California Fruit Produce
Fresno, CA

Boiler Emissions Test
Test Date: 12-4-92

BEST ENVIRONMENTAL, INC.
15890 Foothill Boulevard
San Leandro, California 94578
(510) 278-4011 FAX (510) 278-4018

December 17, 1992

Canandaigua Wine Company
P.O. Box 55
Woodridge, CA 95258

Attn: Mr. Vernon DeWulf

Subject: Boiler Emissions Testing

Test Date: December 4, 1992

Sampling Location: Outlet of the Keeler Boiler located at California Fruit Produce's facility in Fresno, CA.

Sampling Personnel: Guy Worthington and Mike Wiley of BEST ENVIRONMENTAL.

Observing District: San Joaquin Valley Unified A.P.C.D.

Process Description: California Fruit Produce operates a Keeler Water Tube boiler for steam production. At full load the boiler produces 27,500 lbs/hr steam, and can be fired on natural gas or oil. The boiler has a capacity of 33 mmBTU/hr and 900 Hp.

Test Program: Boiler emissions were continuously monitored for CO, O2, CO2 and NOx concentration at the stack outlet. Triplicate forty minute test runs were performed on the boiler burning natural gas. Calibrations were performed before and after each run with the appropriate concentrations. Moisture determination and volumetric flowrate measurements were taken at the boiler outlet. All tests were performed with the boiler at or above 90% full load.

Sampling Methods: The following Source Test Methods of the California Air Resouces Board (CARB) were used:

Method 1-100	CO2, NOx, O2, CO, THC, Continuous Sampling
Method 1	Traverse Point Determination
Method 2	Volumetric Flowrate Determination
Method 3	CO2 and O2 Determination
Method 4	Moisture Determination

Instrumentation:

Horiba Model PIR-2000 CO2 Analyzer

Infrared Ind. Model 2200 O2 Analyzer

Thermo Electron Model 10 NOx Analyzer

Horiba Model PIR-2000 CO Analyzer

Hewlett Packard Strip Chart Recorders

Inclined Manometer

Standard Pitot Tube

Omega Temperature Meter & K-type Thermocouple

TFE Tubing & Glass Condensers

Test Results: Table 1 presents the results of the Boiler emissions test while burning natural gas fuel. Average NOx concentration and NOx @ 3% O2 were 55.9 and 62.8 ppm, respectively. Average NOx emission rate was 1.95 lbs/hr or 0.076 lbs/mmBTU. Average CO concentration and emission rate were 11.9 ppm and 0.25 lbs/hr, respectively. Average CO lbs/mmBTU was 0.016. The stack gas flowrate was 4,847 scfm.

Comments: Strip chart recordings, field data sheets, flowrate calculations, permit to operate documentation and calibration gas certifications are contained in the appendix to this report.

If there are any questions concerning this report, please contact Craig Thiry or myself at (510) 278-4011.

Reviewed by,

Craig Thiry
Operations Manager

Submitted by,

Dan Cartner
Source Test Engineer

TABLE 1
CEMS Emissions Results
CALIFORNIA PRODUCE, FRESNO

TEST	1	2	3	AVERAGE
TEST LOCATION	OUTLET	OUTLET	OUTLET	
FUEL	Nat. Gas	Nat. Gas	Nat. Gas	
TEST TIME	0917-0952	1010-1050	1110-1150	
TEST DATE	12-4-92	12-4-92	12-4-92	
FLOWRATE, SDCFM	4,847	4,847	4,847	4,847
O2, %	4.90	4.95	5.00	4.95
CO2, %	9.4	9.2	9.2	9.25
H2O, %	16.2	16.2	16.2	16.20
NOx, ppm	56.0	56.0	55.8	55.9
NOx, ppm corr. 3%, O2	62.7	62.8	62.8	62.8
NOx, lbs/hr	1.95	1.95	1.94	1.95
NOx, lbs/mmBTU	0.076	0.076	0.076	0.076
CO, ppm	14.7	9.5	11.5	11.9
CO, lbs/hr	0.31	0.20	0.24	0.25
CO, lbs/mmBTU	0.020	0.013	0.016	0.016

= 46.8 PPM

15.5

WHERE,
- CO = Carbon Monoxide
- NOx = Oxides of Nitrogen
- CO2 = Carbon Monoxide
- THC = Tot. Hydrocarbons @CH4
- ppm = Parts Per Million Concentration
- N.D. = Not Determined
- lbs/hr = Pounds Per Hour Emission Rate
- F = EPA F-factor for Natural Gas = 8710

Calculations,

- lbs/hr = ppm x SDCFM x 1.56e-7 x 10 x Mol. Wt.
- lbs/mmBTU = ppm x F x Mol. Wt. x 2.59e-9 x 20.9 / (20.9-%O2)
- NOx @3%O2 = ppm x 17.9 / (20.9-%O2)

APPENDICES

CALCULATIONS

BEST ENVIRONMENTAL
STACK VOLUMETRIC FLOW RATE DETERMINATION

California Products
Keeler Boiler

Date: 12/4/92
Time: 1045

1. Avg. (SQRT ^P)	0.357 H^2O
2. Pitot Coefficient (Cp)	0.99
3. Temperature of Stack (ts)	334.0 °F
4. Barometric Pressure (Pb)	29.90 "Hg
5. Static Pressure (Pstatic)	0.01 H^2O
6. Stack Pressure (Ps)	29.90 "Hg
7. Percent of H^2O in Stack (%)	16.2 %
8. Molecular Weight of Stack Gas (MWs)	27.76 lb/lb-mole
A. Percent O2	5.1 %
B. Percent CO2	9.1 %
C. Percent CO	0.0 %
9. Area of Stack ft^2 (As)	4.909 ft^2

STACK GAS VELOCITY , Actual (Vs)	**29.6 ft/sec**
STACK GAS VOL. FLOWRATE, (Qactual)	**8,704 ACFM**
STACK GAS VOL. FLOWRATE (Qstd)	**4,847 SDCFM**

WHERE,

Vs = Velocity of the stack gas, actual (ft/sec)
Qstd = Volumetric flowrate at standard conditions
MWs = Molecular Wt. Stack Gas, wet basis
MWd = Molecular Wt. Stack Gas, dry basis
Ps = Stack pressure
^ P = Differential pressure measured by the pitot
ACFM = Actual Cubic Feet Per Minute
SDCFM = Standard Dry Cubic Feet Per Minute
Bws = %H20 / 100

CALCULATIONS,

MWs = (MWd) x (1-Bws) + 18 (Bws)
MWd = .44 (%CO2) + .32 (%O2) + .28 (%CO + %N2)
Ps = Pb + (Pstatic /13.6)
Vs = 85.49 x Cp x SQRT ^P x SQRT((ts + 460) / (Ps x MWs))
Qactual = 60 x Vs x As
Qstd = 60 x Vs x As x 528/(ts + 460) x Ps/29.92 x (1-Bws)

BEST ENVIRONMENTAL
STACK MOISTURE DETERMINATION

California Products
Keeler Boiler

Date: 12/4/92
Time: 0904-0939

1. Uncorrected Meter Volume (Vm)	24.955	ft^3
2. Meter Factor (Yd)	0.9553	
3. Barometric Pressure (Pb)	29.90	"Hg
4. Meter Pressure (^H)	1.0	"H^2O
5. Meter Temperature (tm)	89.0	°F
6. Std. Temperature (tstd)	68.0	°F
7. Impinger H^20 Gain (VwH20)	87.0	ml
8. Silica Gel Wt. Gain (Vwsg)	7.0	gm
9. Moisture Vapor (Vw std)	4.43	ft^3
Std. Meter Volume (Vm std)	**22.969**	ft^3
Percent of H^2O in Stack (% H^2O)	**16.2**	%

WHERE,

ft^3 = Cubic Feet
Hg = Mercury
°F = Degrees Fahrenheit
ml = milliliters
gm = grams
% = Percent

CALCULATIONS,

Moisture Vapor = 0.00267 x (VwH20 + Vwsg) x (460 + tstd) / 29.92
Std. Meter Vol. = Vm xYd x (tstd + 460) x(Pb + ^H/13.6) / (tm + 460) x 29.92
Stack Moisture = Moisture Vapor / Moisture Vapor + Vm std

BEST ENVIRONMENTAL
STACK MOISTURE DETERMINATION

California Products
Keeler Boiler - Run #2

Date: 12/4/92
Time: 0953-1023

1. Uncorrected Meter Volume (Vm)	24.067	ft^3
2. Meter Factor (Yd)	0.9553	
3. Barometric Pressure (Pb)	29.90	"Hg
4. Meter Pressure (^H)	1.0	"H^2O
5. Meter Temperature (tm)	97.0	°F
6. Std. Temperature (tstd)	68.0	°F
7. Impinger H^2O Gain (VwH^2O)	85.0	ml
8. Silica Gel Wt. Gain (Vwsg)	5.0	gm
9. Moisture Vapor (Vw std)	4.24	ft^3
Std. Meter Volume (Vm std)	**21.833**	**ft^3**
Percent of H^2O in Stack (% H^2O)	**16.3**	**%**

WHERE,

ft^3 = Cubic Feet
Hg = Mercury
°F = Degrees Fahrenheit
ml = milliliters
gm = grams
% = Percent

CALCULATIONS,

Moisture Vapor = 0.00267 x (VwH20 + Vwsg) x (460 + tstd) / 29.92
Std. Meter Vol. = Vm xYd x (tstd + 460) x(Pb + ^H/13.6) / (tm + 460) x 29.92
Stack Moisture = Moisture Vapor / Moisture Vapor + Vm std

FIELD DATA SHEETS

BEST E[illegible]RONMENTAL
CONTINUOUS MONITOR DATA SHEET

Plant CALIFORNIA PRODUCTS — FRESNO
Date 12/4/92
Test Location BOILER
Run Number 1
Operator GW, MW

Ambient Temperature
Barometric Pressure
Static Pressure Duct
Fuel Nat. Gas
Number

Time	Sample Point	Fuel Flow	Dry Uncorrected O_2 %	Dry Uncorrected CO_2 %	Dry Uncorrected CO ppm	Dry Uncorrected SO_2 ppm	Dry Uncorrected NO ppm	Dry Uncorrected NO_x ppm	3% O_2 Dry ppm	3% O_2 Dry NO_x ppm	Hydrocarbons THC	Hydrocarbons CH_4	Hydrocarbons Non CH_4	TOC ppm	CO2 ppm	VOC ppm	Comments
	CAL		5.17	7.96	251			50.5									KEELER WATERTUBE
	ZERO		0	0	0			0									BOILER 1967
0917			5.0	9.17	15			55.0		61.9							Serial # 13491-2
0922			4.7	9.4	20			56.0									Rated 29500# hr steam.
0927			5.0	9.3	22.5			55.5									09/2 HES
0932			5.0	9.3	25.0			55.0									PEIA 24.61
0937			4.9	9.5	28.0			55.0									°F 65.44
0942			4.9	9.4	30.0			54.5									100CF 24.3 DCS.
0947			4.9	9.4	31.5			54.5									24 CFM
0952			5.0	9.3	33.5			54.5									
	CAL		5.1	8.17	272			48.0									
	ZERO		0.0	-0.03	250.0			0									
	AVG.		4.9	9.35	27.8			55.0									
	CORR				14.7			56.0		62.6							

BEST E[illegible]IRONMENTAL
CONTINUOUS MONITOR DATA SHEET

Plant CAL. PRODUCTS
Date 12/4/92
Test Location BOILER
Run Number 2
Operator GW, MW

Ambient Temperature
Barometric Pressure
Static Pressure Duct
Fuel Nat. Gas.
Number

Time	Sample Point	Fuel Flow	Dry Uncorrected O_2 %	Dry Uncorrected CO_2 %	Dry Uncorrected CO ppm	Dry Uncorrected SO_2 ppm	Dry Uncorrected NO ppm	Dry Uncorrected NO_x ppm	3% O_2 Dry ppm	3% O_2 Dry NO_x ppm	Hydrocarbons THC	Hydrocarbons CH_4	Hydrocarbons Non CH_4	TOC ppm	CO2 ppm	VOC ppm	Comments
	CAL		5.57	7.96	251			505									
	ZERO		0	0	0			0									
1010			4.9	9.3	[illegible]			57.0									
1015			4.9	9.3	12.5			56.0									
1020			4.9	9.3	14.0			56.0									
1025			4.9	9.4	15.0			56.0									
1030			5.0	9.3	16.5			56.5									
1035			5.0	9.4	17.5			56.0									
1040			5.0	—	20.0			56.0									
1045			5.0	—	20.0			56.0									
1050	CAL		5.2	8.2	257			49.3									
	ZERO		0	0	9.5			0									
	AVG		4.95	9.33	14.4			56.0									
	CAL.			9.2	9.5												

BEST ENVIRONMENTAL
CONTINUOUS MONITOR DATA SHEET

Plant CAL PRODUCTS
Date 12/4/92
Test Location BOILER
Run Number 3
Operator GW, MW

Ambient Temperature
Barometric Pressure
Static Pressure Duct
Fuel Nat. Gas
Number

Time	Sample Point	Fuel Flow	Dry Uncorrected O_2 %	Dry Uncorrected CO_2 %	Dry Uncorrected CO ppm	Dry Uncorrected SO_2 ppm	Dry Uncorrected NO ppm	Dry Uncorrected NO_x ppm	3% O_2 Dry ppm	3% O_2 Dry NO_x ppm	Hydrocarbons THC	Hydrocarbons CH_4	Hydrocarbons Non CH_4	TOC ppm	CO2 ppm	VOC ppm	Comments
	CAL		5.17	7.96	251			50.5									33MBTU/hr approx.
	ZERO		0	0	0			0									
1110			4.88	9.35	12.5			55.0									
1115			4.9	9.24	15.0			55.0									
1120			5.0	9.30	15.0			54.0									
1125			5.0	9.20	15.0			54.0									
1130			5.0	9.23	15.5			54.0									
1135			5.0	9.22	16.5			54.5									
1140			5.0	9.23	17.5			54.5									
1145			5.1	9.20	18.0			54.5									
1150	CAL		5.2	8.09	256			48.0									
	ZERO		0	-0.03	8.0			0									
	AVG		5.0	9.2	15.6			54.4									
	CORR.				11.5			55.8		62.8							

BEST ENVIRONMENTAL

Stack Gas Volumetric Flowrate Determination

Client: Cal. Products		**Location:**	Boiler outlet
Date: 12/4/92	**Time:** 10:45	**Run#:**	1
Pitot Factor (Cp): 0.99		**Operators:**	MW LGW
Assumed %O2: 6.5	**Actual** 5.1	**Barometric (Pb):**	29.90
Assumed %CO2: 8.7	**Actual** 9.1	**Static Pressure (Pstatic):**	+0.01
Assumed %CO:	**Actual** —	**Stack Diameter, in:**	30" / Port 1.5"
Assumed %H²O: 15%	**Actual** 15.4	**Stack Area , ft² (As):**	4.909

Port ID & Point#	Point Location, Inches	Delta P, (" P)	Stack Temp °F, (ts)	SQRT " P
1	2.5	0.14	334	0.374
2	4.7	0.13		0.361
3	7.3	0.13		0.361
4	11.2	0.14		0.374
5	21.8	0.16		0.400
6	25.7	0.16		0.400
7	28.4	0.14		0.374
8	30.5	0.11		0.332
1		0.06	334	0.245
2		0.09		0.300
3		0.13		0.361
4		0.14		0.374
5		0.11		0.346
6		0.12		0.346
7		0.15		0.387
8		0.14		0.374
		.126	334	0.357
AVG				

CALCULATIONS

Stack Gas Velocity, actual feet per sec (Vs)

Vs = 85.49*Cp*(SQRT "P)avg*SQRT[(ts+460)/Ps*MWs]

Vs =

Molecular Weight of Stack Gas, g/g.mole (MWs)

MWs = MWd*(1-Bwo)+18(Bwo)

MWs =

Molecular Weight of Dry Gas, g/g.mole (MWd)

MWd = 0.44(%CO2)+0.32(%O2)+0.28(%CO+N2)

MWd =

Stack Gas Volumetric Flow Rate, standard dry cubic feet/min (SDCFM)

SDCFM = 60(1-Bwo)*Vs*As*528/(ts+460)*Ps/29.92

SDCFM =

WHERE:

Stack Pressure, "Hg (Ps)

Ps = Pb + (Pstadc/13.6)

Water Vapor Fraction, (Bwo)

Bwo = %H²O/100

Stack Area, ft² (As)

As = (Diameter/24)² * 3.1416

Comments: Vel = ~~1189~~ 29,495

Vol = 4,329 SCFM

FORMCPI.XLS

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 1&2 Method # $H_2O(4)$

Plant Cal products
Date 12/14/92
Location boiler outlet
Port Dim. 1.5 "
Stack I.D. 30 "
Stack Area 4.909 ft2
Personnel MW/GV

ΔH@ —
Meter Yd 0.9553
PBar. 29.90
Stat Press -0.01
%O2 Assum 5.1
%CO2 Assum 9.1
Pre leak ck 0.005 cfm 7 "Hg
" " 0001 7 "Hg

%H2O Assum. 15%
Pitot Cp N/A
Noz. Diam. N/A
Noz I.D. N/A
Meter # 033502
Probe # N/A

Filter # N/A
Pitot # N/A
Net Imp Vol 285/285
Tot Imp Vol 285/285
Sample Time 304.4
Sqrt ΔP Ave N/A
Post leak ck 0.005 cfm 7 "Hg
" " 0004 7 "Hg

F.H. Wt. (mg) —
P.H. Wt. (mg) —
Gel Wt. (g) 7a/5a
%CO2 Actual 5.0
%O2 Actual 9.3
Tot. Moisture 15.2% / 15
Std Vm 27.953/22.774

	Sample Point	Clock Time	Vel. ΔP	M.R. cfm	Orif. ΔH	Gas Meter Volume ft2	Gas Meter In	Gas Meter Out	Temperatures F Stack	Imp.	Filter	Probe	Pump Vac.	Comments
1		9:09	-	0.84	-	055.965	80	83		46	1	-	4	
2		9:14	-	0.85	-	060.19	83	87			-	-	4	180ml
3		9:19	-	0.85	-	064.42	86	89			-	-	4	100ml
4		9:24	-	0.80	-	068.41	91	89			-	-	4	250ml
5		9:29	-	0.79	-	072.35	94	90			-	-	4	7a/5a
6		9:34	-	0.85	-	076.62	95	92			-	-	4	289
7		9:39				080.737	96	93						
9														87ml
				(0.83)		(24.955)	(89)							
10														
11		9:53	-	0.84	-	080.920	95	93		46	-	-	4	
12		9:58	-	0.81	-	84.98	92	96			-	-	4	180ml
13		10:03	-	0.80	-	88.99	97	98			-	-	4	100ml
14		10:08	-	0.80	-	93.00	98	98			-	-	4	80ml
15		10:13	-	0.80	-	97.01	98	98			-	-	4	5a/5a
16		10:18	-	0.80	-	101.00	99	98			-	-	4	85ml
17		10:23	-		-	104.987	100	99						
18														
19										-				
20				(0.80)		(29.067)	(97)							
21														
22														
23														
24														
25														
26														
27														
28	Average													

Notes:

5.5 94
5 94
87.5 47.5
90.0 98
92.0 98
93.5 98.5
99.5

Vs =
Ave. Vs =
Sample I.D. # =

#1 #2

Final Imp Vol =
Initial Imp Vol =

STRIP CHART RECORDS

Closed as per can #3
12/14/21

End

End of can #3

cm

Zero

Distilled water

Cart products.
12/14/21

4 1/4 hr 63

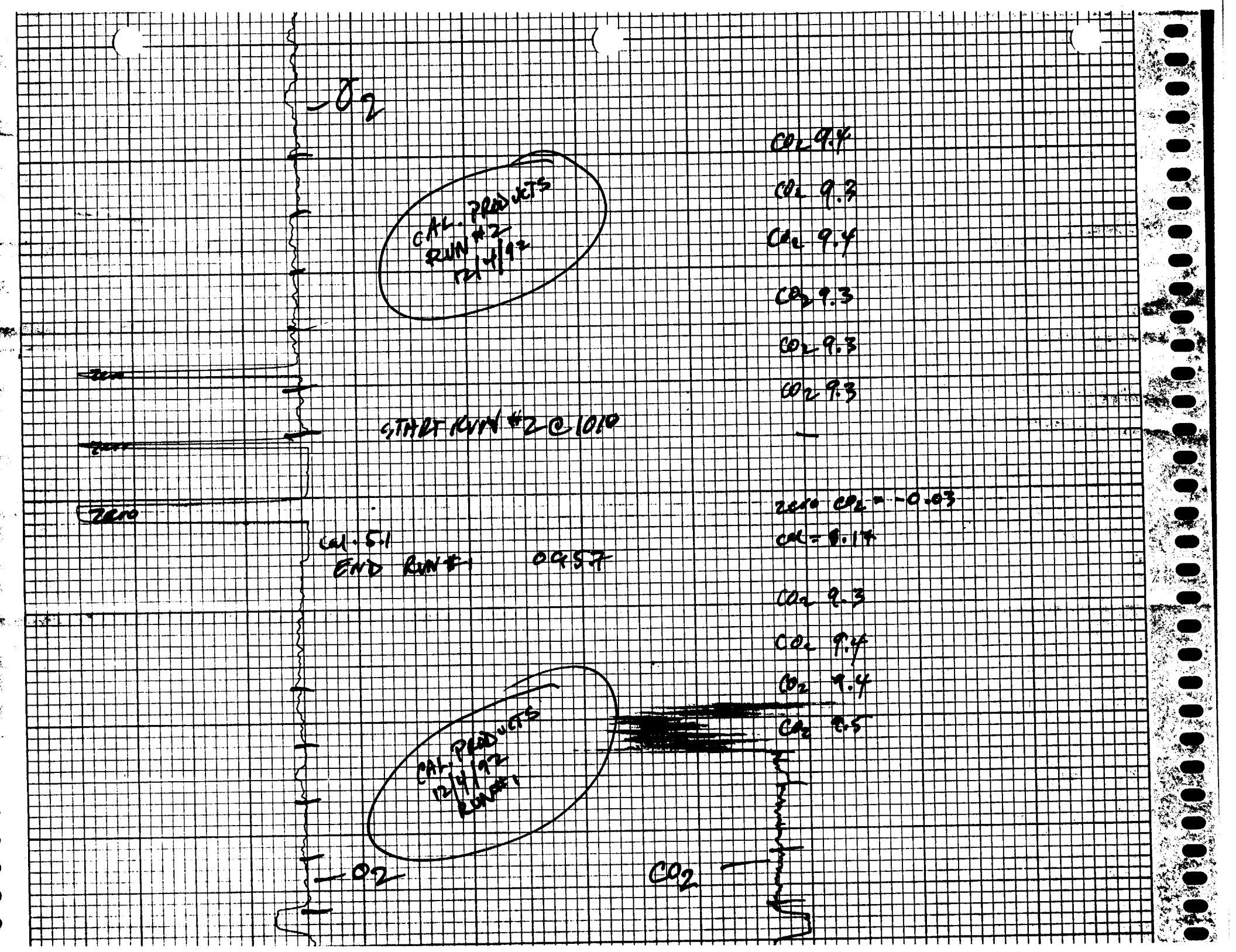
S.17/25
Co2 7.96/15

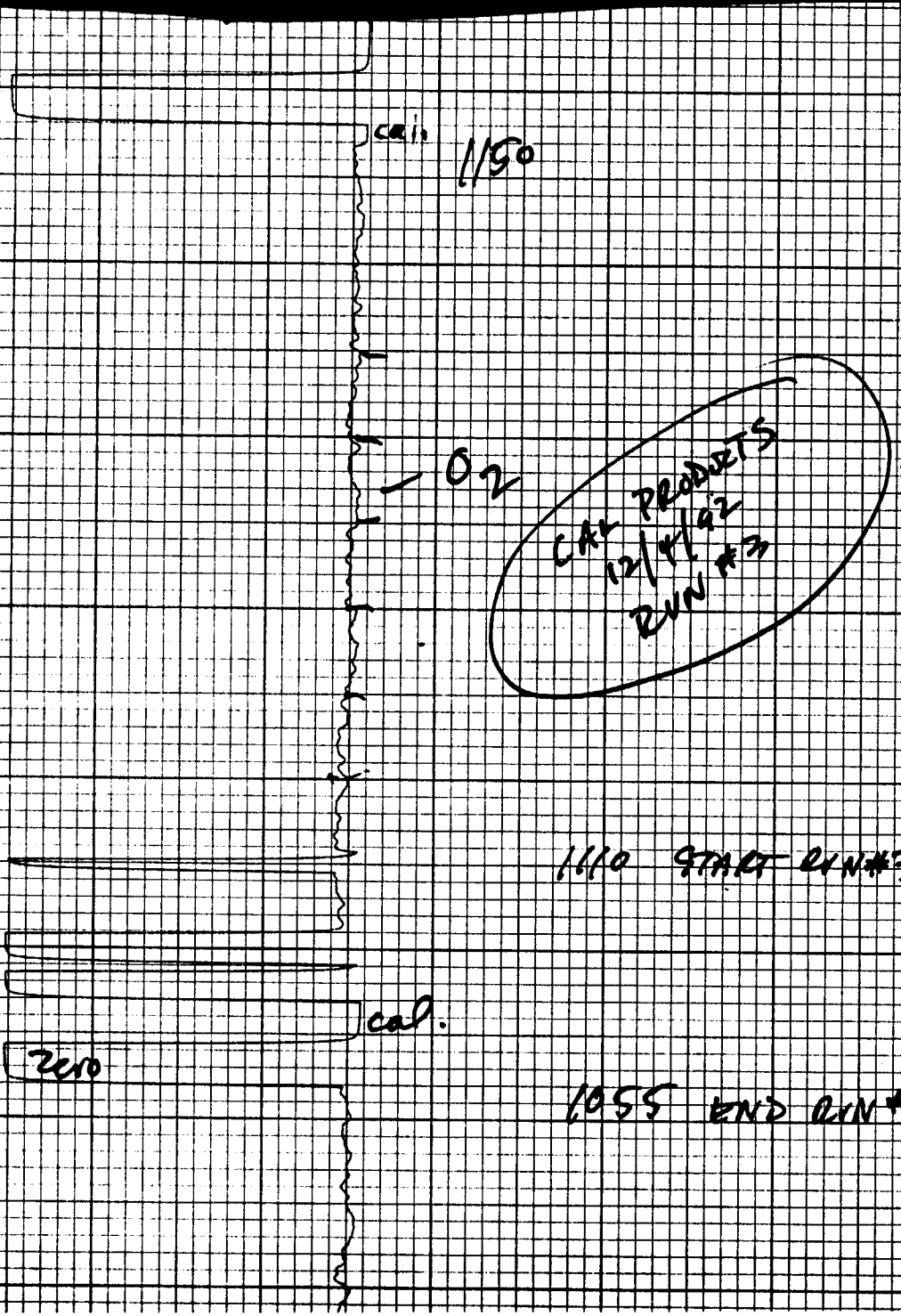
Zero

Rinse

Distilled water

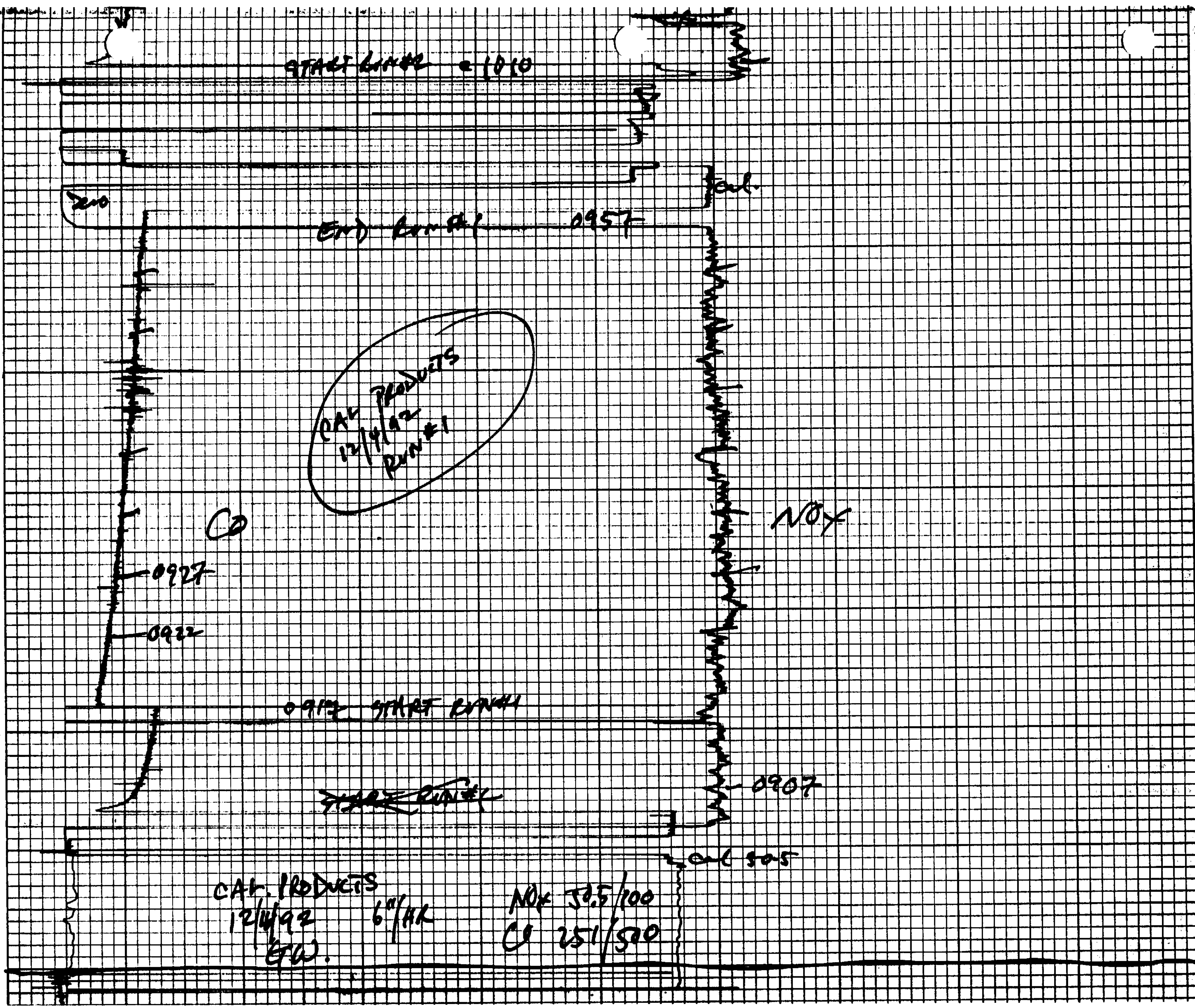
1 part citric to 4 parts water


O2
CAL. PRODUCTS RUN #2 12/4/92
ZERO
CAL. 5.1 END RUN #1 0957
CAL. PRODUCTS 12/4/92 RUN #1
O2
CO2
CO2 9.4
CO2 9.3
CO2 9.4
CO2 9.3
CO2 9.3
CO2 9.3
ZERO CO2 = -0.03
CAL = 5.1%
CO2 9.3
CO2 9.4
CO2 9.4
CO2 9.5



CO_2 zero ~0.03
CO_2 cal 8.00
CO_2 9.20
O_2 9.23
CO_2 9.22
CO_2 9.23
CO_2 9.20
CO_2 9.30
CO_2 9.24
CO_2 9.35

cal CO_2 = 8.2
zero CO_2 = 0.00


START RUN#2 @ 1010
cal.
zero
END RUN#1 0957
CAL PRODUCTS
12/4/92
RUN#1
CO
0927
0922
NOx
0917 START RUN#1
~~START RUN#1~~
0907
cal 50.5
CAL. PRODUCTS
12/4/92
GW.
6"/HR
NOx 50.5/100
CO 251/500

Lead aVR

Lead II

Lead V1

Lead V5

Lead aVL

Lead aVF

Lead V2

Lead V3

Lead V4

Lead V6

Lead II

Chest leads RVA1, 2, 3, 4

CHART NO. 9280-0264

(6092)

ΔV
1.5V
0
Char. peaks
2, 1/4, 1/2
Run #3

CALIBRATION GAS CERTIFICATES

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (714) 653-6780 • FAX (714) 653-2430

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

BEST01

TO:

REGAN BEST
BEST ENVIRONMENTAL
15890 FOOTHILL BLVD.
SAN LEANDRO, CA 94578-2101

DATE: 07/23/92

CUSTOMER ORDER NUMBER: 8451

PAGE 1

CYLINDER NUMBER	COMPONENT	CONCENTRATION (v/v)	NIST TRACEABLE REFERENCE STANDARD
CC114758	Oxygen	5.17 ± 0.05 %	SRM 2658a
	Carbon Dioxide	7.96 ± 0.08 %	SRM 1674b
	Carbon Monoxide	251.0 ± 2.5 ppm	SRM 2636
	Nitrogen	Balance	

ppm = umole/mole % = mole-%

The above analyses are traceable to the National Institute of Standards and Technology by intercomparison with the reference standards listed above. Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance. NIST Report No. MMAP 232.09/207491.

Analyst: Mark Monson
M.J. Monson

Approved:
J.T. Marrin

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (714) 653-6780 • FAX (714) 653-2430

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

BEST01

TO:

DATE: 06/12/92

REGAN BEST
BEST ENVIRONMENTAL
15890 FOOTHILL BLVD.
SAN LEANDRO, CA 94578-2101

CUSTOMER ORDER NUMBER: 8437

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CC83078	Nitric Oxide	50.5 ± 0.5 ppm	SRM 1683b
	Nitrogen,O2-Free	Balance	

ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance. NIST Report No. MMAP 232.09/202491.

Analyst: _____ Approved: _____

B.E. Gross J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

PERMIT TO OPERATE

1221 Fult[illegible] Mall, Fresno, Californi[illegible]93721
Telephone: (209) 445-3239

PERMIT TO OPERATE

A Permit to Operate is hereby granted to:

California Products Company

For equipment located at:

3000 E. Butler, Fresno

Description:

One (1) Keeler Boiler, 13931-2, 33.4 meg Btuh, with Todd D-16 gas burner and Todd VCS oil burner to be used for process heat.

Conditions:

1. Limit oil usage to 2261 gpd and 803K gpy
2. Use oil having .67 wt. % max. sulfur.
3. Report oil and gas used yearly to FCAPCD.
4. Do not fire on-site Kewanee boiler.

Issue Date: August 13, 1987 **P/O No.:** 3030680101

This Permit becomes void upon any change of ownership or location.

Equipment modification requires a new Permit to Operate.

George Bleth
Air Pollution Control Officer
By:
Michael Tollstrup
Supervising Air Quality Engineer

/an

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL DISTRICT/FRESNO ZONE
1221 FULTON MALL, FRESNO, CALIFORNIA 93721
TELEPHONE: (209) 445-3239

PERMIT TO OPERATE

A Permit to Operate is hereby granted to:

CALIFORNIA PRODUCTS COMPANY

For equipment located at:

3000 E. Butler, Fresno

DESCRIPTION:

One (1) Keeler Boiler, 13931-2, 27.5 meg Btuh, with Todd D-16 gas burner and Todd WFS oil burners to be used from [illegible]

Rating: 27.5 MM Btu

CONDITIONS:

1. Visible emissions shall not exceed 20% opacity.
2. Fuel oil #2 shall be used only for emergency standby purposes only, and shall have a sulfur content of 0.5% by weight or less.
3. Fuel consumption shall be recorded on a daily basis and submitted to the District by February 1 of each year.
4. Natural gas consumption shall not exceed 6,600 therms per day and $2.41X10^6$ therms per year.
5. Any change in equipment, operation or fuel requires prior written approval from the District.

Daily Emission Levels (lb/day):

PM10	NOx	SOx	CO	VOC
2.0	44	1.0	11	1.0

Issue Date: August 13, 1991

P/O NO: 3030680101

This Permit becomes void upon any change of ownership or location.

DAVID L. CROW
Air Pollution Control Officer

By: Roger A. Isom

Roger A. Isom
Air Quality Engineer II
San Joaquin Valley Unified
APCD/Fresno Zone

Equipment modification requires a new Permit to Operate.

CALIFPRO010992mo

San Joaquin Valley
Unified Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-202-1-1 **ISSUANCE DATE:** / /

LEGAL OWNER OR OPERATOR: CALIFORNIA PRODUCTS
MAILING ADDRESS: 3000 E BUTLER
FRESNO, CA 93702

LOCATION: 3000 E BUTLER, FRESNO

EQUIPMENT DESCRIPTION:
RETROFIT OF ONE (1) EACH 27.5 MMBTU/HR KEELER BOILER, SER NO. 13931-2 WITH CSI LOW NOXMISER BURNER USING 10-15% FGR MEETING 30 PPM NOX AND 100 PPM CO, NATURAL GAS FIRED.
RATING: 27.5 MMBTU/HR

CONDITIONS

1 - A source test shall be conducted using methods and procedures approved by the District to determine compliance with applicable emission limits. The result of this test shall be submitted to the District within 60 days of the test.

2 - Source testing shall be conducted using the methods and procedures approved by the District. A pretest plan outlining the test methods and procedures shall be submitted for the District's approval no later than 30 days prior to each test.

3 - The results of each source test shall be submitted to the District within 60 days thereafter.

4 - A non-resetable totalizing fuel meter shall be installed on the burner fuel inlet.

5 - Emission sampling limits are: NO2 = 30 ppm at 3% oxygen, CO = 100 ppm at 3% oxygen.

6 - Maintain and operate equipment in accordance with manufactruer's specifications.

(CONDITIONS CONTINUE ON THE NEXT PAGE)

This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. PLEASE NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 497-1040 WHEN CONSTRUCTION OF THE EQUIPMENT IS COMPLETED. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

DAVID L. CROW, EXECUTIVE DIRECTOR/APCO

SEYED SADREDIN, DIRECTOR OF PERMIT SERVICES

Central Regional Office * 1999 Tuolumne, Suite 200 * Fresno, California 93721 * (209)497-1000 * FAX (209) 233-2203

7 - Maintain daily natural gas consumption records for two years. These records shall be kept on site at all times and made available to the District upon request.

8 - An annual report on monthly summaries of natural gas consumption records shall be submitted to the District by March 1 of the following year.

9 - The FGR system shall be in operation at all times during the boiler operation. A minimum of 10% of the flue gas shall be re-circulated during boiler operation.

10 - Daily Emission Limits for natural gas in lbs/day are: NOx = 22.37, CO = 47.81, VOC = 1.67, PM-10 = 2.98, and SOx = 0.36.

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P E R M I T T O O P E R A T E

A Permit to Operate is hereby granted to:

CALIFORNIA PRODUCTS COMPANY

For equipment located at:

3000 E. Butler, Fresno

DESCRIPTION:

One (1) Keeler Boiler, 13931-2, 27.5 meg Btuh, with Todd D-16 gas burner and Todd VCS oil burner to be used for process heat.

Rating: 27.5 MM Btu

CONDITIONS:

1. Visible emissions shall not exceed 20% opacity.
2. Fuel oil #2 shall be used only for emergency standby purposes only, and shall have a sulfur content of 0.5% by weight or less.
3. Fuel consumption shall be recorded on a daily basis and submitted to the District by February 1 of each year.
4. Natural gas consumption shall not exceed 6,600 therms per day and $2.41X10^6$ therms per year.
5. Any change in equipment, operation or fuel requires prior written approval from the District.

Daily Emission Levels (lb/day):

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Issue Date: August 13, 1991

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