270 (19,15)	17.38145 (221,10)	16.43665 (253,20)
150.0 /	21.19768 (151,11)	19.52384 (255,12)	18.26002 (71,14)	16.56422 (318,15)	14.79211 (318,15)
140.0 /	24.35681 (311,14)	21.42219 (90,13)	17.92301 (38,11)	15.79095 (311,14)	15.65965 (130, 1)
130.0 /	22.55939 (255,13)	21.73138 (69,15)	19.52409 (155, 8)	17.74311 (155, 8)	16.56491 (254, 1)
120.0 /	24.99944 (92,13)	21.72801 (86,12)	19.24776 (56,14)	17.07954 (86,14)	16.80394 (272,23)
110.0 /	25.78119 (89,11)	22.15228 (92,15)	20.24762 (89,11)	17.92792 (89,11)	16.61192 (54,10)
100.0 /	26.06755 (154,11)	22.45319 (154,11)	19.36235 (221,17)	18.36841 (89, 4)	18.75424 (51, 9)
90.0 /	23.70325 (81,11)	22.08751 (81,11)	20.15234 (60,17)	18.60797 (81,15)	17.02816 (81,15)
80.0 /	21.73268 (232,12)	21.59666 (59,17)	20.39501 (59,17)	18.74679 (59,17)	17.05980 (59,17)
70.0 /	25.56285 (108,11)	21.64963 (108,11)	19.59691 (355,16)	17.36702 (355,16)	16.63170 (88,24)
60.0 /	24.25130 (88,17)	22.58333 (225,15)	20.13409 (225,15)	17.85132 (95,17)	17.08724 (95,17)
50.0 /	24.59764 (321,13)	22.33422 (108,10)	20.42752 (107,15)	19.35509 (107,15)	17.92325 (107,15)
40.0 /	25.78276 (129,15)	23.28818 (141,10)	21.65407 (83, 9)	22.09155 (83, 9)	22.46762 (83, 9)
30.0 /	24.53462 (110,13)	21.83311 (129, 9)	19.87702 (55,16)	17.48250 (6,15)	15.72922 (354,14)
20.0 /	20.71631 (247,15)	21.29808 (247,15)	20.10872 (87,12)	17.39183 (324,11)	16.74009 (87,12)
10.0 /	19.94841 (215, 9)	20.90671 (215, 9)	20.06740 (183,12)	17.75668 (183,12)	17.60649 (232,17)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	16.04852	(232,17)	5500.0	10.0	15.06149	(232,17)
4500.0	20.0	15.47169	(10,10)	5000.0	20.0	15.04556	(10,10)
2500.0	30.0	21.83311	(129, 9)	3000.0	30.0	19.87702	(55,16)
2500.0	40.0	23.28818	(141,10)	3000.0	40.0	21.65407	(83, 9)
1500.0	50.0	28.23987	(88,14)	2000.0	50.0	24.59764	(321,13)
1500.0	60.0	24.92262	(88,12)	2000.0	60.0	24.25130	(88,17)
1500.0	70.0	26.88521	(62,15)	2000.0	70.0	25.56285	(108,11)
838.0	80.0	14.18405	(223,12)	1100.0	80.0	14.82639	(91,14)
1500.0	80.0	19.88295	(129,14)	2000.0	80.0	21.73268	(232,12)
686.0	90.0	24.74557	(86, 2)	1100.0	90.0	22.23936	(60,15)
1500.0	90.0	25.69620	(107,14)	2000.0	90.0	23.70325	(81,11)
533.0	100.0	27.26794	(60,14)	700.0	100.0	17.28094	(60,14)
1100.0	100.0	18.70880	(257,12)	1500.0	100.0	24.60927	(154,11)
2000.0	100.0	26.06755	(154,11)	457.0	110.0	44.10922	(89,15)
700.0	110.0	25.62608	(194,12)	1100.0	110.0	29.47023	(89,15)
1500.0	110.0	28.94531	(244,13)	2000.0	110.0	25.78119	(89,11)
457.0	120.0	78.50522	(310,24)	700.0	120.0	27.09419	(145,12)
1100.0	120.0	20.23917	(259,12)	1500.0	120.0	23.78534	(92,13)
2000.0	120.0	24.99944	(92,13)	457.0	130.0	100.25635	(316,19)
700.0	130.0	27.56369	(119,12)	1100.0	130.0	21.55153	(155,14)
1500.0	130.0	24.35847	(255,13)	2000.0	130.0	22.55939	(255,13)
[redacted]				700.0	140.0	24.87958	(256,12)
1100.0	140.0	18.97502	(256,12)	1500.0	140.0	19.49661	(221,11)
2000.0	140.0	24.35681	(311,14)	457.0	150.0	137.61295	(276, 1)
700.0	150.0	22.58871	(256,12)	1100.0	150.0	17.09912	(221,11)
1500.0	150.0	20.36363	(151,12)	2000.0	150.0	21.19768	(151,11)
488.0	160.0	27.32849	(275, 4)	700.0	160.0	29.54227	(275, 4)
1100.0	160.0	18.49210	(153,14)	1500.0	160.0	17.54227	(190,12)
2000.0	160.0	16.81718	(190,12)	533.0	170.0	20.10239	(219,11)
700.0	170.0	22.22148	(153,14)	1100.0	170.0	19.81161	(130,14)
1500.0	170.0	27.50449	(152,13)	2000.0	170.0	25.44119	(152,12)
610.0	180.0	75.77798	(22, 1)	700.0	180.0	33.03635	(22, 1)
1100.0	180.0	21.16895	(130,15)	1500.0	180.0	19.80119	(242,14)
2000.0	180.0	24.77940	(151,14)	750.0	190.0	25.60646	(176,14)
1100.0	190.0	18.62077	(184,11)	1500.0	190.0	15.89505	(328,14)
2000.0	190.0	25.80328	(1, 9)	1829.0	200.0	25.77029	(252,12)
2000.0	200.0	23.83951	(235,11)	1829.0	210.0	20.75484	(270,12)
2000.0	210.0	22.21240	(270,12)	1981.0	220.0	24.84642	(271,16)

2ND HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	24.82861	(271,16)	2134.0	230.0	26.70776	(145,14)
2500.0	230.0	23.71871	(241,12)	2438.0	240.0	23.90945	(138,13)
2500.0	240.0	23.47575	(138,13)	2896.0	250.0	21.31448	(178,13)
3000.0	250.0	20.75009	(178,13)	3048.0	260.0	19.91228	(240,17)
3500.0	260.0	17.94053	(188,16)	3658.0	270.0	17.10507	(161,16)
4000.0	270.0	15.77087	(205,16)	3962.0	280.0	16.64357	(117,17)
4000.0	280.0	16.61246	(117,17)	4572.0	290.0	15.75610	(265,16)
5000.0	290.0	15.13525	(87,18)	5182.0	300.0	15.51280	(143,16)
5500.0	300.0	14.88464	(64,17)	4801.0	310.0	15.97049	(169,16)
5000.0	310.0	15.59303	(64,15)	4875.0	320.0	15.28490	(112,17)
5000.0	320.0	15.11032	(112,17)	6000.0	330.0	14.23249	(337,15)
6500.0	330.0	13.50421	(337,15)	5500.0	340.0	15.14783	(127, 8)
6000.0	340.0	15.88158	(127, 8)	5250.0	350.0	13.55429	(231,15)
5500.0	350.0	13.22139	(87,14)	5125.0	360.0	14.44353	(65,13)
5500.0	360.0	13.76229	(65,13)				

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 11.75509 AND OCCURRED AT (2500.0, 90.0) *

DIRECTION /			RANGE (METERS)		
(DEGREES) /	2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.74637 (112, 2)	7.60126 (112, 2)	7.26377 (112, 2)	7.74605 (65, 2)	7.75898 (65, 2)
350.0 /	5.43549 (112, 2)	6.34614 (112, 2)	5.77960 (121, 2)	5.04055 (118, 2)	4.95677 (118, 2)
340.0 /	6.86910 (214, 2)	6.46352 (214, 2)	5.52104 (214, 2)	4.60898 (214, 2)	4.35514C(174, 3)
330.0 /	7.60494 (211, 2)	8.12243 (211, 2)	7.18932 (211, 2)	6.08122 (211, 2)	5.11060 (211, 2)
320.0 /	6.79022C(193, 2)	6.26373C(193, 2)	6.27348C(366, 2)	5.95083C(366, 2)	5.49653C(197, 2)
310.0 /	5.46964 (216, 2)	7.61285C(41, 2)	8.54225C(41, 2)	8.12272C(41, 2)	7.33196C(41, 2)
300.0 /	6.80365C(218, 2)	6.89128C(167, 2)	6.83378C(366, 2)	6.41726C(366, 2)	5.72641C(366, 2)
290.0 /	9.25448C(160, 2)	9.26746C(160, 2)	7.99714C(160, 2)	6.67008C(160, 2)	5.54786C(160, 2)
280.0 /	8.79490C(160, 2)	8.18983C(160, 2)	6.92278C(160, 2)	6.14677C(78, 2)	5.49375 (147, 2)
270.0 /	8.61397 (239, 2)	8.56138 (239, 2)	7.33464 (239, 2)	6.19911 (267, 2)	5.69881 (267, 2)
260.0 /	8.45450C(238, 2)	8.04933C(238, 2)	7.26204C(330, 2)	7.25342 (33, 2)	6.79538 (33, 2)
250.0 /	5.82452C(240, 2)	5.76987C(240, 2)	5.37207 (138, 2)	5.04213 (331, 2)	4.69518 (331, 2)
240.0 /	8.78904 (137, 2)	7.03114 (271, 2)	7.44713 (271, 2)	7.21307 (271, 2)	6.74138 (271, 2)
230.0 /	8.17892 (241, 2)	6.92970 (241, 2)	7.39545 (284, 2)	8.52662 (284, 2)	8.96728 (284, 2)
220.0 /	5.10716 (272, 1)	7.44462 (272, 1)	8.44775 (272, 1)	8.56342 (272, 1)	8.27292 (272, 1)
210.0 /	4.70256 (328, 2)	6.13367 (261, 3)	8.27033 (261, 3)	9.02417 (261, 3)	9.07762 (261, 3)
200.0 /	7.25286 (252, 2)	7.20906 (252, 2)	6.76687 (252, 2)	6.05872 (252, 2)	5.65719 (326, 2)
190.0 /	4.27761 (328, 2)	5.04749 (241, 2)	5.82256 (327, 3)	7.10812 (327, 3)	7.60522 (327, 3)
180.0 /	6.88678 (130, 2)	6.49593 (61, 2)	6.24878 (152, 2)	5.98345 (152, 2)	5.52728 (327, 1)
170.0 /	8.03014 (152, 2)	7.02320 (152, 2)	5.90429 (152, 2)	4.93506 (152, 2)	4.28623 (328, 1)
160.0 /	5.72464 (151, 2)	4.81148 (151, 2)	3.90443 (253, 3)	4.58700 (253, 3)	4.82294 (253, 3)
150.0 /	11.58370 (151, 2)	10.91478 (151, 2)	9.39170 (151, 2)	7.90909 (151, 2)	6.65903 (151, 2)
140.0 /	4.44227 (177, 2)	5.06413 (255, 2)	5.09903 (255, 2)	5.88059 (254, 1)	7.12729 (254, 1)
130.0 /	9.34108 (155, 2)	8.18016 (69, 2)	7.67188 (69, 2)	6.79151 (255, 2)	6.17796 (255, 2)
120.0 /	8.56923 (224, 2)	10.19474 (97, 2)	10.54361 (97, 2)	10.23613 (97, 2)	9.67616 (97, 2)
110.0 /	10.98614 (115, 2)	9.64964 (115, 2)	8.18115 (115, 2)	6.92550 (115, 2)	5.90761 (115, 2)
100.0 /	7.38343 (96, 2)	8.69458 (96, 2)	9.30445 (96, 2)	9.17085 (96, 2)	8.72833 (96, 2)
90.0 /	11.52107 (81, 2)	11.75509 (81, 2)	10.95574 (81, 2)	9.91095 (81, 2)	8.88387 (81, 2)
80.0 /	4.76449 (135, 2)	5.74182 (232, 2)	5.94918 (232, 2)	5.57217 (232, 2)	5.40693 (80, 3)
70.0 /	8.97382 (225, 2)	8.65495 (225, 2)	7.47274 (225, 2)	6.26951 (225, 2)	6.81386C(355, 2)
60.0 /	11.04660 (225, 2)	9.64036 (225, 2)	7.89902 (225, 2)	6.42252 (225, 2)	5.26466 (225, 2)
50.0 /	8.08571 (225, 2)	6.97177C(321, 2)	7.84829 (125, 2)	8.78240 (125, 2)	9.01868 (125, 2)
40.0 /	6.07460C(321, 2)	5.14472 (129, 2)	5.19007 (324, 2)	4.84300 (324, 2)	4.35738 (324, 2)
30.0 /	7.41521 (129, 2)	7.91961 (129, 2)	7.01265 (129, 2)	5.92117 (129, 2)	4.95212 (129, 2)
20.0 /	6.21480C(247, 2)	7.03893C(247, 2)	6.46797C(247, 2)	5.60421C(247, 2)	5.54474 (10, 2)
10.0 /	7.33328 (215, 2)	7.22390 (215, 2)	6.20160 (215, 2)	5.29128 (124, 2)	4.78480 (124, 2)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	4.55736C	(112, 1)	5500.0	10.0	4.83239C	(112, 1)
4500.0	20.0	6.33299	(10, 2)	5000.0	20.0	6.72908	(10, 2)
2500.0	30.0	7.91961	(129, 2)	3000.0	30.0	7.01265	(129, 2)
2500.0	40.0	5.14472	(129, 2)	3000.0	40.0	5.19007	(324, 2)
1500.0	50.0	9.46360	(88, 2)	2000.0	50.0	8.08571	(225, 2)
1500.0	60.0	9.02561	(225, 2)	2000.0	60.0	11.04660	(225, 2)
1500.0	70.0	5.50232	(225, 2)	2000.0	70.0	8.97382	(225, 2)
838.0	80.0	2.22848C	(134, 2)	1100.0	80.0	2.64111	(223, 2)
1500.0	80.0	3.70074	(135, 2)	2000.0	80.0	4.76449	(135, 2)
686.0	90.0	1.35719C	(346, 2)	1100.0	90.0	5.20928	(59, 2)
1500.0	90.0	8.40321	(59, 2)	2000.0	90.0	11.52107	(81, 2)
533.0	100.0	1.13913C	(24, 3)	700.0	100.0	1.53709C	(278, 2)
1100.0	100.0	5.66343	(89, 2)	1500.0	100.0	7.26573	(89, 2)
2000.0	100.0	7.38343	(96, 2)	457.0	110.0	2.63067C	(90, 3)
700.0	110.0	3.75877	(89, 2)	1100.0	110.0	7.10108	(89, 2)
1500.0	110.0	10.61931	(115, 2)	2000.0	110.0	10.98614	(115, 2)
457.0	120.0	19.37637	(56, 1)	700.0	120.0	4.22893C	(119, 2)
1100.0	120.0	5.04949	(224, 2)	1500.0	120.0	9.25209	(224, 2)
2000.0	120.0	8.56923	(224, 2)	457.0	130.0	17.98524	(91, 1)
700.0	130.0	4.13060C	(171, 2)	1100.0	130.0	4.09428	(224, 2)
1500.0	130.0	9.28008	(155, 2)	2000.0	130.0	9.34108	(155, 2)
457.0	140.0	32.64571C	(76, 1)	700.0	140.0	3.91064C	(171, 2)
1100.0	140.0	3.65753	(229, 2)	1500.0	140.0	3.69675	(229, 2)
2000.0	140.0	4.44227	(177, 2)	457.0	150.0	15.11476C	(251, 1)
700.0	150.0	4.08667	(228, 2)	1100.0	150.0	3.92452	(228, 2)
1500.0	150.0	7.90988	(151, 2)	2000.0	150.0	11.58370	(151, 2)
488.0	160.0	3.45300	(310, 3)	700.0	160.0	3.75649	(228, 2)
1100.0	160.0	3.47472	(228, 2)	1500.0	160.0	4.57583	(151, 2)
2000.0	160.0	5.72464	(151, 2)	533.0	170.0	27.98026C	(286, 1)
700.0	170.0	3.26885	(219, 2)	1100.0	170.0	3.86914	(130, 2)
1500.0	170.0	7.47657	(152, 2)	2000.0	170.0	8.03014	(152, 2)
610.0	180.0	13.83285C	(238, 1)	700.0	180.0	6.55459C	(238, 1)
1100.0	180.0	4.23052C	(242, 2)	1500.0	180.0	5.95510	(130, 2)
2000.0	180.0	6.88678	(130, 2)	750.0	190.0	3.20063	(176, 2)
1100.0	190.0	2.68734C	(242, 2)	1500.0	190.0	3.55002	(130, 2)
2000.0	190.0	4.27761	(328, 2)	1829.0	200.0	6.41437	(252, 2)
2000.0	200.0	7.25286	(252, 2)	1829.0	210.0	3.96851	(132, 2)
2000.0	210.0	4.70256	(328, 2)	1981.0	220.0	5.06322	(272, 1)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	5.10716	(272, 1)	2134.0	230.0	7.92559	(241, 2)
2500.0	230.0	6.92970	(241, 2)	2438.0	240.0	7.08577	(137, 2)
2500.0	240.0	7.03114	(271, 2)	2896.0	250.0	5.42308	(138, 2)
3000.0	250.0	5.37207	(138, 2)	3048.0	260.0	7.25888C	(330, 2)
3500.0	260.0	7.25342	(33, 2)	3658.0	270.0	6.04530	(267, 2)
4000.0	270.0	5.69881	(267, 2)	3962.0	280.0	5.49390	(147, 2)
4000.0	280.0	5.49375	(147, 2)	4572.0	290.0	4.56227	(75, 2)
5000.0	290.0	4.18432	(75, 2)	5182.0	300.0	4.18728C	(366, 2)
5500.0	300.0	3.85174C	(366, 2)	4801.0	310.0	6.03455C	(41, 2)
5000.0	310.0	5.74292C	(41, 2)	4875.0	320.0	4.76603C	(197, 2)
5000.0	320.0	4.65970C	(197, 2)	6000.0	330.0	3.49518	(58, 1)
6500.0	330.0	3.27463	(58, 1)	5500.0	340.0	3.58168C	(174, 3)
6000.0	340.0	3.48030C	(144, 2)	5250.0	350.0	4.12268	(118, 2)
5500.0	350.0	3.93701	(118, 2)	5125.0	360.0	7.08321	(65, 2)
5500.0	360.0	6.78826	(65, 2)				

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 9.04192 AND OCCURRED AT (2000.0, 90.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	4.67602 (80, 2)	5.63849 (65, 2)	7.22113 (65, 2)	6.38259 (112, 2)	5.48779 (112, 2)
350.0 /	5.28700 (121, 2)	6.25656 (121, 2)	5.61748 (112, 2)	5.04007 (121, 2)	4.34459 (121, 2)
340.0 /	5.42616C(198, 2)	5.17650C(198, 2)	4.80636 (209, 2)	4.23132C(174, 3)	3.84606 (214, 2)
330.0 /	7.19043C(198, 2)	6.23451C(198, 2)	4.94782C(198, 2)	4.00918 (58, 1)	4.14990 (58, 1)
320.0 /	4.92511 (187, 2)	5.49255C(366, 2)	5.57861C(197, 2)	5.76031C(197, 2)	5.35037 (168, 2)
310.0 /	4.96169 (169, 2)	6.96464 (169, 2)	7.05826 (169, 2)	6.56585 (169, 2)	5.94459 (169, 2)
300.0 /	6.51538C(167, 2)	6.38676 (57, 2)	6.24058C(167, 2)	5.42891C(167, 2)	4.70408C(167, 2)
290.0 /	6.14084C(133, 2)	6.86926C(133, 2)	6.21741C(133, 2)	5.32054C(133, 2)	4.99300 (75, 2)
280.0 /	5.32355 (158, 2)	6.91675C(78, 2)	6.89745C(78, 2)	5.74543C(160, 2)	5.37760C(78, 2)
270.0 /	5.70512C(161, 2)	6.48921 (120, 2)	6.58077 (267, 2)	6.09489 (239, 2)	5.05653 (239, 2)
260.0 /	5.85204 (138, 2)	6.38183C(330, 2)	7.07500 (33, 2)	6.90049C(330, 2)	6.21810C(330, 2)
250.0 /	4.70082C(238, 2)	5.27371 (138, 2)	5.15615 (331, 2)	4.89375 (138, 2)	4.28853 (138, 2)
240.0 /	6.10396 (271, 2)	6.97251 (191, 2)	6.82778 (191, 2)	6.17112 (191, 2)	5.43271 (191, 2)
230.0 /	6.37855 (137, 2)	6.55372 (329, 2)	6.27872 (329, 2)	6.55963 (262, 2)	6.71063 (262, 2)
220.0 /	3.28118 (241, 2)	5.94408 (339, 2)	6.67418 (339, 2)	6.45868 (339, 2)	7.39416 (361, 2)
210.0 /	4.44360 (132, 2)	5.16995C(152, 3)	5.38712 (339, 2)	5.34771 (339, 2)	5.18924 (271, 3)
200.0 /	4.08905 (4, 2)	5.36649 (235, 2)	5.99313 (235, 2)	5.91769 (235, 2)	5.58777 (235, 2)
190.0 /	4.09793 (241, 2)	4.65675 (328, 2)	5.66850 (327, 1)	6.33185 (327, 1)	6.48819 (327, 1)
180.0 /	5.97132 (61, 2)	6.16651 (130, 2)	6.01648 (61, 2)	5.64468 (235, 2)	5.48775 (152, 2)
170.0 /	4.38622 (130, 2)	4.39117 (61, 2)	4.50130 (61, 2)	4.25891 (61, 2)	4.14948 (152, 2)
160.0 /	3.28756 (318, 2)	3.34647 (221, 2)	3.79064 (151, 2)	3.62936 (130, 1)	3.88496 (130, 1)
150.0 /	5.55623C(288, 2)	5.67334C(288, 2)	5.30707 (318, 2)	4.72647 (318, 2)	4.08222 (318, 2)
140.0 /	4.09832 (317, 2)	5.05521 (317, 2)	4.96077 (38, 2)	5.04829 (67, 1)	5.54916 (67, 1)
130.0 /	7.05363 (69, 2)	7.94165 (155, 2)	7.30140 (255, 2)	6.77290 (69, 2)	5.87125 (69, 2)
120.0 /	8.55622 (97, 2)	6.95677 (115, 2)	5.83638 (115, 2)	5.57396 (37, 2)	5.58543 (37, 2)
110.0 /	8.09757 (244, 2)	7.66362 (244, 2)	6.63254 (244, 2)	5.60986 (244, 2)	4.99485 (89, 2)
100.0 /	7.25153 (135, 2)	7.23727 (135, 2)	6.34257 (135, 2)	6.11773 (60, 1)	6.22028 (60, 1)
[redacted]		8.78300 (59, 2)	8.14407 (59, 2)	7.42346 (59, 2)	6.72944 (59, 2)
80.0 /	4.03543 (109, 2)	4.75888 (109, 2)	4.76174 (109, 2)	5.14741 (80, 3)	5.04792 (232, 2)
70.0 /	8.25047 (109, 2)	7.68972 (109, 2)	7.00112 (113, 2)	6.18977C(355, 2)	5.99067 (59, 1)
60.0 /	6.08356 (105, 2)	5.49908 (88, 3)	5.10158 (88, 3)	4.64005 (88, 3)	4.34301 (30, 2)
50.0 /	7.56849 (88, 2)	6.58566 (225, 2)	5.88379C(321, 2)	5.51888 (95, 3)	5.35996 (95, 3)
40.0 /	4.96479 (124, 2)	5.00352 (324, 2)	4.69530 (129, 2)	4.10305 (129, 2)	3.74460C(83, 2)
30.0 /	4.51643 (111, 2)	3.78383C(315, 2)	3.85540C(123, 2)	3.87781C(123, 2)	3.69466 (6, 2)
20.0 /	5.22772 (141, 2)	5.31642 (141, 2)	4.62591 (141, 2)	4.12678 (10, 2)	4.77769C(247, 2)
10.0 /	6.12420 (124, 2)	6.09565 (124, 2)	5.77774 (124, 2)	5.15703 (215, 2)	4.27759 (215, 2)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	3.92131	(65, 2)	5500.0	10.0	3.75429	(65, 2)
4500.0	20.0	4.06906C	(247, 2)	5000.0	20.0	4.14604	(341, 1)
2500.0	30.0	3.78383C	(315, 2)	3000.0	30.0	3.85540C	(123, 2)
2500.0	40.0	5.00352	(324, 2)	3000.0	40.0	4.69530	(129, 2)
1500.0	50.0	6.97524	(225, 2)	2000.0	50.0	7.56849	(88, 2)
1500.0	60.0	6.14568	(109, 2)	2000.0	60.0	6.08356	(105, 2)
1500.0	70.0	4.56386	(108, 2)	2000.0	70.0	8.25047	(109, 2)
838.0	80.0	2.17569C	(290, 2)	1100.0	80.0	2.46239C	(119, 2)
1500.0	80.0	2.77014	(129, 2)	2000.0	80.0	4.03543	(109, 2)
686.0	90.0	1.35608C	(290, 2)	1100.0	90.0	4.24578	(223, 2)
1500.0	90.0	8.34301	(81, 2)	[redacted]			
533.0	100.0	0.70855C	(119, 2)	700.0	100.0	1.51063	(142, 2)
1100.0	100.0	3.23699	(223, 2)	1500.0	100.0	6.04397	(223, 2)
2000.0	100.0	7.25153	(135, 2)	457.0	110.0	1.92017	(89, 2)
700.0	110.0	2.77989C	(119, 2)	1100.0	110.0	3.97342	(115, 2)
1500.0	110.0	7.89121	(89, 2)	2000.0	110.0	8.09757	(244, 2)
457.0	120.0	5.42896	(60, 2)	700.0	120.0	2.65700	(60, 2)
1100.0	120.0	3.82062	(155, 2)	1500.0	120.0	6.83248	(115, 2)
2000.0	120.0	8.55622	(97, 2)	457.0	130.0	1.25621C	(25, 1)
700.0	130.0	3.61737C	(119, 2)	1100.0	130.0	3.54809	(155, 2)
1500.0	130.0	5.38653	(224, 2)	2000.0	130.0	7.05363	(69, 2)
457.0	140.0	1.04387C	(25, 1)	700.0	140.0	3.12267C	(256, 2)
1100.0	140.0	2.87748C	(171, 2)	1500.0	140.0	3.67499C	(153, 2)
2000.0	140.0	4.09832	(317, 2)	457.0	150.0	0.59105C	(308, 1)
700.0	150.0	3.74726C	(256, 2)	1100.0	150.0	2.80239C	(256, 2)
1500.0	150.0	3.41666	(255, 2)	2000.0	150.0	5.55623C	(288, 2)
488.0	160.0	0.74615	(219, 2)	700.0	160.0	3.75067	(310, 3)
1100.0	160.0	2.14416C	(290, 2)	1500.0	160.0	2.92309C	(190, 2)
2000.0	160.0	3.28756	(318, 2)	533.0	170.0	2.36508	(219, 2)
700.0	170.0	1.96676	(228, 2)	1100.0	170.0	3.29724C	(242, 2)
1500.0	170.0	4.42775	(130, 2)	2000.0	170.0	4.38622	(130, 2)
610.0	180.0	2.14622	(219, 2)	700.0	180.0	1.68049C	(153, 2)
1100.0	180.0	2.43769C	(360, 2)	1500.0	180.0	3.42380C	(242, 2)
2000.0	180.0	5.97132	(61, 2)	750.0	190.0	2.06602	(178, 2)
1100.0	190.0	2.24835C	(360, 2)	1500.0	190.0	2.65674	(328, 2)
2000.0	190.0	4.09793	(241, 2)	1829.0	200.0	3.67828	(4, 2)
2000.0	200.0	4.08905	(4, 2)	1829.0	210.0	3.44442	(328, 2)
2000.0	210.0	4.44360	(132, 2)	1981.0	220.0	3.22196	(241, 2)

*** ISCST BY KBN 3/88 *** 1984 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	3.28118	(241, 2)	2134.0	230.0	6.40840	(137, 2)
2500.0	230.0	6.55372	(329, 2)	2438.0	240.0	6.91623	(191, 2)
2500.0	240.0	6.97251	(191, 2)	2896.0	250.0	5.22096C	(240, 2)
3000.0	250.0	5.15615	(331, 2)	3048.0	260.0	7.14214	(33, 2)
3500.0	260.0	6.90049C	(330, 2)	3658.0	270.0	5.74263	(239, 2)
4000.0	270.0	5.05653	(239, 2)	3962.0	280.0	5.43229C	(78, 2)
4000.0	280.0	5.37760C	(78, 2)	4572.0	290.0	4.53628C	(160, 2)
5000.0	290.0	3.93898C	(160, 2)	5182.0	300.0	3.46570C	(167, 2)
5500.0	300.0	3.35426C	(75, 3)	4801.0	310.0	5.00612	(169, 2)
5000.0	310.0	4.79834	(169, 2)	4875.0	320.0	4.57392	(168, 2)
5000.0	320.0	4.46057	(168, 2)	6000.0	330.0	2.85609	(211, 2)
6500.0	330.0	2.58486	(149, 2)	5500.0	340.0	3.36108C	(148, 3)
6000.0	340.0	3.29203C	(148, 3)	5250.0	350.0	3.05655	(121, 2)
5500.0	350.0	2.86628	(121, 2)	5125.0	360.0	4.06138	(80, 2)
5500.0	360.0	3.79813	(80, 2)				

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ISCSTK6C MODEL, A VERSION OF
  ISCST (VERSION 88207)
  AN AIR QUALITY DISPERSION MODEL IN
  SECTION 1.  GUIDELINE MODELS.
  IN UNAMAP (VERSION 6) JULY 1988.
  SOURCE: FILE 6  ON UNAMAP MAGNETIC TAPE FROM NTIS.
  (Based on Change 7 to UNAMAP, July 27, 1988)


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        GAINESVILLE, FLORIDA
            (904)375-8000

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  CARD INPUT File is        gcoinc85.in
  SUMMARY OUTPUT File is    gcoinc85.out
  METEOROLOGICAL FILE is    jaxpre85.bin
  TITLE OF RUN is           1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4
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*** ISCST BY KBN 7/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

CALCULATE (CONCENTRATION=1,DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1,POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1,NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1,NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0,YES=1,MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1,NO=0)	ISW(7) = 1
2-HOUR (YES=1,NO=0)	ISW(8) = 0
3-HOUR (YES=1,NO=0)	ISW(9) = 0
4-HOUR (YES=1,NO=0)	ISW(10) = 0
6-HOUR (YES=1,NO=0)	ISW(11) = 0
8-HOUR (YES=1,NO=0)	ISW(12) = 1
12-HOUR (YES=1,NO=0)	ISW(13) = 0
24-HOUR (YES=1,NO=0)	ISW(14) = 0
PRINT 'N'-DAY TABLE(S) (YES=1,NO=0)	ISW(15) = 0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1,NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1,NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1,NO=0)	ISW(18) = 0
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1,CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RU.=0,UR. MODE 1=1,UR. MODE 2=2,UR. MODE 3=3)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1,USER ENTERS=2,3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1,USER ENTERS=2,3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0,YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1,NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2,NO=1)	ISW(25) = 2
PROGRAM USES BUOYANCY INDUCED DISPERSION (YES=1,NO=2)	ISW(26) = 1
CONCENTRATIONS DURING CALM PERIODS SET = 0 (YES=1,NO=2)	ISW(27) = 1
REG. DEFAULT OPTION CHOSEN (YES=1,NO=2)	ISW(28) = 1
TYPE OF POLLUTANT TO BE MODELLED (1=SO2,2=OTHER)	ISW(29) = 1
DEBUG OPTION CHOSEN (YES=1,NO=2)	ISW(30) = 2
ABOVE GROUND (FLAGPOLE) RECEPTORS USED (YES=1,NO=0)	ISW(31) = 0
NUMBER OF INPUT SOURCES	NSOURC = 2
NUMBER OF SOURCE GROUPS (=0,ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0,ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 105
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =.10000E+07
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 6.10 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 13889
YEAR OF SURFACE DATA	ISY = 85
UPPER AIR STATION NO.	IUS = 13861
YEAR OF UPPER AIR DATA	IUY = 85
ALLOCATED DATA STORAGE	LIMIT = 25000 WORDS
REQUIRED DATA STORAGE FOR THIS PROBLEM RUN	MIMIT = 4245 WORDS

*** ISCST BY KBN 7/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4   ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
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*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.50,   3.10,   5.10,   8.20, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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*** ISCST BY KBN  7/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4                ***


                                   *** RANGES OF POLAR GRID SYSTEM ***
                                                (METERS)

 2000.0,    2500.0,    3000.0,    3500.0,    4000.0,


                               *** RADIAL ANGLES OF POLAR GRID SYSTEM ***

                                               (DEGREES)

   10.0,      20.0,      30.0,      40.0,      50.0,      60.0,      70.0,      80.0,      90.0,     100.0,
  110.0,     120.0,     130.0,     140.0,     150.0,     160.0,     170.0,     180.0,     190.0,     200.0,
  210.0,     220.0,     230.0,     240.0,     250.0,     260.0,     270.0,     280.0,     290.0,     300.0,
  310.0,     320.0,     330.0,     340.0,     350.0,     360.0,


                            *** RANGE,THETA COORDINATES OF DISCRETE RECEPTORS ***
                                            (METERS,DEGREES)

(  5000.0,     10.0), (  5500.0,     10.0), (  4500.0,     20.0), (  5000.0,     20.0), (  2500.0,     30.0),
(  3000.0,     30.0), (  2500.0,     40.0), (  3000.0,     40.0), (  1500.0,     50.0), (  2000.0,     50.0),
(  1500.0,     60.0), (  2000.0,     60.0), (  1500.0,     70.0), (  2000.0,     70.0), (   838.0,     80.0),
(  1100.0,     80.0), (  1500.0,     80.0), (  2000.0,     80.0), (   686.0,     90.0), (  1100.0,     90.0),
(  1500.0,     90.0), (  2000.0,     90.0), (   533.0,    100.0), (   700.0,    100.0), (  1100.0,    100.0),
(  1500.0,    100.0), (  2000.0,    100.0), (   457.0,    110.0), (   700.0,    110.0), (  1100.0,    110.0),
(  1500.0,    110.0), (  2000.0,    110.0), (   457.0,    120.0), (   700.0,    120.0), (  1100.0,    120.0),
(  1500.0,    120.0), (  2000.0,    120.0), (   457.0,    130.0), (   700.0,    130.0), (  1100.0,    130.0),
(  1500.0,    130.0), (  2000.0,    130.0), (   457.0,    140.0), (   700.0,    140.0), (  1100.0,    140.0),
(  1500.0,    140.0), (  2000.0,    140.0), (   457.0,    150.0), (   700.0,    150.0), (  1100.0,    150.0),
(  1500.0,    150.0), (  2000.0,    150.0), (   488.0,    160.0), (   700.0,    160.0), (  1100.0,    160.0),
(  1500.0,    160.0), (  2000.0,    160.0), (   533.0,    170.0), (   700.0,    170.0), (  1100.0,    170.0),
(  1500.0,    170.0), (  2000.0,    170.0), (   610.0,    180.0), (   700.0,    180.0), (  1100.0,    180.0),
(  1500.0,    180.0), (  2000.0,    180.0), (   750.0,    190.0), (  1100.0,    190.0), (  1500.0,    190.0),
(  2000.0,    190.0), (  1829.0,    200.0), (  2000.0,    200.0), (  1829.0,    210.0), (  2000.0,    210.0),
(  1981.0,    220.0), (  2000.0,    220.0), (  2134.0,    230.0), (  2500.0,    230.0), (  2438.0,    240.0),
(  2500.0,    240.0), (  2896.0,    250.0), (  3000.0,    250.0), (  3048.0,    260.0), (  3500.0,    260.0),
(  3658.0,    270.0), (  4000.0,    270.0), (  3962.0,    280.0), (  4000.0,    280.0), (  4572.0,    290.0),
(  5000.0,    290.0), (  5182.0,    300.0), (  5500.0,    300.0), (  4801.0,    310.0), (  5000.0,    310.0),
(  4875.0,    320.0), (  5000.0,    320.0), (  6000.0,    330.0), (  6500.0,    330.0), (  5500.0,    340.0),
(  6000.0,    340.0), (  5250.0,    350.0), (  5500.0,    350.0), (  5125.0,    360.0), (  5500.0,    360.0),
(
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*** ISCST BY KBN 7/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

*** SOURCE DATA ***

SOURCE NUMBER	T Y P E	W A K E	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
88020	0	0	0	-.13770E+03	-104.0	78.0	0.0	70.70	471.00	10.88	3.05	-64.60	36.30	36.30
88010	0	0	0	0.16860E+03	-104.0	78.0	0.0	72.20	500.00	21.88	2.16	-64.60	36.30	36.30

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*** ISCST BY KBN  7/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4                ***


                         *** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE    1
IFV   BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE
  1  64.6,  41.0,    0   2  64.6,  41.0,    0   3  64.6,  41.0,    0   4  64.6,  41.0,    0   5  64.6,  41.0,    0   6  64.6,  41.0,    0
  7  64.6,  41.0,    0   8  64.6,  41.0,    0   9  64.6,  41.0,    0  10  64.6,  41.0,    0  11  64.6,  41.0,    0  12  64.6,  41.0,    0
 13  64.6,  41.0,    0  14  64.6,  41.0,    0  15  64.6,  41.0,    0  16  64.6,  41.0,    0  17  64.6,  41.0,    0  18  64.6,  41.0,    0
 19  64.6,  41.0,    0  20  64.6,  41.0,    0  21  64.6,  41.0,    0  22  64.6,  41.0,    0  23  64.6,  41.0,    0  24  64.6,  41.0,    0
 25  64.6,  41.0,    0  26  64.6,  41.0,    0  27  64.6,  41.0,    0  28  64.6,  41.0,    0  29  64.6,  41.0,    0  30  64.6,  41.0,    0
 31  64.6,  41.0,    0  32  64.6,  41.0,    0  33  64.6,  41.0,    0  34  64.6,  41.0,    0  35  64.6,  41.0,    0  36  64.6,  41.0,    0


SOURCE    2
IFV   BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE IFV    BH    BW    IWAKE
  1  64.6,  41.0,    0   2  64.6,  41.0,    0   3  64.6,  41.0,    0   4  64.6,  41.0,    0   5  64.6,  41.0,    0   6  64.6,  41.0,    0
  7  64.6,  41.0,    0   8  64.6,  41.0,    0   9  64.6,  41.0,    0  10  64.6,  41.0,    0  11  64.6,  41.0,    0  12  64.6,  41.0,    0
 13  64.6,  41.0,    0  14  64.6,  41.0,    0  15  64.6,  41.0,    0  16  64.6,  41.0,    0  17  64.6,  41.0,    0  18  64.6,  41.0,    0
 19  64.6,  41.0,    0  20  64.6,  41.0,    0  21  64.6,  41.0,    0  22  64.6,  41.0,    0  23  64.6,  41.0,    0  24  64.6,  41.0,    0
 25  64.6,  41.0,    0  26  64.6,  41.0,    0  27  64.6,  41.0,    0  28  64.6,  41.0,    0  29  64.6,  41.0,    0  30  64.6,  41.0,    0
 31  64.6,  41.0,    0  32  64.6,  41.0,    0  33  64.6,  41.0,    0  34  64.6,  41.0,    0  35  64.6,  41.0,    0  36  64.6,  41.0,    0


* CALM HOURS (=1) FOR DAY   1 *  0  0  1  0  1  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY   2 *  0  0  0  0  0  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY   5 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY   6 *  1  1  1  1  0  0  1  0  1  0  0  0  0  0  0  0  0  1. 1  1  1  1  1  0
* CALM HOURS (=1) FOR DAY   7 *  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY   8 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  0  1
* CALM HOURS (=1) FOR DAY   9 *  1  1  1  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  10 *  0  0  0  0  1  0  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  1  0  1
* CALM HOURS (=1) FOR DAY  11 *  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  13 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  14 *  1  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  15 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0
* CALM HOURS (=1) FOR DAY  16 *  1  1  1  1  1  1  0  0  0  1  0  0  0  0  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY  19 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  20 *  0  0  0  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  23 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY  24 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1
* CALM HOURS (=1) FOR DAY  26 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  27 *  1  1  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  1  1  1  1  0
* CALM HOURS (=1) FOR DAY  28 *  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  29 *  0  0  0  0  0  0  0  0  0  0  0  1  0  1  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY  30 *  1  1  1  1  1  0  1  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  31 *  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  36 *  0  0  0  0  1  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  38 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  39 *  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  40 *  1  0  0  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  41 *  1  1  1  1  1  1  0  1  1  0  0  0  1  0  0  0  0  0  0  0  1  1  1  1
* CALM HOURS (=1) FOR DAY  42 *  1  1  1  1  1  1  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
* CALM HOURS (=1) FOR DAY  45 *  0  0  0  1  0  1  1  1  1  0  0  0  0  0  0  0  0  0  1  1  0  0  0  0
* CALM HOURS (=1) FOR DAY  46 *  1  1  1  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1  1  1  1  1
* CALM HOURS (=1) FOR DAY  47 *  1  1  1  1  1  0  1  1  0  1  1  0  0  0  0  0  0  0  0  1  1  1  1  1
```

* CALM HOURS (=1) FOR DAY 48 *	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 49 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 50 *	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 51 *	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 52 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 53 *	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 54 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 56 *	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 57 *	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 58 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 59 *	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 60 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 61 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 62 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 63 *	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 64 *	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 65 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 67 *	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 68 *	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 69 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 70 *	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 71 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 72 *	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 73 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 77 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 78 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 79 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 80 *	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 81 *	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 82 *	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
* CALM HOURS (=1) FOR DAY 83 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 84 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 85 *	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 86 *	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 87 *	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 88 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 89 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 90 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 92 *	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 93 *	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 94 *	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 95 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 96 *	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 97 *	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
* CALM HOURS (=1) FOR DAY 98 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 99 *	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 100 *	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 101 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 102 *	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 104 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 105 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 106 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 107 *	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 108 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 109 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 110 *	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 111 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 112 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 113 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 114 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1

* CALM HOURS (=1) FOR OAY 115 *	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR OAY 116 *	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR OAY 117 *	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
* CALM HOURS (=1) FOR OAY 118 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR OAY 121 *	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR OAY 122 *	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR OAY 123 *	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 125 *	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 126 *	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 128 *	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 129 *	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 130 *	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 131 *	1	1	0	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 132 *	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 133 *	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 134 *	0	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 135 *	1	1	1	0	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 136 *	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
* CALM HOURS (=1) FOR DAY 138 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 139 *	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	1
* CALM HOURS (=1) FOR DAY 140 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 141 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR OAY 142 *	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 143 *	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 145 *	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 146 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 147 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 148 *	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 149 *	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 150 *	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 151 *	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 153 *	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 154 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 155 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 159 *	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 160 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 161 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 162 *	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 163 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 164 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 165 *	1	1	1	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 166 *	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 168 *	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
* CALM HOURS (=1) FOR DAY 170 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 171 *	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1
* CALM HOURS (=1) FOR DAY 172 *	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 173 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 174 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
* CALM HOURS (=1) FOR DAY 175 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 176 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 177 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 178 *	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 179 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 180 *	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 181 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 184 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 185 *	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 186 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1
* CALM HOURS (=1) FOR DAY 187 *	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 188 *	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0

```
* CALM HOURS (=1) FOR DAY 189 *  1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0
* CALM HOURS (=1) FOR DAY 190 *  0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 191 *  1 1 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 192 *  0 0 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 193 *  1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 194 *  0 1 1 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 1 1 1
* CALM HOURS (=1) FOR DAY 195 *  1 1 1 1 1 1 1 1 1 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 196 *  1 1 1 0 1 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1
* CALM HOURS (=1) FOR DAY 197 *  0 1 1 1 0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 198 *  0 0 1 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 199 *  1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 200 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 201 *  0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 202 *  1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 203 *  1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 204 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 205 *  0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 206 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 207 *  1 1 1 1 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 208 *  0 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 209 *  1 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 210 *  0 0 1 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 211 *  1 1 1 1 1 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 212 *  1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 213 *  0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 214 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0
* CALM HOURS (=1) FOR DAY 216 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 217 *  0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 218 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 219 *  0 0 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 220 *  1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 221 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
* CALM HOURS (=1) FOR DAY 222 *  0 1 1 1 1 1 1 0 1 0 1 0 0 0 0 0 0 0 0 0 1 0 1 1
* CALM HOURS (=1) FOR DAY 223 *  1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 224 *  1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1
* CALM HOURS (=1) FOR DAY 225 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 226 *  1 1 1 1 1 1 1 0 0 0 0 0 1 0 1 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 227 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 228 *  0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 229 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 230 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
* CALM HOURS (=1) FOR DAY 231 *  0 0 0 1 1 0 1 0 1 1 0 0 1 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 232 *  0 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 233 *  0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 234 *  0 0 0 1 0 0 0 0 0 0 0 0 1 0 1 0 0 0 0 0 0 0 1 0
* CALM HOURS (=1) FOR DAY 235 *  1 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 236 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 1 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 237 *  0 0 1 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 238 *  1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 239 *  0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 240 *  0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1
* CALM HOURS (=1) FOR DAY 241 *  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 242 *  0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 245 *  0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
* CALM HOURS (=1) FOR DAY 246 *  1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 247 *  1 0 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 248 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 249 *  1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 250 *  0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 0 1 1
* CALM HOURS (=1) FOR DAY 251 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
```

* CALM HOURS (=1) FOR DAY 252 *	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 253 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 254 *	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 255 *	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
* CALM HOURS (=1) FOR DAY 256 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 260 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 261 *	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 264 *	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 265 *	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 266 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 267 *	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 268 *	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 269 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 270 *	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 271 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
* CALM HOURS (=1) FOR DAY 272 *	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 273 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 274 *	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 275 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
* CALM HOURS (=1) FOR DAY 276 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 277 *	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 278 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 279 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
* CALM HOURS (=1) FOR DAY 280 *	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 281 *	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 284 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 285 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 286 *	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 287 *	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0
* CALM HOURS (=1) FOR DAY 288 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
* CALM HOURS (=1) FOR DAY 289 *	1	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
* CALM HOURS (=1) FOR DAY 290 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 292 *	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 293 *	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
* CALM HOURS (=1) FOR DAY 294 *	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1
* CALM HOURS (=1) FOR DAY 295 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 296 *	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 297 *	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
* CALM HOURS (=1) FOR DAY 298 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
* CALM HOURS (=1) FOR DAY 299 *	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 301 *	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 305 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 306 *	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0
* CALM HOURS (=1) FOR DAY 307 *	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 310 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
* CALM HOURS (=1) FOR DAY 311 *	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 312 *	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
* CALM HOURS (=1) FOR DAY 313 *	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 314 *	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 315 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 316 *	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 317 *	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 318 *	1	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
* CALM HOURS (=1) FOR DAY 319 *	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
* CALM HOURS (=1) FOR DAY 320 *	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1
* CALM HOURS (=1) FOR DAY 321 *	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 322 *	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 324 *	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* CALM HOURS (=1) FOR DAY 326 *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
* CALM HOURS (=1) FOR DAY 327 *	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1

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* CALM HOURS (=1) FOR DAY 328 *  0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0
* CALM HOURS (=1) FOR DAY 329 *  0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1
* CALM HOURS (=1) FOR DAY 330 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 331 *  0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 332 *  0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
* CALM HOURS (=1) FOR DAY 333 *  1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0
* CALM HOURS (=1) FOR DAY 334 *  0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 1
* CALM HOURS (=1) FOR DAY 335 *  1 0 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 339 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 341 *  1 1 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1
* CALM HOURS (=1) FOR DAY 342 *  0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 343 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 344 *  1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 345 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 347 *  0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 349 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0
* CALM HOURS (=1) FOR DAY 350 *  0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 351 *  1 1 1 1 1 1 1 1 0 0 0 0 1 0 0 0 0 1 1 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 352 *  0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0
* CALM HOURS (=1) FOR DAY 353 *  0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 354 *  1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 355 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 1
* CALM HOURS (=1) FOR DAY 356 *  1 0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0 1 1
* CALM HOURS (=1) FOR DAY 357 *  0 0 0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 361 *  0 0 0 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 362 *  0 0 1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1
* CALM HOURS (=1) FOR DAY 363 *  1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
* CALM HOURS (=1) FOR DAY 364 *  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 1 1 1 1
* CALM HOURS (=1) FOR DAY 365 *  1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0
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HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 39.02882 AND OCCURRED AT (2500.0, 210.0) *

DIRECTION /	RANGE (METERS)				
(DEGREES) /	2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	27.54402 (122,11)	23.70251 (122,11)	20.23216 (220,16)	18.13531 (220,16)	17.21144 (277,20)
350.0 /	23.30870 (304,12)	23.41818 (304,12)	20.43583 (304,12)	18.13941 (95,12)	16.23013 (331,14)
340.0 /	19.35776 (67,13)	20.26605 (89,14)	20.22351 (345,14)	18.68257 (325,22)	17.40936 (325,22)
330.0 /	21.37524 (79,10)	21.01654 (42,12)	20.79086 (42,12)	25.49586 (244,18)	31.33792 (244,18)
320.0 /	21.43083 (80,14)	21.99544 (203,16)	20.47041 (211,15)	18.54041 (244,16)	21.01031 (244,16)
310.0 /	26.61601 (241,11)	24.11401 (241,11)	20.88886 (208,16)	19.28445 (325,20)	17.88853 (325,20)
300.0 /	27.13834 (245,13)	24.50705 (245,13)	21.61909 (218, 8)	22.04505 (218, 8)	23.94882 (244,15)
290.0 /	26.98373 (157,17)	24.45647 (157,17)	21.24864 (155,16)	18.25153 (155,16)	17.16961 (79,15)
280.0 /	28.39618 (179,14)	23.45621 (178,12)	20.52726 (313,12)	18.12637 (248,14)	16.40025 (173,10)
270.0 /	26.01059 (201,15)	23.63995 (246,16)	20.93095 (187,15)	19.54716 (154,20)	18.47458 (154,20)
260.0 /	27.38004 (62,13)	23.74718 (316,13)	20.77427 (172,13)	18.24764 (262,14)	17.61626 (175,15)
250.0 /	26.24829 (85,12)	23.62401 (303,14)	23.97192 (69, 9)	22.36528 (69, 9)	20.05367 (69, 9)
240.0 /	27.69193 (120,11)	23.45319 (120,11)	21.59073 (256,22)	20.06403 (256,22)	18.32524 (256,22)
230.0 /	26.71169 (120,12)	23.36603 (174,15)	21.49037 (66,15)	20.02024 (364,11)	18.81017 (364,11)
220.0 /	24.69453 (109,14)	23.13266 (62,11)	20.17630 (109,16)	18.27145 (280,15)	17.45607 (282,13)
210.0 /	32.98631 (129, 8)	39.02882 (129, 8)	38.69862 (129, 8)	36.04941 (129, 8)	33.04871 (129, 8)
200.0 /	23.02453 (198, 8)	24.04687 (198, 8)	21.95595 (198, 8)	19.13794 (198, 8)	16.79143 (257,14)
190.0 /	27.27796 (198, 8)	33.54860 (198, 8)	34.63718 (198, 8)	33.50520 (198, 8)	31.76452 (198, 8)
180.0 /	24.63698 (132,14)	22.03419 (257, 9)	19.62945 (257, 9)	16.90800 (353,16)	17.44041 (171, 9)
170.0 /	24.90775 (165,18)	27.10254 (165,18)	26.42567 (165,18)	24.83373 (165,18)	23.03571 (165,18)
160.0 /	19.97960 (99,12)	22.54169 (165,18)	23.41301 (165,18)	23.07674 (165,18)	22.25760 (165,18)
150.0 /	21.86549 (84,12)	18.49361 (84,12)	17.69009 (160,16)	16.50694 (160,16)	16.20327 (10,12)
140.0 /	20.18445 (91,12)	19.88821 (38,14)	18.89091 (38,14)	17.91486 (77,12)	16.95454 (77,12)
130.0 /	24.26064 (144,10)	21.99749 (144,10)	19.47020 (359,15)	18.38785 (359,15)	19.60293 (119, 8)
120.0 /	25.12685 (138,14)	22.33736 (92,15)	18.97507 (92,15)	18.02306 (336, 9)	19.18585 (336, 9)
110.0 /	24.75078 (136,13)	22.32051 (163,12)	20.23698 (22, 9)	19.70420 (22, 9)	22.17340 (363, 9)
100.0 /	24.04572 (71,15)	22.37125 (153,10)	20.84634 (5, 8)	20.28709 (5, 8)	19.00747 (5, 8)
90.0 /	26.48744 (170,14)	22.08029 (118,12)	21.43114 (152, 7)	20.24191 (152, 7)	18.72784 (152, 7)
80.0 /	25.84122 (137,11)	22.45181 (144,16)	19.81425 (144,16)	17.42325 (152,18)	18.60758 (181,10)
70.0 /	23.59941 (309,11)	22.29823 (309,11)	19.73999 (57,16)	17.52538 (115,16)	17.12369 (305,15)
60.0 /	26.96393 (159,13)	23.23637 (159,13)	20.75629 (305,13)	19.50631 (305,13)	17.97890 (305,13)
50.0 /	25.87363 (169,14)	23.44939 (181, 9)	24.03328 (181, 9)	22.59199 (181, 9)	20.54598 (181, 9)
40.0 /	23.48329 (87,13)	20.41612 (252,10)	19.31806 (357,11)	17.66862 (17,16)	17.05646 (17,16)
30.0 /	24.36493 (87,12)	23.32704 (87,12)	21.69396 (326, 7)	19.98513 (326, 7)	18.14115 (326, 7)
20.0 /	26.84334 (89,13)	23.55322 (1,13)	20.17331 (87,15)	18.64494 (326, 5)	17.72202 (326, 5)
10.0 /	26.83444 (95,13)	23.88739 (95,13)	20.71857 (242,13)	17.88572 (122,14)	16.37689 (158, 9)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	14.84668	(305, 2)	5500.0	10.0	14.25922	(305, 2)
4500.0	20.0	16.57538	(326, 5)	5000.0	20.0	15.39000	(326, 5)
2500.0	30.0	23.32704	(87,12)	3000.0	30.0	21.69396	(326, 7)
2500.0	40.0	20.41612	(252,10)	3000.0	40.0	19.31806	(357,11)
1500.0	50.0	22.35786	(187,11)	2000.0	50.0	25.87363	(169,14)
1500.0	60.0	24.02943	(159,13)	2000.0	60.0	26.96393	(159,13)
1500.0	70.0	20.73416	(149,11)	2000.0	70.0	23.59941	(309,11)
838.0	80.0	27.07617	(190,14)	1100.0	80.0	19.13010	(137,11)
1500.0	80.0	28.03673	(137,11)	2000.0	80.0	25.84122	(137,11)
686.0	90.0	30.05406	(191,14)	1100.0	90.0	29.37082	(137,13)
1500.0	90.0	31.75777	(170,14)	2000.0	90.0	26.48744	(170,14)
533.0	100.0	95.23547	(44,20)	700.0	100.0	28.16475	(185,14)
1100.0	100.0	23.55569	(92,14)	1500.0	100.0	20.85930	(154,14)
2000.0	100.0	24.04572	(71,15)	457.0	110.0	43.00641	(137,22)
700.0	110.0	29.29344	(185,14)	1100.0	110.0	30.66740	(137,12)
1500.0	110.0	27.28331	(137,12)	2000.0	110.0	24.75078	(136,13)
457.0	120.0	182.27618	(171, 1)	700.0	120.0	30.66801	(253,13)
1100.0	120.0	29.23579	(144,13)	1500.0	120.0	28.87831	(144,13)
2000.0	120.0	25.12685	(138,14)	457.0	130.0	292.80676	(312, 2)
700.0	130.0	122.93616	(312, 2)	1100.0	130.0	24.33527	(179,12)
1500.0	130.0	22.66959	(179,12)	2000.0	130.0	24.26064	(144,10)
457.0	140.0	29.43536	(12, 6)	700.0	140.0	30.24377	(193,13)
1100.0	140.0	19.02408	(193,13)	1500.0	140.0	15.59294	(355,13)
2000.0	140.0	20.18445	(91,12)	457.0	150.0	208.57602	(238,20)
700.0	150.0	24.76865	(135,13)	1100.0	150.0	19.83632	(189,14)
1500.0	150.0	22.29457	(84,12)	2000.0	150.0	21.86549	(84,12)
488.0	160.0	174.02591	(337, 1)	700.0	160.0	23.91214	(147,11)
1100.0	160.0	18.89488	(147,11)	1500.0	160.0	17.54858	(130,11)
2000.0	160.0	19.97960	(99,12)	533.0	170.0	220.65573	(312, 6)
700.0	170.0	23.02251	(190,12)	1100.0	170.0	20.18855	(190,12)
1500.0	170.0	19.31832	(130,11)	2000.0	170.0	24.90775	(165,18)
610.0	180.0	82.42804	(269, 2)	700.0	180.0	38.82489	(269, 2)
1100.0	180.0	23.49075	(159,19)	1500.0	180.0	18.95697	(132,14)
2000.0	180.0	24.63698	(132,14)	750.0	190.0	95.34650	(271, 3)
1100.0	190.0	61.01509	(341, 7)	1500.0	190.0	21.42935	(146,12)
2000.0	190.0	27.27796	(198, 8)	1829.0	200.0	21.49146	(146,13)
2000.0	200.0	23.02453	(198, 8)	1829.0	210.0	28.74483	(129, 8)
2000.0	210.0	32.98631	(129, 8)	1981.0	220.0	24.63933	(109,14)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	24.69453	(109,14)	2134.0	230.0	25.68375	(120,12)
2500.0	230.0	23.36603	(174,15)	2438.0	240.0	24.04759	(120,11)
2500.0	240.0	23.45319	(120,11)	2896.0	250.0	24.06967	(69, 9)
3000.0	250.0	23.97192	(69, 9)	3048.0	260.0	20.50253	(172,13)
3500.0	260.0	18.24764	(262,14)	3658.0	270.0	19.24400	(154,20)
4000.0	270.0	18.47458	(154,20)	3962.0	280.0	16.54311	(173,10)
4000.0	280.0	16.40025	(173,10)	4572.0	290.0	17.03356	(244,13)
5000.0	290.0	17.27288	(244,13)	5182.0	300.0	26.00105	(244,15)
5500.0	300.0	25.78056	(244,15)	4801.0	310.0	17.90535	(244,19)
5000.0	310.0	18.33391	(244,19)	4875.0	320.0	22.35334	(244,16)
5000.0	320.0	22.35683	(244,16)	6000.0	330.0	34.97426	(244,18)
6500.0	330.0	33.97714	(244,18)	5500.0	340.0	14.14289	(210, 8)
6000.0	340.0	13.77068	(210, 8)	5250.0	350.0	14.94824	(365,12)
5500.0	350.0	14.60635	(365,12)	5125.0	360.0	18.22228	(255,17)
5500.0	360.0	18.48556	(255,17)				

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 26.72081 AND OCCURRED AT (2000.0, 260.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	24.90245 (88,14)	20.73436 (242,11)	19.34481 (242,11)	17.89650 (55,10)	17.17513 (55,10)
350.0 /	19.89608 (94,15)	20.34087 (95,12)	20.24129 (95,12)	17.87740 (331,14)	16.19717 (304,16)
340.0 /	18.76726 (209,10)	20.07565 (345,14)	19.56497 (325,22)	18.26069 (345,14)	16.19128 (345,10)
330.0 /	20.96274 (42,12)	20.80539 (79,10)	17.87746 (117,17)	19.67670 (42,12)	19.15567 (244,17)
320.0 /	20.69383 (89,16)	20.48396 (80,14)	20.21307 (203,16)	18.40437 (211,15)	16.65675 (80,14)
310.0 /	22.80887 (121,10)	22.87994 (208,16)	20.86843 (209,15)	18.16853 (148,18)	16.08011 (115,17)
300.0 /	24.64145 (241,12)	24.12741 (218,16)	20.90080 (218,16)	20.38606 (244,15)	22.20602 (218, 8)
290.0 /	24.06766 (274,13)	23.71059 (274,13)	21.12404 (158,18)	18.17290 (158,18)	16.23116 (67,17)
280.0 /	23.37303 (178,12)	22.78443 (179,14)	20.43493 (178,12)	18.11495 (173,10)	15.85169 (248,14)
270.0 /	24.48839 (246,16)	23.10020 (187,15)	20.87083 (268,13)	18.34319 (223,15)	17.43109 (303,16)
260.0 /	26.72081 (119,14)	23.31010 (119,14)	20.52412 (316,13)	17.96218 (223,17)	17.19456 (271,11)
250.0 /	23.89937 (303,14)	22.97295 (85,12)	20.44518 (303,14)	18.73221 (263,14)	17.94440 (263,14)
240.0 /	22.97554 (119,13)	22.44695 (111,14)	20.88785 (257,11)	19.76599 (257,11)	18.27203 (257,11)
230.0 /	26.24023 (132,13)	23.23526 (312,14)	20.21166 (174,15)	19.82033 (66,15)	18.04234 (261,17)
220.0 /	24.14519 (62,11)	22.94406 (109,14)	19.76420 (62,11)	18.15195 (282,13)	16.87611 (65,18)
210.0 /	26.67647 (107,14)	22.59705 (145,14)	20.07742 (145,14)	17.50153 (312,12)	16.06969 (280,16)
200.0 /	22.56256 (145,17)	22.56960 (214,13)	20.43581 (257,14)	18.64309 (257,14)	16.49001 (198, 8)
190.0 /	24.10513 (99,10)	22.46093 (99,10)	19.05205 (99,10)	16.40410 (132, 9)	16.93716 (226,16)
180.0 /	23.12611 (26,13)	21.91873 (132,14)	19.32362 (146,15)	16.89545 (146,15)	16.80895 (328,10)
170.0 /	17.08412 (98,11)	19.97925 (46,13)	19.07905 (337,10)	17.36063 (337,10)	16.21606 (38,11)
160.0 /	18.95142 (165,18)	20.35822 (160,15)	19.24486 (160,15)	17.70216 (310, 9)	16.65247 (310, 9)
150.0 /	17.73850 (161,12)	18.29600 (353,13)	17.58979 (349,16)	16.42820 (349,16)	16.05389 (283,13)
140.0 /	19.29803 (138, 9)	19.87147 (91,12)	18.51555 (77,12)	16.80503 (38,14)	16.21402 (162,16)
130.0 /	23.70374 (270,15)	21.39525 (15,12)	19.45835 (359,14)	18.24810 (119, 8)	17.35375 (137,19)
120.0 /	24.54826 (92,15)	21.49962 (270,12)	18.96671 (270,12)	17.35875 (278,16)	17.06679 (278,16)
110.0 /	24.49113 (163,12)	21.98923 (359,13)	19.83500 (162,17)	18.06340 (44,10)	18.50067 (22, 9)
100.0 /	22.85124 (144,14)	22.29250 (185,11)	19.71118 (153,10)	17.97152 (308,13)	17.26944 (106,11)
90.0 /	26.17407 (118,12)	21.65295 (152,14)	19.46330 (73,14)	18.27235 (19,15)	17.48592 (278,12)
80.0 /	22.46684 (170,13)	21.84103 (57,14)	19.63461 (152,18)	17.33258 (326,13)	17.01360 (326,13)
70.0 /	23.36726 (64,12)	22.16174 (64,12)	19.35468 (162, 8)	17.46124 (57,16)	16.29598 (90,14)
60.0 /	25.99889 (170,11)	22.95564 (170,11)	19.91483 (159,15)	17.60085 (88,17)	16.97199 (33,11)
50.0 /	22.37245 (326, 8)	23.06136 (169,14)	19.86612 (73,15)	17.68900 (73,15)	15.77766 (181,18)
40.0 /	23.05280 (93,14)	20.21921 (122,10)	19.20071 (252,10)	17.66077 (333,13)	16.48024 (42,21)
30.0 /	22.43571 (326, 7)	22.63284 (326, 7)	19.90634 (87,12)	17.60683 (237, 9)	16.99852 (17,10)
20.0 /	24.50099 (1,13)	23.28145 (89,13)	20.09140 (1,13)	17.97890 (330,14)	15.63365 (330,14)
10.0 /	24.44316 (55,13)	22.81349 (242,13)	19.84066 (166,12)	17.81142 (242,13)	16.11703 (122,14)

2ND HIGH
1-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
5000.0	10.0	14.45000	(158, 9)	5500.0	10.0	13.38741	(158, 9)
4500.0	20.0	14.31187	(95,17)	5000.0	20.0	14.33050	(95,17)
2500.0	30.0	22.63284	(326, 7)	3000.0	30.0	19.90634	(87,12)
2500.0	40.0	20.21921	(122,10)	3000.0	40.0	19.20071	(252,10)
1500.0	50.0	21.34221	(169,14)	2000.0	50.0	22.37245	(326, 8)
1500.0	60.0	22.22177	(170,11)	2000.0	60.0	25.99889	(170,11)
1500.0	70.0	20.25961	(233,12)	2000.0	70.0	23.36726	(64,12)
838.0	80.0	23.25102	(230,11)	1100.0	80.0	18.26854	(230,11)
1500.0	80.0	25.93614	(170,13)	2000.0	80.0	22.46684	(170,13)
686.0	90.0	30.01535	(45, 3)	1100.0	90.0	28.10295	(170,14)
1500.0	90.0	27.31868	(137,13)	2000.0	90.0	26.17407	(118,12)
533.0	100.0	35.27429	(77, 1)	700.0	100.0	25.04776	(192,11)
1100.0	100.0	20.16113	(190,15)	1500.0	100.0	20.60588	(221,14)
2000.0	100.0	22.85124	(144,14)	457.0	110.0	32.34064	(359,12)
700.0	110.0	24.09232	(253,13)	1100.0	110.0	24.47337	(359,13)
1500.0	110.0	26.04744	(359,13)	2000.0	110.0	24.49113	(163,12)
457.0	120.0	176.92181	(23,20)	700.0	120.0	29.44104	(4, 6)
1100.0	120.0	28.62909	(4, 6)	1500.0	120.0	26.43814	(4, 6)
2000.0	120.0	24.54826	(92,15)	457.0	130.0	162.08813	(348,24)
700.0	130.0	26.56508	(193,13)	1100.0	130.0	19.32091	(189,13)
1500.0	130.0	21.09241	(189,13)	2000.0	130.0	23.70374	(270,15)
457.0	140.0	21.84012	(98, 5)	700.0	140.0	22.50058	(135,13)
1100.0	140.0	17.42399	(135,13)	1500.0	140.0	15.50837	(189,13)
2000.0	140.0	19.29803	(138, 9)	[redacted]			
700.0	150.0	21.31010	(147,11)	1100.0	150.0	18.59715	(135,13)
1500.0	150.0	21.74115	(189,14)	2000.0	150.0	17.73850	(161,12)
488.0	160.0	67.63721	(45,24)	700.0	160.0	17.64400	(164,14)
1100.0	160.0	18.59995	(130,11)	1500.0	160.0	17.42216	(84,12)
2000.0	160.0	18.95142	(165,18)	533.0	170.0	143.67291	(340,19)
700.0	170.0	22.96776	(164,14)	1100.0	170.0	19.99612	(164,14)
1500.0	170.0	18.75316	(348,13)	2000.0	170.0	17.08412	(98,11)
610.0	180.0	82.05310	(259, 1)	700.0	180.0	38.49429	(259, 1)
1100.0	180.0	19.74075	(155,12)	1500.0	180.0	16.82239	(119,10)
2000.0	180.0	23.12611	(26,13)	750.0	190.0	29.08826	(253,12)
1100.0	190.0	19.61147	(155,12)	1500.0	190.0	17.04721	(190,10)
2000.0	190.0	24.10513	(99,10)	1829.0	200.0	21.29840	(145,17)
2000.0	200.0	22.56256	(145,17)	1829.0	210.0	28.06468	(107,14)
2000.0	210.0	26.67647	(107,14)	1981.0	220.0	24.05508	(62,11)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 1-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,HOUR)	- RNG -	- DIR -	CON.	(DAY,HOUR)
2000.0	220.0	24.14519	(62,11)	2134.0	230.0	25.39525	(132,13)
2500.0	230.0	23.23526	(312,14)	2438.0	240.0	22.50575	(111,14)
2500.0	240.0	22.44695	(111,14)	2896.0	250.0	21.15897	(303,14)
3000.0	250.0	20.44518	(303,14)	3048.0	260.0	20.19004	(316,13)
3500.0	260.0	17.96218	(223,17)	3658.0	270.0	17.60217	(251,16)
4000.0	270.0	17.43109	(303,16)	3962.0	280.0	16.02195	(248,14)
4000.0	280.0	15.85169	(248,14)	4572.0	290.0	16.61493	(79,15)
5000.0	290.0	15.97121	(79,15)	5182.0	300.0	21.23019	(218, 8)
5500.0	300.0	20.71999	(218, 8)	4801.0	310.0	15.84509	(121,16)
5000.0	310.0	15.67722	(121,16)	4875.0	320.0	15.89699	(177,16)
5000.0	320.0	15.78221	(177,16)	6000.0	330.0	18.14632	(244,17)
6500.0	330.0	17.43863	(244,17)	5500.0	340.0	13.96292	(96, 5)
6000.0	340.0	13.59440	(96, 5)	5250.0	350.0	14.75777	(304,16)
5500.0	350.0	14.35464	(304,16)	5125.0	360.0	15.28547	(277,20)
5500.0	360.0	14.55626	(277,20)				

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 11.65823 AND OCCURRED AT (3000.0, 100.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	6.66965 (157, 2)	5.21619 (157, 2)	5.53000 (86, 2)	5.59329 (86, 2)	5.22746 (86, 2)
350.0 /	8.28775 (157, 2)	6.51413 (94, 2)	6.37542 (304, 2)	6.21435 (304, 2)	5.82068 (304, 2)
340.0 /	4.92506 (94, 2)	8.28023C(345, 2)	9.74912C(345, 2)	9.53162C(345, 2)	8.78165C(345, 2)
330.0 /	6.21909C(210, 2)	5.76084 (238, 2)	5.31226 (238, 2)	5.44659 (244, 3)	6.31170 (244, 3)
320.0 /	5.42252 (228, 2)	7.12522C(287, 2)	7.01423C(287, 2)	6.22464C(287, 2)	6.20271 (217, 2)
310.0 /	7.78296 (325, 3)	8.86294 (325, 3)	9.07856 (325, 3)	8.74737 (325, 3)	8.21143 (325, 3)
300.0 /	10.06128 (241, 2)	10.05174 (241, 2)	8.66091 (241, 2)	7.21853 (241, 2)	5.99942 (241, 2)
290.0 /	5.46123 (112, 2)	6.28365 (156, 2)	6.28093C(275, 2)	6.25863C(275, 2)	5.89813C(275, 2)
280.0 /	6.42829 (112, 2)	9.84398C(313, 2)	10.09977C(313, 2)	9.21932C(313, 2)	8.10839C(313, 2)
270.0 /	4.75441C(110, 2)	6.37144 (223, 2)	6.46926 (223, 2)	5.83390 (223, 2)	5.64340 (322, 2)
260.0 /	7.13347C(268, 2)	7.66463C(268, 2)	6.78421C(268, 2)	5.73143C(268, 2)	5.37109 (262, 2)
250.0 /	6.36703 (199, 2)	6.67671 (69, 2)	6.91751 (69, 2)	6.42002 (263, 2)	6.27585 (271, 2)
240.0 /	7.36047 (120, 2)	7.31680 (120, 2)	6.90366 (120, 2)	6.23317 (120, 2)	6.13644 (263, 2)
230.0 /	7.41673 (132, 2)	6.12554 (257, 1)	8.76173 (257, 1)	9.92829 (257, 1)	10.27881 (257, 1)
220.0 /	5.52710 (282, 2)	7.36950 (282, 2)	8.48863 (282, 2)	8.63412 (282, 2)	8.35124 (282, 2)
210.0 /	8.03318C(145, 2)	7.51900C(145, 2)	6.44977C(129, 1)	6.00823C(129, 1)	5.50812C(129, 1)
200.0 /	8.81900C(145, 2)	8.75013C(145, 2)	7.75851C(145, 2)	6.65619C(145, 2)	5.66692C(145, 2)
190.0 /	9.15764 (146, 2)	8.26714 (146, 2)	6.91774 (146, 2)	5.70885 (146, 2)	4.73117 (146, 2)
180.0 /	4.26679 (146, 2)	5.43016 (146, 2)	5.63570 (146, 2)	5.33609 (146, 2)	4.88643 (146, 2)
170.0 /	4.15129C(165, 3)	4.51709C(165, 3)	4.49294 (279, 2)	4.78436 (12, 2)	5.32267 (12, 2)
160.0 /	4.55410C(289, 2)	5.34846 (349, 2)	5.39054 (349, 2)	4.91000 (349, 2)	4.32426 (349, 2)
150.0 /	3.71098 (84, 2)	4.99092 (349, 2)	5.28742 (349, 2)	5.52625 (283, 2)	5.62254 (283, 2)
140.0 /	4.51523 (189, 2)	5.61954C(356, 2)	5.56255C(356, 2)	5.40450 (28, 3)	5.45437 (28, 3)
130.0 /	5.55868 (189, 2)	6.61784C(356, 2)	6.51634C(356, 2)	5.98571 (20, 2)	6.18627 (20, 2)
120.0 /	6.48661 (189, 2)	7.15041 (189, 2)	6.55147 (189, 2)	6.15766 (348, 1)	5.72741 (348, 1)
110.0 /	9.92736 (359, 2)	9.49388 (359, 2)	8.98654 (359, 2)	8.30090 (359, 2)	7.59262 (359, 2)
100.0 /	10.09920 (43, 1)	11.56764 (43, 1)	11.65823 (43, 1)	11.18720 (43, 1)	10.50371 (43, 1)
90.0 /	6.12297 (137, 2)	5.18422 (137, 2)	6.29805 (4, 2)	6.53845 (4, 2)	6.37079 (4, 2)
80.0 /	8.93854 (137, 2)	7.49166 (137, 2)	6.09713 (137, 2)	5.21653 (169, 2)	5.21637 (169, 2)
70.0 /	10.46096 (149, 2)	8.31148 (149, 2)	6.40870 (149, 2)	5.32943C(27, 2)	4.49794C(27, 2)
60.0 /	6.13200 (159, 2)	6.02685 (159, 2)	5.22914 (159, 2)	4.73904 (182, 2)	4.39357 (182, 2)
50.0 /	7.50364 (182, 2)	7.25194 (182, 2)	6.21595 (182, 2)	5.16824 (182, 2)	4.50538C(181, 3)
40.0 /	4.65695 (182, 2)	5.63955 (17, 2)	7.09775 (17, 2)	7.50275 (17, 2)	7.41551 (17, 2)
30.0 /	5.67702 (191, 2)	5.32876 (191, 2)	4.44191 (191, 2)	4.07875 (326, 1)	3.99892 (33, 1)
20.0 /	5.54286 (158, 2)	6.46438 (346, 2)	6.04095 (346, 2)	5.25983 (87, 2)	5.08114 (87, 2)
10.0 /	7.90162 (95, 2)	7.82320 (95, 2)	6.95224 (95, 2)	6.06566 (95, 2)	5.30939 (95, 2)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	4.17397	(95, 2)	5500.0	10.0	3.74801	(95, 2)
4500.0	20.0	4.73262	(87, 2)	5000.0	20.0	4.33631	(87, 2)
2500.0	30.0	5.32876	(191, 2)	3000.0	30.0	4.44191	(191, 2)
2500.0	40.0	5.63955	(17, 2)	3000.0	40.0	7.09775	(17, 2)
1500.0	50.0	4.29829	(182, 2)	2000.0	50.0	7.50364	(182, 2)
1500.0	60.0	6.87453	(149, 2)	2000.0	60.0	6.13200	(159, 2)
1500.0	70.0	10.57432	(149, 2)	2000.0	70.0	10.46096	(149, 2)
838.0	80.0	6.41459	(230, 2)	1100.0	80.0	4.95143	(230, 2)
1500.0	80.0	9.06341	(137, 2)	2000.0	80.0	8.93854	(137, 2)
686.0	90.0	4.05452	(212, 2)	1100.0	90.0	3.91655	(190, 2)
1500.0	90.0	6.17631	(137, 2)	2000.0	90.0	6.12297	(137, 2)
533.0	100.0	4.40929	(77, 1)	700.0	100.0	3.10339	(191, 2)
1100.0	100.0	2.96445	(190, 2)	1500.0	100.0	6.05793	(43, 1)
2000.0	100.0	10.09920	(43, 1)	457.0	110.0	0.77256C	(146, 1)
700.0	110.0	2.29176C	(253, 2)	1100.0	110.0	4.09240	(359, 2)
1500.0	110.0	8.19448	(359, 2)	2000.0	110.0	9.92736	(359, 2)
457.0	120.0	30.37818C	(171, 1)	700.0	120.0	3.92343C	(171, 1)
1100.0	120.0	4.96497C	(153, 2)	1500.0	120.0	6.35688C	(198, 2)
2000.0	120.0	6.48661	(189, 2)	457.0	130.0	48.80113C	(312, 1)
700.0	130.0	20.48936C	(312, 1)	1100.0	130.0	4.52032C	(198, 2)
1500.0	130.0	5.84305C	(198, 2)	2000.0	130.0	5.55868	(189, 2)
457.0	140.0	3.64000C	(98, 1)	700.0	140.0	4.03126	(193, 2)
1100.0	140.0	3.49883	(189, 2)	1500.0	140.0	5.34235	(189, 2)
2000.0	140.0	4.51523	(189, 2)	457.0	150.0	26.07200	(238, 3)
700.0	150.0	4.20639C	(135, 2)	1100.0	150.0	3.16889C	(135, 2)
1500.0	150.0	3.51184	(189, 2)	2000.0	150.0	3.71098	(84, 2)
488.0	160.0	11.27287C	(45, 3)	700.0	160.0	3.38494C	(135, 2)
1100.0	160.0	2.50924C	(135, 2)	1500.0	160.0	3.55644	(84, 2)
2000.0	160.0	4.55410C	(289, 2)	533.0	170.0	22.67687C	(312, 1)
700.0	170.0	3.02465	(164, 2)	1100.0	170.0	3.61980	(164, 2)
1500.0	170.0	3.48309	(98, 2)	2000.0	170.0	4.15129C	(165, 3)
610.0	180.0	3.53850C	(253, 2)	700.0	180.0	3.78930C	(253, 2)
1100.0	180.0	2.93634	(159, 3)	1500.0	180.0	2.43395	(98, 2)
2000.0	180.0	4.26679	(146, 2)	750.0	190.0	4.15547C	(253, 2)
1100.0	190.0	10.16918C	(341, 1)	1500.0	190.0	6.71875	(146, 2)
2000.0	190.0	9.15764	(146, 2)	1829.0	200.0	8.56849	(146, 2)
2000.0	200.0	8.81900C	(145, 2)	1829.0	210.0	7.51733C	(145, 2)
2000.0	210.0	8.03318C	(145, 2)	1981.0	220.0	5.35080	(282, 2)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	5.52710	(282, 2)	2134.0	230.0	7.07219	(132, 2)
2500.0	230.0	6.12554	(257, 1)	2438.0	240.0	7.32270	(120, 2)
2500.0	240.0	7.31680	(120, 2)	2896.0	250.0	6.96494	(69, 2)
3000.0	250.0	6.91751	(69, 2)	3048.0	260.0	6.68241C	(268, 2)
3500.0	260.0	5.73143C	(268, 2)	3658.0	270.0	5.72698	(322, 2)
4000.0	270.0	5.64340	(322, 2)	3962.0	280.0	8.19262C	(313, 2)
4000.0	280.0	8.10839C	(313, 2)	4572.0	290.0	5.37428C	(275, 2)
5000.0	290.0	4.98108C	(275, 2)	5182.0	300.0	4.92000	(274, 2)
5500.0	300.0	4.85421	(274, 2)	4801.0	310.0	7.26564	(325, 3)
5000.0	310.0	7.03722	(325, 3)	4875.0	320.0	5.58807	(325, 2)
5000.0	320.0	5.54946	(325, 2)	6000.0	330.0	6.64007	(244, 3)
6500.0	330.0	6.42697	(244, 3)	5500.0	340.0	6.35699C	(345, 2)
6000.0	340.0	5.70897C	(345, 2)	5250.0	350.0	4.69730	(304, 2)
5500.0	350.0	4.49156	(304, 2)	5125.0	360.0	4.11160	(86, 2)
5500.0	360.0	4.09847	(332, 2)				

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 8.47573 AND OCCURRED AT (2000.0, 200.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 2000.0	2500.0	3000.0	3500.0	4000.0
360.0 /	5.88585C(63, 2)	4.97890C(63, 2)	4.57806 (326, 1)	4.36571 (326, 1)	4.05411 (326, 1)
350.0 /	6.99575 (94, 2)	6.25285 (157, 2)	5.82292 (86, 2)	5.51325 (86, 2)	5.02981 (86, 2)
340.0 /	4.71581 (89, 2)	4.89832 (89, 2)	4.39843 (89, 2)	3.82564 (56, 2)	3.45362 (56, 2)
330.0 /	5.05014 (89, 2)	4.83827C(210, 2)	4.46930C(1, 2)	4.58808 (238, 2)	3.89632 (238, 2)
320.0 /	4.59299C(287, 2)	5.23599 (228, 2)	5.86320C(63, 2)	6.20165 (217, 2)	5.73730C(63, 2)
310.0 /	4.81024 (209, 2)	6.51336 (121, 2)	6.59804 (121, 2)	6.16408 (121, 2)	5.61104 (121, 2)
300.0 /	5.58458 (156, 2)	7.11616 (227, 2)	7.43723 (227, 2)	6.81044 (227, 2)	5.97801 (227, 2)
290.0 /	5.05716 (156, 2)	5.31700C(275, 2)	5.86737 (156, 2)	5.10348 (156, 2)	4.49570 (235, 2)
280.0 /	6.41102C(110, 2)	7.24830C(110, 2)	6.46190C(110, 2)	7.00283 (266, 2)	7.00293 (266, 2)
270.0 /	4.04207 (85, 2)	5.71899C(41, 2)	5.70823C(41, 2)	5.71942 (322, 2)	5.07304 (223, 2)
260.0 /	4.79626 (262, 2)	5.65191 (69, 2)	5.77763 (262, 2)	5.65980 (262, 2)	4.94703 (224, 2)
250.0 /	6.05610C(135, 2)	6.62518 (199, 2)	6.38131 (263, 2)	6.36951 (69, 2)	6.16343 (263, 2)
240.0 /	6.28302C(135, 2)	6.75219 (49, 2)	6.62352 (49, 2)	6.18980 (65, 2)	5.91544 (65, 2)
230.0 /	6.43777 (119, 2)	5.97459 (132, 2)	6.71924 (66, 2)	7.28879 (66, 2)	7.35873 (66, 2)
220.0 /	5.18567 (132, 2)	4.74714 (302, 2)	6.56655 (302, 2)	7.23394 (302, 2)	7.33235 (302, 2)
210.0 /	6.16027 (107, 2)	6.50480C(129, 1)	6.21873C(145, 2)	5.01686C(145, 2)	4.12768 (108, 2)
200.0 /	8.47573 (146, 2)	7.19194 (146, 2)	5.75154 (146, 2)	4.58293 (146, 2)	3.84712C(327, 3)
190.0 /	3.90348 (107, 2)	4.53891 (107, 2)	4.26730C(145, 2)	4.10251C(145, 2)	3.81564C(145, 2)
180.0 /	3.75325 (352, 2)	4.41198 (107, 2)	4.94413 (107, 2)	5.02282 (107, 2)	4.88604 (107, 2)
170.0 /	3.98092 (98, 2)	4.17060 (279, 2)	4.40428C(165, 3)	4.57924 (46, 2)	4.41341 (46, 2)
160.0 /	3.69500 (84, 2)	4.29849C(289, 2)	3.95285 (26, 2)	4.25542 (26, 2)	4.25266 (26, 2)
150.0 /	3.43846 (160, 2)	3.93424 (160, 2)	5.02134 (283, 2)	4.93824 (349, 2)	4.73537 (340, 2)
140.0 /	3.50002C(356, 2)	4.16803 (355, 2)	5.13019 (355, 2)	5.29946 (355, 2)	5.15430 (355, 2)
130.0 /	5.55802C(198, 2)	5.32551 (359, 2)	5.40084 (20, 2)	5.89174C(356, 2)	5.18328C(356, 2)
120.0 /	6.25796 (160, 2)	6.63332 (348, 1)	6.51178 (348, 1)	5.69164 (189, 2)	4.87159 (189, 2)
110.0 /	5.91185 (44, 2)	6.64356 (44, 2)	6.67516 (44, 2)	6.41432 (44, 2)	6.03992 (44, 2)
100.0 /	7.09717C(153, 2)	7.72721C(153, 2)	7.10546C(153, 2)	6.21445C(153, 2)	5.35837C(153, 2)
90.0 /	5.51085 (118, 2)	5.12064 (138, 2)	5.62443 (83, 2)	5.72375 (83, 2)	5.50913 (83, 2)
80.0 /	7.47643 (149, 2)	6.47819 (149, 2)	5.24336 (149, 2)	4.97359 (137, 2)	4.10228 (137, 2)
70.0 /	5.87183C(27, 2)	6.81584C(27, 2)	6.21611C(27, 2)	4.98540 (149, 2)	4.26042 (169, 2)
60.0 /	5.98091 (170, 2)	5.43906 (170, 2)	4.89849 (233, 2)	4.39452 (159, 2)	4.03624C(237, 2)
50.0 /	4.27422 (185, 2)	4.81515C(181, 3)	5.30815C(181, 3)	5.01846C(181, 3)	4.28665 (182, 2)
40.0 /	4.00626 (151, 2)	4.25261 (357, 2)	4.49620 (358, 2)	5.63530 (358, 2)	5.97378 (358, 2)
30.0 /	4.24075 (158, 2)	3.94116 (31, 2)	4.23892C(237, 2)	3.91280 (220, 2)	3.95460 (326, 1)
20.0 /	5.26577 (346, 2)	5.03849 (158, 2)	5.00918 (87, 2)	5.25541 (346, 2)	4.48139 (346, 2)
10.0 /	6.67573C(63, 2)	6.22300C(63, 2)	5.13476C(63, 2)	4.14035C(63, 2)	4.02973 (220, 2)

2ND HIGH
8-HR
SGROUP# 1

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
5000.0	10.0	3.53009	(220, 2)	5500.0	10.0	3.40811	(305, 1)
4500.0	20.0	3.81297	(346, 2)	5000.0	20.0	3.40906	(220, 2)
2500.0	30.0	3.94116	(31, 2)	3000.0	30.0	4.23892C	(237, 2)
2500.0	40.0	4.25261	(357, 2)	3000.0	40.0	4.49620	(358, 2)
1500.0	50.0	4.11852	(151, 2)	2000.0	50.0	4.27422	(185, 2)
1500.0	60.0	4.61802	(230, 2)	2000.0	60.0	5.98091	(170, 2)
1500.0	70.0	6.12630	(137, 2)	2000.0	70.0	5.87183C	(27, 2)
838.0	80.0	4.37279	(212, 2)	1100.0	80.0	4.28457	(137, 2)
1500.0	80.0	6.09209	(149, 2)	2000.0	80.0	7.47643	(149, 2)
686.0	90.0	3.81632	(191, 2)	1100.0	90.0	3.35527	(137, 2)
1500.0	90.0	5.32635	(118, 2)	2000.0	90.0	5.51085	(118, 2)
533.0	100.0	3.78063	(44, 3)	700.0	100.0	1.59377	(92, 2)
1100.0	100.0	2.91930	(92, 2)	1500.0	100.0	3.71790	(185, 2)
2000.0	100.0	7.09717C	(153, 2)	457.0	110.0	0.58739	(300, 3)
700.0	110.0	1.54997C	(195, 2)	1100.0	110.0	3.67454	(137, 2)
1500.0	110.0	3.93941C	(47, 2)	2000.0	110.0	5.91185	(44, 2)
457.0	120.0	5.34316	(4, 1)	700.0	120.0	3.68013	(4, 1)
1100.0	120.0	4.47056C	(198, 2)	1500.0	120.0	4.90474	(46, 2)
2000.0	120.0	6.25796	(160, 2)	457.0	130.0	11.60748	(348, 3)
700.0	130.0	3.99789	(193, 2)	1100.0	130.0	4.34383C	(153, 2)
1500.0	130.0	4.20697	(359, 2)	2000.0	130.0	5.55802C	(198, 2)
457.0	140.0	1.74938	(137, 2)	700.0	140.0	3.75090C	(135, 2)
1100.0	140.0	3.36746C	(198, 2)	1500.0	140.0	3.49771C	(198, 2)
2000.0	140.0	3.50002C	(356, 2)	[redacted]			
700.0	150.0	2.74439	(193, 2)	1100.0	150.0	2.98651	(189, 2)
1500.0	150.0	2.98591C	(171, 2)	2000.0	150.0	3.43846	(160, 2)
488.0	160.0	0.79750C	(265, 1)	700.0	160.0	2.43602	(147, 2)
1100.0	160.0	2.43313	(164, 2)	1500.0	160.0	2.64386C	(289, 2)
2000.0	160.0	3.69500	(84, 2)	533.0	170.0	12.16013	(340, 3)
700.0	170.0	2.84846C	(135, 2)	1100.0	170.0	2.28702C	(135, 2)
1500.0	170.0	2.76809C	(165, 3)	2000.0	170.0	3.98092	(98, 2)
610.0	180.0	3.23496	(193, 2)	700.0	180.0	3.44345	(193, 2)
1100.0	180.0	2.83772	(164, 2)	1500.0	180.0	2.33713	(132, 2)
2000.0	180.0	3.75325	(352, 2)	750.0	190.0	3.52660	(193, 2)
1100.0	190.0	3.42418	(254, 2)	1500.0	190.0	3.19708	(190, 2)
2000.0	190.0	3.90348	(107, 2)	1829.0	200.0	8.22337C	(145, 2)
2000.0	200.0	8.47573	(146, 2)	1829.0	210.0	6.47687	(107, 2)
2000.0	210.0	6.16027	(107, 2)	1981.0	220.0	5.20232	(132, 2)

*** ISCST BY KBN 3/88 *** 1985 CO SIGNIFICANCE ANALYSIS FOR COMB. BLR #4 ***

* SECOND HIGHEST 8-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE DISCRETE RECEPTOR POINTS *

- RNG -	- DIR -	CON.	(DAY,PER.)	- RNG -	- DIR -	CON.	(DAY,PER.)
2000.0	220.0	5.18567	(132, 2)	2134.0	230.0	6.26159	(119, 2)
2500.0	230.0	5.97459	(132, 2)	2438.0	240.0	6.69718	(49, 2)
2500.0	240.0	6.75219	(49, 2)	2896.0	250.0	6.30190	(263, 2)
3000.0	250.0	6.38131	(263, 2)	3048.0	260.0	5.77889	(262, 2)
3500.0	260.0	5.65980	(262, 2)	3658.0	270.0	5.59380	(223, 2)
4000.0	270.0	5.07304	(223, 2)	3962.0	280.0	7.01457	(266, 2)
4000.0	280.0	7.00293	(266, 2)	4572.0	290.0	4.20423	(244, 1)
5000.0	290.0	3.97996	(244, 1)	5182.0	300.0	4.25450	(227, 2)
5500.0	300.0	3.89074	(227, 2)	4801.0	310.0	4.76453	(121, 2)
5000.0	310.0	4.57507	(121, 2)	4875.0	320.0	5.44051	(217, 2)
5000.0	320.0	5.31074	(217, 2)	6000.0	330.0	3.36871	(42, 2)
6500.0	330.0	3.33909	(42, 2)	5500.0	340.0	3.02599	(304, 2)
6000.0	340.0	3.01482	(304, 2)	5250.0	350.0	3.87199	(86, 2)
5500.0	350.0	3.67637	(86, 2)	5125.0	360.0	3.71460	(332, 2)
5500.0	360.0	3.76952	(86, 2)				

P 794 947 067

RECEIPT FOR CERTIFIED MAIL

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Sent to: Vernon L. Adams, Sup. ~~Georgia-Pacific Corp.~~	
Street and No. P.O. Box 919	
P.O., State and ZIP Code Palatka, FL 32078-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 04/29/88	

PS Form 3800, June 1985

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1. ☒ Show to whom delivered, date, and addressee's address. †(Extra charge)† 2. ☐ Restricted Delivery †(Extra charge)†

Add fee not paid

3. Article Addressed to:	4. Article Number
Mr. Vernon L. Adams Supervisor of Environmental Affairs Georgia-Pacific Corp. P.O. Box 919 Palatka, FL 32078-0919	P 794 947 067 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5 Signature – Addressee X Georgia Pacific Corp	8. Addressee's Address *(ONLY if requested and fee paid)*
6 Signature – Agent X S. J. Brown	
7 Date of Delivery 5/2/88	

PS Form **3811**, Mar. 1987 ★ U S G P O 1987-178-268 **DOMESTIC RETURN RECEIPT**

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MAY 4 1988

DER - BAQM

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Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

ATTN: M. JANES

Florida Department of Environmental Regulation

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

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

April 27, 1988

entire doc.

Mr. Vernon L. Adams
Supervisor of Environmental Affairs
Georgia-Pacific Corporation
P.O. Box 919
Palatka, Florida 32078-0919

Dear Mr. Adams:

We have reviewed FAC Chapters 17-2 and 17-4 in order to determine if the Department has the authority to require you to obtain a construction permit prior to increasing the operation rate of the No. 4 Combination Boiler. The answer is that the Department does clearly have the authority and the obligation to require an application for a construction permit.

First, FAC Rule 17-2.210(1) specifies that the owner or operator of a proposed new or modified source must obtain a construction permit. It does not in any way preclude the requirements for a construction permit in other situations.

Second, the requirements of FAC Rule 17-2.500 are generally applicable to the construction or modification of air pollutant emitting sources. The requirements are not specifically limited to the construction or modification of air pollutant emitting sources. This means that the Department may elect to review any change to an air pollution source under the provisions of FAC Rule 17-2.500. If the changes are exempted from the full preconstruction review requirements of FAC Rule 17-2.500(5) then the review continues pursuant to FAC Rule 17-2.520. The permits are issued pursuant to the applicable requirements of both FAC Rules 17-2.500 and 17-2.520.

Third, FAC Rule 17-2.500(1)(d) requires the Department to condition <u>any</u> permit to insure that the provisions of FAC Rule 17-2.500 are not violated. Since FAC Rule 17-2.500 is a federally enforceable part of the SIP, the permit conditions need to be federally enforceable. The U.S. EPA does not recognize state operation permits as federally enforceable, so a construction permit is the only appropriate vehicle.

Fourth, the requirements of FAC Rule 17-2.100(118) may be interpreted to mean that the proposed increase in the operation rate of the No.4 Combination Boiler is not a modification. But, the change in the operation rate and any associated change in emissions (as compared to those prior to noncompliance) are creditable emission changes that affect ambient air quality standards and PSD increment. So, the changes to the No.4 Combination Boiler are not fully exempt from review pursuant to FAC Rules 17-2.500 and 17-2.520, especially since FAC Rule 17-2.520 applies to all sources that are not subject to the full preconstruction review requirements of FAC Rule 17-2.500 and to all sources that are not exempt from the requirements of FAC Chapters 17-2 and 17-4.

Fifth, an operation permit is not the appropriate vehicle to obtain the requested change in operation rate. An operation permit is defined by FAC Rule 17-4.020(5) as, "the legal authorization granted by the Department to operate or maintain any installation for a specified period of time." While a construction permit is defined in FAC Rule 17-4.020(4) as, "the legal authorization granted by the Department to construct, expand, modify; or make alterations to any installation and to temporarily operate and test such new or modified installation. The installation of an electrostatic precipitator larger than needed to comply with the emission limits in FAC Rule 17-2.600(10) at the previous operation rate and the requested change in operation rate is construed as both an expansion and an alteration. So, an application for a construction permit is required.

Last, since the electrostatic precipitator was constructed such that the No. 4 Combination Boiler can comply with the emission limits in FAC Rule 17-2.600(10) at an increased operation rate--it is not exempt from review pursuant to 40 CFR 60.15 and 40 CFR 60, Appendix C. The review is to be based on a comparison of actual mass emissions as of the last test prior to non - compliance versus those at the time compliance was demonstrated at the increased operation rate. If, based on emission test results for particulate and emission factors for other pollutants, an increase in actual emissions occurs--then the No. 4 Combination Boiler will become subject to the applicable federal NSPS. This data will need to be included in the completed application for a construction permit.

Mr. Vernon L. Adams
Page Three
April 27, 1988

If you have any questions or wish to meet with us, please call Bill Thomas or Mike Harley at (904)488-1344 or write to me at the address above.

Sincerely,

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

CHF/plm

cc: W. Stewart
D. Buff, P.E.
B. Pittman
B. Mitchell

PM
April 22, 1988
Palatka, FL

File Copy

Georgia-Pacific Corporation
Palatka Operations
Southern Pulp & Paper Division

P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

April 22,1988

RECEIVED

APR 25 1988

DER - BAQM

Mr. Clair H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Re: Request for Operation Permit Renewal
No. AO 54-58340 No. 4 Combination Boiler

Dear Mr. Fancy:

We have received your letter of March 16th and appreciate the Department's willingness to review the permit without applying NSPS and PSD review.

The No. 4 Combination Boiler was built prior to the need for construction permits and to the best of our knowledge has never been subject to either a construction permit or a variance. Our engineering and legal people have reviewed both your letter and the regulations, and have been unable to ascertain the legal justification for the Department requiring a construction permit for this source at this time. We believe the requested changes can be accomplished through a simple change in the operating permit. Please review the situation and advise us if you still believe we need to submit a construction permit application. If so, we would appreciate a meeting with you and your staff so that we can better understand your reasoning.

If I can be of service, please call me at 904-325-2001.

Sincerely,
Vernon L. Adams

Vernon L. Adams
Supervisor of
Environmental Affairs

cc: W. L. Baxter
D. Buff, P.E.
H. Hirschman
A. Hodges
E. Schmidt
W. Stewart

Copied: Pradeep Raval
CHF/BT
4.25.88

Georgia-Pacific

P. O. Box 919
Palatka, Florida 32078-0919

PRESORTED FIRST CLASS

PALATKA
APR 22 '88
FL

U.S. POSTAGE
25

Mr. Clair H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

P 274 010 436

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☆ U.S.G.P.O. 1985-480-794

Mr. Vernon L. Adams	
~~Georgia-Pacific Corp.~~	
Street and No. P.O. Box 919	
P.O., State and ZIP Code Palatka, FL 32077-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 03/16/88 Permits: AO 54-58340 No. 4 Combination Boiler	

PS Form 3800, June 1985

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

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

1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to: Mr. Vernon L. Adams General Manager Georgia-Pacific Corporation P.O. Box 919 Palatka, FL 32077-0919	4. Article Number P 274 010 436 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X Ga-Pac Corp	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X Johnny Bebbry	
7. Date of Delivery 3/17/88	

PS Form 3811, Feb 1986 DOMESTIC RETURN RECEIPT

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- Endorse article "Return Receipt Requested" adjacent to number.

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

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MAR 18 1988

DER - BAQM

Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

ATTN: M. JANES

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

DEPARTMENT OF ENVIRONMENTAL REGULATION
STATE OF FLORIDA

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

March 16, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Vernon Adams
Supervisor of Environmental Affairs
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32078-0919

Re: Request for Operation Permit Renewal
No. AO 54-58340 No. 4 Combination Boiler

Dear Mr. Adams:

We have reviewed your letter, received February 16, 1988, about the proposed increase in the operation rate of the No. 4 combination boiler. In order for us to process your proposed changes, you will need to submit a completed application for a construction permit accompanied by the appropriate application fee.

The Department is willing to agree that the proposed change in operation rate may not be a modification subject to NSPS or PSD review. But, we need to know if the No. 4 combination boiler has ever been subject to a construction permit and/or variance. Please provide copies of all construction permit(s) and variance(s) that have been issued for the No. 4 combination boiler.

Sincerely,

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

CHF/plm

cc: Bill Stewart
David Buff, P.E.

PM
2·11·88
Palatka, FL

File Copy

Georgia-Pacific Corporation Palatka Operations
Southern Pulp & Paper Division

P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

February 10, 1988

DER
FEB 15
BAQM

Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Re: Request for Operation Permit Renewal
No. AO 54-58340 No. 4 Combination Boiler

Georgia-Pacific Corporation has been reviewing the application previously submitted for the above referenced boiler and the comments received from the department regarding this application. Our consulting engineer Mr. David Buff was also asked to review the Department's comments and investigate the rule applicability concerning major modifications. Both Georgia-Pacific and Mr. Buff believe the permit changes requested do not constitute a major modification. The attached letter from Mr. Buff explains our interpretation of the rules as we believe they apply. Please review Mr. Buff's letter and continue processing the application if you agree. If the Department needs further information or we need to discuss the issue at greater length we would welcome the opportunity to meet with you or your staff concerning the matter.

Please call me if I can be of assistance or if we need to meet.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Supervisor of
Environmental Affairs

cc: W. L. Baxter
D. Buff
J. Cole
H. Hirschman
B. Mitchell
E. Schmidt
B. Thomas
Mike Harley
CHF/BT } 2·22·88

Georgia-Pacific

P. O. Box 919
Palatka, Florida 32078-0919

4/16

magzie Jukie needs to draft response after talking to Bill T's Botany looks like it could go either way; If there was a construction permit with limits, it will need to be amended.

Clair

2-15-88

CHF — Disposition — please?!?

PRESORTED FIRST CLASS

PALATKA FEB 11 '88

U.S. POSTAGE .22

Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

KBN

January 25, 1988
87046

Mr. Vernon Adams
Environmental Manager
Georgia-Pacific Corporation
P.O. Box 919
Palatka, FL 32077

Re: Request for Operation Permit Renewal
No. A054-58340: No. 4 Combination Boiler

Dear Mr. Adams:

At your request, I have reviewed FDER's incompleteness letter of August 14, 1987, concerning the above referenced permit application. FDER states in their letter that the application as submitted constitutes a major modification and therefore requires a construction permit review process. However, the justification or rationale for this conclusion is not presented. It is my opinion that the No. 4 Combination Boiler operation as reflected in the application does not constitute a major modification under FDER's rules. The basis for this conclusion is presented below.

Under the FDER Prevention of Significant Deterioration (PSD) rules (FAC Rule 17-2.500), major modifications are subject to PSD review. Rule 17-2.100(118) defines "modification" as:

> Any physical change in, change in the method of operation of, or addition to a stationary source or facility which increases the actual emissions of any air pollutant, regulated under this Chapter, including any not previously emitted, from any source or facility. A physical change or change in the method of operation shall not include:
> (a) routine maintenance, repair, or replacement of component parts of a source;
> (b) An increase in the hours of operation or in the production rate of a source, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975; or
> (c) A change in ownership of a source or facility.

KBN ENGINEERING AND APPLIED SCIENCES, INC.
P. O. Box 14288 5700 SW 34th Street Gainesville, FL 32604 904/375-8000

First, G-P is not making any physical changes to the boiler in order to operate at the higher steam rate requested in the application. The boiler has always had the capability to run at this higher steam rate, but G-P did not run the boiler at this rate so that compliance with particulate emission limits could be met. The ESP serving the boiler has been added to the existing pollution control equipment which allows compliance with the particulate emission limits at the higher steam rate.

Secondly, the above definition of modification specifically excludes an increase in the production rate of a source, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. It is my understanding that operating permits are not considered by USEPA to be federally enforceable. It is therefore concluded that there are no federally enforceable permit limitations on this boiler which would prohibit the proposed steam rate increase. As a result, the proposed change should not be subject to PSD review.

I would like FDER's comments on this position, and an explanation of why the Department believes the proposed rate increase is subject to PSD review.

Sincerely,

David A. Buff

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

Vernon Adams
David Buff, PE
Bill Stewart

4/16.

m's [illegible] needs to
draft response after
talking to Bill T's Betsy
looks like it [illegible] so
either way, If there was
a construction permit with
limits, it will need to
be amended.

Clon

2-15-88
CHF — Disposi-
tion — [illegible] ?!?

ii

BEST AVAILABLE COPY

Georgia-Pacific Corporation
Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

February 10, 1988

Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Re: Request for Operation Permit Renewal
No. AO 54-58340 No. 4 Combination Boiler

Georgia-Pacific Corporation has been reviewing the application previously submitted for the above referenced boiler and the comments received from the department regarding this application. Our consulting engineer Mr. David Buff was also asked to review the Department's comments and investigate the rule applicability concerning major modifications. Both Georgia-Pacific and Mr. Buff believe the permit changes requested do not constitute a major modification. The attached letter from Mr. Buff explains our interpretation of the rules as we believe they apply. Please review Mr. Buff's letter and continue processing the application if you agree. If the Department needs further information or we need to discuss the issue at greater length we would welcome the opportunity to meet with you or your staff concerning the matter.

Please call me if I can be of assistance or if we need to meet.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Supervisor of
Environmental Affairs

cc: W. L. Baxter
D. Buff
J. Cole
H. Hirschman
B. Mitchell
E. Schmidt
B. Thomas
Mike Harley
CHF/BT
2.22.88

DER
FEB 16
BAQM

January 25, 1988
87046

Mr. Vernon Adams
Environmental Manager
Georgia-Pacific Corporation
P.O. Box 919
Palatka, FL 32077

Re: Request for Operation Permit Renewal
No. A054-58340: No. 4 Combination Boiler

Dear Mr. Adams:

At your request, I have reviewed FDER's incompleteness letter of August 14, 1987, concerning the above referenced permit application. FDER states in their letter that the application as submitted constitutes a major modification and therefore requires a construction permit review process. However, the justification or rationale for this conclusion is not presented. It is my opinion that the No. 4 Combination Boiler operation as reflected in the application does not constitute a major modification under FDER's rules. The basis for this conclusion is presented below.

Under the FDER Prevention of Significant Deterioration (PSD) rules (FAC Rule 17-2.500), major modifications are subject to PSD review. Rule 17-2.100(118) defines "modification" as:

> Any physical change in, change in the method of operation of, or addition to a stationary source or facility which increases the actual emissions of any air pollutant, regulated under this Chapter, including any not previously emitted, from any source or facility. A physical change or change in the method of operation shall not include:
> (a) routine maintenance, repair, or replacement of component parts of a source;
> (b) An increase in the hours of operation or in the production rate of a source, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975; or
> (c) A change in ownership of a source or facility.

KBN ENGINEERING AND APPLIED SCIENCES, INC.
P. O. Box 14288 5700 SW 34th Street Gainesville, FL 32604 904/375-8000

V. Adams
January 25, 1988
Page 2

First, G-P is not making any physical changes to the boiler in order to operate at the higher steam rate requested in the application. The boiler has always had the capability to run at this higher steam rate, but G-P did not run the boiler at this rate so that compliance with particulate emission limits could be met. The ESP serving the boiler has been added to the existing pollution control equipment which allows compliance with the particulate emission limits at the higher steam rate.

Secondly, the above definition of modification specifically excludes an increase in the production rate of a source, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975. It is my understanding that operating permits are not considered by USEPA to be federally enforceable. It is therefore concluded that there are no federally enforceable permit limitations on this boiler which would prohibit the proposed steam rate increase. As a result, the proposed change should not be subject to PSD review.

I would like FDER's comments on this position, and an explanation of why the Department believes the proposed rate increase is subject to PSD review.

Sincerely,

David A. Buff

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

Mike: 2-2-88
Should I copy
anyone else?

1 Feb 1988
Palatka, Fla

Georgia-Pacific Corporation Palatka Operations
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

January 28, 1988

DER

FEB 2

BAQM

Mr. Bruce Mitchell
Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Bruce;

Please find enclosed a copy of the letter we received which extended the expiration dates for permits AC 54-43773, AC 54-43791, and AC 54-43795. If you need additional information please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Supervisor of
Environmental Affairs

cc: W. L. Baxter

Copied: Mike Harley
CHF/BT } 2-2-88 mr

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

cc: W.L. Baxter
W.R. Wilson
E. Schmidt
Air File
Air Permit File

November 21, 1985

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DER
FEB 2
BAQM

Mr. Vernon L. Adams
Supervisor of Environmental Affairs
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32077

Dear Mr. Adams:

Re: Extension of the Expiration Date for AC 54-43773, AC 54-43791 and AC 54-43795

The bureau is in receipt of your request to extend the expiration date of the above referenced construction permits issued November 2, 1981, and are to expire December 31, 1985. The request is acceptable and the following condition is changed:

Expiration Date:

From: December 31, 1985
To: July 31, 1989

Attachment to be incorporated is:

- AC 54-43773

10. Mr. Vernon L. Adams' letter dated November 12, 1985.

- AC 54-43791 and AC 54-43795

9. Mr. Vernon L. Adams' letter dated November 12, 1985.

November 21, 1985
Page Two

This letter and attachment shall be attached to each of your construction permits, No. AC 54-43773, -43791 and -43795, and shall become a part of that permit.

Sincerely,

Victoria J. Tschinkel
Secretary

VJT/p

cc: W. R. Wilson
Johnny Cole

Georgia-Pacific Corporation

Hudson Pul per Corp.
A wholly-ow ıbsidiary

P.O. Box 919
Palatka, Floric 32077
Telephone (904) 325-2001

November 12, 1985

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

Dear Clair:

Georgia-Pacific hearby requests an extension of construction permits, numbers AC 54-43773, AC 54-43791 and AC 54-43795, all of which expire on December 31, 1985. These permits are for the construction of a new lime kiln, recovery boiler and combination boiler. The receipt of our PSD permit from EPA in December of 1984, combined with a subsequent appeal of this permit which was resolved in October of 1985, has made it impossible to construct these sources prior to the expiration date of our current Florida permits. It is for these reasons that we respectfully request an extension of these permits until July 31, 1989. This period is requested in order to allow time to begin construction, complete construction and complete the compliance testing of these units.

If you have any questions, please contact me at (904) 325-2001.

Sincerely,

Vernon L. Adams

Vernon L. Adams
Supervisor of Environmental Affairs

/de

cc: W. L. Baxter-Palatka
J. Cole - FDER-Jax
W. R. Wilson-Palatka
D. Hodges - Atlanta 11
E. Schmidt- Atlanta 09

P 274 007 711

RECEIPT FOR CERTIFIED MAIL

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

☆ U.S.G.P.O. 1985-480-794

Sent to Henry Hirschman, G.M. Georgia-Pacific Corp.	
Street and No. P.O. Box 919	
P.O., State and ZIP Code Palatka, FL 32708-0919	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 08/14/87 Permit: AO 54-58340	

PS Form 3800, June 1985

File Copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

August 14, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32708-0919

Dear Mr. Hirschman:

Re: Request for Operation Permit Renewal
No. AO 54-58340: No. 4 Combination Boiler

The Department's Bureau of Air Quality Management's (BAQM) staff, along with the Northeast District office, have reviewed your request for an operation permit renewal for the above referenced permit and source. The request that you have submitted constitutes a major modification and will require a construction permit review process. Therefore, submit to BAQM an appropriate application permit package (in quadruplicate) and processing fee.

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

Sincerely,

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

CHF/BM/s

cc: B. Stewart
B. Pittman
V. Adams
D. Buff, P.E.
Reading File
Bruce

File Copy

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

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

TO: Bill Stewart

THRU: Clair Fancy CHF

FROM: Bruce Mitchell BM

DATE: August 11, 1987

SUBJ: Georgia-Pacific Corporation's No. 4 Combination Boiler
No. AO 54-58340

The Bureau received Johnny Cole's cover note on July 29, 1987, on an application renewal request for the above referenced source and operating permit. Based on a review of the application package request, the following points are offered:

1. The installation of a new ESP was allowed without permitting requirements (see IM dated March 7, 1985) because it was a replacement control device and there was not an increase in through-put rate requested. However, the request to increase the through-put rate, which will increase pollutant emissions, is considered to be a modification and will require a full permitting review process. In this case, the new ESP is considered a capital expenditure (40 CFR 60.14(e)(2)).

2. The requested through-put rate and pollutant emission increases exceed the established Interim Operating Permitted levels and the 111(d) source inventory levels. Since the through-put could not have occurred without the installation of the new ESP, the request, again, is considered a modification and will require a full permitting review process.

3. The company should submit to the Bureau a PSD permit application package, along with the appropriate processing fee, since the requested increases in pollutant emissions are greater than the net significant pollutant levels contained in Table 500-2, FAC Rule 17-2, and would constitute a major modification.

4. As an alternative, the company can submit an amended application package and request that the levels of operation to be that of the current established maximum levels.

If there are any questions, please call Bruce Mitchell at (904)488-1344 or SC: 278-1344.

/bm

copied:
Bill Stewart
CHF/BT
Reading
8-19-87 BM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

G. DOUG DUTTON
DISTRICT MANAGER

April 10, 1985

file

DER

JUL 29 1987

BAQM

Mr. Henry Hirschman
General Manager
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32077

Dear Mr. Hirschman:

Putnam County - AP
Georgia-Pacific Corporation
No. 4 Combination Boiler

This addendum must be attached and shall become a part of permit No. AO54-58340 for No. 4 Combination Boiler to implement Consent Order OGC File No. 83-0803 dated January 7, 1985.

The addendum Specific Conditions are as follows:

9. The installation of the electrostatic precipitater (ESP) shall be according to the following timetable:

1.	Start of construction	January 31, 1986
2.	Completion of construction	October 31, 1986
3.	Startup and shakedown complete	December 31, 1986

10. Upon startup after the ESP installation, except for allowable excess emissions, the maximum allowable emission rate for each pollutant is as follows:

Pollutant	Regulation	Emission Rate lbs/hr.	TPY
PM[1]	17-2.600(10)(a)2.b.	130.1	570
VE[1]	17-2.600(10)2.a.	30% opacity, except 40% for 2 mins/hr.	
PM[2]	17-2.600(5)(b)2.	43.3	190
SO_2[2]	17-2.600(5)(b)3.a.(xi)	1193.0	5225
VE[2]	17-2.600(5)(b)1.	20% opacity, except 40% for 2 mins/hr.	

1 - when burning bark
2 - when burning No. 6 fuel oil

11. Testing of emissions must be accomplished at an input rate of at least 90% of 433.7 MMBTU/hr. when using bark or No. 6 fuel oil.

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)
Bill Thomas, BAQM
Initial
Date

2.
Initial
Date

3.
Initial
Date

4.
Initial
Date

DER
JUL 29 1987
BAQM

REMARKS:

Pls note increase in emissions in the AOP vs current OP.

Copied: Bruce Mitchell 7/29/87

INFORMATION
- Review & Return
- Review & File
- Initial & Forward

DISPOSITION
- Review & Respond
- Prepare Response
- For My Signature
- For Your Signature
- Let's Discuss
- Set Up Meeting
- Investigate & Report
- Initial & Forward
- Distribute
- Concurrence
- For Processing
- Initial & Return

FROM: Johnny Cole

DATE 07-28-87

PHONE

BEST AVAILABLE COPY

Mr. Henry Hirschman
April 10, 1985
page two

2/2/87
V. Adams asked if SC 12 req'd test using only bark & one w/ only FO.
I said No.
Use bark & if use FO, send FOA.

12. Test the emissions after Decem
pollutants by February 28, 198
prior to testing, and submit t
the last day of testing:

Pollutants

PM	when burning bar
VE	during one of th
PM	when burning fue
VE	during one of th
SO_2	during test, sam

Test and test reports shall cc
Sections 17-2.700(6) and (7),

13. Test the emissions for the fo]
interval(s) indicated from the
notify us 14 days prior to tes
to this office within 45 days

Pollutant	Interval
PM	6 mos. (when burning bark)
VE	6 mos. (when burning bark)
PM	12 mos. (if FO used, or report no FO used)
VE	12 mos. (if FO used, or report no FO used)
SO_2	6 mos. (if FO used, certified ASTM FOA or report no FO used)

Test and test reports shall comply with the requirements of Section 17-2.700(6) and (7), FAC, respectively.

14. Specific Conditions Nos. 5, 6 and 7 remain in effect and are a part of this addendum.

12. Test the emissions after December 31, 1986 for the following pollutants by February 28, 1987, notify this office 14 days prior to testing, and submit the test report within 45 days of the last day of testing:

Pollutants	
PM	when burning bark
VE	during one of the PM test runs
PM	when burning fuel oil
VE	during one of the PM test runs
SO_2	during test, sample and analyze by ASTM method

Test and test reports shall comply with the requirements of Sections 17-2.700(6) and (7), FAC., respectively.

13. Test the emissions for the following pollutant(s) at the interval(s) indicated from the date of February 28, 1987, notify us 14 days prior to testing, and submit the test report to this office within 45 days after completion of the testing:

Pollutant	Interval
PM	6 mos. (when burning bark)
VE	6 mos. (when burning bark)
PM	12 mos. (if FO used, or report no FO used)
VE	12 mos. (if FO used, or report no FO used)
SO_2	6 mos. (if FO used, certified ASTM FOA or report no FO used)

Test and test reports shall comply with the requirements of Section 17-2.700(6) and (7), FAC, respectively.

14. Specific Conditions Nos. 5, 6 and 7 remain in effect and are a part of this addendum.

Attachments to be incorporated are:

Application dated April 4, 1985 (filed February 28, 1985)
Consent Order OGC File No. 83-0803 dated January 7, 1985
Georgia-Pacific letter - timetable, dated October 29, 1984
DER letter - timetable, dated December 27, 1984

Sincerely,

Frank Watson Jr.

for Jerry M. Owen, P.E.
Acting District Manager

JMO:jck

Georgia-Pacific Corporation *Palatka Operations*
Southern Pulp & Paper Division
P.O. Box 919
Palatka, Florida 32078-0919
Telephone (904) 325-2001

July 20, 1987

NORTHEAST DISTRICT
RECEIVED
JUL 21 1987
DER-JACKSONVILLE

Mr. Johnny Cole
Florida Department of Environmental Regulation
3426 Bills Road
Jacksonville, Florida 32207

Dear Johnny:

Enclosed please find the permit renewal application for Georgia-Pacific #4 Combination Boiler. The long form has been completed pursuant to your request. You will note that the allowable emission rates requested in the application are those allowable under Chapter 17-2. We will continue to operate with the old allowable emission rates until the Department has had time to process this application.

If you have any questions, please call me.

Sincerely,

Vernon L. Adams

Vernon L. Adams, Supervisor
Environmental Affairs

em

cc: Henry Hirschman
E. J. Schmidt - Atlanta
W. L. Baxter

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959

DEPARTMENT OF ENVIRONMENTAL REGULATION STATE OF FLORIDA

NORTHEAST DISTRICT
RECEIVED
JUL 21 1987
DER-JACKSONVILLE

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ERNEST E. FREY
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Combination Fuel Steam Power Boiler [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Georgia-Pacific Corporation COUNTY: Putman

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) No. 4 Combination Power Boiler Stack

SOURCE LOCATION: Street State Road 216 (North Side) City Palatka

UTM: East 434.0 North 3283.4

Latitude 29 ° 41 ' 00 "N Longitude 81 ° 40 ' 45 "W

APPLICANT NAME AND TITLE: Georgia-Pacific Corporation

APPLICANT ADDRESS: P. O. Box 919, Palatka, Florida 32078-0919

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Georgia-Pacific Corp.

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

*Attach letter of authorization

Signed: Henry Hirschman 7/20/87

Henry Hirschman, General Manager
Name and Title (Please Type)

Date: ________ Telephone No. 904/325-2001

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

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

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

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed David A. Buff

David A. Buff
Name (Please Type)

KBN Engineering and Applied Sciences, Inc.
Company Name (Please Type)

P.O. Box 14288, Gainesville, FL 32604
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 07/09/87 Telephone No. (904) 375-8000

SECTION II: GENERAL PROJECT INFORMATION

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

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

Start of Construction ____________ Completion of Construction ____________

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

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

Permit No. A054-58340 dated December 8, 1982, expires September 30, 1987.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8,760; if seasonal, describe: ____________________

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

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

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

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

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

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

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

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

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

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? ______

a. If yes, for what pollutants? ______

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

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

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

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

Not applicable per definition - Rule 17-2.100(127), Process Weight

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

1. Total Process Input Rate (lbs/hr): ______

2. Product Weight (lbs/hr): ______

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr *			lbs/yr	T/yr *	
Particulates (Oil)	51.3	225	0.1 lbs/M̄ BTU	51.3	449,388	225	Stack
Particulates (Bark)	153.8	613	0.3 lbs/M BTU	153.8	1,347,288	673	Stack
SO_2 (Oil)	1482	6491	2.75 " " "	1482	12,982,320	6491	Stack
Fuel NO (as NO)	199**	870**	N/A	N/A	1,743,290**	870**	Stack
CO (Bark)	116**	507**	N/A	N/A	1,013,566**	507**	Stack
Methane Hydrocarbons	116**	507**	N/A	N/A	1,013,566**	507**	Stack
Opacity	30%, 40% 2 min/hr.		30%, 40% 2 min/hr	30%, 40% 2 min/hr		40%	Stack

[1] See Section V, Item 2. * at 8760 hr/yr. ** No sampling data: factored from AP-42 Chapter 1

[2] Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, Tables E. (1) - 0.1 pounds per million BTU heat input)

SO_2: from oil only - used very infrequently; no SO_2 from bark

[3] Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic Precipitator	Particulates	96%	N/A	Inlet loading= 1.18 grains/ACF
Research-Cottrell				Outlet loading= 0.04 grains/ACF
Custom Design				
IP-3355				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 Fuel Oil	Supplemental-varies	3772	512.69
Bark (wood)	94,549	115,704	512.69

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

Fuel Analysis: (See enclosed compliance test report, page 12)

Percent Sulfur: 2.5%(oil); 0%(bark) Percent Ash: 0.15 ±(Oil); 2.0 ±(bark)

Density: 8.28(oil); 21 lbs/cf (bark) lbs/gal Typical Percent Nitrogen: 0.54(oil) 0.1(bark)

Heat Capacity: 18,350(oil), 4500(bark) BTU/lb 151,938(oil) BTU/gal

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

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

Annual Average - Maximum -

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

100-1064 lbs/hr. ash to be collected from the precipitator (excluding mechanical dust collector) and disposed of in a controlled landfill.

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

Stack Height: 255' - 0" El. ft. Stack Diameter: 9 ft.

Gas Flow Rate: 217,000 ACFM 104,062 DSCFM Gas Exit Temperature: 440 °F.

Water Vapor Content: 18-21 % Velocity: 71.8 FPS

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste N/A

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

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

Manufacturer ______

Date Constructed ______ Model No. ______

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

Stack Height: ______ ft. Stack Diamter: ______ Stack Temp. ______

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

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

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) ______

Brief description of operating characteristics of control devices:

N/A

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

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

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

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

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

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

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

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

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

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. ____________no. sites ____________ TSP ____________ ( ) SO^2* ____________ Wind spd/dir

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

Other data recorded ______________________________

Attach all data or statistical summaries to this application.

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

DER Form 17-1.202(1)
Effective November 30, 1982

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)______________________________

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

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

C. Computer Models Used

1. ______________________________ Modified? If yes, attach description.

2. ______________________________ Modified? If yes, attach description.

3. ______________________________ Modified? If yes, attach description.

4. ______________________________ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

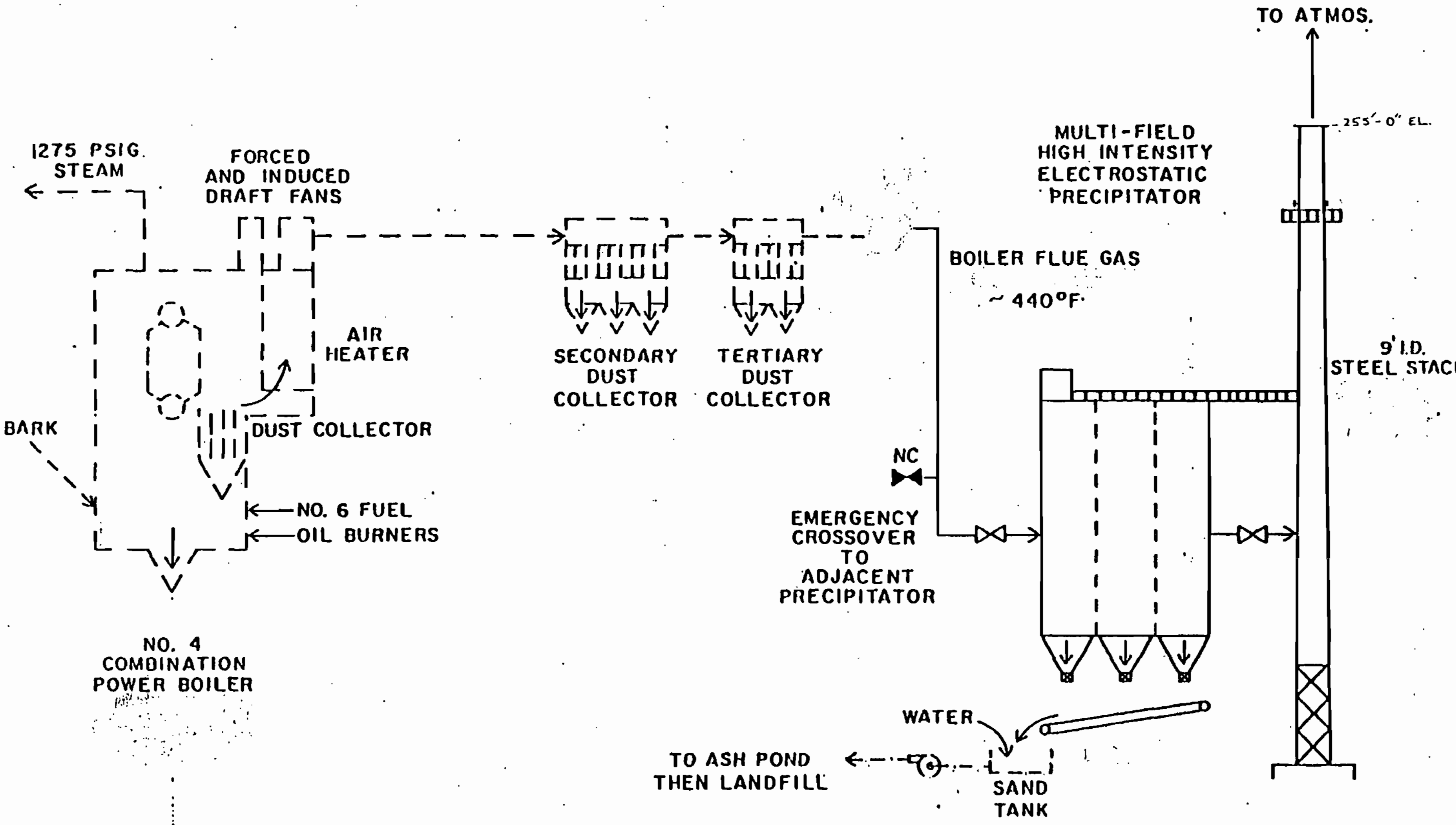
E. Emission Data Used in Modeling

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

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

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

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



SCALE NONE

DRAWN R.E.B. DATE 2-6-85

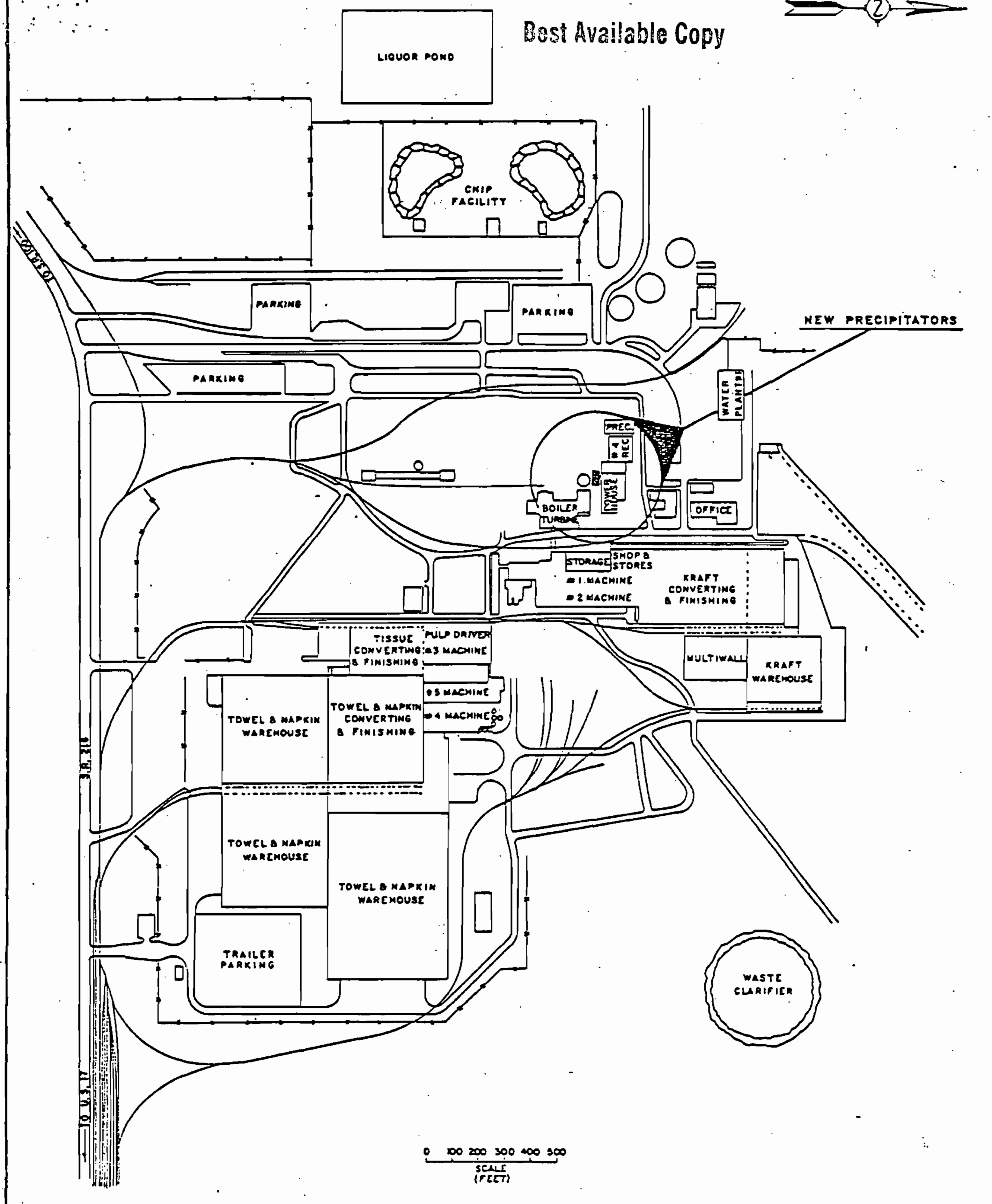
CHECKED DATE

APPROVED DATE

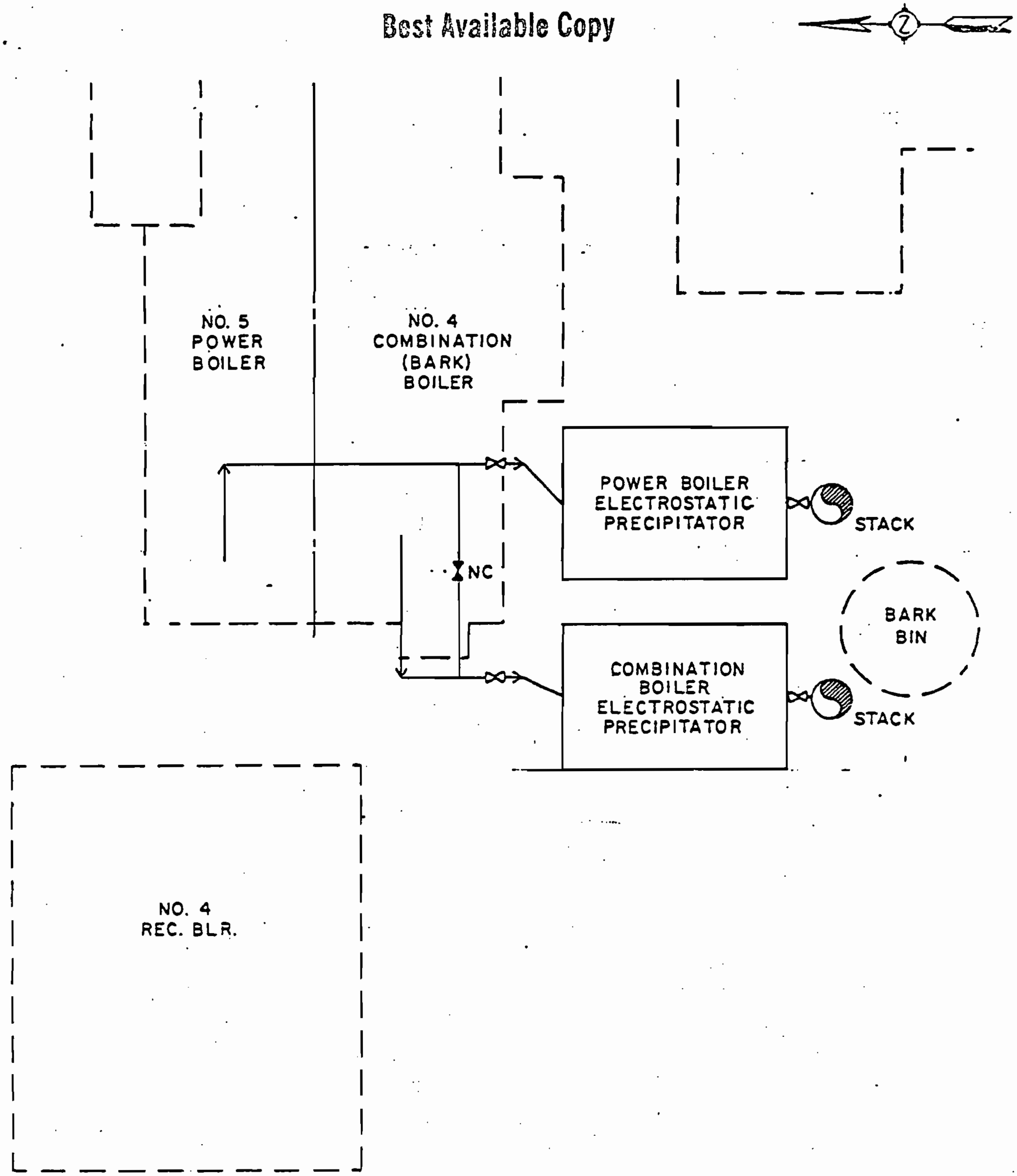
Ford, Bacon & Davis
Incorporated
MONROE, LOUISIANA

GEORGIA-PACIFIC CORPORATION

DRAWING TITLE
NO. 4 COMBINATION
POWER BOILER FLUE
GAS PRECIPITATOR-PROPOSED



SCALE NOTED		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE OVERALL PLOT PLAN OF MILL LOCATION
DRAWN R. E. B.	DATE 2 - 7 - 85		
CHECKED	DATE	GEORGIA - PACIFIC CORPORATION	
APPROVED	DATE		



SCALE	NONE		
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APPROVED		DATE	

Ford, Bacon & Davis
Incorporated
MONROE, LOUISIANA

GEORGIA - PACIFIC
CORPORATION

DRAWING TITLE
PLOT PLAN
OF
EQUIPMENT LAYOUT

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTER、OFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To:	Loctn.:	
To:	Loctn.:	
To:	Loctn.:	
From:	Date:	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due:	Date Due:	

TO: John C. Brown, Jr., Northeast District office

FROM: Bill Thomas, Bureau of Air Quality Management

DATE: March 7, 1985

SUBJ: Application Packages to install ESP's on No. 4 Combination Boiler and No. 5 Power Boiler at Georgia-Pacific Corporation

---

On February 28, 1985, the bureau received the above referenced application packages. Since each of the referenced sources was not permitted via a construction permit, their requests would not be considered a modification, pursuant to FAC Rule 17-2.100(105), which is also attached. Therefore, the bureau is transmitting the application packages to the district office for processing as a revision to their existing operating permits.

A fee per source should be appropriate. The applicant is awaiting a response from the department on fees and any additional information that might be necessary for processing their requests.

If there are any questions, please call me or Bruce Mitchell at SunCom 278-1344.

BT/BM/rw

Attachments

Georgia-Pacific Corporation

Hudson Pulp & Paper Corp.
A wholly-owned subsidiary

P.O. Box 919
Palatka, Florida 32077
Telephone (904) 325-2001

February 27, 1985

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

Dear Bruce:

Enclosed are 3 copies each of permit applications for adding particulate control devices to our No. 4 Combination Boiler and the No. 5 Oil Fired Power Boiler.

If there are any questions please contact me.

Sincerely,

Bob Wilson

W. R. Wilson
Environmental Supt.

mg
enclosures

cc W. L. Baxter
John Brown, FDER, Jacksonville

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: STEAM POWER BOILER OIL-FIRED [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [X] Operation [ ] Modification (TO A054-45320)

COMPANY NAME: GEORGIA-PACIFIC CORPORATION COUNTY: PUTNAM

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) NO. 5 POWER BOILER STACK

SOURCE LOCATION: Street STATE ROAD 216 (NORTH SIDE) City PALATKA

UTM: East 434.0 North 3283.4

Latitude 29° 41' 00"N Longitude 81° 40' 45"W

APPLICANT NAME AND TITLE: GEORGIA-PACIFIC CORPORATION

APPLICANT ADDRESS: P.O. BOX 919, PALATKA, FLORIDA 32077

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of GEORGIA-PACIFIC CORP.

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

*Attach letter of authorization Signed: ____________________

____
Name and Title (Please Type)

Date: __________ Telephone No. __________

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

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

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

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

HAROLD L. CULP CERTIFICATE NO. PE 0029275 STATE OF FLORIDA REGISTERED ENGINEER

Signed Harold L Culp

Harold L. Culp, PE
Name (Please Type)

Ford, Bacon & Davis, Inc.
Company Name (Please Type)

P.O. Box 1894, Monroe, LA 71210
Mailing Address (Please Type)

Florida Registration No. 29275 Date: March 21, 1980 Telephone No. (318) 323-9000

SECTION II: GENERAL PROJECT INFORMATION

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

(See Attached Supplementary Report)

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

Start of ~~Construction~~ February 28, 1986 Completion of ~~Construction~~ November 28, 1986
Modification-Addition of Control Equipment

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

Estimated cost of multi-cell electrostatic precipitator, ducting, ash removal and vertical stack with all installed appurtenances = $2,000,000

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

Permit No. A054-45320 dated January 22, 1982, expires September 30, 1986.

Consent Order OGC File No. 83-0803 - Florida Dept. of Environmental Regulation dated January 7, 1985.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8760; if seasonal, describe: N/A

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

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

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

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

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

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

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

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

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

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

   a. If yes, for what pollutants? --

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

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

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

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

Not Applicable Per Definition - Rule 17-2.100 (127), Process Weight

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

1. Total Process Input Rate (lbs/hr): To 31,550 lbs/hr No. 6 Oil plus Combustion Air
2. Product Weight (lbs/hr): 475,000 lbs/hr, 1275 psig, 900 °F Superheated Steam Maximum

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Requested Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr *			lbs/yr	T/yr *	
Particulates	56.8	248.8	0.1 lbs/MBTU	56.8	497,568	248.8	Stack
SO_2	1564	6850	2.75lbs/MBTU	1564	13,814,520	6907	Stack
Fuel NO(As NO	200	876	N/A	N/A	1,752,000	876	Stack
• CO	0.15	0.66	N/A	N/A	1314	0.66	Stack
• Methane Hydrocarbons	7.6	33.3	N/A	N/A	66,751	33.3	Stack
Opacity	20%, 40% 2M		20%, 40% 2M	20%, 40% 2M	30%		Stack

[1]See Section V, Item 2. *At 8760 hrs/yr • No Sampling data - factored from AP-42 Chap. 1 Tabl

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic Pre-	Particulates	Up to 90%	1-100	Cost Effective
cipitator (Not				Design Basis
Selected From Vendor				
Yet. Equipment Bids -				
Guaranteed Performance				
Data Not Yet Received)				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 Fuel Oil	2750 ±	3810	568.9

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

Fuel Analysis: (See Attached Report)

Percent Sulfur: 2 ½ Percent Ash: 0.15 ±

Density: 8.28 (10.9°AP1) lbs/gal Typical Percent Nitrogen: 0.54

Heat Capacity: 18,350 BTU/lb 151,938 BTU/gal

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

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

Annual Average -- Maximum -- Unknown-Paper and Pulp Mill

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

35-50 lbs/hr ash to be collected and disposed of in a controlled landfill.

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

Stack Height: 232 Above Grade ft. Stack Diameter: 9 ft.

Gas Flow Rate: 231,500 ACFM 118,500 DSCFM Gas Exit Temperature: 445 °F.

Water Vapor Content: 10-12 % Velocity: 60.6 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste N/A

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

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

Manufacturer ______

Date Constructed ______ Model No. ______

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

Stack Height: ______ ft. Stack Diamter: ______ Stack Temp. ______

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

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

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) ______

Brief description of operating characteristics of control devices: ______

N/A

______

______

______

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

N/A

______

______

______

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

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

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

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

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

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

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

*Explain method of determining

5. Useful Life: 6. Operating Costs:

7. Energy: 8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

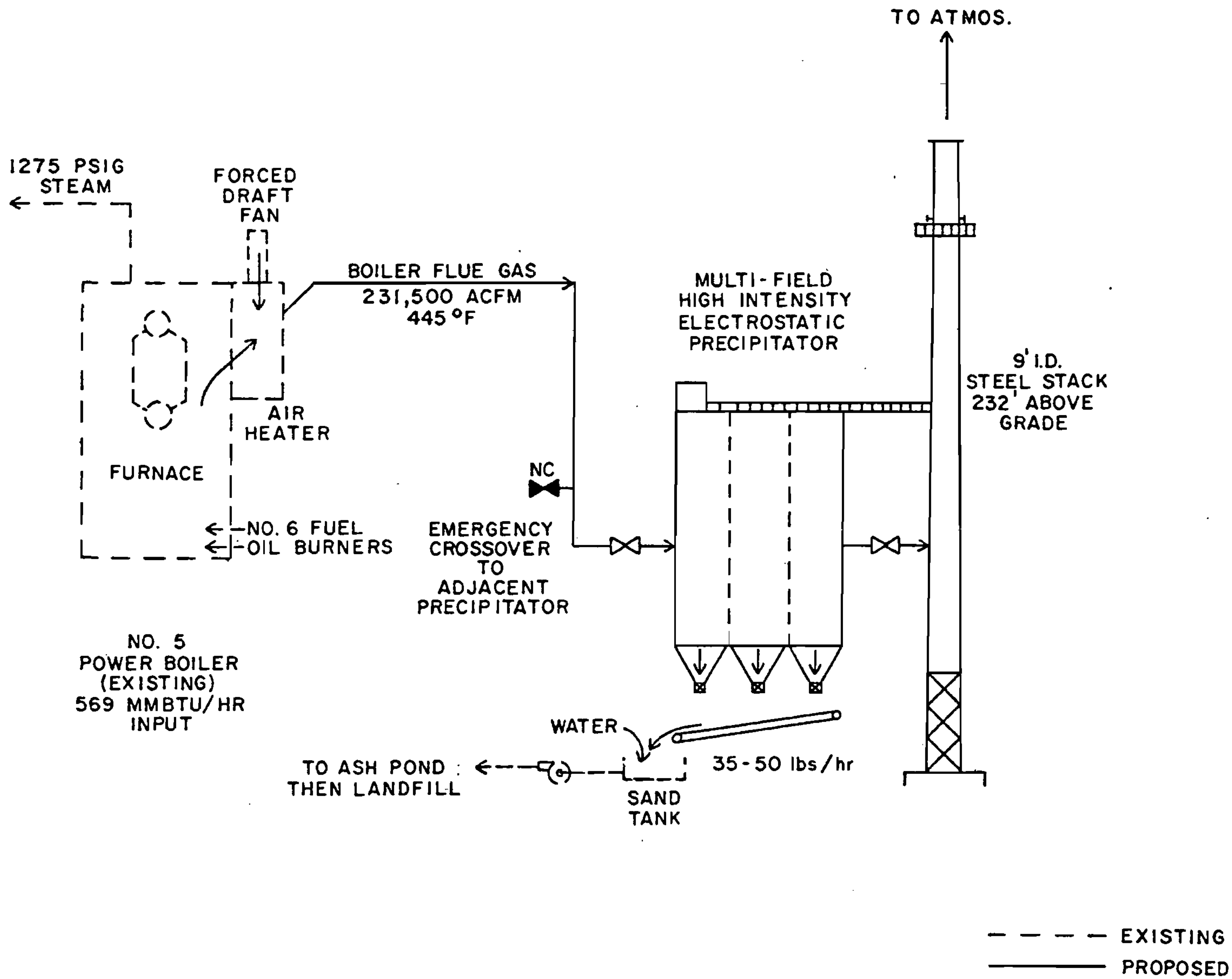
a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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



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PALATKA, FLORIDA

DRAWING TITLE
NO. 5 POWER BOILER FLUE GAS PRECIPITATOR - PROPOSED

DWG. NO. SK-C-1712-1

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

N/A

1. ___________ no. sites ___________ TSP ___________ ( ) SO^2* ___________ Wind spd/dir

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

Other data recorded ____

Attach all data or statistical summaries to this application.

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

SUPPLEMENTAL REPORT

INSTALLATION OF AN ELECTROSTATIC PRECIPITATOR ON THE NUMBER 5 POWER BOILER AT THE PALATKA, FLORIDA MILL OF GEORGIA-PACIFIC CORPORATION.

Background

The Number 5 boiler was erected in 1965 and is certified by an existing Operating Permit. The boiler fires Number 6 residual fuel oil exclusively and to date is not equipped with any emission control equipment. Permit-wise (A054-45320) the boiler has been rated at a maximum heat input rate of 465 MM BTU/Hr, thus its current emission rate is limited by this value.

The boiler has essentially met necessary emission criteria over the years but it's been found difficult to meet existing requirements using standard grades of Bunker C oils. Specific lower ash-sulfur oils have been purchased lately for the boiler enabling it to meet requirements on a more consistent basis.

Due to stack sampling difficulties and some alleged violations, various mutually acceptable solutions were arrived at recently by the Company and the Florida Department of Environmental Regulation which were contained in a January 1985 Consent Order. The Company has submitted a schedule for installing new emission control equipment on the boiler along with various intervals of stack monitoring and reportings of performance.

Proposed Project

Despite the knowledge that particulate removal equipment for oil based boiler flue gas streams is not always required to meet current emission standards (0.1 lbs/MM BTU/hr input) the Company has unilaterally decided to employ the best available control technology on this boiler at this time. This will allow the Company greater latitude in the selection of available, commercially plentiful and economic oil supplies without concern for random firing conditions that could encroach on current emission limits.

The Company has initiated the necessary engineering, planning, bid selection and procurement work necessary to install a high intensity, multi-field, rigid frame electrostatic precipitator on this boiler per a schedule previously approved by the Department of Environmental Regulation.

Facility Details

A study of the present steaming facilities is underway including a computerized analysis of combustion conditions (see Exhibit I). With

TABLE I

TYPICAL FUEL OIL ANALYSIS OF SUPPLIES USED BY GEORGIA-PACIFIC PALATKA MILL*

Degrees API at 60°F	10.9
Specific Gravity at 60°F	0.99
Flash Point, °F	178
BS & W, %	1.65
Viscosity, SFS at 122°F	275
Asphaltene, %	9.9
Ash, %	0.15
Carbon, %	85.7
Hydrogen, %	10.6
Nitrogen, %	0.54
Sulfur, %	2.5
Oxygen, %	0.6
Vanadium, ppm	550
BTUs per pound	18,350

*Analyzed by Fuel Engineering Company of New York in Thornwood, New York in 1984.

fuel oil, the unit has been found to demonstrate the following combustion design related characteristics:

1275 psig steam at 900°F = 1437.4 BTU/lb
Feedwater at 445°F saturated = -424.1 BTU/lb

1013.3 BTU/lb

Heat Input $\frac{1013.3 \text{ X } 475{,}000}{84.6\% \text{ efficiency}}$ lbs/hr maximum firing capacity

= 568,933,220 BTU/hr heat input with gross fuel requirement of 31,550 lbs/hr.

As noted in Section III (p.4) of the attached Application, under current Florida Regulations, the boiler particulate emission allowable is 56.8 lbs/hr rather than the 46.5 lbs/hr cited in the original permit.

Similarly SO_2 allowables (2.75 lbs/MM BTU/hr input) are 1564 lbs/hr contrasted to the former 1279 lbs/hr allowed. NO, CO and methane hydrocarbon values are also listed in Section III for Departmental purposes.

Despite these more applicable allowables, the Company is requiring that precipitator suppliers-bidders meet a particulate requirement of 0.08 lbs/MM BTU/hr at a flue gas flow of 267,000 acfm or about 15 percent over that derived from the combustion evaluation.

A simplified schematic of the proposed installation is depicted by Sketch C-1712-1 attached. The general plot plan of the entire mill is shown in Sketch C-1712-2 and the immediate boiler area layout is illustrated by Sketch C-1712-3.

An adjacent, similarly sized modern precipitator will be ducted together with this boiler (serving Number 4 combination fuel boiler certified by a separate Permit) for standby treatment purposes. The precipitator serving this boiler will be equipped with isolation dampers, a complete ash removal system and a separate 232 foot (above grade) stack outfitted with the necessary platforms, sampling ports, monorails, etc. required for monitoring purposes.

A typical analysis of the fuel oil expected to be used in this service is listed in Table I. This and similar grades of oil will be purchased and should fall within the ranges shown.

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)________________________________

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

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

C. Computer Models Used

1. ________________________________ Modified? If yes, attach description.

2. ________________________________ Modified? If yes, attach description.

3. ________________________________ Modified? If yes, attach description.

4. ________________________________ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

Air Emissions

Although hydrocarbon-based particulate capture is more rigorous than inorganic ash removal using charged electrode technology, it is expected this technical application will ensure complete compliance with present particulate emission limits. Up to 90% removals under this low loading regime is expected.

Some minor SO_2 removals will also be experienced as some 5% of the carbonaceous sulfur based residue will be removed along with the captured ash agglomerates. Visual opacity levels will also be positively affected.

Derivation of various values used to develop the Table in Section III (C) of the Application are as follows:

Particulates

568.9 MM BTU/hr input at 0.1 lbs/MM BTU = 56.8 lbs/hr

Ash = 31,550 lbs/hr oil X $\frac{0.15\%}{100}$ ash = 47.3 lbs/hr plus soot blows

Precipitator to remove up to 90%

Potential emission, uncontrolled = 56.8 lbs./hr X 8760 hrs/yr
= 497.568 lbs/yr or
248.8 tons/yr

SO_2

568.9 MM BTU/hr input at 2.75 lbs/MM BTU = 1564 lbs/hr

SO_2 = $\frac{31,550}{2,000}$ t/hr oil X 2.5% S X 2 x .95
($S \rightarrow SO_2$) (5% in ash dropout)

= $\frac{74.9}{100}$ = 0.749 tons/hr SO_2

= 1498 lbs/hr SO_2

and 1577 lbs/hr SO_2 with no ash dropout.

Potential emission, uncontrolled = 1577 lbs/hr X 8760 hrs/yr
= 13,814,520 lbs/yr or
6907 tons/yr of SO_2

Fuel NO (excludes thermal NO)

Federal Criteria 0.3 lbs/MM BTU = 170.6 lbs/hr
as NO_x

($NO + NO_2$)

NO = 15.77 t/hr oil X 0.54% X 2.14 X 0.55
(NO_x is 95% NO) (N⟶NO) (Conversion)
(CE 4-34)

$= \frac{10.02}{100}$ = 0.100 tons/hr NO

= 200 lbs/hr NO

Potential emission, uncontrolled = 200 lbs/hr X 8760 hr/yr
= 1,752,000 lbs/yr or
= 876 tons/yr of fuel derived NO.

CO

As taken from EPA AP-42 Chap. 1 data.
0.04 (3.81 M gal/hr oil) = 0.15 lbs/hr
= 1314 lbs/yr or
0.66 tons/yr of CO
Same for potential emission, uncontrolled.

Methane Hydrocarbons

As taken from EPA AP-42 Chap. 1 data.
2(3.81 M gal/hr oil) = 7.62 lbs/hr
= 66,751 lbs/yr or
33.3 tons/yr of m. hydrocarbons
Same for potential emission, uncontrolled.

Opacity

Per current State of Florida Regulations.

Other elements in the fuel oil will be converted through combustion to their basic oxidative states.

During operations, stack emissions will be analyzed per Permit requirements. EPA Standard Reference Methods (Method 1, 2, 3, 4, 5, 6, 7, 9, 10, 17, etc) would be utilized as may be required and applicable.

Closure

Georgia-Pacific Corporation intends to employ the best available control technology at this time to reduce particulate and related emissions from their Number 5 Power Boiler. A field erected, rigid frame electrostatic precipitator will be used. Internal collector (gas) velocities, specific (plate) collection area, wire length, rapper parameters and power inputs will be selected for the equipment to ensure appropriate design sizing. Full compliance with current State emissions requirements will be ensured.

Per attached Exhibit I the Company requests the appropriate heat input rating (BTU/hr) be established for this boiler and the related, allowable emission rates per Rule 17-2 be authorized as contained within the submitted Application Form 17-1.202(1).

cs/D985/A

F A N   S I Z I N G

Best Available Copy

TOTAL HEAD FOR FD FAN (INCHES H2O)	19.2000
PERCENT EFFICIENCY OF FD FAN	81.6000
PERCENT LEAKAGE FOR FD FAN	0.5000
PERCENT SAFETY FACTOR FOR FD FAN	10.0000
TOTAL VOLUME OF COMBUSTION AIR (CFM)	134102.0625
HORSEPOWER FOR FORCED DRAFT FAN	496.3350
TOTAL HEAD FOR ID FAN (INCHES H2O)	10.0000
PERCENT EFFICIENCY OF ID FAN	71.5000
PERCENT LEAKAGE FOR ID FAN	0.5000
PERCENT SAFETY FACTOR FOR ID FAN	10.0000
TOTAL VOLUME OF FLUE GAS (CFM) ACTUAL	231439.8125
HORSEPOWER FOR INDUCED DRAFT FAN	509.1672

– NO ID FAN REQUIRED

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**************************************
*B O I L E R   E F F I C I E N C Y*
**************************************

PERCENT COMBUSTIBLE IN ASH ----------------------------          2.0000
EXIT GAS TEMPERATURE (FAHRENHEIT) ---------------------        425.0000
COMBUSTION AIR TEMPERATURE (FAHRENHEIT) ---------------         80.0000
PERCENT RADIATION LOSSES ------------------------------          0.3800
PERCENT MANUFACTURER'S OR UNMEASURED LOSSES -----------          1.0000

ENTHALPY OF WATER VAPOR AT 1 PSIA AND EXIT TEMP -------       1252.5073
ENTHALPY OF LIQUID WATER AT COMBUSTION GAS TEMP -------         48.0000

HEAT LOSS DUE TO DRY GAS ------------------------------          7.5049%
HEAT LOSS DUE TO H2 AND FUEL H2O ----------------------          6.3184%
HEAT LOSS DUE TO AIR MOISTURE -------------------------          0.1866%
HEAT LOSS DUE TO COMBUSTIBLE IN REFUSE ----------------          0.0023%
HEAT LOSS DUE TO RADIATION ----------------------------          0.3800%
HEAT LOSS DUE TO UNMEASURED LOSSES --------------------          1.0000%
                                                              ----------
TOTAL HEAT LOSSES -------------------------------------         15.3922%

BOILER EFFICIENCY -------------------------------------         84.6078%
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*************************************************
* C O M B U S T I O N   C A L C U L A T I O N S *
*************************************************

          *****************************************
          * T O T A L S   F O R   A L L   F U E L S *
          *****************************************

TOTAL FUEL RATE (LBS PER HOUR) ---------OIL------------     31554.0000
THEORETICAL COMBUSTION AIR ----------------------------    432676.8125

TOTAL (THEORETICAL PLUS EXCESS) COMBUSTION AIR -------    525267.0000

AT TOTAL COMBUSTION AIR:
   TOTAL FLUE DRY GAS ----------------------------------  526240.5625
   TOTAL FLUE PRODUCT H2O ------------------------------   37284.2539
   TOTAL FLUE PRODUCT CO2 ------------------------------  100830.5000
   TOTAL FLUE PRODUCT NITROGEN -------------------------  403993.5625

TOTAL FUEL HYDROGEN ----------------------------------   340783.1299
TOTAL FUEL SULFUR ------------------------------------    78884.9854
TOTAL FUEL OXYGEN ------------------------------------          0.0
TOTAL FUEL CARBON ------------------------------------  2708910.1563
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* C O M B U S T I O N   C A L C U L A T I O N S *

****

FUEL NAME: #6 FUEL OIL

FUEL USE RATE AS A WEIGHT PERCENTAGE ----------------	100.0000
BTU'S PER POUND OF FUEL ----------------------------	18400.0000

CONSTITUENT	FUEL PERCENT
32 SULFUR	2.50%
33 CARBON	85.85%
30 HYDROGEN	10.80%
29 NITROGEN	0.70%
34 ASH	0.15%
TOTAL PERCENTAGE	100.00%

PERCENT EXCESS AIR --------------------------------	21.4000%
TOTAL AIR (LBS PER POUND FUEL) --------------------	16.6466
THEORETICAL AIR (LBS PER POUND FUEL) --------------	13.7122
AT 121.40% THEORETICAL AIR:	
TOTAL DRY GAS (LBS PER POUND FUEL) ----------------	16.6775
FLUE PRODUCT H2O (LBS PER POUND FUEL) -------------	1.1816
PRODUCT CO2 (LBS PER POUND FUEL) ------------------	3.1955
FLUE PRODUCT NITROGEN (LBS PER POUND FUEL) --------	12.8032
PERCENT FUEL HYDROGEN -----------------------------	10.8000
PERCENT FUEL SULFUR -------------------------------	2.5000
PERCENT FUEL OXYGEN -------------------------------	0.0%
PERCENT FUEL CARBON -------------------------------	85.8500

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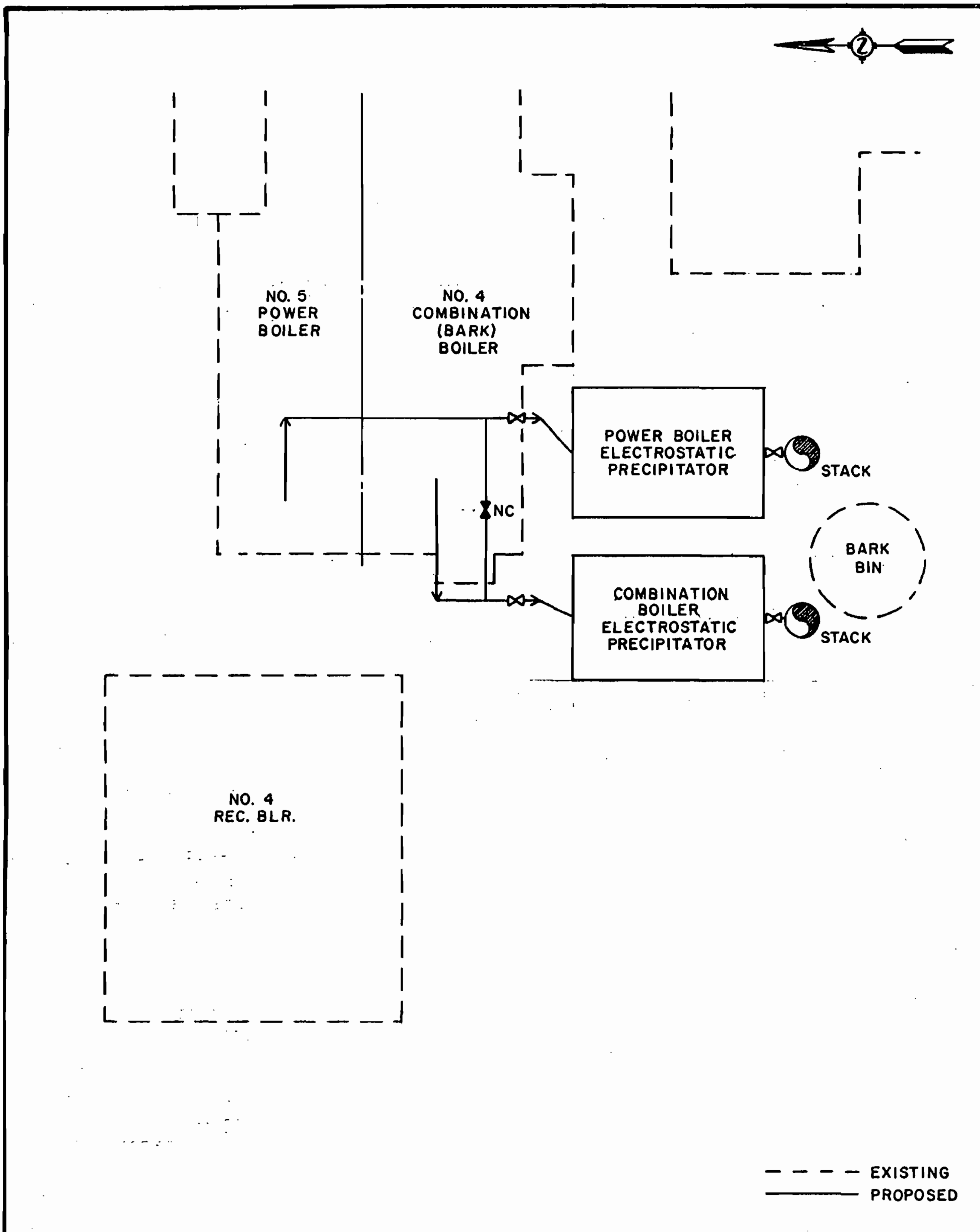
*  C O M B U S T I O N   C A L C U L A T I O N S   *
*                                                   *
*        B O I L E R   E F F I C I E N C Y          *
*                                                   *
*             F A N   S I Z I N G                   *
*****************************************************

JOB NUMBER ---------- C1712
CLIENT NAME --------- GEORGIA PACIFIC   PALATKA, FL
USER INITIALS ------- AJF
DATE OF RUN --------- 02/20/85
TIME OF RUN --------- 11:29:30
```

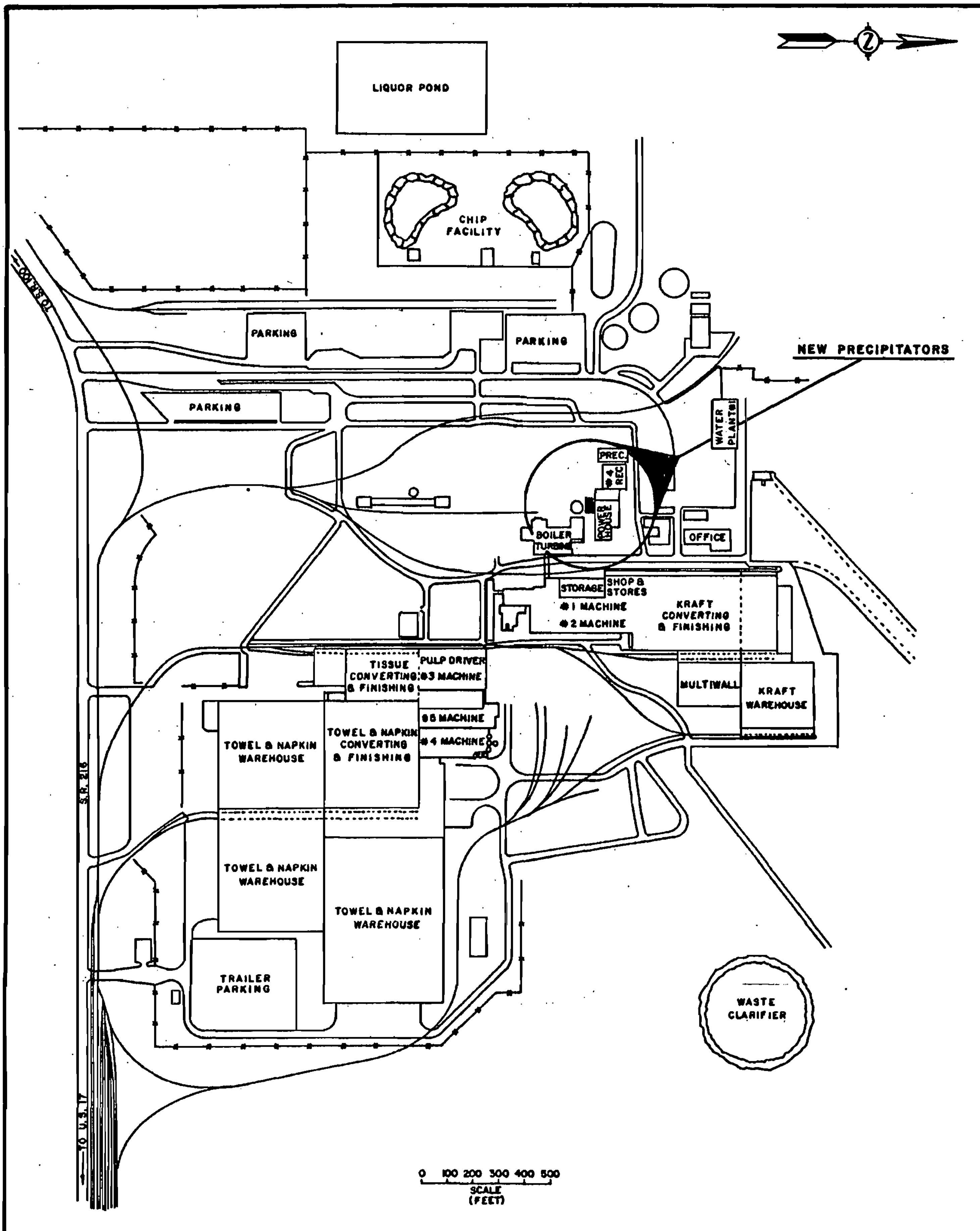
NO. 5 POWER BOILER
USING NO. 6 FUEL OIL AT
MAXIMUM LOAD RATING
OF 475,000 lbs/hr

EXHIBIT I

MONROE, LA.



SCALE NONE		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE PLOT PLAN OF EQUIPMENT LAYOUT	
DRAWN R. E. B.	DATE 2 - 11 - 85			
CHECKED RDS	DATE	GEORGIA - PACIFIC CORPORATION PALATKA, FLORIDA		
APPROVED	DATE			
APPROVED	DATE		DWG. NO. SK - C - 1712 - 3	



SCALE NOTED		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE OVERALL PLOT PLAN OF MILL LOCATION
DRAWN R.E.B.	DATE 2 - 7 - 85		
CHECKED RDS	DATE	GEORGIA-PACIFIC CORPORATION PALATKA, FLORIDA	
APPROVED	DATE		
APPROVED	DATE		DWG. NO. SK-C-1712-2

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Combination Fuel Steam Power Boiler [ ] New[1] [x] Existing[1]

APPLICATION TYPE: [ ] Construction [X] Operation [ ] Modification (To A054-58340)

COMPANY NAME: Georgia-Pacific Corporation COUNTY: Putnam

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) No. 4 Combination Power Boiler Stack

SOURCE LOCATION: Street State Road 216 (North Side) City Palatka

UTM: East 434.0 North 3283.4

Latitude 29° 41' 00"N Longitude 81° 40' 45"W

APPLICANT NAME AND TITLE: Georgia-Pacific Corporation

APPLICANT ADDRESS: P.O. Box 919 Palatka, Florida 32077

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Georgia-Pacific Corp.

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

*Attach letter of authorization

Signed: ____________________

____
Name and Title (Please Type)

Date: __________ Telephone No. __________

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

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

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

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

HAROLD L. CULP CERTIFICATE NO PE 0029275 STATE OF FLORIDA REGISTERED ENGINEER

Signed Harold L. Culp

Harold L. Culp, PE
Name (Please Type)

Ford, Bacon & Davis, Inc.
Company Name (Please Type)

P.O. Box 1894, Monroe, LA 71210
Mailing Address (Please Type)

Florida Registration No. 29275 Date: March 21, 1980 Telephone No. (318) 323-9000

SECTION II: GENERAL PROJECT INFORMATION

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

(See Attached Supplementary Report)

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

Start of ~~Construction~~ February 28, 1986 Completion ~~of-Construction~~ November 28, 1986
Modification-Addition of Control Equipment

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

Estimated cost of multi-cell electrostatic precipitator, ducting, ash removal and vertical stack with all installed appurtenances = $2,150,000

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

Permit No. A054-58340 Dated December 8, 1982, expires September 30, 1987.

Consent Order OGC File No. 83-0803 - Florida Dept. of Environmental Regulation dated January 7, 1985

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8760; if seasonal, describe: N/A

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

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

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

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

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

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

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

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

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

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

   a. If yes, for what pollutants? --

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

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

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

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

Not Applicable Per Definition - Rule 17-2.100 (127), Process Weight

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

1. Total Process Input Rate (lbs/hr): To 97,900 lbs/hr Bark and/or 26,426 lbs/hr No. 6 Oil Plus Combustion Air

2. Product Weight (lbs/hr): 360,000 lbs/hr, 1275 psig, 900°F Superheated Steam

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Requested Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr *			lbs/yr	T/yr *	
Particulates	(Oil) 43.3	190	0.1 lbs/M BTU	43.3	379,308	190	Stack
Particulates	(Bark) 130.1	570	0.3 lbs/M BTU	130.1	1,314,000	657	Stack
• SO_2 (Oil)	1254	5492	2.75 lbs/MBTU	1254	11,571,960	5786	Stack
Fuel NO (As NO)	168	736	N/A	N/A	1,471,680	736	Stack
^ CO (Bark)	97.9	429	N/A	N/A	857,604	429	Stack
^ Methane Hydrocarbons	97.9	429	N/A	N/A	857,604	429	Stack
Opacity	30%, 40% 2m		30%, 40% 2m	30%, 40% 2m	40%		Stack

[1] See Section V, Item 2. *At 8760 hrs/hr ^ No Sampling Data - factored from AP-42 Chap. 1 Tables

[2] Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

• SO_2-From oil only - used very infrequently, no SO_2 from bark.

[3] Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic	Particulates	Up to 95%	1/2 - 60	Cost Effective
Precipitator				Design Basis
(Not Selected Yet,				
Bids-Guaranteed				
Performance Data Not				
Yet Received)				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 Fuel Oil	Supplemental - Varies	3192	433.8
Bark (Wood)	80,000 ±	97,900	433.7

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

Fuel Analysis: (See Attached Report)

Percent Sulfur: 2 1/2 (oil) 0 (Bark) Percent Ash: 0.15±(oil), 2.0±(Bark)

Density: 8.28 (oil), 21 lbs/cf (Bark) lbs/gal Typical Percent Nitrogen: 0.54 (oil), 0.1 (Bark)

Heat Capacity: 18,350(oil), 4500(Bark) BTU/lb 151,938 (oil) BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Unknown Paper and Pulp Mill

Annual Average -- Maximum --

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

100-900 lbs/hr ash to be collected from the precipitator (excluding mechanical dust collectors) and disposed of in a controlled landfill.

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

Stack Height: 232 Above Grade ft. Stack Diameter: 9 ft.

Gas Flow Rate: 198,000 ACFM 87,000 DSCFM Gas Exit Temperature: 440 °F.

Water Vapor Content: 18-21 % Velocity: 51.9 FPS

SECTION IV: INCINERATOR INFORMATION

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

Description of Waste N/A

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

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

Manufacturer ______

Date Constructed ______ Model No. ______

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

Stack Height: ______ ft. Stack Diamter: ______ Stack Temp. ______

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

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

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) ______

Brief description of operating characteristics of control devices: ____________

N/A

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

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

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

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

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

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

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

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

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
N/A	

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

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

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data N/A

1. ____________no. sites ____________ TSP ____________( ) SO^2* ____________ Wind spd/dir

Period of Monitoring ______/____/______ to ______/____/______
month day year month day year

Other data recorded ____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)____________________

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

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

C. Computer Models Used

1. ____________________ Modified? If yes, attach description.

2. ____________________ Modified? If yes, attach description.

3. ____________________ Modified? If yes, attach description.

4. ____________________ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

SUPPLEMENTAL REPORT

INSTALLATION OF AN ELECTROSTATIC PRECIPITATOR ON THE NUMBER 4 COMBINATION POWER BOILER AT THE PALATKA, FLORIDA MILL OF GEORGIA-PACIFIC CORPORATION.

Background

The Number 4 boiler was erected in 1965 and is certified by an existing operating permit. The boiler fires a combination of Number 6 residual fuel oil and bark (wood). The major fuel used in this boiler is bark due to its economic availability. The flue gas is treated for particulate removal at the present time through the use of three sets of mechanical collectors in series. Despite their pressure drops these have been found to be effective devices. Permit-wise (A054-58340) the boiler has been rated at a maximum heat input rate of 425 MM BTU/hr on bark (per original permit of December 8, 1982) and 360 MM BTU/hr on oil thus its current emission rate is limited by these values.

The boiler has essentially met necessary emission criteria over the years but it's been found difficult to meet existing requirements when operating at maximum capacity on bark, despite its multiple set of mechanical collectors.

Due to stack sampling difficulties and some alleged violations, various mutually acceptable solutions were arrived at recently by the Company and the Florida Department of Environmental Regulation which were contained in a January 1985 Consent Order. The Company has submitted a schedule for installing additional emission control equipment on the boiler along with various intervals of stack monitoring and reportings of performance.

Proposed Project

To ensure reliable, continuous removals of bark related sands and char the Company has decided to employ the best available control technology on this boiler at this time. This will allow the Company greater latitude in the selection of available bark and commercially plentiful oil supplies without concern for random firing conditions that could encroach on current emission limits.

The Company has initiated the necessary engineering, planning, bid selection and procurement work necessary to install a high intensity, multi-field, rigid frame electrostatic precipitator on this boiler per a schedule previously approved by the Department of Environmental Regulation.

Facility Details

A study of the present steaming facilities is underway including a computerized analysis of combustion conditions (see Exhibit I and II). With bark and fuel oil, the unit has been found to demonstrate the following combustion design related characteristics:

1275 psig steam at 900°F = 1437.4 BTU/lb
Feedwater at 445°F saturated = -424.1 BTU/lb

1013.3 BTU/lb

Bark Heat Input $\frac{1013.3 \text{ X } 300{,}000}{70.09\%}$ lbs/hr capacity on bark only / efficiency

= 433,713,000 BTU/hr heat input with gross fuel requirement of 97,900 lbs/hr.

Fuel Oil Heat Input $\frac{1013.3 \text{ X } 360{,}000}{84.08\%}$ lbs/hr capacity on oil only / efficiency

= 433,858,230 BTU/hr heat input with gross fuel requirement of 26,426 lbs/hr

As noted in Section III (p.4) of the attached Application, under current Florida regulations, the boiler particulate emission allowable firing bark is 130.1 lbs/hr rather than the maximum 114 lbs/hr cited in the present permit.

Similarly SO_2 allowables from oil (2.75 lbs/MM BTU/hr input) are 1192.9 lbs/hr contrasted to the 962.5 lbs/hr permit limit. NO, CO and methane hydrocarbon values are also listed in Section III for Departmental purposes.

Despite these more applicable allowables, the Company is requiring that precipitator suppliers-bidders meet a particulate requirement of 0.25 lbs/MM BTU/hr at a flue gas flow of 30 percent over the base flow of 198,000 acfm derived from the combustion evaluation. However to allow appropriate standby capacity for the adjacent power boiler a peak design flow of 267,000 acfm is being used.

A simplified schematic of the proposed installation is depicted by Sketch C-1712-1 attached. The general plot plan of the entire mill is shown in Sketch C-1712-2 and the immediate boiler area layout is illustrated by Sketch C-1712-3.

An adjacent, similarly sized modern precipitator will be ducted together with this boiler (serving Number 5 power boiler certified by a separate Permit) for standby treatment purposes. The precipitator serving this boiler will be equipped with isolation dampers, a complete ash removal system and a separate 232 foot (above grade) stack outfitted with the necessary platforms, sampling ports, monorails, etc. required for monitoring purposes.

A typical analysis of the wood waste (bark) and fuel oil expected to be used in this service is listed in Table I. These and similar grades of fuel will be purchased and should fall within the ranges shown.

TABLE I

TYPICAL FUEL OIL ANALYSIS OF SUPPLIES USED BY GEORGIA-PACIFIC PALATKA MILL*

Degrees API at 60°F	10.9
Specific Gravity at 60°F	0.99
Flash Point, °F	178
BS & W, %	1.65
Viscosity, SFS at 122°F	275
Asphaltene, %	9.9
Ash, %	0.15
Carbon, %	85.7
Hydrogen, %	10.6
Nitrogen, %	0.54
Sulfur, %	2.5
Oxygen, %	0.6
Vanadium, ppm	550
BTUs per pound	18,350

*Analyzed by Fuel Engineering Company of New York in Thornwood, New York in 1984.

TABLE I (CONTINUED)

TYPICAL WOOD (HOGGED BARK) ANALYSIS OF SUPPLIES RECEIVED BY GEORGIA-PACIFIC PALATKA MILL*

Weight, lbs/cf	21 ±
Dry Ash, %	2 +
Fixed Carbon, %	25.2
Hydrogen, %	3.1
Moisture, %	50.0
Oxygen, %	21.5
Volatile Matter, %	79
Nitrogen, %	0.1
Sulfur, %	0
Heating Value As Fired, BTU/lb	4500

* Analyzed By Georgia-Pacific Corporation

Air Emissions

With the main particulate loading comprised of inorganic sand and carbonaceous char, it is expected this technical application will ensure complete compliance with present particulate emission limits. Up to 95% removals under this loading regime are expected.

Some minor SO_2 removals (when oil is burned) will also be experienced as about 5% of the carbonaceous sulfur based residue will be removed along with the captured ash agglomerates. Visual opacity levels will also be positively affected.

Derivation of various values used to develop the Table in Section III (C) of the Application are as follows:

Particulates (Using Bark)

433.7 MM BTU/hr input at 0.3 lbs/MM BTU = 130.1 lbs/hr

Ash = 97,900 lbs/hr bark $\times \frac{2\%}{100}$ ash = 1958 lbs/hr plus soot blows

Precipitator to remove up to 95% leaving 98-124 lbs/hr

Potential emission, uncontrolled = 150 lbs./hr X 8760 hrs/yr
(Using existing triple set of installed mechanical collectors. = 1,314,000 lbs/yr or 657 tons/yr
Without collectors = 8760 tons/yr)

Ash = 26,426 lbs/hr oil $\times \frac{0.15\%}{100}$ ash = 39.6 lbs/hr < 43.3 lbs/hr allowed.

SO_2 (Using No. 6 Fuel Oil)

433.8 MM BTU/hr input at 2.75 lbs/MM BTU = 1192.9 lbs/hr

$SO_2 = \frac{26,426}{2,000}$ t/hr oil X 2.5% S X 2 x .95
(S→SO_2) (5% in ash dropout)

$= \frac{62.7}{100\%} = 0.627$ tons/hr SO_2

= 1254 lbs/hr SO_2

and 1321 lbs/hr SO_2 with no ash dropout.

Potential emission, uncontrolled = 1321 lbs/hr X 8760 hrs/yr
= 11,571,960 lbs/yr or
5786 tons/yr of SO_2

Fuel NO (excludes thermal NO using oil)

Federal Criteria 0.3 lbs/MM BTU = 130.1 lbs/hr
as NO_x ($NO + NO_2$)

NO = 13.21 t/hr oil X 0.54% N X 2.14 X 0.55
(NO_x is 95% NO) (N⟶NO) (Conversion)
(CE4-34)

$= \frac{8.39}{100} = 0.084$ tons/hr NO

= 168 lbs/hr NO

Potential emission, uncontrolled = 168 lbs/hr X 8760 hr/yr
= 1,471,680 lbs/yr or
= 736 tons/yr of fuel derived NO.

CO, Methane Hydrocarbons (Using Bark)

As taken from EPA AP-42 Chap. 1 data. Same factor for both emissions.

$\frac{97{,}900}{2{,}000}$ tons/hr (2 lbs/ton) = 97.9 lbs/hr
= 857,604 lbs/yr or
= 429 tons/yr of CO and
429 tons/yr of Methane Hydrocarbons

Opacity

Per current State of Florida Regulations.

Other elements in the fuel will be converted through combustion to their basic oxidative status.

During operations stack emissions will be analyzed per Permit requirements. EPA Standard Reference Methods (Method 1, 2, 3, 4, 5, 6, 7, 9, 10, 17, etc) would be utilized as may be required and applicable.

Closure

Georgia-Pacific Corporation intends to employ the best available control technology at this time to reduce particulate and related emissions from their Number 4 Combination Boiler. A field erected, rigid frame electrostatic precipitator will be used. Internal collector (gas) velocities, specific (plate) collection area, wire length, rapper parameters and power inputs will be selected for the equipment to ensure appropriate design sizing. Full compliance with current State emission requirements will be ensured.

Per attached Exhibit I and II the Company requests the appropriate heat input rating (BTU/hr) be established for this boiler and the related, allowable emission rates per Rule 17-2 be authorized as contained within the submitted Application Form 17-1.202(1).

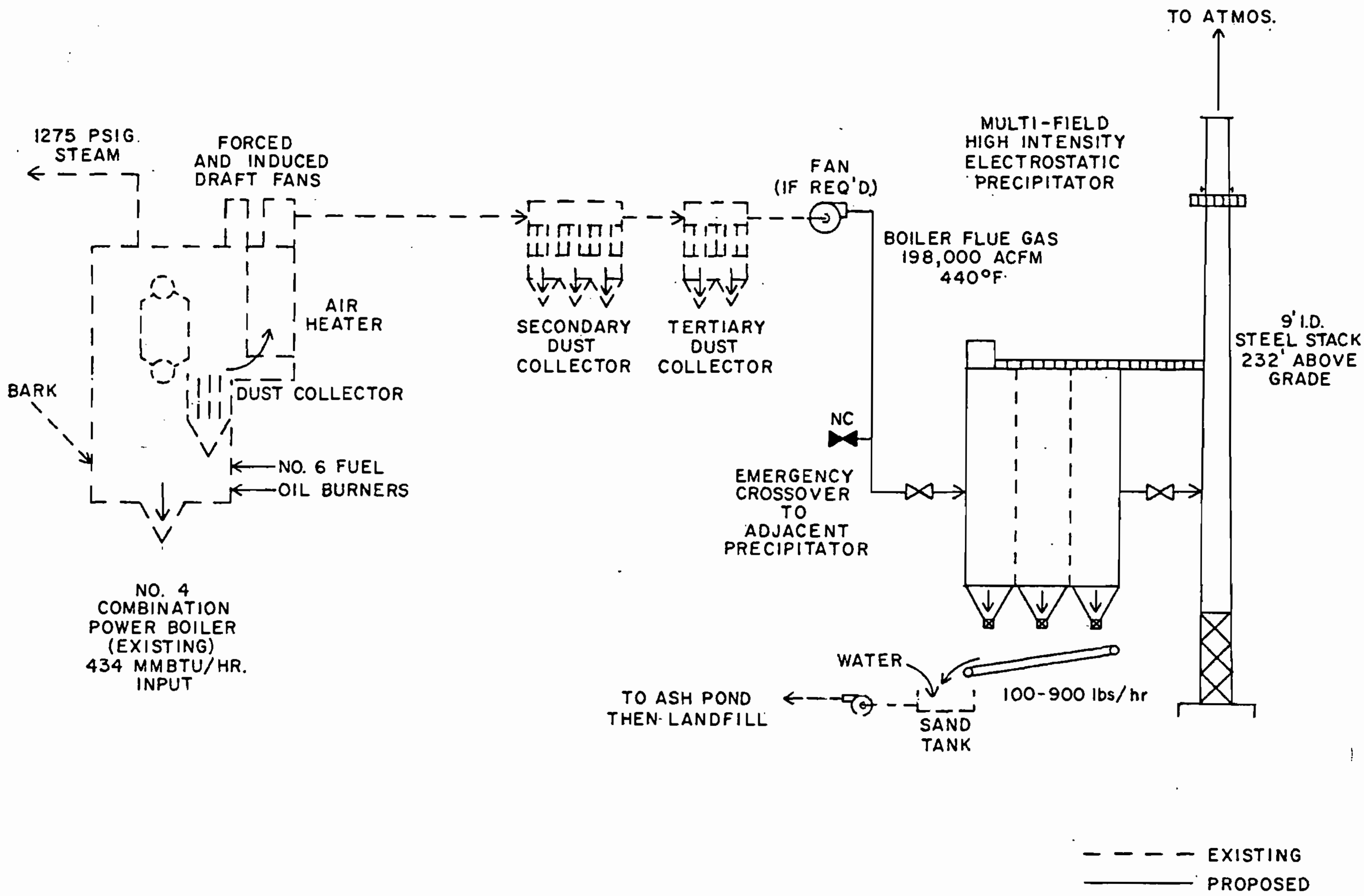
SCALE NONE
DRAWN R.E.B. DATE 2-8-85
CHECKED REB DATE
APPROVED DATE
APPROVED DATE

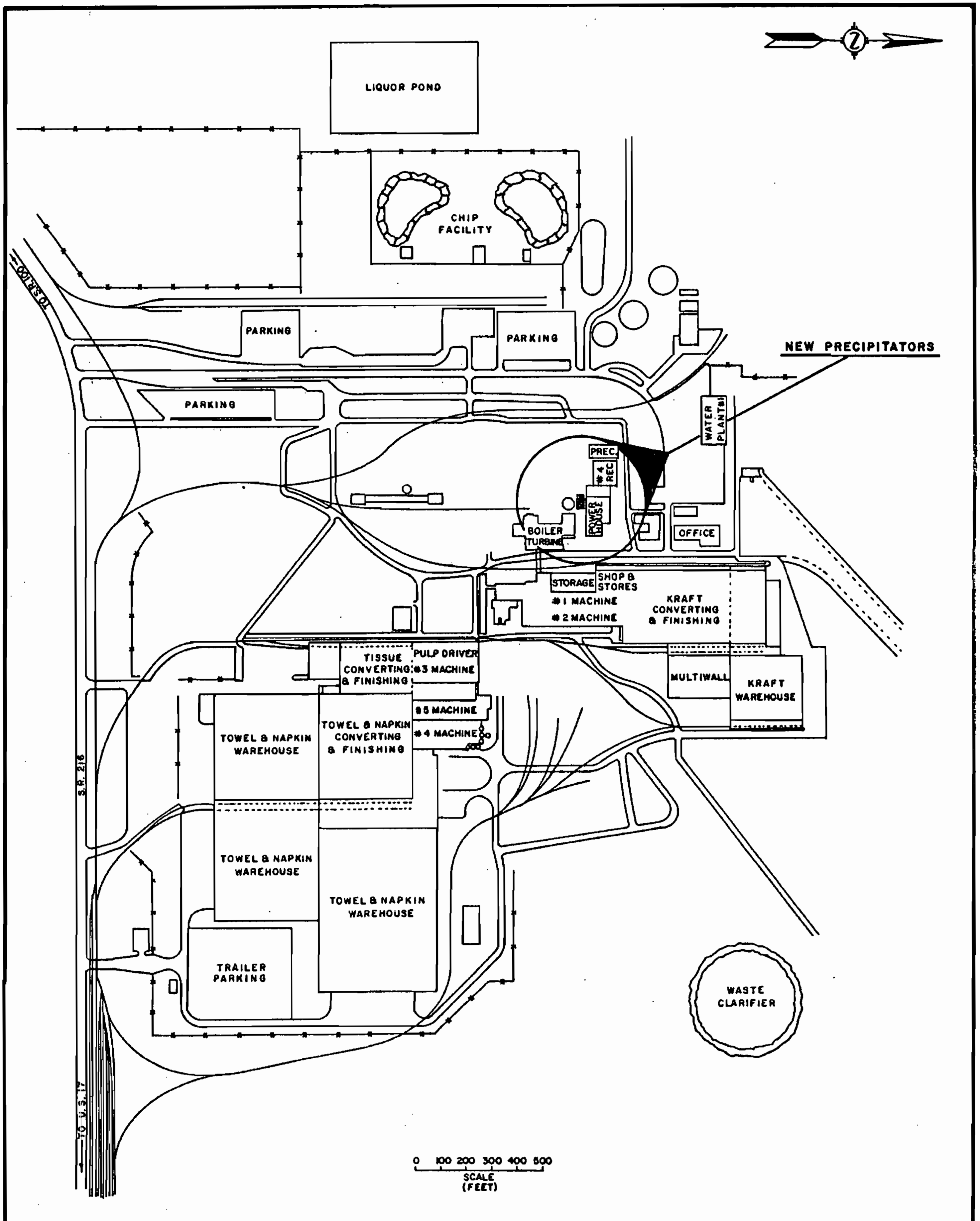
Ford, Bacon & Davis
Incorporated
MONROE, LOUISIANA

GEORGIA-PACIFIC
CORPORATION
PALATKA, FLORIDA

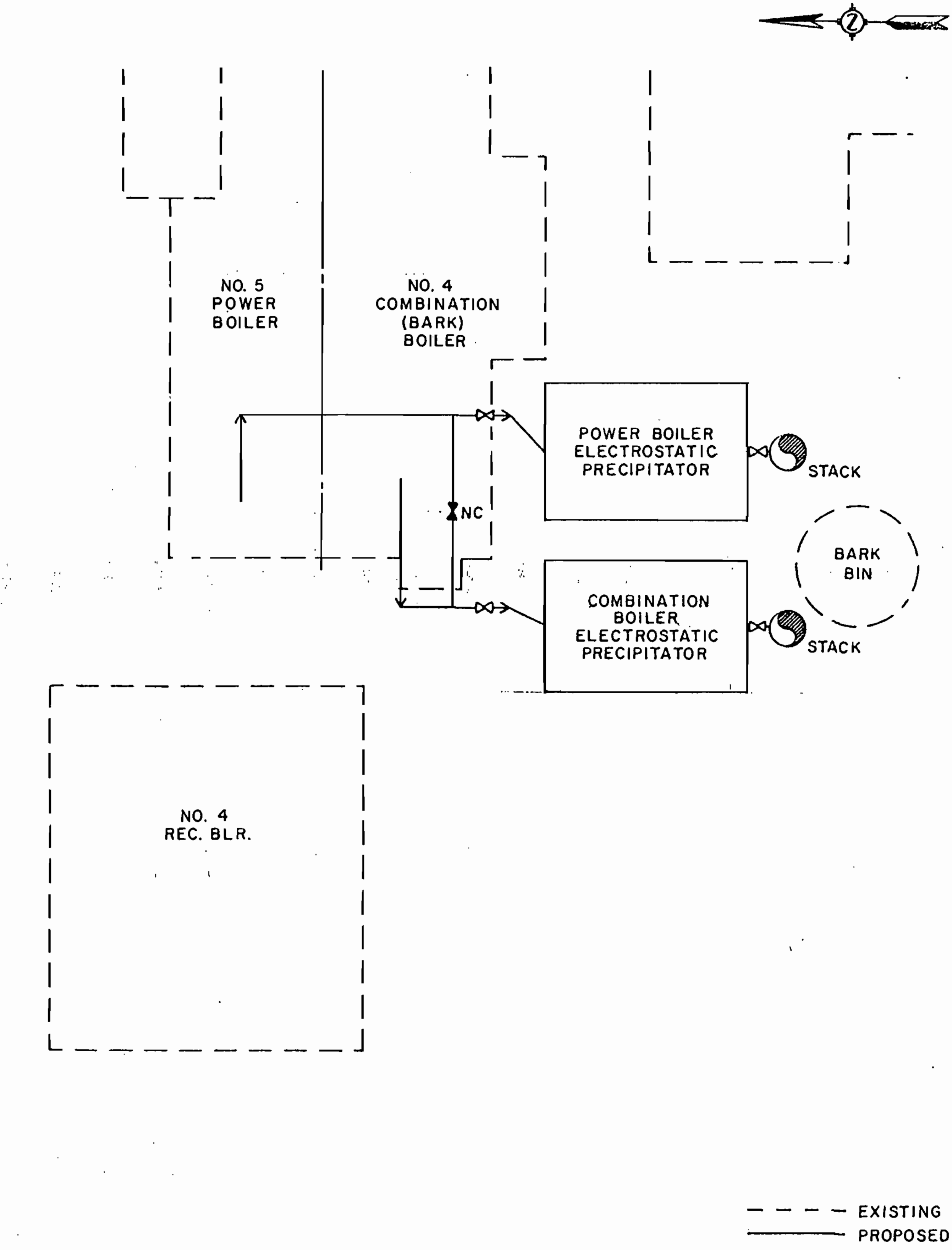
DRAWING TITLE
NO. 4 COMBINATION
POWER BOILER FLUE
GAS PRECIPITATOR-PROPOSED

DWG. NO. SK-C-1712-1





SCALE NOTED		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE OVERALL PLOT PLAN OF MILL LOCATION
DRAWN R.E.B.	DATE 2 - 7 - 85		
CHECKED	DATE	GEORGIA-PACIFIC CORPORATION	
APPROVED	DATE		DWG. NO. SK-C-1712-2
APPROVED	DATE	PALATKA, FLORIDA	



SCALE NONE		Ford, Bacon & Davis Incorporated MONROE, LOUISIANA	DRAWING TITLE PLOT PLAN OF EQUIPMENT LAYOUT
DRAWN R. E. B.	DATE 2 - 11 - 85		
CHECKED RDS	DATE	GEORGIA - PACIFIC CORPORATION PALATKA, FLORIDA	
APPROVED	DATE		DWG. NO. SK - C - 1712 - 3
APPROVED	DATE		

NO. 4 COMBINATION BOILER
USING NO. 6 FUEL OIL ONLY
AT FULL LOAD RATING OF
360,000 lbs/hr.

EXHIBIT I

MONROE, LA.

COMBUSTION CALCULATIONS

BOILER EFFICIENCY

FAN SIZING

JOB NUMBER ---------- C1712

CLIENT NAME -------- GEORGIA PACIFIC PALATKA, FL

USER INITIALS -------- ADS

DATE OF RUN -------- 02/06/85

TIME OF RUN -------- 09:38:05

```
*************************************************
*C O M B U S T I O N   C A L C U L A T I O N S*
*************************************************

FUEL NAME: OIL #6

FUEL USE RATE AS A WEIGHT PERCENTAGE -----------------     100.0000
BTU'S PER POUND OF FUEL -------------------------------   18400.0000

                              FUEL
      CONSTITUENT           PERCENT
32 SULFUR                     2.50%
33 CARBON                    85.85%
30 HYDROGEN                  10.80%
29 NITROGEN                   0.70%
34 ASH                        0.15%
                            -------
   TOTAL PERCENTAGE         100.00%

PERCENT EXCESS AIR ------------------------------------      21.4000%

TOTAL AIR (LBS PER POUND FUEL) ------------------------      16.6466
THEORETICAL AIR (LBS PER POUND FUEL) ------------------      13.7122

AT 121.40% THEORETICAL AIR:
   TOTAL DRY GAS (LBS PER POUND FUEL) -----------------      16.6775
   FLUE PRODUCT H2O (LBS PER POUND FUEL) --------------       1.1816
   PRODUCT CO2 (LBS PER POUND FUEL) -------------------       3.1955
   FLUE PRODUCT NITROGEN (LBS PER POUND FUEL) ---------      12.8032

PERCENT FUEL HYDROGEN ---------------------------------      10.8000
PERCENT FUEL SULFUR -----------------------------------       2.5000
PERCENT FUEL OXYGEN -----------------------------------       0.0
PERCENT FUEL CARBON -----------------------------------      85.8500
```

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*******************************************************
* C O M B U S T I O N   C A L C U L A T I O N S *
*******************************************************

**********************************************
* T O T A L S   F O R   A L L   F U E L S *
**********************************************

TOTAL FUEL RATE (LBS PER HOUR) ----------------------      26426.0000
THEORETICAL COMBUSTION AIR --------------------------     362358.6250

TOTAL (THEORETICAL PLUS EXCESS) COMBUSTION AIR -------    439903.1875

AT TOTAL COMBUSTION AIR:
    TOTAL FLUE DRY GAS ------------------------------     440718.5000
    TOTAL FLUE PRODUCT H2O --------------------------      31225.0000
    TOTAL FLUE PRODUCT CO2 --------------------------      84444.0000
    TOTAL FLUE PRODUCT NITROGEN ---------------------     338338.5000

TOTAL FUEL HYDROGEN ---------------------------------     285400.7324
TOTAL FUEL SULFUR -----------------------------------      66064.9902
TOTAL FUEL OXYGEN -----------------------------------          0.0
TOTAL FUEL CARBON -----------------------------------    2268671.4844
```

*** BOILER EFFICIENCY ***

PERCENT COMBUSTIBLE IN ASH	2.0000
EXIT GAS TEMPERATURE (FAHRENHEIT)	425.0000
COMBUSTION AIR TEMPERATURE (FAHRENHEIT)	80.0000
PERCENT RADIATION LOSSES	0.4000
PERCENT MANUFACTURER'S OR UNMEASURED LOSSES	1.5000

ENTHALPY OF WATER VAPOR AT 1 PSIA AND EXIT TEMP	1252.5073
ENTHALPY OF LIQUID WATER AT COMBUSTION GAS TEMP	48.0000

HEAT LOSS DUE TO DRY GAS	7.5049%
HEAT LOSS DUE TO H2 AND FUEL H2O	6.3184%
HEAT LOSS DUE TO AIR MOISTURE	0.1866%
HEAT LOSS DUE TO COMBUSTIBLE IN REFUSE	0.0023%
HEAT LOSS DUE TO RADIATION	0.4000%
HEAT LOSS DUE TO UNMEASURED LOSSES	1.5000%
TOTAL HEAT LOSSES	15.9122%
BOILER EFFICIENCY	84.0878%

****
* F A N   S I Z I N G *
****

TOTAL HEAD FOR FD FAN (INCHES H2O) ----------------------	7.5000
PERCENT EFFICIENCY OF FD FAN -------------------------	81.6000
PERCENT LEAKAGE FOR FD FAN ---------------------------	0.5000
PERCENT SAFETY FACTOR FOR FD FAN ----------------------	10.0000
TOTAL VOLUME OF COMBUSTION AIR (CFM) -----------------	112332.1875
HORSEPOWER FOR FORCED DRAFT FAN ----------------------	162.4067
TOTAL HEAD FOR ID FAN (INCHES H2O) ----------------------	10.0000
PERCENT EFFICIENCY OF ID FAN -------------------------	71.5000
PERCENT LEAKAGE FOR ID FAN ---------------------------	0.5000
PERCENT SAFETY FACTOR FOR ID FAN ----------------------	10.0000
TOTAL VOLUME OF FLUE GAS (CFM) ---- ACTUAL ----------------	193827.1875
HORSEPOWER FOR INDUCED DRAFT FAN ----------------------	426.4197

(NEGLECTING 3 STAGE COLLECTORS)

NO. 4 COMBINATION BOILER
USING MAXIMUM BARK FEED
ONLY AT LOAD OF
300,000 lbs/hr.

EXHIBIT II

MONROE, LA

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********************************************
*                                          *
* C O M B U S T I O N   C A L C U L A T I O N S *
*                                          *
*       B O I L E R   E F F I C I E N C Y  *
*                                          *
*            F A N   S I Z I N G           *
*                                          *
********************************************
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JOB NUMBER ---------- C1712

CLIENT NAME --------- GEORGIA PACIFIC PALATKA, FL

USER INITIALS ------- ADS

DATE OF RUN --------- 02/05/85

TIME OF RUN --------- 09:28:01

C O M B U S T I O N   C A L C U L A T I O N S

FUEL NAME: BARK (*wood*)

FUEL USE RATE AS A WEIGHT PERCENTAGE ---------------- 100.0000
BTU'S PER POUND OF FUEL --------------------------- 4500.0000

CONSTITUENT	FUEL PERCENT
28 WATER VAPOR	50.00%
33 CARBON	23.40%
30 HYDROGEN	3.10%
31 OXYGEN	21.50%
34 ASH	2.00%
TOTAL PERCENTAGE	100.00%

PERCENT EXCESS AIR ------------------------------- 28.1000%

TOTAL AIR (LBS PER POUND FUEL) -------------------- 3.6321
THEORETICAL AIR (LBS PER POUND FUEL) -------------- 2.8353

AT 128.10% THEORETICAL AIR:
TOTAL DRY GAS (LBS PER POUND FUEL) ---------------- 3.8336
FLUE PRODUCT H2O (LBS PER POUND FUEL) ------------- 0.8243
PRODUCT CO2 (LBS PER POUND FUEL) ------------------ 0.8574
FLUE PRODUCT NITROGEN (LBS PER POUND FUEL) -------- 2.7920

PERCENT FUEL HYDROGEN ----------------------------- 3.1000
PERCENT FUEL SULFUR ------------------------------- 0.0
PERCENT FUEL OXYGEN ------------------------------- 21.5000
PERCENT FUEL CARBON ------------------------------- 23.4000

****
* C O M B U S T I O N   C A L C U L A T I O N S *
****

****
* T O T A L S   F O R   A L L   F U E L S *
****

TOTAL FUEL RATE (LBS PER HOUR)	97900.0000
THEORETICAL COMBUSTION AIR	277578.6875
TOTAL (THEORETICAL PLUS EXCESS) COMBUSTION AIR	355578.0000
AT TOTAL COMBUSTION AIR:	
TOTAL FLUE DRY GAS	375311.0000
TOTAL FLUE PRODUCT H2O	80695.3750
TOTAL FLUE PRODUCT CO2	83937.0625
TOTAL FLUE PRODUCT NITROGEN	273332.7500
TOTAL FUEL HYDROGEN	303489.9170
TOTAL FUEL SULFUR	0.0
TOTAL FUEL OXYGEN	2104849.6094
TOTAL FUEL CARBON	2290858.9844

```
*************************************
* B O I L E R   E F F I C I E N C Y *
*************************************

PERCENT COMBUSTIBLE IN ASH ------------------------------          2.0000
EXIT GAS TEMPERATURE (FAHRENHEIT) ----------------------          420.0000
COMBUSTION AIR TEMPERATURE (FAHRENHEIT) ----------------           80.0000
PERCENT RADIATION LOSSES -------------------------------            0.4000
PERCENT MANUFACTURER'S OR UNMEASURED LOSSES ------------            1.5000

ENTHALPY OF WATER VAPOR AT 1 PSIA AND EXIT TEMP --------         1250.1426
ENTHALPY OF LIQUID WATER AT COMBUSTION GAS TEMP --------           48.0000

HEAT LOSS DUE TO DRY GAS -------------------------------            6.9516%
HEAT LOSS DUE TO H2 AND FUEL H2O -----------------------           20.7582%
HEAT LOSS DUE TO AIR MOISTURE --------------------------            0.1641%
HEAT LOSS DUE TO COMBUSTIBLE IN REFUSE -----------------            0.1278%
HEAT LOSS DUE TO RADIATION -----------------------------            0.4000%
HEAT LOSS DUE TO UNMEASURED LOSSES ---------------------            1.5000%
                                                             -----------
TOTAL HEAT LOSSES --------------------------------------           29.9017%

BOILER EFFICIENCY --------------------------------------           70.0983%
```

FAN SIZING

TOTAL HEAD FOR FD FAN (INCHES H2O)	6.4000
PERCENT EFFICIENCY OF FD FAN	81.6000
PERCENT LEAKAGE FOR FD FAN	0.5000
PERCENT SAFETY FACTOR FOR FD FAN	10.0000
TOTAL VOLUME OF COMBUSTION AIR (CFM)	90562.4375
HORSEPOWER FOR FORCED DRAFT FAN	111.7292
TOTAL HEAD FOR ID FAN (INCHES H2O)	12.0000
PERCENT EFFICIENCY OF ID FAN	71.5000
PERCENT LEAKAGE FOR ID FAN	0.5000
PERCENT SAFETY FACTOR FOR ID FAN	10.0000
TOTAL VOLUME OF FLUE GAS (CFM) ACTUAL	197681.0000
HORSEPOWER FOR INDUCED DRAFT FAN (NEGLECTING 3 STAGE COLLECTORS)	521.8777