OSCEOLA FARMS CO.
RAW SUGAR FACTORY
INTERSECTION U.S. 98 & HATTON HWY.

TELEPHONE:
(305) 924-7156

CABLE: SUGAR

POST OFFICE BOX 679
PAHOKEE, FLORIDA 33476

June 13, 1985

DER
JUN 17 1985
BAQM

United States Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Attention: Winston A. Smith, Director
Air, Pesticides and Toxics
Management Division

Dear Mr. Smith:

Thank you for the extension of time until Monday June 17, 1985, to answer the eight points requested in your May 23, 1985 letter to Alex Fanjul, Vice President and General Manager of Osceola Farms Co. Listed below are the boiler efficiencies and other information requested by your letter. The calculations are attached with the assumptions used.

1. Boiler efficiency for boiler No. 6 as calculated from information obtained during stack test on January 9, 1984: 61.48%

2. Boiler efficiency for boiler No. 1 as calculated from information obtained during stack test on February 4, 1985: 54.18%

3. Boiler efficiency for boiler No. 2 as calculated from information obtained during stack test on November 15 - 16, 1984: 57.39%

4. Boiler efficiency for boiler No. 3 as calculated from information obtained during stack test on January 16, 1985: 56.15%

5. Boiler efficiency for boiler No. 4 as calculated from information obtained during stack test on January 21, 1985: 56.56%

6. Boiler efficiency for boiler No. 5 as calculated from information obtained during stack test on November 16 - 17, 1984: 56.97%

7. We present the calculations associated with the answers above to items 1 thru 6 as support to the assumed 55% efficiency currently utilized by Osceola Farms Co. The

average of the above efficiencies is 57.12%. Also, please keep in mind that these are calculations from one test for each boiler. These results could vary from one test to another. The above efficiencies are based on several assumptions as shown on the attached sheet. The exact data required to calculate the actual boiler efficiency was not taken because it was not a requirement of the stack test in all cases except boiler No. 6. Of course the Florida D.E.R., in reaching their conclusion that 55% efficiency should be assumed for the Florida sugar industry is based upon a number of years experience. Never the less, the Florida Sugar Cane League, of which Osceola Farms Co. is a member, is presently evaluating the use of the F-Factor method when conducting particulate emission tests.

8.

Boiler No.	Oxygen	Carbon Monoxide	Carbon Dioxide
6	7.87%	.13%	12.70%
1	10.37%	.20%	10.27%
2	9.23%	.10%	11.53%
3	9.90%	.23%	10.77%
4	9.63%	.10%	11.20%
5	9.23%	.10%	11.53%

In response to the opportunity to have a conference on June 12, 1985 which you have allowed us to change to June 20, 1985, to discuss the concerns expressed by the EPA in its Notice of Violation dated April 18, 1984 on boiler No. 6, F.J. Farinas, the Assistant Factory Superintendent and myself are looking forward to discussing this issue with your office on June 20, 1985.

We hope this information is satisfactory. Please do not hesitate to call if additional information is necessary.

Sincerely yours,

OSCEOLA FARMS CO.

Bob Jackson

Robert E. Jackson, Jr.
Vice President and
Assistant to the
General Manager

REJ,Jr./br
Encl.

cc: Philip R. Edwards
Steve Smallwood
Marshall Mott-Smith
Eugene J. Sacco
Jewell Harper

OSCEOLA FARMS COMPANY

ASSUMPTIONS FOR BOILER EFFICIENCY CALCULATIONS

The attached calculations of Boiler Efficiency are based on the ultimate analysis, Net Heating value of the bagasse, Flue Gas analysis by Orsat tests, and the temperatures of the gases leaving the boiler.

In order to complete these calculations, the following assumptions were made:

1. Temperatures for Flue Gases, Fuel and Air are assumed.

2. The Fuel ultimate analysis for Boilers #2 and #5 are assumed to be equal to the one taken for Boiler #6.

3. For the unburned carbon calculations, an assumed value of 1.5% unburned carbon to total carbon in fuel is used.

4. The Radiation and Unmeasured Losses are assumed as follows:

A.	Water wall and Traveling grate Boilers	3.0%
B.	Cell type Boilers	5.0%

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #6

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	440 DEGREES FAHR. *
FUEL AS FIRED	100 DEGREES FAHR. *
AIR ENTERING AIR HEATER	80 DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1260.3
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS (AS FIRED)

H2O =	51.5%
C =	23.62%
H2 =	2.94%
N2 =	.14%
O2 =	21.32%
S =	.03%
ASH =	.45%

FLUE GAS ANALYSIS (ORSAT TEST)

CO2 =	12.70%
O2 =	7.87%
CO =	.13%
N2 =	79.30%

NET HEATING VALUE OF FUEL (DRY) = 8225 BTU/LB

NET HEATING VALUE OF FUEL (AS FIRED) = 3989.1 BTU/LB

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	4.588	#/# FUEL
WEIGHT OF AIR REQUIRED	2.773	#/# FUEL
WEIGHT OF AIR SUPPLIED	4.376	#/# FUEL
EXCESS AIR	57.81%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	15.39
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.04
LOSSES DUE TO MOISTURE IN AIR	.25
LOSSES DUE TO DRY FLUE GASES	9.94
LOSSES DUE TO INCOMPLETE COMBUSTION	.60
LOSSES DUE TO UNBURNED CARBON	1.30 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	3.0 *
TOTAL LOSSES	38.52%
BOILER EFFICIENCY	61.48%

* ASSUMED VALUES

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #1

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	480	DEGREES FAHR. *
FUEL AS FIRED	100	DEGREES FAHR. *
AIR ENTERING AIR HEATER	80	DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1278.9
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS (AS FIRED)		FLUE GAS ANALYSIS (ORSAT TEST)	
H2O =	52.20%	CO2 =	10.27%
C =	23.02%		
H2 =	2.90%	O2 =	10.37%
N2 =	.13%		
O2 =	21.05%	CO =	.20%
S =	.011%		
ASH =	.698%	N2 =	79.16%

NET HEATING VALUE OF FUEL (DRY) = 8108 BTU/LB

NET HEATING VALUE OF FUEL (AS FIRED) = 3875.6 BTU/LB

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	5.43	#/# FUEL
WEIGHT OF AIR REQUIRED	2.70	#/# FUEL
WEIGHT OF AIR SUPPLIED	5.22	#/# FUEL
EXCESS AIR	93.16%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	16.31
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.29
LOSSES DUE TO MOISTURE IN AIR	.34
LOSSES DUE TO DRY FLUE GASES	13.44
LOSSES DUE TO INCOMPLETE COMBUSTION	1.14
LOSSES DUE TO UNBURNED CARBON	1.30 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	5.0 *
TOTAL LOSSES	45.82%
BOILER EFFICIENCY	54.18%

* ASSUMED VALUES

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #2

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	480	DEGREES FAHR. *
FUEL AS FIRED	100	DEGREES FAHR. *
AIR ENTERING AIR HEATER	80	DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1278.9
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS * (AS FIRED)		FLUE GAS ANALYSIS (ORSAT TEST)	
H2O =	51.50%	CO2 =	12.33%
C =	23.62%		
H2 =	2.94%	O2 =	8.33%
N2 =	.14%		
O2 =	21.32%	CO =	.20%
S =	.03%		
ASH =	.45%	N2 =	79.14%

NET HEATING VALUE OF FUEL (DRY) = 8225 BTU/LB *

NET HEATING VALUE OF FUEL (AS FIRED) = 3989.1 BTU/LB *

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	4.692	#/# FUEL
WEIGHT OF AIR REQUIRED	2.773	#/# FUEL
WEIGHT OF AIR SUPPLIED	4.479	#/# FUEL
EXCESS AIR	61.54%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	15.63
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.16
LOSSES DUE TO MOISTURE IN AIR	.28
LOSSES DUE TO DRY FLUE GASES	11.29
LOSSES DUE TO INCOMPLETE COMBUSTION	.95
LOSSES DUE TO UNBURNED CARBON	1.30 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	5.0 *
TOTAL LOSSES	42.61%
BOILER EFFICIENCY	57.39%

* ASSUMED VALUES

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #3

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	480	DEGREES FAHR. *
FUEL AS FIRED	100	DEGREES FAHR. *
AIR ENTERING AIR HEATER	80	DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1278.9
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS (AS FIRED)		FLUE GAS ANALYSIS (ORSAT TEST)	
H2O =	49.66%	CO2 =	10.77%
C =	24.51%		
H2 =	3.07%	O2 =	9.90%
N2 =	.136%		
O2 =	22.12%	CO =	.23%
S =	.015%		
ASH =	.48%	N2 =	79.10%

NET HEATING VALUE OF FUEL (DRY) = 8121.7 BTU/LB

NET HEATING VALUE OF FUEL (AS FIRED) = 4088.5 BTU/LB

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	5.51	#/# FUEL
WEIGHT OF AIR REQUIRED	2.88	#/# FUEL
WEIGHT OF AIR SUPPLIED	5.29	#/# FUEL
EXCESS AIR	83.51%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	14.71
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.32
LOSSES DUE TO MOISTURE IN AIR	.32
LOSSES DUE TO DRY FLUE GASES	12.94
LOSSES DUE TO INCOMPLETE COMBUSTION	1.25
LOSSES DUE TO UNBURNED CARBON	1.31 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	5.0 *
TOTAL LOSSES	43.85%
BOILER EFFICIENCY	56.15%

* ASSUMED VALUES

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #4

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	480 DEGREES FAHR. *
FUEL AS FIRED	100 DEGREES FAHR. *
AIR ENTERING AIR HEATER	80 DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1278.9
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS * (AS FIRED)

H2O =	51.5%
C =	23.41%
H2 =	2.90%
N2 =	.14%
O2 =	21.12%
S =	.018%
ASH =	.92%

FLUE GAS ANALYSIS (ORSAT TEST)

CO2 =	11.20%
O2 =	9.63%
CO =	.10%
N2 =	79.70%

NET HEATING VALUE OF FUEL (DRY) = 8163 BTU/LB *

NET HEATING VALUE OF FUEL (AS FIRED) = 3959.1 BTU/LB *

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	5.13	#/# FUEL
WEIGHT OF AIR REQUIRED	2.74	#/# FUEL
WEIGHT OF AIR SUPPLIED	4.92	#/# FUEL
EXCESS AIR	79.40%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	15.75
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.11
LOSSES DUE TO MOISTURE IN AIR	.31
LOSSES DUE TO DRY FLUE GASES	12.45
LOSSES DUE TO INCOMPLETE COMBUSTION	.52
LOSSES DUE TO UNBURNED CARBON	1.30 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	5.0 *
TOTAL LOSSES	43.44%
BOILER EFFICIENCY	56.56%

* ASSUMED VALUES

OSCEOLA FARMS COMPANY
BOILER EFFICIENCY CALCULATIONS

BOILER #5

DATA

TEMPERATURES:

GASES LEAVING AIR HEATER	480 DEGREES FAHR. *
FUEL AS FIRED	100 DEGREES FAHR. *
AIR ENTERING AIR HEATER	80 DEGREES FAHR. *

ENTHALPIES:

	BTU/LB.
VAPOR @ 1 PSIA & TEMPERATURE LEAVING AIR HEATER	1278.9
LIQUID @ TEMPERATURE OF FUEL	68.0
LIQUID @ TEMPERATURE OF AIR	48.08

ULTIMATE ANALYSIS * (AS FIRED)

H2O =	51.5%
C =	23.62%
H2 =	2.94%
N2 =	.14%
O2 =	21.32%
S =	.03%
ASH =	.45%

FLUE GAS ANALYSIS (ORSAT TEST)

CO2 =	11.53%
O2 =	9.23%
CO =	.10%
N2 =	79.14%

NET HEATING VALUE OF FUEL (DRY) = 8225 BTU/LB *

NET HEATING VALUE OF FUEL (AS FIRED) = 3989.1 BTU/LB *

GAS AND AIR WEIGHTS (LB/LB FUEL AS FIRED)

WEIGHT OF DRY GAS	5.04	#/# FUEL
WEIGHT OF AIR REQUIRED	2.77	#/# FUEL
WEIGHT OF AIR SUPPLIED	4.83	#/# FUEL
EXCESS AIR	74.08%	

HEAT LOSSES

	%
LOSSES DUE TO MOISTURE IN FUEL	15.63
LOSSES DUE TO H2O FROM COMBUSTION OF HYDROGEN	8.16
LOSSES DUE TO MOISTURE IN AIR	.30
LOSSES DUE TO DRY FLUE GASES	12.13
LOSSES DUE TO INCOMPLETE COMBUSTION	.51
LOSSES DUE TO UNBURNED CARBON	1.30 *
LOSSES DUE TO RADIATION AND UNMEASURED LOSSES	5.0 *
TOTAL LOSSES	43.03%
BOILER EFFICIENCY	56.97%

* ASSUMED VALUES

Rick Vail —
this yours?
pls send copy to
Andrus K.

W, June 21

OSCEOLA FARMS CO.

RAW SUGAR FACTORY

INTERSECTION U.S. 98 & HATTON HWY.

TELEPHONE:
(305) 924-7156

CABLE: SUGAR

POST OFFICE BOX 679
PAHOKEE, FLORIDA 33476

October 31, 1984

12-5

1) Bill Davis RO 12/5/84

~~2) Bill Pearce~~ B

3) File - federal PSD file

United States Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Attn: Mr. W. Devine, Director, Air and Waste Management Division

RE: Your letter, 4AW-AM dated May 15, 1984
Our Boilers Nos.2-5

Gentlemen:

In reply to above referenced letter we wish to notify the following:

After a period of normal "start up" adjustments we now have the referenced boilers operating in a normal manner, and are prepared to schedule particulate emissions compliance stack tests. Consequently, we have now scheduled test dates:

Boiler # 2	November 15, 1984
Boiler # 5	November 16-17, 1984.

We would like to call to your attention that we have multiple boiler stacks operating on wet scrubbers. This poses a problem in making meaningful visible emissions tests and to-date this problem has not been solved.

Unless we hear from you to the contrary we will presume that the above schedule is acceptable to you.

Respectfully yours,

OSCEOLA FARMS CO.

Alexander L. Fanjul

Alexander L. Fanjul
Vice President and
General Manager

ALF/io

OSCEOLA FARMS CO.

VERMILION SUGAR FACTORY

(JUNCTION OF CONNERS HIGHWAY & STATE ROAD 717)

TELEPHONES:
924-7116
924-7117
924-7391

CABLE: SUGAR

October 31, 1984

P. O. BOX 679
PAHOKEE, FLORIDA 33476

United States Enviromental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365.

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

Mr. Marshall Mott-Smith
Field Operations Coordinator
Division of Enviromental Permitting.

Mr. Phillip R. Edwards, District Manager
South Florida District
Florida Department of Enviromental Regulation.

Mr.Eugene J. Sacco
Air Pollution Control Administrator.
Palm Beach County Health Department
Division of Enviromental Sciences and Engineering.

STATE OF FLORIDA

DEPARTMENT OF

ENVIRONMENTAL REGULATION

PARTICULATE COMPLIANCE TEST

OSCEOLA FARMS CO.

BAGASSE BOILER NO. 4

PAHOKEE, FLORIDA

DECEMBER 1982

PREPARED BY

BUREAU OF AIR QUALITY MANAGEMENT

AIR MONITORING AND ANALYSIS SECTION

TABLE OF CONTENTS

SECTION I

SUMMARY AND DISCUSSION

SOURCE DESCRIPTION

FACILITY NAME: Osceola Sugar

TYPE OF SOURCE: Bagasse Boiler #4
(power plant, DAP, asphalt, etc.)

LOCATION: Street Address P. O. Box 679

City Pahokee 33476

County Palm Beach

DESIGNATION: Permit ID AC50-2052A

APIS No. 5250001904

PLANT CONTACT: Mr. Rafael Fanjul/Gen. Manager

PHONE NO: (305) 924-7116

FUEL TYPE: Bagasse

Fuel Use Rate (Operating Rate) 600 tons/day

MATERIAL PROCESSING RATE 50,000 lb/hr
(Average)

COMPLIANCE TEST SUMMARY

PLANT Osceola Farms TEST METHOD EPA 5

UNIT Boiler #4

RUN	DATE	POLLUTANT	EMISSION LEVELS Allowable(units)	Actual (units)
1	12/07/82	Particulate	0.3 LB/10^6BTU	0.29 LB/10^6BTU
2	12/08/82	Particulate	0.3 LB/10^6BTU	0.28 LB/10^6BTU
3	12/08/82	Particulate	0.3 LB/10^6BTU	0.30 LB/10^6BTU
		Average	0.3 LB/10^6BTU	0.29 LB/10^6BTU

This source is in compliance with FAC 17-2.

I/we certify that the information contained herein is correct and accurate to the best of my knowledge.

W. J Blommel
for John Manning
Signature

Environmental Engineer
Title

FDER
Affliation

START

DATE 12483 FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

METHOD 5 STACK TEST VERIFICATION

COMPANY NAME: OSCEOLA FARMS APIS # 525000194

COMPANY CONDUCTING TEST: FDER TEST DATE 12/8/82

SOURCE DESCRIPTION: BAGASSE BOILER # 4

EMISSION LIMITING STANDARD: .3 LBS/MBTU
F FACTOR: 9224 DSCF/MBTU

STACK TEST DATA SUMMATION

		RUN1	RUN2	RUN3
1.	H2O COLLECTED (IMPINGER), ML	345	363	358
2.	H2O COLLECTED (SILICA GEL),GM	15.6	18.1	18
3.	MN PARTICULATE WEIGHT, GM	.30925	.30987	.32
4.	VM VOLUME METERED, CFT	56.4	55.62	57.33
5.	Y DRY GAS METER CAL FACTOR	.99	.99	.99
6.	DP AVG SQ RT OF DELTA P	.838	.825	.837
7.	DH AVG DELTA H, IN H2O	1.54	1.53	1.55
8.	TM AVG METER TEMPERATURE, R	555	548	557
9.	TS AVG STACK TEMPERATURE, R	608	610	609
10.	PS ABS STACK PRESSURE, IN HG	30.16	30.23	30.16
11.	PB BAROMETRIC PRESSURE,IN HG	30.21	30.28	30.21
12.	AS AREA OF STACK, SQ FT	27.88	27.88	27.88
13.	AN AREA OF NOZZLE, SQ FT	.000335	.000335	.000335
14.	T TOTAL TEST TIME, MIN	80	80	80
15.	CP PITOT TUBE COEFFICIENT	.84	.84	.84
16.	%CO2	9.2	9.6	9.15
17.	%O2	11.85	11.2	11.6
18.	%CO	0	0	0
19.	%N2	78.95	79.2	79.25

RUN	STANDARD VOLUME DSCF	MOISTURE CONTENT PROPORTION	STACK VELOCITY F/SEC	FLOW RATE DSCF/HR	PERCENT ISO-KINETIC	ACTUAL EMISSIONS LBS/MBTU	ALLOWABLE EMISSIONS LBS/MBTU
1	53.814	0.23979	51.9205	3,466,507	96.92	0.270	0.300
2	53.870	0.24982	51.2262	3,371,771	99.75	0.252	0.300
3	54.506	0.24513	51.9754	3,440,163	98.92	0.268	0.300
MEAN	54.064	0.24491	51.7074	3,426,147	98.53	0.263	0.300

* STANDARD CONDITIONS = DRY,528 DEG R,29.92 IN HG
* DRY MOLECULAR WEIGHT OF GAS ASSUMED TO BE 28.94
WHEN GAS COMPOSTION DATA NOT AVAILABLE

DISCUSSION

On December 6, 7 and 8, 1982, the DER stack test team conducted a particulate emissions test at Osceola Farms, Inc. sugar mill in Pahokee, Florida. The unit tested was Boiler #4.

Boiler #4 is a gravity-feed unit with a rated capacity of 100,000 lb/hr of steam production. During the testing, the only fuel used was bagasse and the average steam rate was 80,300 lb/hr.

The emission from Boiler #4 are controlled by two medium-energy wet scrubbers. The scrubber water flow rate is not quantifiably monitored. The pressure drop across the scrubbers is monitored by slack-tube manometers and was recorded as follows:

Run	Average Pressure Drop (in. H_2O) Scrubber #1	Scrubber #2
1	9	10
2	9	10
3	10	9

Several times during the three days the test team was on site, the plant experienced a power loss from the incoming power lines. Each time it caused an upset condition and abnormal boiler conditions. During these periods, testing was discontinued because they were determined to be, in fact, upset conditions beyond the control of plant personnel.

For the purpose of compliance determination, the emission rate was calculated using steam parameters, steam tables and a boiler efficiency of 55%. The steam temperature for Boiler #4 is not monitored. For our calculations, the steam temperature indicated on the control panel for Boiler #5 was used, 425°F. The steam production rate was determined from the steam flow integrator on the Boiler #4 control panel, using an integrator factor of 1500.

For information purposes, emission rates were also calculated using the F-factor method. This method resulted in an average rate of 0.26 lb/MMBTU, slightly lower than the rate using the other method. This determination was made only to give an indication of the effect the F-factor method would have on calculated emission rates if and when it becomes DER policy.

The company was very cooperative during the testing. Plant personnel assisting the test team were Mr. Adolfo Galvez and Mr. Humberto Farinis.

SECTION II

FIELD AND ANALYTICAL PROCEDURES

STACK SAMPLING EQUIPMENT DESCRIPTION

The sampling apparatus consisted of the following:

1. Nozzle - Stainless steel with a sharp, tapered leading edge.

2. Probe - Stainless steel with a 5/8 inch O.D. stainless steel liner wrapped with glass cloth-covered nichrome wire. Rheostat-controlled and capable of maintaining a minimum temperature of 250°F (120°C).

3. Pitot - Type "S" attached to the probe.

4. Stack Temperature Sensor - Chromel/Alumel type "K" thermocouple within a stainless steel sheath attached to the probe.

5. Orsat Line - 1/4 inch stainless steel piping attached to the probe, 1/4 inch polyethylene tubing from the probe to the pump. A glass wool plug inserted at the sampling tip to remove particulates.

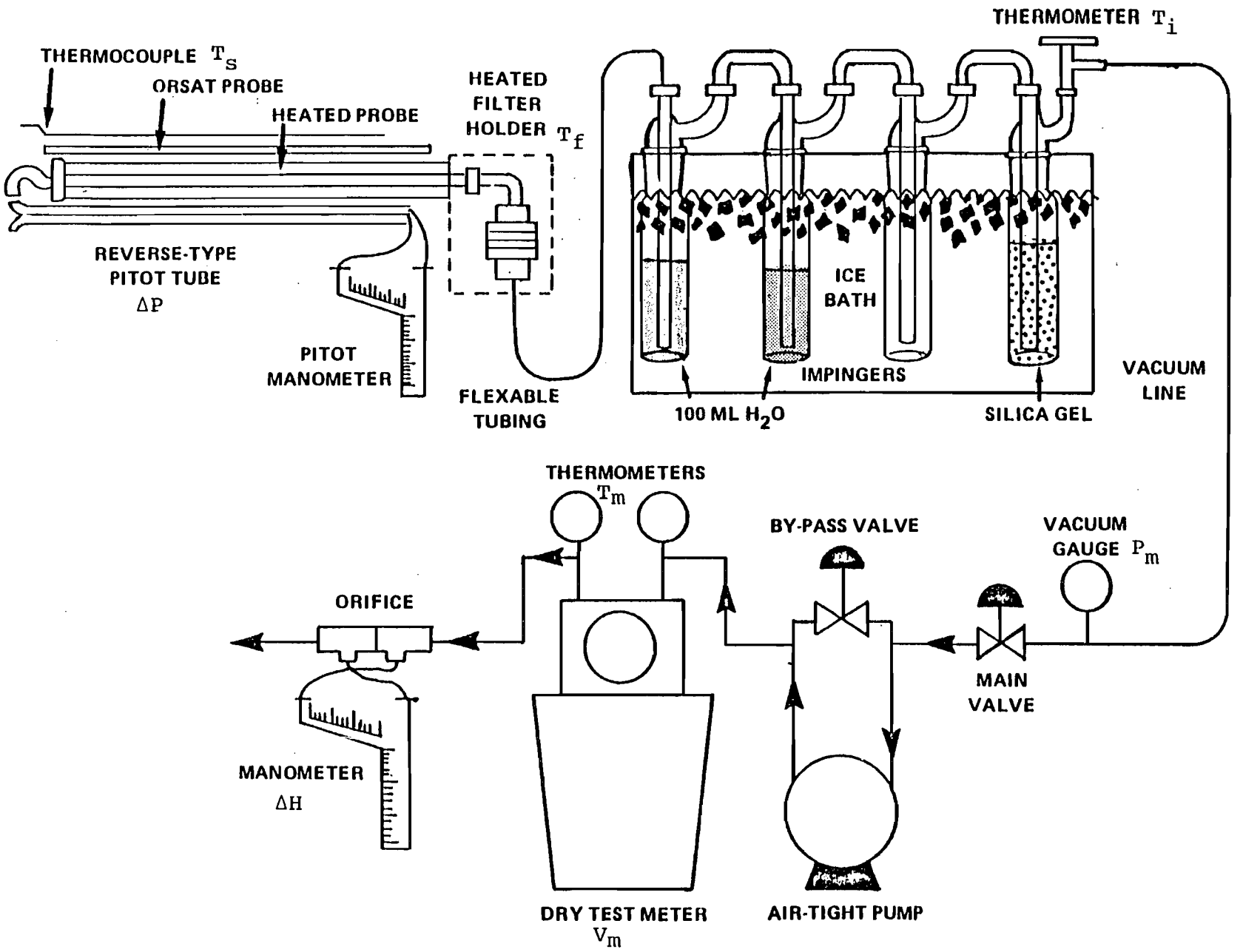
6. Filter Holder - Pyrex glass with fritted glass or stainless steel filter support.

7. Impingers - Four impingers connected in series with glass ball joint fittings. The first, third and fourth impingers are the modified Greenburg-Smith design. The second impinger is the Greenburg-Smith design with a standard tip.

8. Filter/Impinger Box - Fiberglass module with a heating system for maintaining the filter holder at a minimum temperature of 225°F (120°C), and an area for the impingers to be placed in an ice bath.

9. Vacuum Pump - Fiber vane, leakfree and capable of achieving a minimum vacuum of 15 in. Hg.

10. Control Box - Nutech "Sampler" containing vacuum guage, dry gas meter with a maximum of 2 percent error, valves and related equipment necessary to maintain an isokenetic sampling rate and determine sample volume.



MODIFIED METHOD 5 SAMPLING TRAIN

TEST PROCEDURES AND METHODS

Prior to the test, glass fiber filters were numbered for identification, heated in an oven for 2 hours at 273°F (134°C), desiccated for 2 hours and weighed to the nearest .1 mg. The filters were then desiccated for 6 hours and reweighed, this process continued until constant values (± 0.5 mg.) were achieved.

During the test, EPA methods 1 through 5 were followed with the exceptions of using a stainless steel probe liner and a stainless steel frit in the filter holder.

Following the test, the filters were desiccated in plastic petri dishes for at least 24 hours. Initial weights were recorded, the filters desiccated again for 6 hours and reweighed. This process was repeated until constant values (± 0.5 mg.) were achieved. The probe, nozzle, front filter holder and frit wash along with any loose particulate matter from the appropriate petri dish were placed in previously tared beakers and allowed to evaporate to dryness. The beakers were then oven-dried at 250°F (121°C) for 2 hours, desiccated for at least 2 hours and weighed. The beakers were weighed to a constant weight. The tare weights of the filters and beakers along with blank values for a representative amount of acetone and a filter which accompanied the test filters were subtracted from the final weights to determine the particulate totals for each run.

TESTER AND OBSERVERS

James Manning	Stack Sampling Team Leader
John Glunn, Doug Kiesling	Sampling Technicians
Mike Martin	Agency Observer
None	Company Observer

SECTION III

FIELD DATA, LAB DATA, AND CALCULATIONS

VELOCITY TRAVERSE DATA

PLANT Osceola Sugar DATE 12/6/82 BAROMETRIC PRESS.(P_b) 30.15 in. H_2O
UNIT # 4 CITY Panokee STATIC PRESSURE(P_s) −0.62 in. H_2O
INSIDE STACK DIAMETER(D_s) 71.5 in. NIPPLE LENGTH 0 in.
DISTANCE TO UPSTREAM FLOW DISTURBANCE 228 in. DIAMETERS 3.19
DISTANCE TO DOWNSTREAM FLOW DISTURBANCE > 144 in. DIAMETERS > 2 ⊖

				CYCLONIC FLOW DETERMINATION	
Point No.	Position in. ~~(m)~~ in	ΔP in. H_2O	T_s °F (C)	ΔP, parallel to flow	Angle of flow (α)
1	1.0	0.55	147		< 5°
2	2.8	0.65	148		< 5°
3	4.8	0.65	148		< 3°
4	6.9	0.70	148	P_s =	3°
5	9.2	0.75	146	-0.62	4°
6	11.8	0.75	144		3°
7	14.6	0.65	142		2°
8	17.9	0.60	142		1°
9	21.9	0.55	142		1°
10	27.7	0.50	144		1°
11	43.8	0.45	144		—
12	49.6	0.45	144		—
13	53.6	0.40	144		—
14	56.9	0.40	144		
15	59.3	0.37	143		
16	62.3	0.35	141		
17	64.6	0.32	142		
18	66.7	0.27	142		
19	68.7	0.17	140		
20	70.5	0.13	135		
AVERAGE		0.48	605		

[a] Average of (α) must be <10° to be acceptable

SKETCH OF STACK
(include distance to up stream and downstream flow disturbances.)

APPROXIMATE VELOCITY

$$V_s \cong 2.45 \sqrt{T_s \, \overline{\Delta P}} = 2.45 \sqrt{(605)(.48)} = 41.75 \text{ FPS}$$

DESIRED NOZZLE SIZE

$$D_n \cong \sqrt{\frac{0.956}{T_m (1-B_{ws})}} \sqrt{\frac{T_s}{\Delta P}} = \sqrt{\frac{0.956}{(550)(1-.22)}} \sqrt{\frac{(605)}{(.48)}} = 0.28 \text{ in.}$$

$$\frac{\pi}{4} (D_n)^2 = \frac{\pi}{4} (.25)^2 = .049 \text{ in.}^2$$

OPTIMUM RUN TIME

$$\theta \cong \frac{72 \, T_s}{V_s \, A_n \, (1-B_{ws}) \, T_m} = \frac{72 (605)}{(41.75)(.049)(1-.22)(550)} = 50 \text{ min.}$$

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STACK DATA SHEET

Sheet 1 of 2

PLANT OSCEOLA CITY PAHOKEE UNIT #4 DATE 12-8-82

RUN 01 STACK DIAMETER 71.5 in. PROBE LENGTH 8 ft.

METER ID 17524 FILTER NO. 523 NOZZLE ID No-8 NOZZLE DIA. .248 in. $AREA_N$ .000335 ft_2

P_b 30.21 ΔH@ 1.7 Y 0.99 PITOT ID _____ C_p .84 STATIC PRESS. -6.2 in

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T		PUMP VAC.	FILTER T	IMPINGER T
	0	281.243				IN	OUT			
1	2	82.5	.58	1.3	146	89		6	264	64
2	4	84.0	.80	1.8	146	89		8	260	56
3	6	85.6	.84	1.9	147	89		9	258	52
4	8	87.1	.92	2.0	145	90		10	256	51
5	10	88.7	.92	2.0	144	91		11	256	50
6	12	90.2	.82	1.8	144	91		11	256	51
7	14	91.8	.82	1.8	143	92		11	255	52
8	16	93.2	.81	1.8	143	93		12	256	54
9	18	94.8	.79	1.7	144	93		12	259	54
10	20	96.3	.76	1.7	146	94		12	260	55
11	22	97.6	.63	1.4	148	94		11	259	56
12	24	98.9	.59	1.3	147	94		10	261	57
13	26	300.2	.57	1.3	148	95		11	262	57
14	28	1.5	.57	1.3	148	95		11	262	58
15	30	2.8	.56	1.2	149	96		11	262	58
16	32	4.1	.57	1.3	149	95		12	263	58
17	34	5.4	.55	1.2	150	95		11	262	58
18	36	6.6	.55	1.2	152	96		11	262	58
19	38	7.9	.57	1.3	151	96		12	262	59
20	40	309.218	.59	1.3	150	96		13	262	58
			16.54	30.5	5927	5791				
		V_m=56.403	√0.838	ΔH=1.54	T_s=148 =608°R	T_M=95 =555°R				

NOTES:

Gas Analysis	%CO_2	%O_2	%CO
	9.2	10.8	
	9.2	11.9	
AVG.			
COLL. RATE			

Condensate	Impinger ML	Dess. Grams
FINAL	595	769.7
INITIAL	200	754.1
CHANGE	395	15.6

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS No leak TRAIN No leak

OPERATOR ~~[illegible]~~ J.Glunn

START TIME 12:11

STOP TIME 12:51

START TIME 1:00

STOP TIME ~~1:39~~ 1:40

STACK DATA SHEET

Sheet 2 of 2

PLANT Osceola Sugar CITY Pahokee UNIT 4 DATE 12/7/80

RUN 01 STACK DIAMETER 21.5 in. PROBE LENGTH 8 ft.

METER ID 12524 FILTER NO. 523 NOZZLE ID Nu-8 NOZZLE DIA. .248 in. $AREA_N$ .000335 ft_2

P_b 30.21 ΔH@ 1.7 Y .994 PITOT ID _____ C_p .84 STATIC PRESS. -.62

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T		PUMP VAC.	FILTER T	IMPINGER T
	0	309.218				IN	OUT			
1	2	10.6	.73	1.6	152	95		13	264	59
2	4	12.2	.93	2.0	151	95		15	251	54
3	6	13.8	.93	2.0	150	96		16	248	53
4	8	15.3	.93	1.9	151	96		17	251	57
5	10	16.9	.93	1.9	151	96		17	252	59
6	12	18.5	.92	1.8	151	96		17	252	61
7	14	320.00	.92	1.8	150	97		17	254	61
8	16	21.5	.91	1.7	150	96		17	255	62
9	18	22.9	.88	1.7	149	96		17	256	63
10	20	24.4	.82	1.6	149	96		17	257	63
11	22	25.8	.70	1.5	148	96		17	258	65
12	24	27.2	.66	1.5	148	96		17	259	64
13	26	28.6	.63	1.4	148	97		18	259	63
14	28	30.1	.57	1.4	147	97		18	260	63
15	30	31.4	.54	1.4	147	96		18	260	63
16	32	32.7	.49	1.0	148	97		17	262	64
17	34	34.0	.53	1.2	149	97		16	263	63
18	36	35.2	.53	1.2	148	97		16	264	63
19	38	36.5	.52	1.2	149	98		17	264	63
20	40	337.646	.54	1.2	151	98		17	264	64
				31.0						
					2987					

NOTES:

Gas Analysis	$\%CO_2$	$\%O_2$	%CO
AVG.			
COLL. RATE			

Condensate	Impinger ML	Dess. Grams
FINAL		
INITIAL	700	
CHANGE		

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS _____ TRAIN _____

OPERATOR [redacted]

START TIME 1:00

STOP TIME _____

START TIME _____

STOP TIME _____

STACK DATA SHEET

Sheet 1 of 2

PLANT OSCEOLA CITY PAHOKEE UNIT #4 DATE 12-8-82

RUN 02 STACK DIAMETER 71.5 in. PROBE LENGTH 8 ft.

METER ID 12524 FILTER NO. 524 NOZZLE ID No-8 NOZZLE DIA. .248 in. AREA$_N$ .000335 ft$_2$

P_b 30.26 ΔH@ 1.7 Y 0.99 PITOT ID _____ C_p 0.84 STATIC PRESS. _____

342.31

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T IN	METER T OUT	PUMP VAC.	FILTER T	IMPINGER T
	0									
1	2	343.7	0.70	1.5	145		79	4.5	246	60
2	4	345.2	0.80	1.8	144		80	5	242	52
3	6	346.75	0.90	2.0	145		80	6	243	50
4	8	348.4	0.90	2.0	145		81	6.5	245	49
5	10	349.9	0.90	2.0	145		82	7	247	49
6	12	351.5	0.86	1.9	146		83	7.5	249	50
7	14	353.0	0.82	1.8	147		83	7.5	251	51
8	16	354.5	0.82	1.8	145		84	8	252	51
9	18	356.05	0.78	1.7	146		84	8	253	53
10	20	357.5	0.72	1.6	147		85	8	254	54
11	22	358.9	0.62	1.4	149		85	8	254	54
12	24	360.2	0.56	1.2	153		86	7.5	255	54
13	26	361.4	0.52	1.1	153		86	7.5	257	55
14	28	362.6	0.52	1.1	154		87	7.5	257	55
15	30	363.85	0.53	1.2	155		87	8	257	55
16	32	365.1	0.53	1.2	155		87	8	256	55
17	34	366.3	0.53	1.2	155		88	8.5	256	55
18	36	367.55	0.50	1.1	153		88	8.5	257	55
19	38	367.84	0.56	1.2	148		88		265	61
20	40									
17		368.7	0.44	0.97	138		86	7	247	61
20		369.76	0.42	0.92	138		86	7.5	238	57
		V_M=55.62	$\sqrt{\Delta p}$=0.825	$\overline{\Delta H}$=1.53	$\overline{T_s}$=150 =610°R		$\overline{T_M}$=88 =548°R			

STOP 30 sec. into pt 19

NOTES:

Gas Analysis	%CO_2	%O_2	%CO
AVG.			
COLL. RATE			

Condensate	Impinger ML	Dess. Grams
FINAL		
INITIAL	700	
CHANGE		

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS _____ TRAIN _____

OPERATOR DJR

START TIME 8:40

STOP TIME 9:18

START TIME 9:30

STOP TIME 9:35

STACK DATA SHEET

Sheet 2 of 2

PLANT OSCEOLA CITY PAHOKEE UNIT #4 DATE 12-8-82

RUN 02 STACK DIAMETER 71.5 in. PROBE LENGTH 8 ft.

METER ID 12524 FILTER NO. 524 NOZZLE ID NU-8 NOZZLE DIA. _____ in. $AREA_N$ _____ ft_2

P_b 30.28 ΔH@ 1.7 Y 0.99 PITOT ID _____ C_p 0.84 STATIC PRESS. _____

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T		PUMP VAC.	FILTER T	IMPINGER T
	0	369.76				IN	OUT			
1	2	371.2	0.92	2.0	150		87	17	250	56
2	4	372.8	0.92	2.0	152		88	17.5	240	50
3	6	374.4	0.96	2.1	153		88	14	247	47
4	8	376.0	1.0	2.2	152		89	15	255	47
5	10	377.65	1.0	2.2	153		89	16	262	48
6	12	379.3	0.98	2.2	151		90	16.5	273	50
7	14	380.9	0.95	2.1	151		90	16.5	273	54
8	16	382.55	0.93	2.0	151		90	17	268	56
9	18	384.1	0.87	1.9	153		91	17	273	60
10	20	—	0.78	1.7	155		91	16.5	268	62
11	22	387.05	0.68	1.5	155		91	16	252	64
12	24	388.6	0.62	1.4	155		92	15.5	248	64
13	26	389.8	0.60	1.3	154		92	15	250	65
14	28	391.1	0.55	1.2	153		92	14.5	246	64
15	30	392.35	0.52	1.1	152		93	14	245	65
16	32	—	0.47	1.0	152		93	13	244	65
17	34	394.7	0.45	0.99	151		94	13	248	65
18	36	395.0	0.40	0.88	151		94	12.5	246	63
19	38	396.9	0.40	0.88	151		94	12.5	243	64
20	40	397.93	0.40	0.88	152		95	12.5	244	64
			16.746	31.53	3047		1823			
		$\bar{T}_m$=55.62	$\bar{\sqrt{\Delta p}}$=0.825	$\bar{\Delta H}$=1.53	$\bar{T}_s$=150°F =610°R		$\bar{T}_m$=88°F =548°R			

NOTES:

Gas Analysis	%CO_2	%O_2	%CO
	9.6	11.2	
	9.6	11.2	
AVG.			
COLL. RATE			

Condensate	Impinger ML	Dess. Grams
FINAL	580	800.0
INITIAL	200	781.9
CHANGE	380	18.1

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS OK TRAIN ✓ OK

OPERATOR OAK

START TIME 10:52

STOP TIME 11:32

START TIME _____

STOP TIME _____

STACK DATA SHEET

Sheet 1 of 2

PLANT Osceola Sugar CITY Pahokee UNIT 4 DATE 12/8/82

RUN 03 STACK DIAMETER 71.5 in. PROBE LENGTH 8 ft.

METER ID 12524 FILTER NO. 535 NOZZLE ID Nu-8 NOZZLE DIA. .248 in. $AREA_N$ .000335 ft_2

P_b 30.21 ΔH@ 1.7 Y 0.99 PITOT ID _____ C_p .84 STATIC PRESS. -.62 in

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T		PUMP VAC.	FILTER T	IMPINGER T
	0	398.638				IN	OUT			
1	2	400.2	.60	1.3	143	90		4	245	66
2	4	1.5	.82	1.3	143	90		4	247	61
3	6	3.0	.89	2.0	145	91		6	250	56
4	8	4.7	.89	2.0	147	92		7	252	55
5	10	6.2	.87	1.9	147	93		7	253	56
6	12	7.8	.87	1.9	147	94		7	252	57
7	14	9.3	.82	1.8	150	95		8	253	64
8	16	10.8	.80	1.8	150	95		8	253	64
9	18	12.4	.81	1.8	151	96		9	255	65
10	20	13.9	.80	1.8	151	96		9	256	67
11	22	15.3	.68	1.5	152	97		9	259	67
12	24	16.7	.63	1.4	152	97		8	260	68
13	26	18.0	.60	1.3	151	97		8	262	67
14	28	19.3	.59	1.3	153	97		9	262	63
15	30	20.7	.64	1.4	152	98		9	263	61
16	32	22.0	.64	1.4	150	98		9	263	60
17	34	23.4	.61	1.3	150	98		9	267	60
18	36	24.9	.57	1.25	150	99		9	267	60
19	38	26.0	.60	1.3	150	99		10	264	61
20	40	427.319	.60	1.3	151	99		10	264	61
			16.68							

NOTES:

Gas Analysis	%CO_2	%O_2	%CO
	9.2	11.6	
	9.1	11.6	
AVG.			
COLL. RATE 0.9 SCFH			

Condensate	Impinger ML	Dess. Grams
FINAL	568	818.0
INITIAL	200	800.0
CHANGE	368	18.0

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS OK 110 leak TRAIN OK no leak

OPERATOR John Shum

START TIME 1:56

STOP TIME 2:36

START TIME 2:44

STOP TIME 3:24

STACK DATA SHEET

Sheet 2 of 2

PLANT Osceola Sugar CITY Pahokee UNIT 4 DATE 12/8/82

RUN 03 STACK DIAMETER 71.5 in. PROBE LENGTH 8 ft.

METER ID 12524 FILTER NO. 535 NOZZLE ID Nu 8 NOZZLE DIA. .248 in. $AREA_N$ .000335 ft_2

P_b 30.21 ΔH@ 1.7 Y 0.99 PITOT ID _____ C_p .84 STATIC PRESS. -0.62

PT.	TIME	V_m	ΔP	ΔH	STACK T	METER T		PUMP VAC.	FILTER T	IMPINGER T
	0	427.319				IN	OUT			
1	2	28.8	.87	1.9	149	97		12	263	63
2	4	30.5	.92	2.0	149	97		13	263	56
3	6	32.1	.92	2.0	148	97		14	262	58
4	8	33.4	.95	2.1	148	97		15	263	61
5	10	35.4	.94	2.1	148	98		15	265	62
6	12	37.0	.91	2.0	150	98		15	265	64
7	14	38.7	.91	2.0	151	98		15	264	65
8	16	40.2	.92	2.0	151	98		17	264	65
9	18	41.9	.86	1.9	151	98		17	262	66
10	20	43.5	.82	1.8	152	98		17	261	67
11	22	45.0	.75	1.6	150	98		16	261	67
12	24	46.5	.69	1.5	148	98		15	260	67
13	26	47.8	.67	1.5	147	98		15	261	66
14	28	49.1	.49	1.1	147	98		13	261	67
15	30	50.2	.40	.88	147	98		11	261	66
16	32	51.4	.48	1.1	146	98		13	260	65
17	34	52.7	.47	1.0	146	98		13	259	66
18	36	53.7	.40	.88	145	99		12	260	65
19	38	54.9	.40	.88	144	99		12	258	64
20	40	456	.40	.88	146	99		12	250	64
		455.970								
		V_m=57.332	$\overline{\sqrt{\Delta p}}$=0.837	$\overline{\Delta H}$=1.55	$\overline{T_s}$ = 149°F = 609°R	$\overline{T_m}$ = 97°F = 557°R				

NOTES:

Gas Analysis	%CO_2	%O_2	%CO
AVG.			
COLL. RATE 0.9 SCFH			

Condensate	Impinger ML	Dess. Grams
FINAL		
INITIAL	200	
CHANGE		

K FACTOR 2.2

FINAL LEAK CHECK

PITOTS _____ TRAIN _____

OPERATOR John Glenn

START TIME _____

STOP TIME _____

START TIME _____

STOP TIME _____

PARTICULATE RECOVERY AND ANALYSIS

PLANT Osceola Farms CITY Pahokee UNIT #4 DATE 12-20-82

FILTER DESCRIPTION
Run 1 gray
Run 2 gray
Run 3 gray

IMPINGER CONTENTS DESCRIPTION
Run 1 clear
Run 2 clear
Run 3 clear

FILTERS

RUN NO.	FILTER NO.	FINAL WT. (g)	TARE WT. (g)	CHANGE (g)	LESS b	COMMENTS
1	523	0.70273	0.40028	0.30245	0.30225	
2	524	0.69222	0.39777	0.29445	0.29425	
3	535	0.64947	0.33928	0.31019	0.30999	
BLANK	507	0.40843	0.40823	b= .0002	X	

SOLVENT RINSES

Solvent Used Acetone
Parts of Train Rinsed "front half"

Liquid Level Marked?

RUN	
1	✓
2	✓
3	✓

RUN NO.	BEAKER(S) NO.	FINAL WT. (g)	TARE WT. (g)	CHANGE (g)	LESS b	COMMENTS
1	10	106.88600	106.87900	0.00700	—	neg. blank
2	28	105.10612	105.09050	0.01562	—	" "
3	19	110.22676	110.21625	0.01001	—	" "
BLANK[a]	#23	105.66417	105.66480	b= -.00063	X	

PARTICULATE TOTAL, Mn — Filter and Rinse

RUN	
1	0.30925 g
2	0.30987 g
3	0.32000 g

MODIFICATIONS/NOTES:

Signature of Analyst Douglas Kiesling Date: 12-20-82

[a]The average amount of solvent used for the rinses shall be analyzed for the blank.

DATE 12-6-82
PLANT Osceola
STACK #4
RUN 01
FILTER 523

STACK SAMPLING
CALCULATION SHEET
K Factor Calculation (optional)

$K \cong 849.8\ (D_n)^4 \Delta H_@\ (C_p)^2\ (1-B_{ws})^2\ T_m/T_s$

$= 849.8\ (\quad)^4(\quad)(\quad)^2(\quad)^2\ \frac{(\quad)}{(\quad)} =$ _____

ISOKINETIC CALCULATION

$(1-B_{ws})$ _____

$\bar{T}_s$ _____ °R

$\bar{T}_m$ _____ °R

CALIBRATION

$\Delta H_@$ 1.7
C_p .84
Y .99
D_n .248 in.
A_n .000335 ft.²

NEW DATA

P_b 30.21 "Hg.
V_m 56.403 dcf
$\overline{\Delta H}$ 1.54 "H_2O
$\bar{T}_m$ 555 °R
H_2O_c 395 ml
H_2O_{sg} 15.6 g
CO_2 9.2 %
O_2 11.85 %
$(\sqrt{\Delta P})$ avg 0.838
$\bar{T}_s$ 608 °R
P_s 30.16 "Hg.
A_s 27.88 ft.²
θ 1.33 hr
m_n 0.30925 g

$V_{m(std)} = \frac{17.64\ V_m Y\ (P_b + \Delta H/13.6)}{T_m} =$

$\frac{17.64\ (56.403)(0.99)(30.21 + \frac{1.54}{13.6})}{(555)} = 53.73$ dscf

$V_{w(std)} = .0471\ (V_{wc(std)} + V_{wsg(std)})$

$= .0471\ (395 + 15.6) = 19.34$ scf

$B_{ws} = \frac{V_{w(std)}}{V_{w(std)} + V_{m(std)}} = \frac{(19.34)}{(19.34) + (53.73)} = 0.265 \rightarrow 0.240$ saturation

$M_d = 0.44\ (\%CO_2) + 0.32\ (\%O_2) + 0.28\ (\%CO + N_2)$

$= 0.44\ (\quad) + 0.32\ (\quad) + 0.28\ (\quad) = 30$

$M_s = M_d\ (1-B_{ws}) + 18\ (B_{ws}) = (30)(0.760) + 18\ (.24) = 27.12$

$\bar{V}_s = 85.49\ C_p\ (\sqrt{\Delta P})\ avg. \sqrt{\frac{T_s}{P_s M_s}} =$

$85.49\ (.84)(.838)\sqrt{\frac{(608)}{(30.16)(27.12)}} = 51.88$ ft/sec

$\bar{Q}_s = 63530\ \bar{V}_s\ (1 - B_{ws})\ A_s\ (P_s/T_s) =$

$63530\ (51.88)(.760)(27.88)\left(\frac{30.16}{608}\right) = 364280$ dscf/hr

$\%\ 1 = \frac{100\ V_{m(std)}\ A_s}{\theta\ \bar{Q}_s\ A_n} = \frac{100(53.73)(27.88)}{(1.33)(364280)(.000335)} = 97.0$

$C_s = \frac{m_n}{454\ (Vm_{std})} \quad \frac{(.30925)}{454\ (53.73)} = 1.267 \times 10^{-5}$ lb/dscf

$PMR = C_s\ \bar{Q}_s = (\quad)(364280) = 43.92$ lb/hr

$E = C_s F_d\ \left(\frac{20.9}{20.9 - \%O_2}\right) = (1.27 \times 10^{-5})(9224)\ \frac{20.9}{20.9 - (11.85)} = .270$ lb/10^6 BTUs

Optional

$C_s = \frac{15.43(m_n)}{V_{m(std)}} = 0.089$ gr/dscf

$\%I = \frac{0.945\ T_s V_{m(std)}}{P_s V_s A_n\ \theta(1-B_{ws})}$

$= \frac{0.945\ (\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(1-\quad)} =$ ____ %

DATE 12-8-82
PLANT Osceola Sugar
STACK Unit 4
RUN 02
FILTER No. 524

FROM PREVIOUS RUN DATA (OPTIONAL)

$(1-B_{ws})$ _____
$\bar{T}_s$ _____ °R
$\bar{T}_m$ _____ °R

CALIBRATION

$\Delta H_@$ 1.7
C_p .84
Y 0.99
D_n 0.248 in.
A_n 0.000335 ft.^{2}

NEW DATA

P_b 30.28 "Hg.
V_m 55.62 dcf
$\overline{\Delta H}$ 1.53 "H_2O
$\bar{T}_m$ 548 °R
H_2O_c 380 ml
H_2O_{sg} 18.1 g
CO_2 9.6 %
O_2 11.2 %
$(\sqrt{\Delta P})$ avg 0.825
$\bar{T}_s$ 610 °R
P_s 30.23 "Hg.
A_s 27.88 ft.^{2}
θ 1.33 hr
m_n .30987 g

STACK SAMPLING
CALCULATION SHEET
K Factor Calculation (optional)

$K \cong 849.8\ (D_n)^4 \Delta H_@\ (C_p)^2\ (1-B_{ws})^2\ T_m/T_s$

$= 849.8\ (\quad)^4(\quad)(\quad)^2(\quad)^2\ \frac{(\quad)}{(\quad)} =$ _____

ISOKINETIC CALCULATION

$$V_{m(std)} = \frac{17.64\ V_m Y\ (P_b + \Delta H/13.6)}{T_m} = \frac{17.64\ (55.62)(0.99)(30.28 + \frac{1.53}{13.6})}{(548)} = 53.87 \text{ dscf}$$

$$V_{w(std)} = .0471\ (V_{wc(std)} + V_{wsg(std)})$$

$= .0471\ (380 + 18.1) =$ 18.75 scf

$$B_{ws} = \frac{V_{w(std)}}{V_{w(std)} + V_{m(std)}} = \frac{(18.75)}{(18.75) + (53.78)} = 0.258$$

Use 0.250 (B_{ws} at saturation)

$$M_d = 0.44\ (\%CO_2) + 0.32\ (\%O_2) + 0.28\ (\%CO + N_2)$$

$= 0.44\ (\quad) + 0.32\ (\quad) + 0.28\ (\quad) =$ 30

$M_s = M_d\ (1-B_{ws}) + 18\ (B_{ws}) = (30)(0.75) + 18\ (0.25) =$ 27

$$\bar{V}_s = 85.49\ C_p\ (\sqrt{\Delta P})_{avg} \sqrt{\frac{T_s}{P_s M_s}} =$$

$$85.49\ (0.84)(0.825)\sqrt{\frac{(610)}{(30.23)(27)}} = 51.2 \text{ ft/sec}$$

$$\bar{Q}_s = 63530\ \bar{V}_s\ (1 - B_{ws})\ A_s\ (P_s/T_s) =$$

$$63530\ (51.2)(0.75)(27.88)\left(\frac{30.23}{610}\right) = 3370631 \text{ dscf/hr}$$

$$\%I = \frac{100\ V_{m(std)}\ A_s}{\theta\ \bar{Q}_s\ A_n} = \frac{100\ (53.78)(27.88)}{(1.33)(3370631)(0.000335)} = 99.8$$

$$C_s = \frac{m_n}{454\ (V_{m_{std}})} \quad \frac{(.30987}{454\ (53.78)} = 1.269 \times 10^{-5} \text{ lb/dscf}$$

$$PMR = C_s\ \bar{Q}_s = (1.269 \times 10^{-5})(3370631) = 42.78 \text{ lb/hr}$$

$$E = C_s F_d \left(\frac{20.9}{20.9 - \%O_2}\right) = (1.269 \times 10^{-5})(9224)\ \frac{20.9}{20.9 - (11.2)} = .252 \text{ lb/}10^6 \text{ BTUs}$$

Optional

$$C_s = \frac{15.43(m_n)}{V_{m(std)}} = 0.089 \text{ gr/dscf}$$

$$\%I = \frac{0.945\ T_s V_{m(std)}}{P_s V_s A_n\ \theta (1-B_{ws})} = \frac{0.945\ (\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(1-\quad)} = \quad\%$$

DATE 12/8/82
PLANT Osceola Sugar
STACK Unit 4
RUN 03
FILTER No. 535

FROM PREVIOUS RUN DATA (OPTIONAL)

$(1-B_{ws})$ _____
$\bar{T}_s$ _____ °R
$\bar{T}_m$ _____ °R

CALIBRATION

$\Delta H_@$ _____
C_p _____
Y _____
D_n 0.248 in.
A_n 0.000385 ft.²

NEW DATA

P_b	30.21	"Hg.
V_m	57.332	dcf
$\overline{\Delta H}$	1.55	"H_2O
$\bar{T}_m$	557	°R
H_2O_c	368	ml
H_2O_{sg}	18	g
CO_2	9.15	%
O_2	11.6	%
$(\sqrt{\Delta P})$ avg	0.837	
$\bar{T}_s$	609	°R
P_s	30.16	"Hg.
A_s	27.88	ft.²
θ	1.33	hr
m_n	0.32000	g

STACK SAMPLING
CALCULATION SHEET
K Factor Calculation (optional)

$K \cong 849.8\ (D_n)^4 \Delta H_@\ (C_p)^2\ (1-B_{ws})^2\ T_m/T_s$

$= 849.8\ (\quad)^4(\quad)(\quad)^2(\quad)^2\ \frac{(\quad)}{(\quad)} =$ _____

ISOKINETIC CALCULATION

$$V_{m(std)} = \frac{17.64\ V_m Y\ (P_b + \Delta H/13.6)}{T_m} =$$

$$\frac{17.64\ (57.332)(0.99)(30.21 + \frac{1.55}{13.6})}{(557)} = 54.51 \text{ dscf}$$

$V_{w(std)} = .0471\ (V_{wc(std)} + V_{wsg(std)})$

$= .0471\ (368 + 18) = 18.18$ scf (use 0.245 for sat.)

$$B_{ws} = \frac{V_{w(std)}}{V_{w(std)} + V_{m(std)}} = \frac{(18.18)}{(18.18) + (54.51)} = 0.25$$

$M_d = 0.44\ (\%CO_2) + 0.32\ (\%O_2) + 0.28\ (\%CO + N_2)$

$= 0.44\ (\quad) + 0.32\ (\quad) + 0.28\ (\quad) = 30$

$M_s = M_d\ (1-B_{ws}) + 18\ (B_{ws}) = (30)(0.755) + 18\ (0.245) = 27.06$

$$\bar{V}_s = 85.49\ C_p\ (\sqrt{\Delta P})_{avg} \sqrt{\frac{T_s}{P_s M_s}} =$$

$$85.49\ (0.84)(0.837)\sqrt{\frac{(609)}{(30.16)(27.06)}} = 51.92 \text{ ft/sec}$$

$$\bar{Q}_s = 63530\ \bar{V}_s\ (1 - B_{ws})\ A_s\ (P_s/T_s) =$$

$$63530\ (51.92)(0.755)(27.88)\left(\frac{30.16}{609}\right) = 3438486 \text{ dscf/hr}$$

$$\%I = \frac{100\ V_{m(std)}\ A_s}{\theta\ \bar{Q}_s\ A_n} = \frac{100\ (54.51)(27.88)}{(1.33)(3438486)(0.000385)} = 99.2\%$$

$$C_s = \frac{m_n}{454\ (V_{m_{std}})} \quad \frac{(.32)}{454\ (54.51)} = 1.293 \times 10^{-5} \text{ lb/dscf}$$

$PMR = C_s\ \bar{Q}_s = (1.293 \times 10^{-5})(3438486) = 44.46$ lb/hr

$$E = C_s F_d \left(\frac{20.9}{20.9 - \%O_2}\right) = (1.293 \times 10^{-5})(9224)\ \frac{20.9}{20.9 - (11.6)} = .268 \text{ lb}/10^6 \text{ BTUs}$$

Optional

$$C_s = \frac{15.43(m_n)}{V_{m(std)}} = 0.091 \text{ gr/dscf}$$

$$\%I = \frac{0.945\ T_s V_{m(std)}}{P_s V_s A_n\ \theta (1-B_{ws})}$$

$$= \frac{0.945\ (\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(1-\quad)} = \quad\%$$

Osceola Farms

Boiler Heat Input Run 01

Enthalpy of Steam

80,000 LB/HR at 425°F and 180 psi
80,000 LB/HR (1228.15 BTU/LB) = 98.25 x 10^6 BTU/HR

Enthalpy of Feedwater

80,000 LB/HR at 230°F and 280 psi
80,000 LB/HR (199.00 BTU/LB) = 15.92 x 10^6 BTU/HR

Net Enthalpy

$$\frac{(98.25 - 15.92)\ 10^6\ \text{BTU/HR}}{.55\ \text{Boiler Efficiency}} = 149.69 \times 10^6\ \text{BTU/HR}$$

Allowable Emissions = 0.3 LB/10^6 BTU

Actual Emissions Using Steam Production

$$\frac{0.30925\ \text{g particulate}}{454\ (53.73\ \text{DSCF})} \frac{(3464280\ \text{DSCF/HR})}{(149.69 \times 10^6\ \text{BTU/HR})} = 0.29\ \text{LB/}10^6\ \text{BTU}$$

Actual Emissions Using the "F" Factor

$$\frac{0.30925\ \text{g}}{454\ (53.73\ \text{DSCF})} (9224) \frac{20.9}{20.9 - 11.85} = 0.27\ \text{LB/}10^6\ \text{BTU}$$

Osceola Farms

Boiler Heat Input Run 02

Enthalpy of Steam

82,000 LB/HR at 450°F and 175 psi
82,000 LB/HR (1243.21 BTU/LB) = 101.94 x 10^6 BTU/HR

Enthalpy of Feedwater

82,000 LB/HR at 240°F and 280 psi
82,000 LB/HR (209.28 BTU/LB) = 17.16 x 10^6 BTU/HR

Net Enthalpy

$$\frac{(101.94 - 17.16)\ 10^6\ \text{BTU/HR}}{.55\ \text{Boiler Efficiency}} = 154.15 \times 10^6\ \text{BTU/HR}$$

Allowable Emissions = 0.3 LB/10^6 BTU

Actual Emissions Using Steam Production

$$\frac{0.30987\ \text{g particulate}}{454\ (53.78\ \text{DSCF})} \quad \frac{(3370631\ \text{DSCF/HR})}{(154.15 \times 10^6\ \text{BTU/HR})} = 0.28\ \text{LB}/10^6\ \text{BTU}$$

Actual Emissions Using the "F" Factor

$$\frac{0.30987\ \text{g}}{454\ (53.78\ \text{DSCF})}\ (9224)\ \frac{20.9}{20.9 - 11.2} = 0.25\ \text{LB}/10^6\ \text{BTU}$$

Osceola Farms

Boiler Heat Input Run 03

Enthalpy of Steam

79,000 LB/HR at 450°F and 180 psi
79,000 LB/HR (1242.50 BTU/LB) = 98.16 x 10^6 BTU/HR

Enthalpy of Feedwater

79,000 LB/HR at 240°F and 280 psi
79,000 LB/HR (209.28 BTU/LB) = 16.53 x 10^6 BTU/HR

Net Enthalpy

$$\frac{(98.16 - 16.53)\ 10^6\ \text{BTU/HR}}{.55\ \text{Boiler Efficiency}} = 148.42 \times 10^6\ \text{BTU/HR}$$

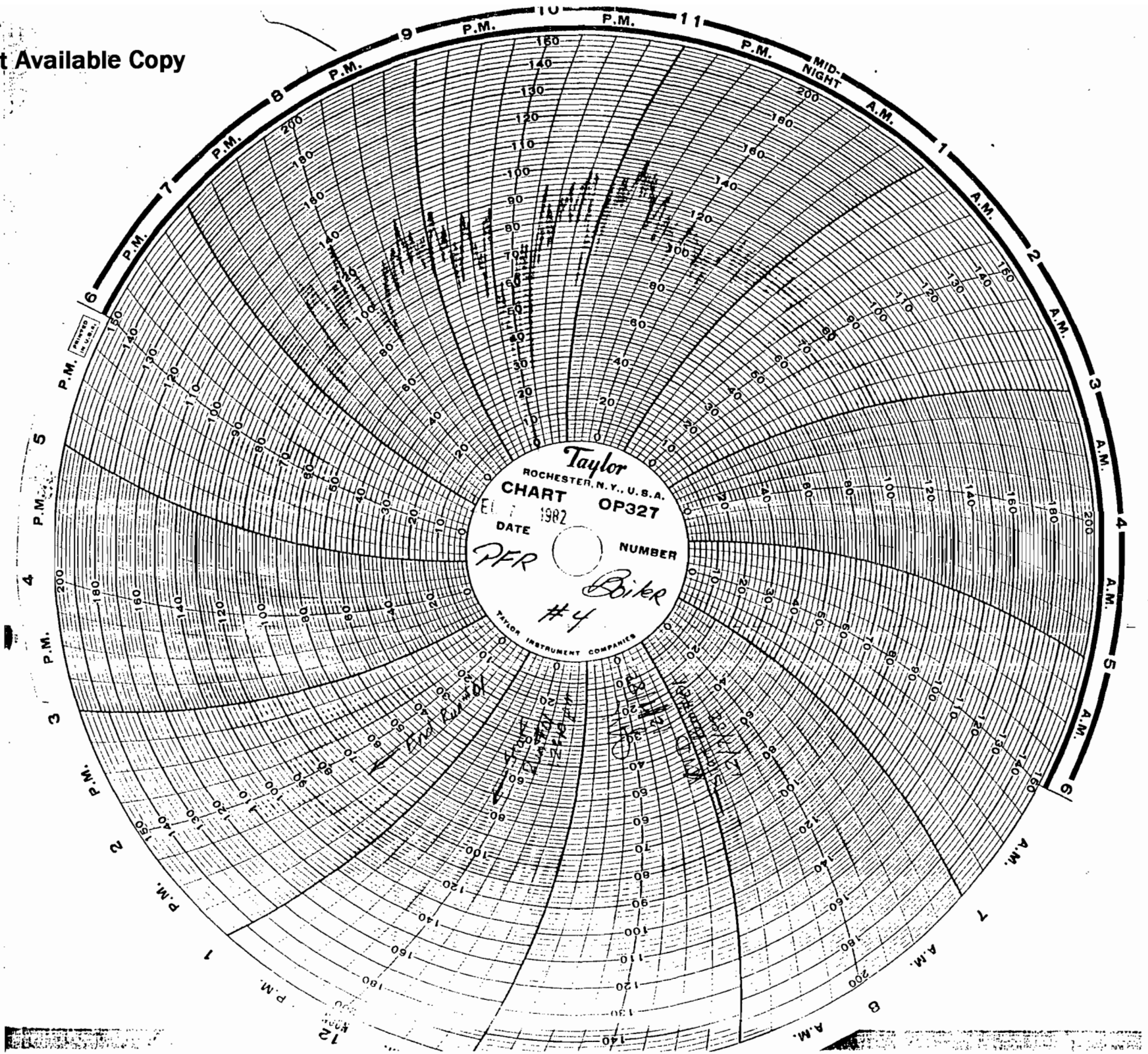
Allowable Emissions = 0.3 LB/10^6 BTU

Actual Emissions Using Steam Production

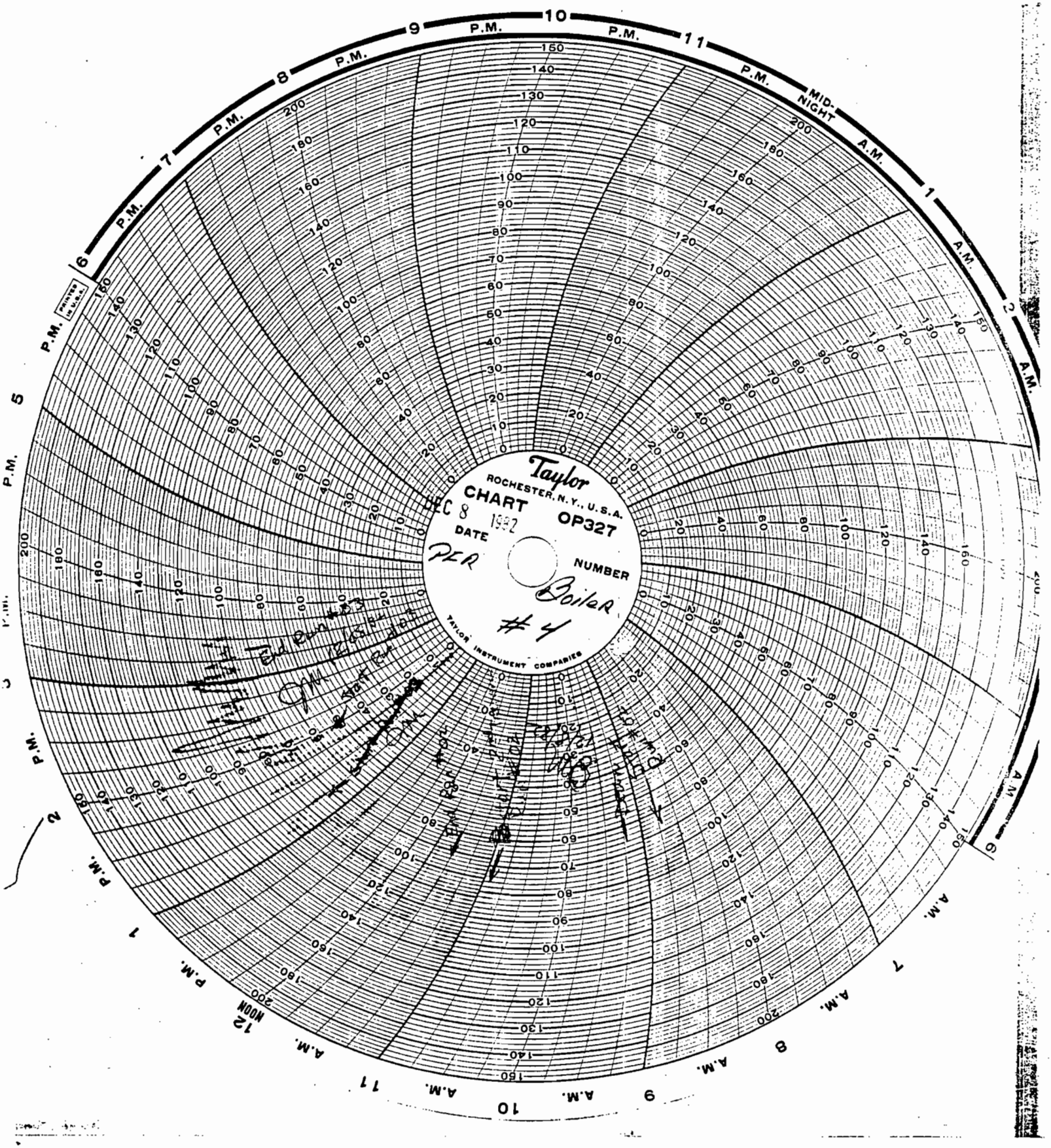
$$\frac{0.32000\ \text{g particulate}}{454\ (54.51\ \text{DSCF})} \quad \frac{(3438486\ \text{DSCF/HR})}{(148.42 \times 10^6\ \text{BTU/HR})} = 0.3\ \text{LB}/10^6\ \text{BTU}$$

Actual Emissions Using the "F" Factor

$$\frac{0.32000\ \text{g}}{454\ (54.51\ \text{DSCF})} \quad (9224) \quad \frac{20.9}{20.9 - 11.6} = 0.27\ \text{LB}/10^6\ \text{BTU}$$



Best Available Copy



SECTION IV

EQUIPMENT CALIBRATION

Dry Gas Meter/Orifice Calibration Procedure

Dry Gas Meter Ident. DER 12524 Uncorr. Baro Press. Pbar(1) 29.90 Room Temp. 72°

Test Meter Ident. 15/2186 Correction Factor (E) .999 Technician/Date DJK 10-5-88

Final WTM	Initial WTM	V_a=Corr Vwtm (2)	Final DGM	Initial DGM	Vol. Vdgm (3)	Temp. DGM Initial	Temp. DGM Final	Temp. DGM Ave °F	Temp. DGM Ave °R (04)	Temp. WTM °F	Temp. WTM °R (5)	Mano. Rd. Δ H"H_2O (6)	OP Time (min) (7)	Y (B)	ΔH@ (C)
												0.25	15		
499.03	492.71	6.31	842.80	836.36	6.44	76°	78°	77°	537°	72°	532°	0.50	15	.988	1.58
504.11	499.03	5.07	847.99	842.80	5.19	77°	79°	78°	538°	72°	532°	0.75	10	.986	1.63
509.97	504.11	5.85	853.97	847.99	5.98	78°	80°	79°	539°	72°	532°	1.00	10	.989	1.63
516.44	509.97	6.46	860.57	853.97	6.60	79°	81°	80°	540°	72°	532°	1.25	10	.990	1.66
523.49	516.44	7.04	867.75	860.57	7.18	80°	81°	81°	541°	72°	532°	1.50	10	.993	1.68
531.55	523.49	8.05	875.97	867.75	8.22	80°	82°	81°	541°	72°	532°	2.00	10	.991	1.71
536.47	531.55	4.915	880.96	875.97	4.99	81°	83	82	542	72	532°	3.00	5	.996	1.72
												4.00	10		

$$Y = \frac{Pb\ Va\ Td}{Vd\ Tw\ (Pb = \frac{\Delta H}{13.6})}$$

$$Va = (Final\ VTM - Initial\ WTM)\ E$$

COMMENTS:

Linear Regression

$Q = 0.0307 + 0.129(\Delta H)$

or $y = 0.0307 + 0.129x$

$$\Delta H@ = \frac{\Delta H\ (.0317)}{Pb\ Td} \left[\frac{Tw\ t}{Va}\right]^2$$

$\overline{\Delta H@}$ overall 1.66

$\overline{\Delta H@}$ 0.25 - 1.25

$\overline{\Delta H@}$ 1.50 - 400

$\overline{Y}$ 0.990

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

To: _____ Loctn.: _____
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____
Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: File

FROM: Doug Kiesling

DATE: November, 1981

The standard dry gas meter #1512186 used to calibrate the console sampling meters was adjusted for accuracy to within 0.1% by the City of Tallahassee Gas Meter Repair Shop.

DK/dt

NOZZLE RECORD SHEET

NOZZLE IDENTIFICATION AND DATE		DIAMETER	AVERAGE DIAMETER INCHES	NOZZLE AREA (FT^2)	TECHNICIAN
C-2	4-26-82	.126, .127, .125	.126	.000086	JG
C-1	4-26-82	.137, .135, .138	.137	.000102	JG
6	9-8-82	.172, .173, .173	.173	.000163	DK
16	9-8-82	.175, .174, .175	.175	.000166	DK
Nu-8	4-26-82	.246, .249, .248	.248	.000335	JG
8	9-8-82	.251, .250, .251	.251	.000343	DK
181	9-8-82	.249, .247, .250	.249	.000337	DK
101	4-26-82	.300, .297, .299	.299	.000488	JG
10	4-26-82	.300, .300, .300	.300	.000491	JG
Nu-12	8-17-81	.363, .360, .360	.361	.000711	JG
12	9-7-82	.363, .363, .364	.363	.000719	DK
13	4-26-82	.397, .400, .399	.399	.000868	JG
16	8-17-81	.489, .485, .489	.488	.001299	JG

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM

Date June 2, 1982 Pyrometer number 13807 & 13808

Ambient temperature 22 °C Barometric pressure 29.77 in. Hg

Calibrator Doug Kiesling Reference: ASTM Hg-in-glass ✓

other _____

Reference point number[a]	Source[b] (specify)	Reference thermometer temperature,[c] °F	Thermocouple potentiometer temperature, °F	Temperature difference,[d] %
Pyrometer ID #13807				
1	ice water	33	30	0.61
2	room temp	71	68	0.56
3	boiling H_2O	208	206	0.30
4	hot oil	302	300	0.26
Pyrometer ID #13808				
1	ice water	34	29	1.0
2	room temp.	72	67	0.94
3	boiling H_2O	205	204	0.22
4	hot oil	300	306	0.79

[a] A minimum of three stable reference points is necessary.

[b] Type of calibration system used; i.e., ice water, boiling water, hot oil, etc.

[c] Average of three one-minute interval readings.

[d] $$\frac{(\text{ref temp, °F} + 460) - (\text{test thermom temp, °F} + 460)}{\text{ref temp, °F} + 460} \times 100 = \_\_\_\_ \leq 1.5\%$$

File C87

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTH FLORIDA DISTRICT
2269 BAY STREET
FORT MYERS, FLORIDA 33901-2896
(813)332-2667.

Robert E. Jackson,Jr., V.P.
Osceola Farms Co.
Post Office Box 679
Pahokee, Florida 33476

RE: Palm Beach County - AP
Osceola Farms Co.
Boiler Number 6
AO-50-132502

Dear Mr. Jackson:

We have received your request for modification of the subject permit. The permit is hereby modified as follows:

The typographical error is corrected on Page 1, second paragraph to show that the permitted maximum steam production capacity of Boiler Number 6 is 185,000 LBS/HR (1 HR. AVG.).

In Specific Condition 4 the double asterisk following the word "volatile" is moved to appear following the maximum VOC emission rate for bagasse, i.e., "0.25 (bagasse)**". EPA Reference Method 18 is added to the list of compliance test methods listed at the top of Page 6 of the permit.

Specific Condition 9 is revised to read as follows:

9. Except as provided in Specific Condition 10, compliance tests shall be conducted on Boiler Number 6 for each of the pollutants for which emission limits are prescribed in Specific Condition 4, in accordance with the EPA reference methods listed in Specific Condition 4. Such tests shall be conducted once per year commencing before February 15th, and the particulate matter and visible emissions compliance testing shall be conducted simultaneously. Test results shall be submitted to the Department within 45 days after completion of compliance testing. The scrubber parameters listed in Specific Condition 7 that existed during the particulate matter and sulfur dioxide compliance tests shall be included in the test reports.

Continued . . . .

Specific Condition 10 is reworded as follows:

10. The company may substitute an Operation and Maintenance plan that is approved by the BAQM that optimizes the NO_x , CO, SO_2 and VOC emissions for the compliance tests specified in Specific Conditions number 4 and 9, except particulate matter.

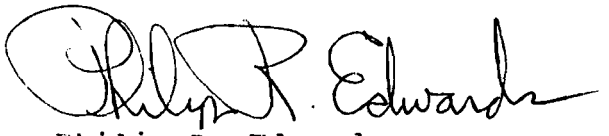
Specific Condition 11 is reworded as follows:

11. Operation of Boiler Number 6 shall not exceed 157 days per season and its steam production rate shall not exceed 185,000 lbs/hr. (1 hour average) or 110 percent of the average steam production rate that existed during the most recent Reference Method 5 test demonstrating compliance with the particulate matter emissions limits, whichever is lower. Permittee shall submit an annual emissions report for Boiler Number 6 which includes the quantity of oil burned in this boiler during the season and the sulfur content of replacement oil purchased.

Compliance with Specific Condition 15 is required only during the term of the consent decree and not for the full term of the operation pemit.

All other permit conditions remain as issued. This letter becomes a part of the operating permit for Boiler Number 6 and must be attached to that permit.

Sincerely,



Philip R. Edwards
Chief of District Management-DER

PRE/DMK/ls

cc: C. H. Fancy, P.E.
Peter Cunningham
Mike Garcia

X 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

June 5, 1987

Mr. David Knowles
Department of Environmental Regulation
South Florida District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Dear David:

Re: Osceola Farms Company, AO 50-132502

The Bureau of Air Quality Management (BAQM) has reviewed Osceola Farm's May 14 letter, operating permit No. AO 50-132502, and your May 22 memorandum concerning Osceola Farm's boiler No. 6. Our recommendations on this matter are as follows:

Page 1, Second Paragraph
The permitted maximum steam production capacity of boiler No. 6 is 185,000 lbs/hr (1 hr avg). The typographical error should be corrected.

Specific Condition No. 4
BAQM recommends the ** be placed after the VOC emission factor for bagasse. EPA Reference Method 18 is an approved test method for this source and should be included in the operating permit.

Specific Condition No. 9
Maximum allowable steam production is 185,000 lbs/hr. BAQM placed the requirement on production rate in the construction permit to obtain test data near the highest capacity the source will operate at. As Specific Condition No. 11 of the operating permit imposes a similar requirement, it is not necessary to have this requirement repeated in Specific Condition No. 9.

Although one interpretation of Specific Condition No. 9 of permit No. AC 50-112851 is to require the annual emissions to be calculated using the F factor and the actual boiler efficiency, BAQM's intent was to obtain this information only on renewal of the operating permit (every 5 years). As any requirement of a construction permit will remain in affect unless modified by a later construction permit, it is not necessary for this

requirement to be repeated in the operating permit. BAQM has no objections to the proposed revision of Specific Condition No. 9 by the permittee.

Specific Condition No. 10
Although BAQM has not approved an O & M plan for the permittee to date, we have no objection to the proposed specific condition.

Specific Condition No. 11
The permittee's suggested specific condition needs to be modified to show that the 185,000 lbs/hr of steam production is a 1 hour average.

Specific Condition No. 15
The permittee is required by the EPA to comply with the Consent Decree. BAQM recommends Specific Condition No. 15 be modified to require compliance for the duration of the Consent Decree as proposed by the permittee.

If we can be of further assistance in this matter, please call Willard Hanks or write to me.

Sincerely,

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

CHF/WH/s

cc: Robert Jackson
Peter Cunningham

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Locth: _____
To: _____ Locth: _____
To: _____ Locth: _____
From: _____ Date: _____

TO: Willard Hanks

THROUGH: Philip R. Edwards
Abdul Ahmadi

FROM: David Knowles

SUBJECT: Operating Permits for Atlantic Boiler #5 and Osceola Boiler #6

DATE: May 22, 1987

DER
MAY 28 1987
BAQM

Enclosed are copies of the subject operating permits.

My comments on the letter from Mr. Alvarez are as follows:

The first two items are obvious typographical errors which we will correct.

We have no objections to the proposed changes to Specific Conditions 4, 9, 10, 11, and 12.

Specific Condition 15 was added at the request of the Palm Beach County Health Department and we have no strong feelings about it. The Intent was that it will apply only to the next two crop seasons, not to the life of the permit.

My comments on the letter from Mr. Jackson are as follows:

The first item is a typographical error which we will correct.

We have no objections to the proposed changes to Specific Conditions 4, 9, 10, and 11.

Again, Specific Condition 15 was added at the request of the Palm Beach County Health Department and we have no strong feelings about it. The Intent was that it will apply only to the next two crop seasons, not to the life of the permit.

We would appreciate your comments on these permits and the proposed changes.

DK/jsw

OSCEOLA FARMS CO.
RAW SUGAR FACTORY

TELEPHONE:
(305) 924-7156

CABLE: SUGAR

INTERSECTION U.S. 98 & HATTON HWY.

POST OFFICE BOX 679
PAHOKEE, FLORIDA 33476

May 14, 1987

Mr. David Knowles, P.E.
South Florida District
Florida Department of
Environmental Regulation
2269 Bay Street
Fort Myers, Florida 33901

RE: Boiler No. 6, Permit # A050-132502

Dear Mr. Knowles:

Osceola Farms Company received the referenced air operation permit for our Boiler No. 6 on May 1, 1987. I am writing to provide our comments and suggested revisions to several of the specific conditions included in the permit. Hopefully, after you have reviewed this letter, the Department will revise the permit conditions in question accordingly.

Our comments on the permit provisions of concern are set forth below, along with suggested revisions:

Page 1,second paragraph -- The description in the first sentence of this paragraph should refer to a design steam production capacity of 185,000 lbs/hr., rather than 185,00.

Specific Condition 4 -- The double asterisk following the word "Volatile" should appear following the maximum VOC emission rate for bagasse, as in the Boiler No. 6 construction permit (i.e.,"0.25 (bagasse)**". EPA Reference Method 18 should be added to the list of compliance test methods listed at the top of page 6 of the permit, as in the Boiler No. 6 construction permit.

Specific Condition 9 -- This condition contains several requirements that were included in the Department's air construction permit for Boiler No. 6, but which we believe are inappropriate in the operation permit. Specifically, the sentence in the construction permit concerning the relationship between the production rate at which the boiler operated during initial compliance testing and its permitted production capacity was intended to ensure that the operation permit reflect the tested capacity.

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

March 12, 1987

Mr. Bob Jackson, Vice President
Osceola Farms
P. O. Box 679
Pahokee, Florida 33476

Dear Mr. Jackson:

This is to confirm our telephone conversation in which you indicated that you were going to replace the tubes and replace the headers with drums on Boiler No. 3 located at the Osceola Farms facility. You further indicated that there would be no temperature change, heat input change, steam flow, or enthalpy change. Based upon these facts, the changes to this boiler would not be considered a modification under the air pollution control rules and regulations.

Sincerely,

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

CHF/ks

cc: D. Knowles
W. Hanks
Reading File
3-12-87

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTH FLORIDA DISTRICT
2269 BAY STREET
FORT MYERS, FLORIDA 33901-2896
(813)332-2667.

PERMITTEE: Robert E. Jackson, Jr., V.P.
Osceola Farms Co.
P. O. Box 679
Pahokee, FL 33476

I.D. Number: 52/50/0019/06
Permit/Certification Number: A050-132502
Date of Issue: April 27, 1987
Expiration Date: April 27, 1992
County: Palm Beach
Latitude/Longitude: 26°49'45"N/80°33'00"W
Section/Township/Range: 36/42S/38E
Project: Osceola Farms Co.
Boiler Number 6

This permit is issued under the provisions of Chapter(s) 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 drawings(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

Operate boiler number 6 with a design steam production capacity of 185,000LBS/HR (1 hr. avg.) at 240 psig and 550°F (1 hr. avg.) fired with bagasse and supplemental Number 6 fuel Oil. Emissions are controlled by one (1) Joy Turbulaire Impingement Scrubber, Size 90, Type D.

Plant is located off U.S. Route 98, Pahokee, Florida.

GENERAL CONDITIONS:

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

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

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

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

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties 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.

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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.

GENERAL CONDITIONS:

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)
( ) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
( ) 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 were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

PERMITTEE: Osceola Farms Co.

I.D. Number: 52/50/0019/06
Permit/Certification Number: AO50-132502
Date of Issue: April 27, 1987
Expiration Date: April 27, 1992

SPECIFIC CONDITIONS:

1. Steam production shall not exceed 185,000 lbs./hr. (1 hr. avg.) of 240 psig and 550°F steam (1 hr. avg.). Steam with a higher enthalpy shall not be produced by this boiler without prior approval of the department. The boiler shall be equipped with an instrument to continuously record steam production, temperature, and pressure. Steam parameter records shall be kept for a minimum of 5 years.

2. Heat input to this boiler shall not exceed 357 million Btu per hour as determined by an energy balance that assumes the boiler is 55 percent efficient. Approximately 50 TPH of wet bagasse will produce 357 million Btu per hour.

3. Heat input from Number 6 residual oil to this boiler shall not exceed 9.8 million Btu per hour. Approximately 65 gallons per hour of Number 6 oil will produce 9.8 million Btu per hour. The fuel oil system shall be equipped with an integrating fuel oil flow meter or continuous recorder to measure the amount of fuel oil consumed by the boiler. The measuring device shall be calibrated annually by a method approved by the Bureau of Air Quality Management. The company shall meter daily fuel oil consumption by other boilers and the Number 6 boiler separately. The total quantity of fuel oil consumed on a daily basis by the Number 6 boiler shall be replaced by the addition to the fuel system of an equal or greater amount of 1.0 percent or less sulfur fuel oil within 72 hours (excluding weekends). Sulfur content of the fuel oil purchased for boilers 2, 4, and 5 shall not exceed 2.4 percent. Oil records shall be retained for 5 years. Operating permits for boilers 2, 4, and 5 shall be amended to reflect burning of the blended oil. The total fuel oil consumption for all existing and proposed boilers shall not exceed 10,000 gallons on a daily basis.

4. The maximum allowable emissions from the Number 6 boiler shall be as follows:

Pollutant	Max. Emission Rate ($lb/10^6$ Btu)*	Max. Emissions (lbs/hr.)
Particulate Matter	0.15 (bagasse) 0.1 (fuel oil)	54
Sulfur Dioxide	0.50 (bagasse) 2.6 (fuel oil)	186
Nitrogen Oxides	0.16 (bagasse) 0.40 (fuel oil)	62
Volatile** Organic Compounds	0.24 (bagasse) 0.002 (fuel oil)	86
Carbon Monoxide	0.27 (bagasse) 0.033 (fuel oil)	91
Visible Emissions	30% Opacity (6 minute average except 40% Opacity allowed for 2 minutes/hour)	

*When bagasse and oil are burned together, the allowable emissions are determined by prorating the standards for each fuel by the heat input.

**Subject to revision based on emissions test data obtained as a condition of this permit.

SPECIFIC CONDITIONS:

4. (Continued)

Compliance with the stanards shall be determined by EPA Reference Methods 1, 2, 3, 4, 5, 6, 7, 7E (if and when adopted by the department), 8, 9, 10, 25, and 25A as described in 40 CFR 60, Appendix A.

Excess emissions resulting from startup, shutdown, or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of the excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the department (South Florida District) for longer duration (FAC 17-2.250). All startups, shutdowns, and malfunctions shall be recorded on the operating log for this boiler.

5. Visible emissions from the bagasse handling system shall not exceed 10 percent opacity over any 6 minute period, as measured by EPA Referenced Method 9, provided, however, that this visible emissions limit shall not apply during periods of high winds (wind speed of 18 miles per hour or greater) if reasonable precautions (covered conveyors, windbreaks, and the height of drop points are minimized) to control fugitive emissions have been taken. The company shall maintain a meteorological instrument to record the wind speed at the plant site.

6. Any Number 6 fuel oil burned in the Number 6 boiler shall contain no more than 2.4 percent sulfur. Boiler Number 1 shall be put in a normal standby condition while all of the other boilers are in operation. Boiler Number 1 can be operated to produce steam when one of the other boilers is not operating.

7. The scrubber shall be equipped with a manometer or equivalent instrument to measure the total pressure drop of the flue gas stream across the scrubber, with pressure gauges to measure the water pressure at the spray nozzles, and with a flow meter or equivalent device (weir) to measure the quantity of water circulating through the scrubber. Data from these instruments shall be recorded once per shift (every 8 hours) and available to regulatory agencies for 5 years. The pH of the scrubber water at the scrubber inlet and outlet shall be measured and recorded once per day, and the data shall remain available for 5 years. During particulate matter and sulfur dioxide compliance tests, these parameters shall be recorded every 15 minutes. Other than during startups, shutdowns, and malfunctions (of up to two hours per 24 hour period) which must be recorded on the boiler operations log, Boiler Number 6 shall not be operated if the pressure drop across the scrubber is less than 7 inches of water, the pressure on the spray nozzles is less than 30 psig, and the flow through the scrubber is less than 300 GPM. These parameters may be changed in the future by the department (BAQM) if other values show compliance.

8. Prior to the expiration of this operation permit, a test shall be made on the Number 6 boiler to determine its actual thermal efficiency in accordance with the ASME short-form procedure. This test must be repeated each time the permit to operate this boiler is renewed (every 5 years). The tests shall be done while the tubes are clean and within 14 days of the compliance tests. A current report on the thermal efficiency test must be included with the application to renew the operating permit for this boiler.

PERMITTEE: Osceola Farms Co.

I.D. Number: 52/50/0019/06
Permit/Certification Number: AO50-132502
Date of Issue: April 27, 1987
Expiration Date: April 27, 1992

SPECIFIC CONDITIONS:

9. All compliance tests on Boiler Number 6 shall be conducted for each of the pollutants for which emission limits are prescribed in Specific Condition 4, in accordance with the EPA reference methods listed in Specific Condition 4. The particulate matter and visible emissions compliance tests shall be conducted concurrently while Boiler Number 6 is operating at an average steam production rate within 10 percent of its permitted capacity. Any permit to operate issued for Boiler Number 6 shall restrict its maximum steam production rate to 185,000 lb./hr. (1 hr. avg.) if the particulate matter compliance tests was conducted within 10 percent of the boiler's permitted capacity, or 110 percent of the average rate that existed during the particulate matter compliance tests if the boiler was operating at less than 90 percent of its permitted capacity during the test. The compliance test results shall be calculated by assuming the thermal efficiency of the boiler is 55 percent, or by any new method subsequently adopted by department rule. For information purposes only, the particulate matter emission rate shall also be calculated by utilizing both the F factor and the actual boiler efficiency as determined by the latest ASME boiler efficiency test. The scrubber parameters listed in Specific Condition number 7 that existed during the particulate matter and sulfur dioxide compliance tests shall be included in the tests report. Such tests shall be conducted once per year commencing before February 15th. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.

10. After the initial reference method tests that showed compliance with the allowable emission standards for this boiler, the company may substitute an Operation and Maintenance plan that is approved by the BAQM that optimizes the NO_x, CO, SO_2, and VOC emissions for the compliance tests specified in Specific Conditions numbers 4 and 9, except particulate matter.

11. Any permit to operate issued for the Number 6 boiler shall limit its operation to 157 days per season and the steam production capacity to 185,000 lbs./hr. or 110 percent of the average rate that existed during a particulate matter compliance test conducted at less than 90 percent of the boiler's permitted capacity; requires (as a minimum) annual particulate matter and visible emissions tests; and an annual operation report which includes the quantity of oil burned in this boiler during the season and sulfur content of the replacement oil purchased.

12. The maximum 24-hour average steam production rates for existing boilers numbers 2, 3, 4, and 5, shall not exceed the following:

Boiler No. 2	140,000 lbs./hr. (24 hr. avg.)
Boiler No. 3	90,000 lbs./hr. (24 hr. avg.)
Boiler No. 4	140,000 lbs./hr. (24 hr. avg.)
Boiler No. 5	165,000 lbs./hr. (24 hr. avg.)

PERMITTEE: Osceola Farms Co.

I.D. Number: 52/50/0019/06
Permit/Certification Number: AO50-132502
Date of Issue: April 27, 1987
Expiration Date: April 27, 1992

SPECIFIC CONDITIONS:

13. Notification and reporting requirements shall also be sent to the Palm Beach County Health Department.

14. Stack sampling facilities provided by the owner shall be in accordance with the requirements of Chapter 17-2.700(4), Florida Administrative Code.

15. This operation permit incorporates the consent degree agreement between the Environmental Protection Agency and the Osceola Farms Company contained in Appendix A titled: Operation and maintenance requirements for Boiler Number 6 and associated scrubber.

Issued this 27th day of April, 1987.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Philip R. Edwards
Chief of District Management-DER

PRE/OO/ls

_____ Pages Attached

In fact, Boiler No. 6 demonstrated compliance while operating within ten percent of its permitted capacity, and the necessary language regarding authorized production capacity is provided in Specific Condition 11. There is thus no reason to repeat the language from the construction permit on this point in the operation permit. In addition, the provision requiring Osceola to calculate the particulate matter emissions rate using both the F-factor and actual boiler efficiency (in addition to the accepted 55 percent boiler efficiency approach) was intended as a one-time requirement applicable to the initial compliance testing of Boiler No. 6, and not as a continuing requirement applicable to all future compliance testing under the operation permit. For these reasons, Osceola suggests that Specific Condition 9 be revised to read as follows:

9. Except as provided in Specific Condition 10, compliance tests shall be conducted on Boiler No. 6 for each of the pollutants for which emission limits are prescribed in Specific Condition 4, in accordance with the EPA reference methods listed in Specific Condition 4. Such tests shall be conducted once per year commencing before February 15th., and the particulate matter and visible emissions compliance testing shall be conducted simultaneously. Test results shall be submitted to the Department within 45 days after completion of compliance testing. The scrubber parameters listed in Specific Condition 7 that existed during the particulate matter and sulfur dioxide compliance tests shall be included in the test reports.

Specific Condition 10 -- The Company has already completed the initial reference method tests required by the construction permit. Therefore, Specific Condition 10 can be reworded as follows:

10. The company may substitute an Operation and Maintenance plan that is approved by the BAQM that optimizes the NO_x, CO, SO_2 and VOC emissions for the compliance tests specified in Specific Conditions numbers 4 and 9, except particulate matter.

Specific Condition 11 -- We suggest minor rewording of this condition to include language more appropriate to an operation permit, as follows:

11. Operation of Boiler No. 6 shall not exceed 157 days per season and its steam production rate shall not exceed 185,000 lbs/hr. or 110 percent of the average steam production rate that existed during the most recent Reference Method 5 test demonstrating compliance with the particulate matter emissions limits, whichever is lower. Permittee shall submit an annual emissions report for Boiler No. 6 which includes the quantity of oil burned in this boiler during the season and the sulfur content of replacement oil purchased.

Specific Condition 15 -- This condition would "incorporate" the "consent decree agreement" entered into by Osceola and EPA, including the operation and maintenance requirements specified in the Consent Decree appendix. Osceola is not aware of any basis for imposition of this condition by the Department in an air operation permit for a source that is in compliance with all applicable State air quality rules and permit conditions. The obligations undertaken by Osceola in connection with the Consent Decree reflect the Company's decision to expeditiously resolve certain litigation involving the federal government, and are wholly unrelated to the Department's air permitting criteria and air quality standards. Consequently, Osceola believes strongly that Specific Condition 15 should be deleted from the permit in its entirety. If the condition is not deleted, we interpret it to incorporate the consent decree requirements only for the term of the consent decree and not for the full term of the operation permit.

I trust that our comments on the Boiler No. 6 operation permit will enable the Department to revise the permit conditions of concern. Please call me if you or your staff have any questions on Osceola's suggestions. If you believe it would be helpful, I would be happy to meet with you at your convenience to further discuss our concerns.

Very truly yours,

OSCEOLA FARMS CO.

Bob Jackson

Robert E. Jackson, Jr.
Vice President

REJ,Jr./io
sc: Clair Fancy
Peter Cunningham

Florida Department of Environmental Regulation

South District • 2269 Bay Street • Fort Myers, Florida 33901-2896 • 813-332-2667

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Philip Edwards, Deputy Assistant Secretary

PERMITTEE: Osceola Farms Company
Post Office Box 679
Pahokee, Florida 33476

I.D. Number: 52FTM50001903
Permit/Certification Number: AO50-165813
Date of Issue: June 26, 1989
Expiration Date: June 26, 1994
County: Palm Beach
Latitude/Longitude:
26° 49' 45" N
80° 33' 00" W
Section/Township/Range: 36/42S/38E
Project: Boiler No. 3

This permit is issued under the provisions of Chapter(s) 403.087, 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 drawings(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

Operation of Boiler No. 3 with a design capacity of 150,000 lbs/hr of 350 psig, 575°F steam, fired with bagasse. Emissions controlled by one Joy Turbulaire Impingement Scrubber, Size 90 Type D.

Facility located at U.S. Route 98 and Hatton Highway, Pahokee, Florida.

PN
7/21/90
West Palm Beach, FL

File Copy

OSCEOLA FARMS CO.

RAW SUGAR FACTORY

TELEPHONE:
(305) 924-7156

CABLE: SUGAR

INTERSECTION U. S. 98 & HATTON HWY.

POST OFFICE BOX 679
PAHOKEE, FLORIDA 33476

July 18. 1990

Department of Environmental Regulation
2269 Bay Street
Fort Myers, Florida 33901

Attention: Mr. Philip R. Edwards, Deputy Assistant Secretary

Subject: Boiler Number 2 Pressure and Temperature Change
Permit No. AO-50-120592

Dear Mr.Edwards:

We have been in contact with Mr. Willard Hanks from Tallahassee concerning our intentions to increase the steam pressure and temperature of the boiler mentioned above, from 240 psig operating pressure and 550 F up to 350 psig and 575 F.

In a letter dated November 18, 1988 Mr. Fancy stated his departments conclusions on this matter; it is that actual emissions are a direct function of the heat input to the boilers. Therefore, the construction and operation permits for this boiler can be amended to authorize the production of steam with a higher temperature and pressure provided the heat input to each boiler does not exceed the quantity allowed by the latest permit for the boiler. Please see the copy of the letter attached. We agree with his conclusions.

To proceed with this amendment we are providing you with the heat balance calculations showing that in order to account for the higher heat content, the quantity of steam to be produced by Boiler Number 2 has to be reduced from 140,000 lbs/hr down to 139,000 lbs/hr. We would like to have this amendment for the start of our 1990/91 crop in October.

There is some on-going maintenance of Boiler Number 2 this summer. Willard Hanks is aware of this. It consists of changing the tubes and drums. These changes need to be done regardless of whether Osceola changes the temperature and pressure of the boiler. In addition, the valves and other pressure parts are being changed. The total cost of all maintenance, repairs and replacements mentioned above is $845,000. This is approximately 21 to 28 percent of the cost of a new boiler of this type and size. (Approximate replacement cost is $3,000,000 to $4,000,000).

OSCEOLA FARMS CO.
BOILER NO. 2 HEAT INPUT CALCULATIONS
TO INCREASE STEAM PRESSURE & TEMPERATURE

PRESENT CONDITIONS:

ENTHALPY OF FEEDWATER @ 250 F (BTU/LB)	218.5
ENTHALPY OF STEAM @ 240 PSIG - 550 F (BTU/LB)	1291
ENTROPY OF STEAM @ 240 PSIG - 550 F (BTU/LB)	1.6209
STEAM PRODUCTION (LBS/HR)	140000
BOILER EFFICIENCY (%)	55
HEAT INPUT (MM.BTU/HR)	273

[(ENTHALPY STEAM - ENTHALPY FEEDWATER) X (STEAM PRODUCTION)]
(DIVIDED BY BOILER EFFICIENCY)
[(1291-218.5) X (140000)] / (.55)

FUTURE CONDITIONS:

ENTHALPY OF FEEDWATER @ 250 F (BTU/LB)	218.5
ENTHALPY OF STEAM @ 350 PSIG - 575 F (BTU/LB)	1295.3
ENTROPY OF STEAM @ 350 PSIG - 575 F (BTU/LB)	1.5875
HEAT INPUT (MM.BTU/HR) WITH NO CHANGE	273
BOILER EFFICIENCY (%)	55
STEAM PRODUCTION (LBS/HR) ALLOWED WITH NO CHANGE IN HEAT INPUT	139441

[(HEAT INPUT) X (BOILER EFFICIENCY)]
DIVIDED BY [(ENTHALPY STEAM - ENTHALPY FEEDWATER)]
(273000000 X .55) / (1295.3 - 218.5)

BJ:7-18-90
C:SC\P&TCALC

Thank you for your help in this matter.

Sincerely yours,

Robert E. Jackson, Jr.
Vice-President

REJ:br

xc: Mr. Claire Fancy, DER Tallahassee, W/Attachments
Mr. Willard Hanks, DER Tallahassee, W/Attachments
Mr. David Knowles, DER Fort Myers, W/Attachments
Mr. Alex Fanjul
Mr. Francisco Farinas, W/Attachments

BAICHF 7/24/90

C:\WP50\P&TREQ

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT ISSUANCE

June 26, 1989

CERTIFIED MAIL #P 675 387 282
RETURN RECEIPT REQUESTED

In the Matter of an Application
for Permit by:

Robert E. Jackson, Jr.
Vice President
Osceola Farms Company
Post Office Box 679
Pahokee, Florida 33476

RE: Palm Beach County - AP
Osceola Farms
Boiler No. 3

/

Enclosed is Permit Number AO50-165813 to operate the above-referenced facility, issued pursuant to Section(s) 403.087, Florida Statutes (F.S.).

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

The Petition shall contain the following information:

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

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

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

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial / Date
1 OER	
2. Tallahassee	Initial / Date
3. WILLARD HANKS	Initial / Date
4.	Initial / Date

REMARKS:

RECEIVED
JUL 31 1989
DER - BAQM

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:
Peter Campbell
Fort Myers

DATE
6-26-89

PHONE
731-7900

(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 permit. 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 receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code (F.A.C.).

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, F.S. 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 the Final Order is filed with the Clerk of the Department.

Executed in Ft. Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Philip R. Edwards
Deputy Assistant Secretary
2269 Bay Street
Ft. Myers, FL 33901-2896
(813)332-2667

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on June 29, 1989 to the listed persons.

Clerk Stamp

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.

(Clerk) 6-29-89 (Date)

Copies furnished to:

Palm Beach County Health Department
DER - Tallahassee

PERMITTEE: Osceola Farms Company

I.D. Number: 52FTM50001903
Permit/Certification Number: AO50-165813
Date of Issue: June 26, 1989
Expiration Date: June 26, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

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

10. The permittee agrees to comply with changes in Department rules and 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 Rule 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

GENERAL CONDITIONS:

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

c. Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the date analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. 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 corrected promptly.

PERMITTEE: Osceola Farms Company

I.D. Number: 52FTM50001903
Permit/Certification Number: AO50-165813
Date of Issue: June 26, 1989
Expiration Date: June 26, 1994

SPECIFIC CONDITIONS:

1. Particulate emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with EPA Method Five as published in 40 CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year commencing before February 15, 1990. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.

2. Particulate matter emissions from boiler No. 3 shall not exceed 58.4 lbs/hr and 112 TPY. Particulate matter emissions from boiler No. 3 shall not exceed 0.2 lb/million BTU heat input for bagasse fuel (assuming 55% efficiency). The compliance test results shall be calculated by assuming the thermal efficiency of the boiler is 55% for bagasse, or by any new method subsequently adopted by Department rule. For informational purposes only, the particulate matter emission rate shall also be calculated by utilizing both the F factor (for each compliance test) and the short term ASME boiler efficiency test results (once every five years). Scrubber parameters (pressure drop, pressure, and flow) shall be recorded every 15 minutes, or at the permittee's option, continuously monitored during the compliance tests for particulate matter.

All compliance tests shall be conducted while the boiler is operating within 10% of its permitted capacity; provided however, if the tests are conducted at less than 90% of the boiler's permitted capacity, the permittee shall notify the South Florida District office and repeat the compliance tests when the steam production increases by 10% above the tested capacity. Except during compliance tests, the boiler shall not be operated above the permitted capacity.

3. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year commencing before February 15, 1990. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.

4. Visible emissions shall not exceed 20% opacity except that 40% opacity is allowed for 2 minutes during any one hour. The particulate matter emissions and visible emissions shall be determined concurrently. Under circumstances when this is not feasible, the company shall obtain prior approval from the South Florida District to conduct the tests at separate times. In such circumstances, the tests shall be conducted as close to each other as feasible.

PERMITTEE: Osceola Farms Company

I.D. Number: 52FTM50001903
Permit/Certification Number: AO50-165813
Date of Issue: June 26, 1989
Expiration Date: June 26, 1994

SPECIFIC CONDITIONS:

5. Steam production, steam pressure, steam temperature, and heat input, for boiler No. 3 shall not exceed the quantities listed below:

Steam PSIG	°F	Averaging Time	Steam Prod. lbs/hr	Heat Input* MMBTU/hr
350	575	1 hour	150,000	292

* Assuming boiler efficiency for bagasse is 55%. Approximately 35.5 TPH of wet bagasse will produce 292 MMBTU/hr.

The permittee shall maintain a log of daily steam production, pressure, and temperature for this boiler to demonstrate compliance with this condition.

Total steam production from all boilers at this mill shall not exceed 17,280,000 pounds per 24 hours (8:00 AM to 8:00 AM). Records to determine compliance with this limitation shall be maintained for five years, and a copy of the records for each crop season shall be sent to the Department's South Florida District within 14 days of the end of crop season. The Department shall be notified within 10 days anytime this limitation is exceeded.

6. The total fuel oil consumption for all boilers at this facility shall not exceed 1,900 GPH, 24,000 GPD (maximum), and 7,500 GPD (season average). Fuel oil shall not be burned in boiler No. 3.

7. This boiler shall not operate commercially during the period from May 1 through October 1. The boiler is limited to 160 days (3840 hours) of operation during the season. Boiler No. 1 shall not be placed in service unless another boiler (2, 3, 4, 5 or 6) is down. A log shall be kept on this boiler to show compliance with this condition. The permittee shall notify the Department's South Florida District office when the crop season has begun.

8. Emissions of other criteria pollutants from boiler No. 3 shall not exceed the following:

Pollutant	Mass Emissions lbs/hr	TPY	Bagasse Emissions lbs/MMBTU*	Test Methods 40 CFR 60 Appen. A	Federal Register
SO_2	244 max	78	0.24	6, 6A, 6B	6/27/84 3/14/84
NO_x	64.6 max	96	0.16	7, 7A	6/27/84 12/8/83
CO**	1402.0	2692	4.8	10**	9/8/78
VOC	71.0	136	0.25	25***	10/13/80

* Assuming a 55% boiler efficiency.

** The CO standard (and BACT) is subject to revision if a lower emission standard can be met through good boiler operation practice. Prior to February 15, 1990, one CO emissions test using EPA Reference Method Ten shall be conducted for this boiler. If the results from this and previous tests indicate that a different CO emission limit is more appropriate, the permittee and the Department agree to revise the CO emissions limit accordingly.

*** Use of other test methods to determine VOC compliance, including Method 25A, must have prior approval from the Department.

This permit does not require routine compliance tests for the pollutants listed in this Specific Condition.

Excess emissions resulting from startup, shutdown, or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of the excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department's South Florida District for a longer duration (F.A.C. 17-2.250). All exceedances caused by startups, shutdown, and malfunctions shall be reported to the Department and recorded on the operating log for this boiler.

9. The scrubber shall be equipped with a manometer or equivalent instrument to measure the total pressure drop of the flue gas stream across the scrubber, with pressure gauges to measure the water pressure at the spray nozzles, and with a flow

SPECIFIC CONDITIONS:

meter or equivalent device (weir) to measure the quantity of water circulating through the scrubber. Data from these instruments shall be recorded once per shift (every 8 hours) and available to regulatory agencies for 5 years. The pH of the scrubber water at the scrubber inlet and outlet shall be measured and recorded once per day, and the data shall remain available for 5 years. Other than during startups, shutdowns, and malfunctions (of up to two hours per 24 hour period) which must be recorded on the boiler operations log, boiler No. 3 shall not be operated if the pressure drop across the scrubber is less than 7 inches of water, the pressure on the spray nozzles is less than 30 psig, and the flow through the scrubber is less than 300 GPM. These parameters may be changed in the future by the Department (BAQM) if other values show compliance.

The scrubber shall be equipped with "quick-release" type nozzles; scrubber nozzles shall be visually checked for pluggage and water flow verified once per day; all plugged or defective nozzles shall be cleaned or replaced within 24 hours; and a log of nozzle condition (plugged, cleaned, replaced, time of inspection, etc.) by location (I.D. number) shall be maintained.

10. The permittee shall take reasonable precautions, as approved by the Department, to minimize unconfined emissions. These precautions, based on the bagasse handling agreement proposed by the Florida Sugar Cane League, shall include covered conveyors, minimizing the distance the bagasse is dropped during handling, and windbreaks around the material handling equipment.

11. For informational purposes only, a test shall be made on boiler No. 3 to determine its actual thermal efficiency in accordance with the ASME short-form procedure each time the operating permit for the boiler is renewed.

12. Emissions of nitrogen oxides, carbon monoxide, and volatile organic compounds shall be minimized through the implementation of operating practices described in the Operation and Maintenance Plan submitted with the application for this permit.

13. The permittee shall comply with any applicable requirements of 40 CFR 60, Subpart Db, New Source Performance Standards for Industrial-Commercial Steam Generating Units.

14. All fugitive dust generated at this site shall be adequately controlled.

15. This facility shall be operated in such a fashion so as to preclude objectionable odors.

16. An annual operation report (DER Form 17-1.202(6) attached) shall be submitted by March 1st each year. The attached form shall be reproduced by the permittee and used for future annual submittals. A monthly summary of the scrubber parameters listed in Specific Condition No. 9 shall be included.

PERMITTEE: Osceola Farms Company

I.D. Number: 52FTM50001903
Permit/Certification Number: AO50-165813
Date of Issue: June 26, 1989
Expiration Date: June 26, 1994

SPECIFIC CONDITIONS:

17. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.

18. Notification and reporting requirements of this permit shall also be sent to the Palm Beach County Health Department.

19. Stack sampling facilities provided by the owner shall be in accordance with the requirements of Chapter 17-2.700(4), Florida Administrative Code.

Issued this 26th day of June, 1989

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Philip R. Edwards
Deputy Assistant Secretary

PRE/PRC/jsw

12 Pages Attached

Florida Department of Environmental Regulatio
Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399
Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant ...ry

November 18, 1988

RECEIVED
DEC 2 1988
OKEELANTA CORPORATION

Mr. P. A. Carreno
Okeelanta Corporation
Post Office Box 86
South Bay, Florida 33493

Dear Mr. Carreno:

Re: Increase Steam Pressure and Temperature for Boilers Numbers 4 and 5

We have reviewed your correspondence showing the affect the increase in steam pressure and temperature for boilers Nos. 4 and 5 will have on the emissions from the sugar mill. It is our conclusion that the actual emissions are a direct function of the heat input to the boilers. Therefore, the construction and operation permits for these two boilers can be amended to authorize the production of steam with a higher temperature and pressure provided the heat input to each boiler does not exceed the quantity allowed by the latest construction permit for each boiler. It will be necessary to reduce the allowable steam production rate of these boilers to account for the higher heat content of the steam. If you wish to proceed with this amendment, please provide Mr. David Knowles at the Department's South Florida District office with heat balance calculations that show the quantity of higher heat content steam that can be produced by boilers Nos. 4 and 5 at their current allowable heat input. You will be limited to this new rate by permit condition.

If you have any questions on this matter, please call Willard Hanks 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/WH/s

cc: D. Knowles, SF District

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTH FLORIDA DISTRICT
2269 BAY STREET
FORT MYERS, FLORIDA 33901-2896
(813)332-2667.

August 21, 1987

Robert E. Jackson, Jr., Vice Pres.
Osceola Farms Company
Post Office Box 679
Pahokee, Florida 33476

Re: Palm Beach County - AP
Osceola Farms Co.
Boiler No. 6
AO-50-132502

Dear Mr. Jackson:

We have received your request for revision of the operation permit for the subject boiler. The permit is hereby revised as follows:

Specific condition no. 15 is deleted in its entirety.

The following specific conditions are added:

16. Continue to operate and maintain the quick release nozzles that have been installed, inspect them once daily and maintain a log of nozzle condition.

17. Maintain an operational sight glass on the scrubber with markings indicating the water level above or below the lip of the scrubber skirt.

18. Maintain the flow measurement device installed on the water supply line for the scrubber as well as the pressure drop alarm system.

19. Manually check, and record, once per week flue gas oxygen readings at the inlet of the scrubber using a portable oxygen instrument. Calibrate the oxygen instrument prior to each use to assure accurate readings.

Continued.....

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

	INITIAL	DATE
1. TO: (NAME, OFFICE, LOCATION) C. Fancy, P.E. BAQM - Tallahassee		
2. Willard 8/28		
3.		
4.		

DER
AUG 26 1987
BAQM

REMARKS:

Osceola Farms Co.

Boiler No. 6

Emeas US Sugar

8/31/87

S.C. 15 required compliance with EPA Consent order. Consent order should stand on its own merit. See no problem with change.

wma

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: SFD

DATE 8-21-87

PHONE 721-7900

20. Obtain and record the water level above or below the scrubber skirt in inches once per day.

All other permit conditions remain as issued. This letter becomes a part of the operating permit for Boiler No. 6 and must be attached to that permit.

Sincerely,

Philip R. Edwards
District Manager

PRE/DMK/pah

cc: C. H. Fancy, P.E.
Peter Cunningham
Mike Garcia