ID: 1399

TP

San Joaquin Valley Unified Air Pollution Control District

APPLICATION FOR:

[X] EMISSION REDUCTION CREDIT (ERC)
[ ] CONSOLIDATION OF ERC CERTIFICATES
[ ] ERC RE-ISSUE AFTER PARTIAL USE
[ ] ERC TRANSFER OF OWNERSHIP

TRINGVO

1. **ERC TO BE ISSUED TO:**
TRI VALLEY GROWERS

2. **MAILING ADDRESS:**
Street/P.O. Box: P.O. Box 7114 P.O. Box 511 - Los Banos - 93635
City: San Francisco State: CA Zip Code: 94120

3. **LOCATION OF REDUCTION:**
Street: 12045 S. Ingomar Grade
City: Los Banos, CA 93635

Source test 5/27/93
4. **DATE OF REDUCTION:** Boiler Run 07/93
ATC Complete 4/1/91

5. **PERMIT NO(S):** **EXISTING ERC NO(S):**

6. **METHOD RESULTING IN EMISSION REDUCTION:**
[ ] SHUTDOWN [X] RETROFIT [ ] PROCESS CHANGE [ ] OTHER
DESCRIPTION:

(Use additional sheets if necessary)

7. **REQUESTED ERCs (In Pounds Per Calendar Quarter):** This is a seasonal source

	VOC	NOx	CO	PM10	SOx	OTHER
1st QTR	-	-	-	-	-	-
2nd QTR	5.6	2182	159	20	2.4	-
3rd QTR	429	173267	10753	7482	39058	-
4th QTR	6.8	2660	194	25	3	-
TOTAL COST	$	$	$	$	$	$

8. **SIGNATURE OF APPLICANT:** [signature]
TYPE OR PRINT TITLE OF APPLICANT: Supervisor Environmental Services

9. **TYPE OR PRINT NAME OF APPLICANT:** Robert Bennett
DATE: 8/20/93
TELEPHONE NO: (209) 572-5564

FOR APCD USE ONLY:

DATE STAMP: RECEIVED AUG 20 1993 SAN JOAQUIN VALLEY UNIFIED A.P.C.D. NO. REGION

FILING FEE RECEIVED: $ 650.00 # 4560074774
DATE PAID: 8-20-93
PROJECT NO.: 930450

N-33-2 & 3

Plant 5 Gas Emissions Calculations 1st Quarter

		1989	1990	Average
	Fuel type	Gas	Gas	Gas
	Amount	0.00	0.00	0.00
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	5	0.00	0.00	0.00
SOx	0.6	0.00	0.00	0.00
NOx	550	0.00	0.00	0.00
CO	40	0.00	0.00	0.00
Voc N Meth	1.4	0.00	0.00	0.00
Voc Meth	0.3	0.00	0.00	0.00

Plant 5 Fuel Oil Emissions Calculations 1st Quarter

		1989	1990	Average
	Fuel type	Oil	Oil	Oil
	Amount	0.00	0.00	0.00
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	13	0.00	0.00	0.00
SOx	78.5	0.00	0.00	0.00
NOx	120	0.00	0.00	0.00
CO	5	0.00	0.00	0.00
Voc N Meth	0.28	0.00	0.00	0.00
Voc Meth	1	0.00	0.00	0.00

Total Emiss 1st Quarter		New Limit
Particulate	0.00	36
SOx	0.00	4.6
NOx	0.00	162
CO	0.00	100
Voc N Meth	0.00	10.6
Voc Meth	0.00	

Plant 5 Gas Emissions Calculations 2nd Quarter

MMFT³

		1989	1990	Average
	Fuel type	Gas	Gas	Gas
	Amount	7.93	0.00	3.97
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	5	39.67	0.00	19.84
SOx	0.6	4.76	0.00	2.38
NOx	550	4363.67	0.00	2181.93
CO	40	317.37	0.00	158.69
Voc N Meth	1.4	11.11	0.00	5.55
Voc Meth	0.3	2.38	0.00	1.19

Plant 5 Fuel Oil Emissions Calculations 2nd Quarter

		1989	1990	Average
	Fuel type	Oil	Oil	Oil
	Amount	0.00	0.00	0.00
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	13	0.00	0.00	0.00
SOx	78.5	0.00	0.00	0.00
NOx	120	0.00	0.00	0.00
CO	5	0.00	0.00	0.00
Voc N Meth	0.28	0.00	0.00	0.00
Voc Meth	1	0.00	0.00	0.00

Total Emiss 2nd Quarter		New Limit
Particulate	0.22	36
SOx	0.03	4.6
NOx	23.98	162
CO	1.74	100
Voc N Meth	0.06	10.6
Voc Meth	0.01	

Plant 5 Gas Emissions Calculations 3rd Quarter

		1989	1990	Average
	Fuel type	Gas	Gas	Gas
	Amount	253.90	159.74	206.82
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	5	1269.49	798.68	1034.08
SOx	0.6	152.34	95.84	124.09
NOx	550	139644.18	87864.36	113749.27
CO	40	10155.94	6389.41	8272.67
Voc N Meth	1.4	355.46	223.63	289.54
Voc Meth	0.3	76.17	47.92	62.05

Plant 5 Fuel Oil Emissions Calculations 3Rd Quarter

		1989	1990	Average
	Fuel type	Oil	Oil	Oil
	Amount	102.50	889.46	495.98
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	13	1332.50	11562.99	6447.75
SOx	78.5	8046.25	69822.69	38934.47
NOx	120	12300.00	106735.32	59517.66
CO	5	512.50	4447.31	2479.90
Voc N Meth	0.28	28.70	249.05	138.87
Voc Meth	1	102.50	889.46	495.98

Total Emiss 3rd Quarter		New Limit
Particulate	82.22	36
SOx	429.21	4.6
NOx	1904.03	162
CO	118.16	100
Voc N Meth	4.71	10.6
Voc Meth	6.13	

Plant 5 Gas Emissions Calculations 4th Quarter

		1989	1990	Average
	Fuel type	Gas	Gas	Gas
	Amount	3.97	5.70	4.84
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	5	19.84	28.52	24.18
SOx	0.6	2.38	3.42	2.90
NOx	550	2181.96	3137.64	2659.80
CO	40	158.69	228.19	193.44
Voc N Meth	1.4	5.55	7.99	6.77
Voc Meth	0.3	1.19	1.71	1.45

Plant 5 Fuel Oil Emissions Calculations 4th Quarter

		1989	1990	Average
	Fuel type	Oil	Oil	Oil
	Amount	0.00	0.00	0.00
FACTORS	#/10x6fx3	# Emtd	# Emtd	# Emtd
Particulate	13	0.00	0.00	0.00
SOx	78.5	0.00	0.00	0.00
NOx	120	0.00	0.00	0.00
CO	5	0.00	0.00	0.00
Voc N Meth	0.28	0.00	0.00	0.00
Voc Meth	1	0.00	0.00	0.00

Total Emiss 4th Quarter		New Limit
Particulate	0.27	36
SOx	0.03	4.6
NOx	29.23	162
CO	2.13	100
Voc N Meth	0.07	10.6
Voc Meth	0.02	

NTC ISSUED Sept 93 to date

Plant 5, Tri Valley Growers Volta CA.

Total Operation Processing				
Operating Year	NG # Days Run	Gas Used Therms Total	Oil # Days Run	Oil Used Gallons Total
1988	60	2906000	0	0
1989	67	2658000	19	102500
1990	58	1654400	58	889461
1991	82	3451543	19	18174

Plant 5 Total, Emissions Calculations in #/day					
	Quarter	1st	2nd	3rd	4th
	Fuel type	Total	Total	Total	Total
	# of Days	91	91	91	91
EMITTANT	Total	# Emtd	# Emtd	# Emtd	# Emtd
Particulate		0.00	0.22	82.22	0.27
SOx		0.00	0.03	429.21	0.03
NOx		0.00	23.98	1,904.03	29.23
CO		0.00	1.74	118.16	2.13
Voc N Meth		0.00	0.06	4.71	0.07
Voc Meth		0.00	0.01	6.13	0.02
% of Operation		0.00%	1.62%	96.76%	1.62%

	Natural Gas Therms				Fuel Oil Gallons				Operating Days For NG				Operating Days For Oil			
YEAR	1988	1989	1990	1991	1988	1989	1990	1991	1988	1989	1990	1991	1988	1989	1990	1991
MONTH																
JAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUNE	0	79343	0	23491	0	0	0	0	0	2	1	4	0	0	0	0
JULY	920233	1110806	28524	325095	0	102500	291375	18174	19	28	27	8	0	19	19	2
AUG	1453000	1150478	770152	402551	0	0	460066	0	30	29	28	31	0	0	30	0
SEPT	436900	277701	798676	1110539	0	0	138020	0	9	7	2	30	0	0	9	0
OCT	0	39672	57048	1589867	0	0	0	0	0	1	0	9	0	0	0	0
NOV	96867	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
DEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2906000	2658000	1654400	3451543	0	102500	889461	18174	60	67	58	82	0	19	58	2

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER.

TVG TRI VALLEY GROWERS™

POST OFFICE BOX 7114 · SAN FRANCISCO, CA 94120

70-1558
719

4560074774

DATE 08/19/93 CHECK NO. AMOUNT

*** SIX HUNDRED FIFTY US DOLLARS *** $ $*********650.00
*** AND 00 CENTS ***

TRI VALLEY GROWERS

PAY TO THE ORDER OF

SAN JOAQUIN VALLEY UNIFIED AIR
POLLUTION CONTROL DISTRICT
4230 KIERNAN AVE # 130
MODESTO CA 95356

NOT VALID OVER $25,000 WITHOUT COUNTERSIGNATURE

HARRIS BANK ROSELLE
ROSELLE, ILLINOIS

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - HOLD AT AN ANGLE TO VIEW

13-26D

⑈4560074774⑈ ⑆071915580⑆ 04⑉429⑉1878⑈

TELEPHONE RECORD FORM

Date / Time	Names of All Persons Involved and Conversation Record
5-4-95	called EP&A - ~~[illegible]~~ Gerardo Rios - No comments
5-4-95	called ARB - left message for comment
5-10-95	Nancy of ARB called - no comment on project

PROJECT ROUTING FORM

ROJECT NUMBER: 930451 FACILITY ID: 1399 PERMIT NOs: _____

PPLICANT NAME: TRI VALLEY GROWERS

REMISE ADDRESS: 12045 S. INGOMAR GRADE, VOLTA

PRELIMINARY REVIEW	ENGR	DATE	SUPR	DATE
A. Application Deemed Incomplete				
B. Application Deemed Complete [ ] Awaiting CB Offsets	TP	8/27/93	Ule	8/31
C. Application Pending Denial				
D. Application Denied				

ENGINEERING EVALUATION	INIT	DATE
E. Engineering Evaluation Complete		
F. Supervising Engineer Approval		
G. Compliance Division Approval [ ] Not Required		
H. Permit Services Manager Approval		

Director Review: [ ] Not Required [ ] Required

LERICAL STAFF: Perform tasks as indicated below. Initial and date when completed.

] PRELIMINARY REVIEW
- [ ] _____ Mail Incompleteness Letter to the Applicant.
- [ ] _____ Mail Completeness Letter to the Applicant.
- [ ] _____ Mail Intent to Deny Letter to the Applicant (Certified Mail).
- [ ] _____ Mail Denial Letter to the Applicant (Certified Mail).

] PROJECTS NOT REQUIRING PUBLIC NOTIFICATION

[ ] PRELIMINARY DISPOSITION:
- [ ] _____ Mail Imminent Denial Letter to the Applicant (Certified Mail).

[ ] FINAL DISPOSITION:
- [ ] _____ Mail ATC(s) to Distribution.
- [ ] _____ Mail Denial Letter to the Applicant (Certified Mail).

] PROJECTS REQUIRING PUBLIC NOTIFICATION

[ ] PRELIMINARY DECISION:
- [ ] _____ Deliver Ad to the Newspaper NOT LATER THAN _____
- [ ] _____ Mail copies of Cover Letter and Engineering Evaluation to Distribution.

[ ] FINAL DECISION:
- [ ] _____ Deliver Ad to the Newspaper NOT LATER THAN _____
- [ ] _____ Mail copies of Cover Letter and ATC(s) to Distribution.
- [ ] _____ Mail copies of Cover Letter to Distribution.

ISTRIBUTION

- [ ] _____ APPLICANT
- [ ] _____ ENGINEER
- [ ] _____ COMPLIANCE
- [ ] _____ PREMISE FILE
- [ ] _____ EPA - 75 Hawthorne St., San Francisco, CA 94105 Attn: A-3-4
- [ ] _____ ARB - Stationary Source Div. Chief, PO Box 2815, Sacramento, CA 95812
- [ ] _____ SJVUAPCD - 1999 Tuolumne St., Fresno, CA 93721 Attn: Seyed Sadredin
- [ ] _____ BLDG DEPT _____
- [ ] _____ OTHER _____
- [ ] _____ FIRE DEPT
- [ ] _____ SCHOOL

PROOF OF PUBLICATION

NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDIT CERTIFICATES

The undersigned says:
I am a citizen of the United States and a resident of San Joaquin County; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of THE RECORD, a newspaper of general circulation, printed and published daily in the City of Stockton, County of San Joaquin and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of San Joaquin, State of California, under the date of February 25, 1952, File Number 52857, San Joaquin County Records; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates,
to-wit:

MAY 22, 1995

I declare under penalty of perjury that the foregoing is true and correct.
Executed on JUNE 5, 1995
at Stockton, California

Sharon E. Farris

Signature SHARON E. FARRIS

MAY 22
NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDIT CERTIFICATES
NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District has issued emission reduction credit certificates to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, California, in the amounts of 90,905 pounds of NOx per year; 3,215 pounds of PM(10) per year; 34,984 pounds of SOx per year; and 241 pounds of VOC per year.
The analysis of the regulatory basis for Project #930450, and of the resulting effect on ambient air quality, is available for public inspection at SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, NORTHERN REGION, 4230 KIERNAN AVE, STE #130, MODESTO, CA 95356 (209) 545-7000.

✓ NORTHERN REGION
___ CENTRAL REGION
___ SOUTHERN REGION

ERC/PUBLIC NOTICE CHECK LIST

PROJECT# 930450 MODEM FILE NAME: TVG_5.FIN

REQST.	COMPL.	
✓	✓	ERC TRANSFER OF PREVIOUSLY BANKED CREDITS
___	___	ERC PRELIMINARY PUBLIC NOTICE
✓	___	ERC FINAL PUBLIC NOTICE
___	___	NSR/CEQA PRELIMINARY PUBLIC NOTICE
___	___	NSR/CEQA FINAL PUBLIC NOTICE

ENCLOSED DOCUMENTS REQUIRE:

✓ SK Enter Correct Date, Print All Documents from Modemed File and Obtain Directors Signature

✓ SK Send *FINAL* Notice Letters to CARB, EPA and Applicant; Including the Following Attachments:
___ Application Evaluation
✓ Other Copies of Public Notice and Certificates to EPA & CARB, copy of Public Notice to applicant

✓ SK Send *FINAL* Public Notice for Publication to The Stockton Record (NEWSPAPER)

✓ SK Send Signed Copies of *FINAL* Notice Letters to Regional Office Attn: Anthony Mendes

✓ SK Director's Signature and District Seal Embossed on ERC Certificates

✓ SK Director's Signature on Cover Letter and Mail Cover Letter & ERC Certificates by Certified Mail to:
✓ Applicant: P.O. Box 511, Los Banos, CA. - 95635
___ Applicant and Additional Addressees (see cover letters)
___ Other

✓ SK Send Copies of Signed and Seal Embossed ERC Certificates and Signed cover letter to Regional Office Attn: Anthony Mendes

___ ___ Other Special Instructions (please specify)

RECEIVED
MAY 22 1995
SAN JOAQUIN VALLEY
UNIFIED A.P.C.D.
NO. REGION

Date Completed ___/By___

Date Added to Seyed Directory: C:\AW directory on 5/??/95

Upon Completion FAX to Regional Office Attn: Steve Howie

5/19/95 SK

San Joaquin Valley
Unified Air Pollution Control District

COPY

May 19, 1995

Robert Bennett
Tri-Valley Growers
P.O. Box 511
Los Banos, CA. 93635

Re: Notice of Final Action - Emission Reduction Credit Certificates
Project # 930450

Dear Mr. Bennett:

The District has made its final decision to issue Emission Reduction Credit Certificates to to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, CA. Certificate #'s N-33-1, N-33-2, N-33-4, and N-33-5 are enclosed.

All relevant comments received within the 30-day public comment period have been addressed and incorporated into the application review. Also enclosed is a copy of the Notice of Final Action which will be published approximately three days from the date of this letter.

Thank you for your cooperation in this matter. Should you have any questions, please contact Anthony Mendes at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH\sa
Enclosures
Certified Mail # Z 051 673 059
c: Anthony Mendes, Permit Services Manager - Northern Region

RECEIVED
MAY 22 1995
SAN JOAQUIN VALLEY
UNIFIED A.P.C.D.
NO. REGION

David L. Crow
Executive Director/Air Pollution Control Officer

1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
(209) 545-7000 • Fax (209) 545-6552

Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

San Joaquin Valley
Unified Air Pollution Control District

May 19, 1995

Raymond Menebroker, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95814-2815

Re: Notice of Final Action - Emission Reduction Credit Certificates
Project # 930450

Dear Mr. Menebroker:

The District has made its final decision to issue Emission Reduction Credit Certificates to to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, CA. Copies of the certificates and the Notice of Final Action are enclosed.

All relevant comments received within the 30-day public comment period have been addressed and incorporated into the application review.

Thank you for your cooperation in this matter. Should you have any questions, please contact Anthony Mendes at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH\sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer

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Northern Region
4230 Kiernan Avenue Suite 130 • Modesto, CA 95356
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Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

San Joaquin Valley
Unified Air Pollution Control District

May 19, 1995

Ken Bigos, Chief
Stationary Source Branch
Air and Toxics Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Re: Notice of Final Action - Emission Reduction Credit Certificates
Project # 930450

Dear Mr. Bigos:

The District has made its final decision to issue Emission Reduction Credit Certificates to to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, CA. Copies of the certificates and the Notice of Final Action are enclosed.

All relevant comments received within the 30-day public comment period have been addressed and incorporated into the application review.

Thank you for your cooperation in this matter. Should you have any questions, please contact Anthony Mendes at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH\sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer

1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
(209) 545-7000 • Fax (209) 545-6652

Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

The Stockton Record

NOTICE OF FINAL ACTION
FOR THE ISSUANCE OF
EMISSION REDUCTION CREDIT CERTIFICATES

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District has issued emission reduction credit certificates to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, California, in the amounts of 90,905 pounds of NOx per year; 3,215 pounds of PM_{10} per year; 34,984 pounds of SOx per year; and 241 pounds of VOC per year.

The analysis of the regulatory basis for Project # 930450, and of the resulting effect on ambient air quality, is available for public inspection at SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, NORTHERN REGION, 4230 KIERNAN AVE, STE # 130, MODESTO, CA 95356 (209) 545-7000.

San Joaquin Valley
Unified Air Pollution Control District

Northern Regional Office * 4230 Kiernan Ave., Suite 130 • Modesto, CA 95356

COPY

Emission Reduction Credit Certificate
N-33-1

Issued To: Tri-Valley Growers
Issue Date: May 19, 1995

Location of Reduction: 12045 Ingomar Grade
Los Banos, CA.

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
0 lbs	0 lbs	241 lbs	0 lbs

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Unit
[X] Other: Installation of LO-NOx burners and flue gas recurculation on two Nebraska boilers, and the termination of fuel oil usage.

David L. Crow, APCO

Seyed Sadredin
Director of Permit Services

5/19/95
Date

San Joaquin Valley
Unified Air Pollution Control District

Northern Regional Office • 4230 Kiernan Ave., Suite 130 • Modesto, CA 95356

COPY

Emission Reduction Credit Certificate
N-33-2

Issued To: Tri-Valley Growers
Issue Date: May 19, 1995

Location of Reduction: 12045 Ingomar Grade
Los Banos, CA.

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
0 lbs	1,166 lbs	88,317 lbs	1,422 lbs

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Unit
[X] Other: Installation of LO-NOx burners and flue gas recurculation on two Nebraska boilers, and the termination of fuel oil usage.

David L. Crow, APCO

Seyed Sadredin
Director of Permit Services

Date 5/19/95

San Joaquin Valley
Unified Air Pollution Control District

Northern Regional Office * 4230 Kiernan Ave., Suite 130 * Modesto, CA 95356

COPY

Emission Reduction Credit Certificate
N-33-4

Issued To: Tri-Valley Growers
Issue Date: May 19, 1995

Location of Reduction: 12045 Ingomar Grade
Los Banos, CA.

For PM_{10} In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
0 lbs	0 lbs	3,215 lbs	0 lbs

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Unit
[X] Other: Installation of LO-NOx burners and flue gas recurculation on two Nebraska boilers, and the termination of fuel oil usage.

David L. Crow, APCO

Seyed Sadredin
Director of Permit Services

5/19/95
Date

San Joaquin Valley
Unified Air Pollution Control District

Northern Regional Office • 4230 Kiernan Ave., Suite 130 • Modesto, CA 95356

COPY

Emission Reduction Credit Certificate
N-33-5

Issued To: Tri-Valley Growers
Issue Date: May 19, 1995

Location of Reduction: 12045 Ingomar Grade
Los Banos, CA.

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
0 lbs	0 lbs	34,984 lbs	0 lbs

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Unit
[X] Other: Installation of LO-NOx burners and flue gas recurculation on two Nebraska boilers, and the termination of fuel oil usage.

David L. Crow, APCO

Seyed Sadredin
Director of Permit Services

Date 5/19/95

This space is for the County Clerk's Filing Stamp

Proof of Publication
(2015.5 C.C.P.)

Proof of Publication of
NOTICE OF PRELIMINARY

STATE OF CALIFORNIA)
) ss.
County of Merced)

LORRAINE BUGALL

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the Merced Sun-Star, a newspaper of general circulation, printed and published in the City of Merced, County of Merced, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Merced, State of California, under the date of July 14, 1964, Case Number 33224 that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

DATE RAN

APRIL 6, 1995

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Signature

Date APRIL 6, 1995

PUBLIC NOTICE

NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDIT CERTIFICATES

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer solicits public comment on the proposed issuance of Emission Reduction Credit Certificates to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-Nix burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil #6 located at 12045 S. Ingomar Grade, Los Banos, CA. The amount of emission reductions proposed are 241 pounds per year of VOC, 90,905 pounds per year of NOx, 3,215 pounds per year of PM10, and 34,984 pounds per year of SOx. Because there were significant changes in the emission reductions of the previous analysis for this project submitted for public notice on February 1, 1995, an updated analysis is available for public inspection.

The updated analysis of the regulatory basis for this certificate, and of the resulting effect on ambient air quality, is available for public inspection at the District office at the address below. Written comments on Project #930450 must be submitted within 30 days of the publication date of this notice to SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, NORTHERN REGION, 4230 KIERNAN AVE., STE #130, MODESTO, CA 95356.

Legal 95-341 April 6, 1995

Proof of Publication - Merced Sun-Star, P.O. Box 739, Merced, California 95341 - Telephone 722-1511
Adjudged a newspaper of general circulation by court decree No. 33224 dated July 14, 1964.

630 FP

✓ NORTHERN REGION
__ CENTRAL REGION
__ SOUTHERN REGION

ERC/PUBLIC NOTICE CHECK LIST

PROJECT# 930450 MODEM FILE NAME: TVG#5_W.EVL

REQST.	COMPL.	
✓	✓	ERC TRANSFER OF PREVIOUSLY BANKED CREDITS
✓	__	ERC PRELIMINARY PUBLIC NOTICE
__	__	ERC FINAL PUBLIC NOTICE
__	__	NSR/CEQA PRELIMINARY PUBLIC NOTICE
__	__	NSR/CEQA FINAL PUBLIC NOTICE

ENCLOSED DOCUMENTS REQUIRE:

✓ SK Enter Correct Date, Print All Documents from Modemed File and Obtain Directors Signature

✓ SK Send ***PRELIMINARY*** Notice Letters to CARB, EPA and Applicant; Including the Following Attachments:
- ✓ Application Evaluation
- ✓ Other Public Notice

✓ SK Send ***PRELIMINARY*** Public Notice for Publication to The Merced Sun Times (NEWSPAPER)

✓ SK Send Signed Copies of ***PRELIMINARY*** Notice Letters to Regional Office Attn: Anthony Mendes

__ __ Director's Signature and District Seal Embossed on ERC Certificates

__ __ Director's Signature on Cover Letter and Mail Cover Letter & ERC Certificates by Certified Mail to:
- __ Applicant: *Applicant Address*
- __ Applicant and Additional Addressees (see cover letters)
- __ Other

__ __ Send Copies of Signed and Seal Embossed ERC Certificates and Signed cover letter to Regional Office Attn:

__ __ Other Special Instructions (please specify)

Date Completed _____/By_____

Date Added to Seyed Directory: C:\AW directory on 03/29/95

Upon Completion FAX to Regional Offi[illegible]

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APR 03 1995
SAN JOAQUIN VALLEY
UNIFIED A.P.C.D.
NO. REGION

San Joaquin Valley
Unified Air Pollution Control District

COPY

April 3, 1995

Robert Bennett
Tri-Valley Growers
P O BOX 511
Los Banos, CA. 93635

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Bennett:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA. Due to the significant changes in the emission reductions of the previous analysis for this project submitted for public notice on February 1, 1995, an updated analysis is submitted for your review.

Also enclosed is a copy of the Preliminary Public Notice for this project , which will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. Should you have any questions please telephone Steve Howie of Permit Services at the Modesto office (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
(209) 545-7000 • Fax (209) 545-8652

Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

San Joaquin Valley
Unified Air Pollution Control District

April 3, 1995

Raymond Menebroker, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
P O BOX 2815
Sacramento, CA 95814-2815

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Menebroker:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA. Due to the significant changes in the emission reductions of the previous analysis for this project submitted for public notice on February 1, 1995, an updated analysis is submitted for your review.

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Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

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San Joaquin Valley
Unified Air Pollution Control District

April 3, 1995

Ken Bigos, Chief
Stationary Source Branch
Air and Toxics Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Bigos:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA. Due to the significant changes in the emission reductions of the previous analysis for this project submitted for public notice on February 1, 1995, an updated analysis is submitted for your review.

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Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

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Merced Sun-Star

NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
EMISSION REDUCTION CREDIT CERTIFICATES

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer solicits public comment on the proposed issuance of Emission Reduction Credit Certificates to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-Nix burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil # 6 located at 12045 S. Ingomar Grade, Los Banos, CA. The amount of emission reductions proposed are 241 pounds per year of VOC, 90,905 pounds per year of NOx, 3,215 pounds per year of PM_{10}, and 34,984 pounds per year of SOx. Because there were significant changes in the emission reductions of the previous analysis for this project submitted for public notice on February 1, 1995, an updated analysis is available for public inspection.

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ERC APPLICATION EVALUATION
Project # 930450

Engineer: Steve Howie
Date: March 30, 1995

Application prepared for: **Tri-Valley Growers #5**
P.O. Box 511
Los Banos, CA., 93635

Contact: Robert Bennett
Phone: (209) 572-5564

Application received: August 20, 1993
Application deemed complete: August 24, 1993

I. SUMMARY:

Tri-Valley Growers (TVG) operates a canning facility at 12045 S. Ingomar Grade, Los Banos. Currently, the facility has 2 boilers under permit with the District. TVG has completed the retrofit of the existing boilers each with a NOx control system, and has terminated the use of fuel oil #6. The NOx control system for each boiler includes a Todd Low NOx Dynaswirl burner with flue gas recirculation (FGR). The retrofits for both boilers were authorized under Authority to Construct Permits 90-25 and 90-26 issued by Merced County Air Pollution Control District on March 16, 1991. The project was completed and reductions were generated on May 27, 1993 when a source test was accomplished to verify results of the issued Authority to Construct Permits and is operating under Permits to Operate N-1399-1-1 and N-1399-2-1. The amount of emission reductions that will be granted by the District are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	88,317	1,422
CO	0	0	0	0
NMHC	0	0	241	0
PM_{10}	0	0	3,215	0
SOx	0	0	34,984	0

The Emission Reduction Certificate filing numbers are:

N-33-1 ☞ VOC reduction credits
N-33-2 ☞ NOx reduction credits
N-33-4 ☞ PM_{10} reduction credits
N-33-5 ☞ SOx reduction credits

II. APPLICABLE RULES:

Rule 2201: New and Modified Stationary Source Review Rule
Rule 2301: Emission Banking Credit

III. LOCATION OF REDUCTIONS:

12045 S. Ingomar Grade, Los Banos

IV. METHOD OF GENERATING REDUCTIONS:

A. Equipment description:

Boiler #1: Boiler Manufacturer: Nebraska boiler NS-G-99
Serial No. 2D-1690

1. Burner Specifications
Manufacturer: Todd (natural gas only)
Heat Input: 150 MMBtu/hr
Fuel: Natural Gas

2. Flue gas recirculation system (natural gas)

Boiler #2: Boiler Manufacturer: Nebraska boiler NS-G-99
Serial No. 2D-1691

1. Burner Specifications
Manufacturer: Todd (natural gas only)
Heat Input: 150 MMBtu/hr
Fuel: Natural Gas

2. Flue gas recirculation system (natural gas)

B. Method of reductions:

The reductions are from the permanent retrofit of these boilers with a LoNOx burner and a flue gas recirculation system on the natural gas firing system, and the termination of fuel oil #6 usage. This will reduce the total VOC, NOx, PM_{10}, and SOx output.

V. CALCULATIONS

A. Assumptions and Emission Factors

1. Determining the Actual Emissions Reductions (AER)
Calculation procedures for determining AER:

Actual emissions reduction due to the installation of a control device or due to implementation of more efficient process or material is as follows:

V. CALCULATIONS (Continued)

$$AER = HAE \bullet CE$$

Where

HAE = Historical Actual Emissions of the unit prior to modification (REF: District's Rule 2201 Sec 6.2.1)

CE = Control efficiency of the proposed air pollution control technology. Reductions due to lowering of throughput rates or operating hours shall not be considered in determining control efficiency.(REF: District's Rule 2201 Sec 6.2.4).

HAE is defined as the Historical Actual Emissions having actually occurred based on source tests or calculated using actual fuel consumption or process weight, recognized emissions factors or other data approved by the Control Officer which most accurately represent the emissions during the baseline period. (REF: District's Rule 2201 Sec.6.2.1)

Adding NOx control equipment will increase the control efficiency when fired on natural gas. The termination from use of fuel oil #6 will also increase the control efficiency when compared to the firing of natural gas for the same period of time.

2. Emission factors

a. Emission factors before boiler modifications firing on natural gas (Heat output is 1000 btu/ft^3)

REF: AP42 table 1.4-1 (> 100 MMBTU/hr cap.)

NOx	• 0.363 lbs/MMBTU
CO	0.040 lbs/MMBTU
NMHC	0.0014 lbs/MMBTU
PM_{10}	0.005 lbs/MMBTU
SOx	0.0006 lbs/MMBTU

• NOx emission factor based on a 80% load on each boiler for a factor of 0.66 (AP42 Fig. 1.4-1). Emission factor used is:

NOx = 550(.66)lbs/1MM ft^3 ÷ 1000 btu/ft^3

b. Emission factors before boiler modifications firing on fuel oil #6 (Heat output is 150,000 btu/gal)

REF: AP42 table 1.3-1 (> 100 MMBTU/hr cap.)

NOx	0.447 lbs/MMBTU
CO	0.033 lbs/MMBTU
NMHC	0.005 lbs/MMBTU
PM_{10}	• 0.053 lbs/MMBTU

V. CALCULATIONS (Continued)

SOx * 0.523 lbs/MMBTU

* Based on a sulfur content of 0.5% (supplied by source) and fuel oil #6 heat content of 150,000 btu/gl. Emission factors used are:

SOx lbs/mmbtu = $(157(.5)_{SO2})$lbs/1000 gals ÷ 150,000 btu/gal * 10^6 btu/1 mmbtu

Because the AP42 SOx emission factor for natural gas is shown as SO_2, the fuel oil SOx emission factor will be shown as SO_2 also.

PM_{10} lbs/mmbtu = (10(.5) + 3)lbs/1000 gals ÷ 150,000 btu/gal * 10^6 btu/1 mmbtu

c. Emission factors after the boiler modification (natural gas only)

REF: Emission Factors as permitted. NOx, CO emission factors verified by source testing accomplished by Best Environmental on May 27, 1993

NOx	(verified by testing) 0.0364 lbs/MMBTU
CO	(verified by testing) 0.074 lbs/MMBTU
NMHC	(AP 42 table 1.4-1) 0.0014 lbs/MMBTU
PM_{10}	(AP 42 table 1.4-1) 0.005 lbs/MMBTU
SOx	(AP 42 table 1.4-1) 0.0006 lbs/MMBTU

B. Baseline Period Determination and Data

The baseline period, for this project, is defined as the two consecutive years of operation immediately prior to the submission of the complete Authority to Construct application (REF: Rule 2201 Section 3.7.1)

The Authority to Construct applications for the retrofit of these boilers were submitted on February 27, 1990 and deemed complete on March 8, 1991. The baseline emissions were determined by using the actual gas and fuel oil usage logs for the eight complete calendar quarters of operation immediately prior to March 8, 1991.

Natural gas usage - Therms
(Total usage for both boilers, combined)

	First quarter	Second quarter	Third quarter	Fourth quarter
1989	0	79,343	2,538,985	39,672
1990	0	0	1,597,352	57,048
Average	0	39,672	2,068,169	48,360

V. CALCULATIONS (Continued)

Fuel oil #6 usage - Gallons (Total usage for both boilers, combined)				
	First quarter	Second quarter	Third quarter	Fourth quarter
1989	0	0	102,500	0
1990	0	0	889,461	0
Average	0	0	495,981	0

1. Maximum allowed for natural gas in one year by permit was 3000 hrs/year for both boilers combined (max. 150 mmbtu/hr) or 4.5 MM therms/year (REF: Merced County Air Pollution Control District Permits to Operate # 3030100101,2).

2. Maximum allowed for fuel oil #6 @ 0.5% sulfur content was 1250 hrs/year for both boilers combined or 1.25 MM gallons/year (REF: Merced County Air Pollution Control District Permits to Operate # 3030100101,2).

C. Historical Actual Emissions (HAE)

1. Because both boilers are identical types of boilers (same manufacturer, model number, and size), the emissions calculations will be based on total use of both boilers combined.

2. Formulas used:

Formula for use with natural gas

$$E.F.\frac{lbs}{MMBTU} * \frac{100\,kBTU}{1\,therm} * \frac{(gas\ usage)\,therms}{QTR} = \frac{lbs}{qtr}$$

Formula for use with fuel oil 6

$$E.F.\frac{lbs}{MMBTU} * \frac{150{,}000\,BTU}{1\,gallon} * \frac{(oil\ usage)\,gallons}{QTR} = \frac{lbs}{qtr}$$

Where: E.F. are the Emission Factors before modification

V. CALCULATIONS (Continued)

Emissions from natural gas usage

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,440	75,075	1,755
CO	0	159	8,273	193
NMHC	0	6	290	7
PM_{10}	0	20	1,034	24
SOx	0	2	124	3

Emissions from fuel oil #6 usage

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	0	33,256	0
CO	0	0	2,455	0
NMHC	0	0	372	0
PM_{10}	0	0	3,943	0
SOx	0	0	38,910	0

D. Actual Emissions Reductions

1. The control efficiency (CE) for all pollutants are as follows:

$$CE(\%) = \frac{EF_B - EF_A}{EF_B} * 100$$

Where:

EF_B = Emission factor of each pollutant before modification
EF_A = Emission factor of each pollutant after modification

CE for natural gas burner modification

	EF_B	EF_A	CE (%)
NOx	0.363 lbs/MMBTU	0.0364 lbs/MMBTU	90
CO	0.040 lbs/MMBTU	0.074 lbs/MMBTU	0.0
NMHC	0.0014 lbs/MMBTU	0.0014 lbs/MMBTU	0.0
PM_{10}	0.005 lbs/MMBTU	0.005 lbs/MMBTU	0.0
SOx	0.0006 lbs/MMBTU	0.0006 lbs/MMBTU	0.0

V. CALCULATIONS (Continued)

CE from the termination of fuel oil #6

	$EF_{B\ (fuel\ oil)}$	$EF_{A\ (natural\ gas)}$	CE (%)
NOx	0.447 lbs/MMBTU	0.0364 lbs/MMBTU	91.9
CO •	0.033 lbs/MMBTU	0.074 lbs/MMBTU	0.0
NMHC	0.005 lbs/MMBTU	0.0014 lbs/MMBTU	72
PM_{10}	0.053 lbs/MMBTU	0.005 lbs/MMBTU	90.6
SOx	0.523 lbs/MMBTU	0.0006 lbs/MMBTU	99.9

- All negative control efficiencies shall be set to zero (SJVUAPCD Policy "Calculation Procedures for Determining Control Efficiency", dated March 25, 1992)

2. Actual Emission Reductions (AER) are as follows:

   a. AER for the retrofit of the two boilers with NOx control equipment on the natural gas system are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,296	67,568	1,580
CO	0	0	0	0
NMHC	0	0	0	0
PM_{10}	0	0	0	0
SOx	0	0	0	0

   b. AER for the termination from use of fuel oil #6 are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	0	30,562	0
CO	0	0	0	0
NMHC	0	0	268	0
PM_{10}	0	0	3,572	0
SOx	0	0	38,871	0

V. CALCULATIONS (Continued)

c. Total AER for this project are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,296	98,130	1,580
CO	0	0	0	0
NMHC	0	0	268	0
PM_{10}	0	0	3,572	0
SOx	0	0	38,871	0

E. Air Quality Improvement Deduction:

10% of the Actual Emission Reductions (AER) shall be deducted for air quality improvement.

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	130	9,813	158
CO	0	0	0	0
NMHC	0	0	27	0
PM_{10}	0	0	357	0
SOx	0	0	3,887	0

F. Increase in Permitted Emissions (IPE)

1. The modifications of these boilers to add low-NOx burners and FGR system and to terminate the use of fuel oil #6 resulted in an increase in permitted emissions for CO of 122.4 lbs/day for each boiler.

   a. IPE = PE - PEPM

      (1) PE = Current potential to emit

      (2) PEPM = Potential to emit prior to modification

   b. IPE = 150 mmbtu/hr • (0.074 - 0.040) lbs/mmbtu • 24 hrs/day = 122.4 lbs/day

2. The increase did not trigger offset requirements at the time the reductions occurred.

V. CALCULATIONS (Continued)

G. Bankable Emission Reductions:

Bankable emission reductions are actual emission reductions minus the 10% air quality improvement deduction.

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	88,317	1,422
CO	0	0	0	0
NMHC	0	0	241	0
PM_{10}	0	0	3,215	0
SOx	0	0	34,984	0

VI. COMPLIANCE

Eligibility for the credits are as follows:

Real

The reductions were calculated using actual fuel usage during the baseline period, and emission factors from AP42 and the post-modification source test. The reductions are the result of the retrofit of a Lo-NOx burner and FGR system and the termination from use of fuel oil # 6 on each boiler, therefore the reductions are real.

Enforceable

The reductions are from the retrofit of each of the boilers with a Low-NOx burner and FGR system and from the termination from use of fuel oil # 6. The resulting NOx, CO, VOC, SOx, and PM_{10} emission limits for natural gas for each boiler are restricted by the Authority to Construct and the Permit to Operate conditions. As required by the District policy - "Adequate Conditions To Enforce Actual Emission Reductions (AER)" - dated September 7, 1994, the NOx, VOC, SOx and PM_{10} emission limits are a performance based limitation in pounds per million BTUs. The performance based limitations will ensure that the minimum control efficiencies for the modified boilers will be maintained at all loads without affecting the potential capacity of the boiler. The Permit to Operate and subsequent Permits to Operate for these boilers will maintain the minimum performance based limitations for NOx, VOC, SOx, and PM_{10}. The conditions shall include language stating that these conditions are to enforce those emission reductions of this project so that all future actions pertaining to this Permit to Operate will retain or add adequate permit conditions so that the granted emission reduction credits remain enforceable. The performance based condition to enforce the NOx, VOC, SOx, and PM_{10} emission reductions from this project are as follows:

V. CALCULATIONS (Continued)

The VOC emission concentration shall not exceed 0.0014 lbs/mmbtu. This performance based limit is to enforce the VOC emission reductions granted by certificate number N-33-1.

The NOx emission concentration shall not exceed 0.0364 lbs/mmbtu. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-33-2.

The PM_{10} emission concentration shall not exceed 0.005 lbs/mmbtu. This performance based limit is to enforce the PM_{10} emission reductions granted by certificate number N-33-4.

The SOx emission concentration shall not exceed 0.0006 lbs/mmbtu. This performance based limit is to enforce the SOx emission reductions granted by certificate number N-33-5.

Therefore the reductions are enforceable.

Quantifiable

The baseline emissions are based on District Rule 2201 Sec 3.7 using a two year baseline, by quarter, preceding the first quarter of 1991 when the Authority to Construct application was deemed complete. The emission reductions were calculated using actual fuel usage during the baseline period and documented emission factors as referenced in the Calculations Section of this report. Therefore the reductions are quantifiable.

Permanent

The Low-NOx burner and the FGR system are a permanent part of the boiler and cannot be removed without disabling the boiler. Permit conditions restricting the NOx, VOC, SOx, and PM_{10} emissions and restricting the fuel usage to natural gas were put on the Authority to Construct for the retrofit of these boilers, and were put on their Permit to Operate when the reductions were completed. Therefore the reductions are permanent.

Surplus

The addition of the low NOx burner and flue gas recirculation and the termination from use of fuel oil #6 on each of the boilers were voluntary. The resulting reduction in emissions was not mandated by any rules or regulations and was not accounted for in the SIP towards attainment of the Air Quality Standards or in demonstrating a Reasonable Further Progress towards meeting the Air Quality Standards. At the time of application, there were no regulations for reduction of emissions from existing boilers. Therefore the reductions are surplus.

VI. COMPLIANCE (continued)

Timeliness

The emission reduction credit application was submitted on August 20, 1993. The date the reduction occurred was June 20, 1994 when the Authority to Construct was implemented to a Permit to Operate. Pursuant to District Rule 2301 (Emission Reduction Credit Banking) Section 4.2, if the emission reductions occurred after September 19, 1991, then the emission reductions are deemed eligible emissions reductions, provided: the reductions are real, surplus, permanent, quantifiable, and enforceable; the AERs are calculated in accordance to Rule 2201 and comply with the definition of AER; and an application for emission reduction credits submitted within 180 days of the reduction. Therefore the application was submitted in a timely manner.

VII. RECOMMENDATION:

The recommendation is to issue emissions reduction credits to Tri-Valley Growers #5 for the retrofit of each of the two Nebraska 150 MMBTU/hr boilers with a Lo-NOx burner and FGR system and the termination from use of fuel oil #6 for the following amounts:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	88,317	1,422
CO	0	0	0	0
NMHC	0	0	241	0
PM_{10}	0	0	3,215	0
SOx	0	0	34,984	0

after the appropriate public notice period.

✓ NORTHERN REGION
___ CENTRAL REGION
___ SOUTHERN REGION

ERC/PUBLIC NOTICE CHECK LIST

PROJECT# 930450 MODEM FILE NAME: TVG#5.EVL

REQST.	COMPL.	
___	___	ERC TRANSFER OF PREVIOUSLY BANKED CREDITS
✓	___	ERC PRELIMINARY PUBLIC NOTICE
___	___	ERC FINAL PUBLIC NOTICE
___	___	NSR/CEQA PRELIMINARY PUBLIC NOTICE
___	___	NSR/CEQA FINAL PUBLIC NOTICE

ENCLOSED DOCUMENTS REQUIRE:

✓ GA Enter Correct Date, Print All Documents from Modemed File and Obtain Directors Signature

✓ GA Send ***PRELIMINARY*** Notice Letters to CARB, EPA and Applicant; Including the Following Attachments:
- ✓ Application Evaluation
- ✓ Other Public Notice

✓ GA Send ***PRELIMINARY*** Public Notice for Publication to The Merced Sun Times (NEWSPAPER)

✓ GA Send Signed Copies of ***PRELIMINARY*** Notice Letters to Regional Office Attn: Anthony Mendes

___ ___ Director's Signature and District Seal Embossed on ERC Certificates

___ ___ Director's Signature on Cover Letter and Mail Cover Letter & ERC Certificates by Certified Mail to:
- ___ Applicant: *Applicant Address*
- ___ Applicant and Additional Addressees (see cover letters)
- ___ Other

___ ___ Send Copies of Signed and Seal Embossed ERC Certificates and Signed cover letter to Regional Office Attn:

___ ___ Other Special Instructions (please specify)

Date Completed _____/By_____

Date Added to Seyed Directory: C:\AW directory on 01/??/95

Upon Completion FAX to Regional Office Attn: Steve Howie

GA

San Joaquin Valley
Unified Air Pollution Control District

COPY

February 1, 1995

Robert Bennett
Tri-Valley Growers
P. O. Box 511
Los Banos, CA 93635

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Bennett:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA.

Also enclosed is a copy of the Preliminary Public Notice for this project which will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. Should you have any questions please telephone Steve Howie of Permit Services at the Modesto office at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
(209) 545-7000 • Fax (209) 545-8652

Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

San Joaquin Valley
Unified Air Pollution Control District

February 1, 1995

Raymond Menebroker, Chief
Project Assessment Branch
Stationary Source Division.
California Air Resources Board
P. O. Box 2815
Sacramento, CA 95814-2815

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Menebroker:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA.

Also enclosed is the Preliminary Public Notice for this project which will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. Should you have any questions please telephone Steve Howie of Permit Services at the Modesto office at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

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San Joaquin Valley
Unified Air Pollution Control District

February 1, 1995

Ken Bigos, Chief
New Source Section
Air and Toxics Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

RE: Preliminary Public Notice - Emissions Reduction Credit Certificates
Project # 930450

Dear Mr. Bigos:

Enclosed, for your review and comment, is the analysis of Tri-Valley Growers' request for emission reduction credits for the voluntary retrofit of two Nebraska boilers with NOx control equipment and the discontinuation of the use of fuel oil # 6 at 12045 S. Ingomar Grade, Los Banos, CA.

Also enclosed is a copy of the Preliminary Public Notice for this project which will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. Should you have any questions please telephone Steve Howie of Permit Services at the Modesto office at (209) 545-7000.

Sincerely,

Seyed Sadredin
Director of Permit Services

SH/sa
Enclosures
c: Anthony Mendes, Permit Services Manager - Northern Region

David L. Crow
Executive Director/Air Pollution Control Officer
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

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4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
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(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

Merced Sun-Star

NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
EMISSION REDUCTION CREDIT CERTIFICATES

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer solicits public comment on the proposed issuance of Emission Reduction Credit Certificates to Tri-Valley Growers for the voluntary retrofit of two Nebraska boilers each with a Low-NOx burner and a flue gas recirculation system, and the discontinuation of the use of fuel oil # 6 located at 12045 S. Ingomar Grade, Los Banos, CA. The amount of emission reductions proposed are 24 pounds per year of VOC; 84,640 pounds per year of NOx; 332 pounds per year of PM_{10}; and 3,615 pounds per year of SOx.

The analysis of the regulatory basis for these certificates, and of the resulting effect on ambient air quality, is available for public inspection at the District office at the address below. Written comments on Project # 930450 must be submitted within 30 days of the publication date of this notice to SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, NORTHERN REGION, 4230 KIERNAN AVE, SUITE 130, MODESTO, CA 95356.

ERC APPLICATION EVALUATION
Project # 930450

Application prepared for:	Tri-Valley Growers # 5 P.O. Box 511 Los Banos, CA., 93635	Engineer: Date:	Steve Howie January 31, 1995
Contact:	Robert Bennett		
Phone:	(209) 572-5564		
Application received:	August 20, 1993		
Application deemed complete:	August 24, 1993		

I. SUMMARY:

Tri-Valley Growers (TVG) operates a canning facility at 12045 S. Ingomar Grade, Los Banos. Currently, the facility has 2 boilers under permit with the District. TVG has completed the retrofit of the existing boilers each with a NOx control system, and has terminated the use of fuel oil # 6. The NOx control system for each boiler includes a Todd Low NOx Dynaswirl burner with flue gas recirculation (FGR). The retrofits for both boilers were authorized under Authority to Construct Permits 90-25 and 90-26 issued by Merced County Air Pollution Control District on March 16, 1991. The project was completed and reductions were generated on May 27, 1993 when a source test was accomplished to verify results of the issued Authority to Construct Permits and is operating under Permits to Operate N-1399-1-1 and N-1399-2-1. The amount of emission reductions that will be granted by the District are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	81,467	2,007
CO	0	0	0	0
NMHC	0	0	24	0
PM_{10}	0	0	332	0
SOx	0	0	3,615	0

The Emission Reduction Certificate filing numbers are:

- N-33-1 ☞ VOC reduction credits
- N-33-2 ☞ NOx reduction credits
- N-33-4 ☞ PM_{10} reduction credits
- N-33-5 ☞ SOx reduction credits

II. APPLICABLE RULES:

Rule 2201: New and Modified Stationary Source Review Rule
Rule 2301: Emission Banking Credit

III. LOCATION OF REDUCTIONS:

12045 S. Ingomar Grade
Los Banos, CA

IV. METHOD OF GENERATING REDUCTIONS:

A. Equipment Description:

Boiler #1: Boiler Manufacturer: Nebraska boiler NS-G-99
Serial No. 2D-1690

1. Burner Specifications
   Manufacturer: Todd (natural gas only)
   Heat Input: 150 MMBtu/hr
   Fuel: Natural Gas
2. Flue gas recirculation system (natural gas)

Boiler #2: Boiler Manufacturer: Nebraska boiler NS-G-99
Serial No. 2D-1691

1. Burner Specifications
   Manufacturer: Todd (natural gas only)
   Heat Input: 150 MMBtu/hr
   Fuel: Natural Gas
2. Flue gas recirculation system (natural gas)

B. Method of Reductions:

The reductions are from the permanent retrofit of these boilers with a Lanais burner and a flue gas recirculation system on the natural gas firing system, and the termination of fuel oil # 6 usage. This will reduce the total VOC, NOx, PM_{10}, and SOx output.

V. EMISSIONS CALCULATIONS

A. Assumptions and Emission Factors

1. Determining the Actual Emissions Reductions (AER) Calculation procedures for determining AER:

Actual emissions reduction due to the installation of a control device or

V. EMISSIONS CALCULATIONS (Cont'd)

due to implementation of more efficient process or material is as follows:

AER = HAE * CE

Where

HAE = Historical Actual Emissions of the unit prior to modification (REF: District's Rule 2201 Sec 6.2.1)

CE = Control efficiency of the proposed air pollution control technology. Reductions due to lowering of throughput rates or operating hours shall not be considered in determining control efficiency.(REF: District's Rule 2201 Sec 6.2.4).

HAE is defined as the Historical Actual Emissions having actually occurred based on source tests or calculated using actual fuel consumption or process weight, recognized emissions factors or other data approved by the Control Officer which most accurately represent the emissions during the baseline period. (REF: District's Rule 2201 Sec.6.2.1)

Adding NOx control equipment will increase the control efficiency when fired on natural gas. The termination from use of fuel oil # 6 will also increase the control efficiency when compared to the firing of natural gas for the same period of time.

2. Emission factors:

a. Emission factors before boiler modifications firing on natural gas (Heat output is 1000 btu/ft^3)

REF: AP42 table 1.4-1 (> 100 MMBTU/hr cap.)

NOx	* 0.363 lbs/MMBTU
CO	0.040 lbs/MMBTU
NMHC	0.0014 lbs/MMBTU
PM_{10}	0.005 lbs/MMBTU6
SOx	0.0006 lbs/MMBTU

* NOx emission factor based on a 80% load on each boiler for a factor of 0.66 (AP42 Fig. 1.4-1). Emission factor used is: NOx = 550(.66)lbs/1MM ft^3 ÷ 1000 btu/ft^3

V. EMISSIONS CALCULATIONS (Cont'd)

b. Emission factors before boiler modifications firing on fuel oil # 6 (Heat output is 150,000 btu/gal)

REF: AP42 table 1.3-1 (> 100 MMBTU/hr cap.)

NOx	0.447 lbs/MMBTU
CO	0.033 lbs/MMBTU
NMHC	0.005 lbs/MMBTU
PM_{10}	* 0.053 lbs/MMBTU
SOx	* 0.523 lbs/MMBTU

* Based on a sulfur content of 0.5% (supplied by source) and fuel oil # 6 heat content of 150,000 btu/gl. Emission factors used are:

SOx lbs/mmbtu = $(157(.5)_{SO2})$lbs/1000 gals ÷ 150,000 btu/gal • 10^6 btu/1 mmbtu

Because the AP42 SOx emission factor for natural gas is shown as SO_2, the fuel oil SOx emission factor will be shown as SO_2 also.

PM_{10} lbs/mmbtu = (10(.5) + 3)lbs/1000 gals ÷ 150,000 btu/gal • 10^6 btu/1 mmbtu

c. Emission factors after the boiler modification (natural gas only)

REF: Emission Factors as permitted. NOx, CO emission factors verified by source testing accomplished by Best Environmental on May 27, 1993

NOx	(verified by testing)	0.0364 lbs/MMBTU
CO	(verified by testing)	0.074 lbs/MMBTU
NMHC	(AP 42 table 1.4-1)	0.0014 lbs/MMBTU
PM_{10}	(AP 42 table 1.4-1)	0.005 lbs/MMBTU
SOx	(AP 42 table 1.4-1)	0.0006 lbs/MMBTU

B. Baseline Period Determination and Data

The baseline period, for this project, is defined as the two consecutive years of operation immediately prior to the submission of the complete Authority to Construct application (REF: Rule 2201 Section 3.7.1)

The Authority to Construct Permits for the retrofit of these boilers were deemed complete on February 27, 1990. The baseline emissions were determined by using the actual gas and fuel oil usage logs for the eight complete calendar quarters of operation immediately prior to February 27, 1990.

V. EMISSIONS CALCULATIONS (Cont'd)

Natural gas usage - Therms (Total usage for both boilers, combined)				
	First quarter	Second quarter	Third quarter	Fourth quarter
1988	0	0	2,809,133	96,867
1989	0	79,343	2,538,985	39,672
Average	0	39,672	2,674,059	68,270

Fuel oil # 6 usage - Gallons (Total usage for both boilers, combined)				
	First quarter	Second quarter	Third quarter	Fourth quarter
1988	0	0	0	0
1989	0	0	102,500	0
Average	0	0	51,250	0

Maximum allowed for natural gas in one year by permit was 3000 hrs/year for both boilers combined (max. 150 mmbtu/hr) or 4.5 MM therms/year (REF: Merced County Air Pollution Control District Permits to Operate # 3030100101,2).

Maximum allowed for fuel oil # 6 @ 0.5% sulfur content was 1250 hrs/year for both boilers combined or 1.25 MM gallons/year (REF: Merced County Air Pollution Control District Permits to Operate # 3030100101,2).

C. Historical Actual Emissions (HAE)

1. Because both boilers are identical types of boilers (same manufacturer, model number, and size), the emissions calculations will be based on total use of both boilers combined.

2. Formulas used:

Formula for use with natural gas

$$E.F.\frac{lbs}{MMBTU} * \frac{100\,kBTU}{1\,therm} * \frac{(gas\ usage)\,therms}{QTR} = \frac{lbs}{qtr}$$

Formula for use with fuel oil 6

$$E.F.\frac{lbs}{MMBTU} * \frac{150{,}000\,BTU}{1\,gallon} * \frac{(oil\ usage)\,gallons}{QTR} = \frac{lbs}{qtr}$$

Where: E.F. are the Emission Factors before modification

V. EMISSIONS CALCULATIONS (Cont'd)

Emissions from natural gas usage

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,440	97,068	2,478
CO	0	159	10,696	273
NMHC	0	6	374	10
PM_{10}	0	20	1,337	34
SOx	0	2	160	4

Emissions from fuel oil # 6 usage

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	0	3,436	0
CO	0	0	254	0
NMHC	0	0	38	0
PM_{10}	0	0	407	0
SOx	0	0	4,021	0

D. Actual Emissions Reductions

The control efficiency (CE) for all pollutants are as follows:

$$CE(\%) = \frac{EF_B - EF_A}{EF_B} * 100$$

Where:

EF_B = Emission factor of each pollutant before modification
EF_A = Emission factor of each pollutant after modification

CE for natural gas burner modification

	EF_B	EF_A	CE (%)
NOx	0.363 lbs/MMBTU	0.0364 lbs/MMBTU	90
CO	0.040 lbs/MMBTU	0.074 lbs/MMBTU	0.0
NMHC	0.0014 lbs/MMBTU	0.0014 lbs/MMBTU	0.0
PM_{10}	0.005 lbs/MMBTU	0.005 lbs/MMBTU	0.0
SOx	0.0006 lbs/MMBTU	0.0006 lbs/MMBTU	0.0

V. EMISSIONS CALCULATIONS (Cont'd)

CE from the termination of fuel oil # 6

	$EF_{B\ (fuel\ oil)}$	$EF_{A\ (natural\ gas)}$	CE (%)
NOx	0.447 lbs/MMBTU	0.0364 lbs/MMBTU	91.9
CO *	0.033 lbs/MMBTU	0.074 lbs/MMBTU	0.0
NMHC	0.005 lbs/MMBTU	0.0014 lbs/MMBTU	72
PM_{10}	0.053 lbs/MMBTU	0.005 lbs/MMBTU	90.6
SOx	0.523 lbs/MMBTU	0.0006 lbs/MMBTU	99.9

* All negative control efficiencies shall be set to zero (SJVUAPCD Policy "Calculation Procedures for Determining Control Efficiency", dated March 25, 1992)

Actual Emission Reductions (AER) are as follows:

AER for the retrofit of the two boilers with NOx control equipment on the natural gas system are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,296	87,361	2,230
CO	0	0	0	0
NMHC	0	0	0	0
PM_{10}	0	0	0	0
SOx	0	0	0	0

AER for the termination from use of fuel oil # 6 are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	0	3,158	0
CO	0	0	0	0
NMHC	0	0	27	0
PM_{10}	0	0	369	0
SOx	0	0	4,017	0

V. EMISSIONS CALCULATIONS (Cont'd)

Total AER for this project are as follows:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,296	90,519	2,230
CO	0	0	0	0
NMHC	0	0	27	0
PM_{10}	0	0	369	0
SOx	0	0	4,017	0

E. Air Quality Improvement Deduction:

10% of the Actual Emission Reductions (AER) shall be deducted for air quality improvement.

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	130	9,052	223
CO	0	0	0	0
NMHC	0	0	3	0
PM_{10}	0	0	37	0
SOx	0	0	402	0

F. Increase in Permitted Emissions (IPE)

The modifications of these boilers to add low-NOx burners and FGR system and to terminate the use of fuel oil # 6 resulted in an increase in permitted emissions for CO of 122.4 lbs/day for each boiler.

IPE = PE - PEPM

PE = Current potential to emit
PEPM = Potential to emit prior to modification
IPE = 150 mmbtu/hr • (0.074 - 0.040) lbs/mmbtu * 24 hrs/day = 122.4 lbs/day

The increase did not trigger BACT or offset requirements at the time the reductions occurred.

G. Bankable Emission Reductions:

Bankable emission reductions are actual emission reductions minus the 10% air quality improvement deduction.

V. EMISSIONS CALCULATIONS (Cont'd)

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	81,467	2,007
CO	0	0	0	0
NMHC	0	0	24	0
PM_{10}	0	0	332	0
SOx	0	0	3,615	0

VI. COMPLIANCE

Eligibility for the credits are as follows:

Real

The reductions were calculated using actual fuel usage during the baseline period, and emission factors from AP42 and the post-modification source test. The reductions are the result of the retrofit of a Lo-NOx burner and FGR system and the termination from use of fuel oil # 6 on each boiler, therefore the reductions are real.

Enforceable

The reductions are from the retrofit of each of the boilers with a Low-NOx burner and FGR system and from the termination from use of fuel oil # 6. The resulting NOx, CO, VOC, SOx, and PM_{10} emission limits for natural gas for each boiler are restricted by the Authority to Construct and the Permit to Operate conditions. The NOx, SOx, VOC, and PM_{10} emission limits are based on a performance based limitation in pounds per million BTU, as required by District policy dated September 7, 1994, therefore the reductions are enforceable.

Quantifiable

The baseline emissions are based on District Rule 2201 Sec 3.7 using a two year baseline, by quarter, preceding the first quarter of 1990 when the Authority to Construct application was deemed complete. The emission reductions were calculated using actual fuel usage during the baseline period and documented emission factors as referenced in the Calculations Section of this report. Therefore the reductions are quantifiable.

Permanent

The Low-NOx burner and the FGR system are a permanent part of the boiler and cannot be removed without disabling the boiler. Permit conditions restricting the NOx, VOC, SOx, and PM_{10} emissions and restricting the fuel usage to natural gas

VI. COMPLIANCE (Cont'd)

were put on the Authority to Construct for the retrofit of these boilers, and were put on their Permit to Operate when the reductions were completed. Therefore the reductions are permanent.

Surplus

The addition of the low NOx burner and flue gas recirculation and the termination from use of fuel oil # 6 on each of the boilers were voluntary. The resulting reduction in emissions was not mandated by any rules or regulations and was not accounted for in the SIP towards attainment of the Air Quality Standards or in demonstrating a Reasonable Further Progress towards meeting the Air Quality Standards. At the time of application, there were no regulations for reduction of emissions from existing boilers. Therefore the reductions are surplus.

Timeliness

The emission reduction credit application was submitted on August 20, 1993. The date the reduction occurred was May 27, 1993. Pursuant to District Rule 2301 (Emission Reduction Credit Banking) Section 4.2, if the emission reductions occurred after September 19, 1991, then the emission reductions are deemed eligible emissions reductions, provided: the reductions are real, surplus, permanent, quantifiable, and enforceable; the AERs are calculated in accordance to Rule 2201 and comply with the definition of AER; and an application for emission reduction credits submitted within 180 days of the reduction. Therefore the application was submitted in a timely manner.

VII. RECOMMENDATION:

The District recommends that emission reduction credits be issued to Tri-Valley Growers # 5 for the retrofit of each of the two Nebraska 150 MMBTU/hr boilers with a Lo-NOx burner and FGR system and the termination from use of fuel oil # 6 for the following amounts:

lbs/QTR	First Qtr	Second Qtr	Third Qtr	Fourth Qtr
NOx	0	1,166	81,467	2,007
CO	0	0	0	0
NMHC	0	0	24	0
PM_{10}	0	0	332	0
SOx	0	0	3,615	0

after the appropriate public notice period. The Permit to Operate and subsequent Permits to Operate for this boiler shall maintain adequate permit conditions so that the granted emission reduction credits remain enforceable. The enforceable

VII. RECOMMENDATION: (Cont'd)

conditions for the VOC, NOx, SOx, PM_{10} reductions that will be maintained on the Permit to Operate are as follows:

1. Source testing to demonstrate compliance with permit conditions and all rules and regulations shall be conducted on a biennial basis.

2. The boiler shall only be fired on natural gas.

3. The VOC emission concentration shall not exceed 0.0014 lbs/mmbtu. This performance based limit is to enforce the VOC emission reductions granted by certificate number N-33-1.

4. The NOx emission concentration shall not exceed 0.0364 lbs/mmbtu. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-33-2.

5. The PM_{10} emission concentration shall not exceed 0.005 lbs/mmbtu. This performance based limit is to enforce the PM_{10} emission reductions granted by certificate number N-33-4.

6. The SOx emission concentration shall not exceed 0.0006 lbs/mmbtu. This performance based limit is to enforce the SOx emission reductions granted by certificate number N-33-5.

MICHAEL FORD M.P.H.
Director of Public Health
Information
385-7710
Administration
385-7700
Laboratory
385-7707
Personal Health Services
385-7710
Jeff Palsgaard M.S. Director
Division of Environmental Healt
385 E. 13th St.
385-7391

DEPARTMENT OF PUBLIC HEALTH

POST OFFICE BOX 471 - 240 E. 15TH STREET
MERCED, CALIFORNIA 95341-0471

AIR POLLUTION CONTROL DISTRICT

March 16, 1991

Mike Diroll
Project Engineer
Tri Valley Growers
2260 Tenaya Drive
Modesto, CA 95354

RE: Engineering Evaluations Complete

Dear Mr. Diroll:

Please find enclosed our engineering evaluations for the following boiler applications submitted by Tri Valley Growers. We will issue the Authority-to-Construct permits following your review and concurrence:

Application No.	Boiler Description	Facility
90-25	PO3030010101 Modification	Plant 5
90-26	PO3030010102 Modification	Plant 5

The engineering evaluations include emission reductions which are recorded in the Facility Net Emission Change. These emission reductions may benefit new on-site installations in the future. However, Tri Valley Growers may wish to "bank" these emission reductions in accordance with District Engineering Policy No. 2 (enclosed) for on-site and off-site use. Banking may be requested following issuance of the applicable Authority-to-Construct and Permit-to-Operate.

If you have any questions or comments, please feel free to contact this office at (209)385-7391.

Very truly yours,

Roland D. Brooks, R.E.H.S., M.P.A. RB
Air Pollution Control Manager

By: John E. Lathrop, E.I.T.
Air Pollution Control Engineer

TRI VALLEY GROWERS ™

PLEASE ADDRESS REPLY TO:
ENVIRONMENTAL SERVICES
POST OFFICE BOX 1211
MODESTO, CA. 95353

San Joaquin Valley Unified Pollution Control District
4230 Kiernan Ave.
Modesto, CA. 95356

Attn: Anthony Mendes, Permit Service Manager

August 3, 1993

RE: New Banking Application, Reference: [ATC# 3030010102 Date 4/01/93]

Dear Mr. Mendes

Please find the attached banking application for Tri Valley Growers, Plant 5 Volta. This application follows the completion of an Authority To Construct, ATC to retrofit two 125 MMBTU boilers with Low Nox Burners and Flue Gas Recirculation.

In addition to the banking application Tri Valley Growers would like to modify the emission limits contained in the ATC. Our reason for changing the limits set by the ATC is to allow TVG to bank more emission credits. The source test for the retrofitted boilers indicates that they are capable of achieving emissions that are lower than the limits specified in the ATC. After allowing for normal variation and aging in the system we believe that the boilers are capable of:

150 ppm

	ATC Limits #/day	Source Test #/day	Requested #/day
PM10	.005 18 .005	18	18
NOx	.0364 131 30 ppm	76.35 17.5	81 18.5
SOx	.0006 2.2	2.3	2.2
CO	.074 267 100 ppm	43.2 16.2	50 18.7
ROG	.0014 5	5	5

5.79 0

13.610

It is the intent of Tri Valley Growers to complete the ATC without change to the fuels listed in the ATC. Fuels listed in the ATC are Natural Gas and LPG. We will likely look to add #2 diesel for an emergency backup at a future date.

TVG wants to be sure that our banking include the maximum credits to which TVG is entitled. We plan to use these credits toward the installation of another boiler, at a future date.

Sincerely,

Bob Bennett
Environmental Services Supervisor
Tri Valley Growers

P.O. Box 7114, Battery St., San Francisco, California 94120-7114 Phone: (415) 445-1600 Telex: 27-9046 Fax: (415) 445-1628

TVG TRI VALLEY GROWERS

FACSIMILE TRANSMITTAL

DATE 2/13/95

To: Steve Howie
Name

SJVUAPCD
Company

City

545-2652
Facsimile Number

From: Bob Bennett
Name

CENTRAL PURCHASING DEPARTMENT
Post Office Box 1211
Modesto, CA 95353
Facsimile Number 572-5564

MESSAGE Please find Attached Letter 8/8/91 Application 90-25 and 90-26 Deemed Complete
Also Engineering Calculations from Merced 8/16/91
Note: They used a 3yr Avg 1988, 89, 90

Number of pages including cover page 12

If you should not receive the above total pages, please call (209) 572-5555.

JUAN

DEPARTMENT OF PUBLIC HEALTH

POST OFFICE BOX 471 - 240 E. 15TH STREET
MERCED, CALIFORNIA 95341-0471

MICHAEL FORD M.P.H.
Director of Public Health
Information
385-7710
Administration
385-7700
Laboratory
385-7707
Personal Health Services
385-7710
Jeff Palsgaard M.S. Director
Division of Environmental Health
385 E. 13th St.
385-7391

AIR POLLUTION CONTROL DISTRICT

March 8, 1991

Mike Diroll
Project Engineer
Tri Valley Growers
2260 Tenaya Drive
Modesto, CA 95354

RE: Applications Deemed Complete

Dear Mr. Diroll:

The following boiler applications submitted by Tri Valley Growers have been deemed complete:

Application No.	Boiler Description	Facility
90-25	PO3030010101 Modification	Plant 5
90-26	PO3030010102 Modification	Plant 5
90-52	PO3040080101 New 140k lb/hr	Plant M

If you have any questions, please feel free to contact this office at (209)385-7391.

Very truly yours,

Roland D. Brooks, R.E.H.S., M.P.A. RB
Air Pollution Control Manager

By: John E. Lathrop, E.I.T.
Air Pollution Control Engineer

Merced County Air Pollution Control District
385 East 13TH Street
Merced, CA 95340

Engineering Evaluation

Tri-Valley Growers
Plant 5 - Volta

Boiler Modification
Application No. 90-26 (90-25 IS SAME)

Permit No. 3030010102

JUAN,

I ASKED JOHN TO RE-CONSIDER ANNUAL SOURCE TESTING IN FAVOR OF BIENNIAL. HE WILL INVESTIGATE

Mike

March 16, 1991

ENGINEERING EVALUATION

Prepared By:

John E. Lathrop

Air Pollution Control Engineer

Approved By:

Roland D. Brooks

Air Pollution Control Manager

I. INTRODUCTION

The applicant, Tri/Valley Growers, proposes to install a new burner into the existing boiler PO#3030010102 at Plant 5 near Volta. The application was submitted on 2/27/90.

II. PROJECT LOCATION

Tri-Valley Growers Plant 5 is located at 12045 S. Ingomar Grade near Volta, CA.

III. EQUIPMENT DESCRIPTION

The application was submitted to modify one emission unit as follows:

Install New Todd Low NOx Dynaswirl Burner

New Burner Information:

Excess Air = 15%
Fuel Type = Natural Gas (LPG backup fuel)
Fuel Consumption = 150000 ft^3/hr

Existing Boiler Information:

Nebraska NS-G-99
Serial No. 2D-1691

Additional information:

Steam Pressure:	150 psig
Boiler Rating:	125,000 lb/hr of Steam
Emission Guarantee:	30 ppmvd NOx @ 3% O_2
	100 ppmvd CO @ 3% O_2

Air Pollution Control Devices:

Flue Gas Recirculation
Oxygen Trim

IV. OPERATING SCHEDULE

24 Hours per Day, Maximum
7 Days per Week
4 Months: June through September, typical (<3000 hr/season)

V. PERMIT SUMMARY

The permit application summary, Table 1, indicates that all pervious emission units were permitted prior to May 21, 1979.

Table 1. TRI-VALLEY GROWERS PLANT 5
Permit Application Summary

Date Received	Eventual P/O #'s	Description
09-13-74	3030010101	Nebraska NS-G-99, 125,000 lb/hr Steam
09-13-74	3030010102	Nebraska NS-G-99, 125,000 lb/hr Steam

VI. EMISSION CALCULATIONS

A. Current Emissions (BOILER S/N 2D-1691)

The historical fuel consumption and operating days are as follows:

	Fuel Consumption		
Year	Natural Gas (10^6 ft^3)	#6 Oil (10^3gal)	Operating Days
1988	145.3	0	60
1989	132.9	51.25	67
1990	82.72	444.73	58

The estimated "current emissions" (three year average) are as follows, assuming 1) seasonal operation, 2) fuel consumption and days of operation as specified by the applicant for 1988, 1989 and 1990, 3) Fuel oil #6 sulfur content of 0.5% and 4) emission factors per AP42:

	Current Emissions, lb/day				
Year	PM10	NOx	SOx	CO	ROC
1988	12.1	1329.2	1.5	96.7	3.4
1989	19.9	1142.2	61.2	83.2	3.4
1990	106.8	1298.2	602.8	95.4	7.8
AVG	46.3	1256.5	221.8	91.7	4.9

B. Proposed Emissions

The "proposed emissions" from this boiler is as follows, assuming 1) 30 ppmvd NOx @ 3% O_2, 2) Natural gas consumption @ 150,000 ft^3/hr (LPG emissions are assumed to be equivalent), 3) 24hr/day of operation, and 4) 100 ppmvd CO @ 3% O_2:

Proposed Emissions, lb/day				
PM10	NOx	SOx	CO	ROC
18	131	2.2	267	5.0

C. Net Emission Change (NEC) (Proposed - Current)

Net Emission Change, lb/day				
PM10	NOx	SOx	CO	ROC
-28.3	-1125.5	-219.6	175.3	0.1

D. Facility Net Emission Change (Added March 16, 1991)

In accordance with Rule 210.1 Part III.F.2 all negative emission changes are multiplied by 0.9 prior to determining the facility net emissions change. The balance of the emissions change shall be preserved in the small source siting allowance.

	Facility Net Emission Change, lb/day				
	PM10	NOx	SOx	CO	ROC
Existing Units	0	0	0	0	0
Current Mod	-25.5	-1013.0	-197.6	175.3	0.1
Facility NEC	-25.5	-1013.0	-197.6	175.3	0.1

VII. NSPS SUBPART D_b

This subpart is applicable to boilers with a heat input of 100 mmBtu/hr or greater. This subpart requires 1) Continuous emission monitors, or 2) monitor operating conditions to predict NOx emissions.

The applicant states that Tri-Valley Growers will set up a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

VIII. COMPLIANCE WITH APPLICABLE RULES

A. Applicable rules include the following:

Rule 210.1	-	New and Modified Stationary Source Review (NSR)
Rule 401	-	Visible Emissions
Rule 404	-	Particulate Matter Concentration
Rule 407	-	Sulfur Compounds
Rule 408	-	Fuel Burning Equipment
Rule 422	-	Code of Federal Regulations New Source Performance Standards (NSPS)

B. Rule 210.1 - NSR

1. Best Available Control Technology (BACT)

   The proposed equipment specified herein complies with the District's BACT requirement.

2. Offsets

   The estimated daily emission levels do not exceed the applicable offset triggers. Therefore, offsets are not required.

C. Rule 401 - Visible Emissions

Under normal circumstances, with proper air/fuel ratio, the visible emissions will be substantially below the Ringlemann 1 or equivalent opacity

D. Rule 404 - Particulate Matter Concentration

When firing on natural gas the particulate matter concentration will be as follows:

F_d = Dry F factor = 8710 dscf/10^6Btu[1] @ 68°F & 29.92 in. Hg

= 8578 dscf/10^6Btu @ 60°F & 29.92 in. Hg

$$Q_{sd} = \text{Gas Flow} = \frac{(170 \times 10^6 \text{ Btu/hr})(8578 \text{ dscf}/10^6\text{Btu})}{(60 \text{ min/hr})}$$

= 24304 dscfm

$$\text{PM10 conc} = \frac{(0.75 \text{ lb/hr})(7000 \text{ gr/lb})}{(24304 \text{ dscfm})(60 \text{ min})}$$

= 0.004 gr/dscf

Therefore, the PM matter concentration will be much less than 0.1 gr/dscf.

E. Rule 407 - Sulfur Compounds

When firing on natural gas, the SO_2 concentration will be as follows:

$$SO_2 \text{ conc.} = \frac{(0.1 \text{ lb/hr})}{(64 \text{ lb/lb mole})(24304 \text{ dscfm})(1.58 \times 10^{-7})}$$

= 0.41 ppmvd

Therefore, the maximum SO_2 concentration will be much less than 2000 ppm by volume.

F. Rule 422 - NSPS

The proposed monitoring and reporting plan specified herein complies with the District interpretation of 40CFR Subpart Db.

---

[1] Reference CFR 40, Pt. 60, App. A, Meth 19, Pg 958, July 1, 1990.

IX. CONCLUSION

Issue an Authority to Construct subject to the following conditions to assure compliance with all applicable rules and regulations:

GENERAL CONDITIONS

1. Facilities Operation

All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this Authority-to-Construct shall be maintained in good working order and be operated as efficiently as possible so as to minimize air pollution emissions and shall comply with all other applicable local, State and Federal rules and regulations.

2. Malfunction

The Merced County Air Pollution Control District shall be notified immediately of any failure of air pollution control equipment, emission monitoring equipment, or any process which results in an increase in emissions above any of the allowable emissions limits of these conditions or any State or Federal emission standards. In addition, the Merced County Air Pollution Control District shall be notified in writing within ten (10) days following the malfunction. This notification shall include a description of the equipment malfunction or abnormal operation, the date of the initial failure or equipment malfunction, the cause of the failure, the estimated emissions in excess of those allowed by these conditions, and the methods utilized to restore normal operations.

3. Right of Entry

The Merced County Air Pollution Control Officer, the Executive Officer of the California Air Resources Board, EPA Regional Administrator, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

a. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority-to-Construct, and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority-to-Construct, and

c. to inspect any equipment, operation, or method required in this Authority-to-Construct, and

d. to sample emissions from the source or require samples to be taken.

4. Public Nuisance

No air contaminant shall be released into the atmosphere which causes a public nuisance.

5. MCAPCD Rules and Regulations

The facility shall comply with all applicable MCAPCD rules and regulations.

6. Other Applicable Rules

The permittee shall comply with all other applicable local, State, and Federal rules and regulations.

SPECIAL CONDITIONS

1. Fuels. The 125000 lb/hr Nebraska Boiler shall be fired on natural gas. The maximum consumption rate of natural gas shall be 150000 scfh. The maximum consumption rate of LPG shall be 1596 gal/hr (@ 94,000 Btu/gal).

2. Daily Emission Limitations. The emissions from this boiler shall not exceed the following emission limitations:

	Natural Gas & LPG Emission Limitations	
Pollutant	(lb/mmBtu)	(lb/day)
PM10	0.005	18.0
NOx	0.0364	131.0
SOx	0.0006	2.2
CO	0.074	267.0
ROG	0.0014	5.0

3. Visible Emissions. No air contaminant shall be released into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringlemann 1 or equivalent opacity.

4. Emission Controls. The boiler shall be equipped with low NOx burner and flue gas recirculation.

5. Source Testing.

   a. Source testing shall be conducted using methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit-to-Operate conditions within 90 days of initial startup. Source testing shall be conducted annually thereafter.

   b. Source testing shall be conducted using the methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit to Operate conditions as requested by MCAPCD.

   c. A pretest plan outlining the test methods, procedures, and operating parameters shall be submitted for District approval at least 30 days prior to each test.

   d. The results of each test shall be submitted for the Districts evaluation no later than 60 days following each testing date.

6. Operating Schedule. The 125000 lb/hr Nebraska Boiler may operate 24 hours/day and 7 days/week.

7. Seasonal Source. Ninety percent of the facility's annual emissions shall occur within a consecutive 120 day period.

8. Recording Requirements. A daily log shall be maintained on the premises at all times and shall be made available for District inspection upon request. The log shall include the following:

   a. Record of daily fuel consumption per boiler. This information may be based on steam flow data and total facility natural gas consumption.

   b. Additional requirements as required to comply with NSPS CFR 60, Subpart D_b. This shall include a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

   c. The facility shall provide the District with the above information within a reasonable length of time upon request.

TRI VALLEY GROWERS™

PLEASE ADDRESS REPLY TO:

2260 TENAYA DRIVE
MODESTO, CALIFORNIA 95354

Steve Howe
Air Quality Specialist
SJVUAPCD
4230 Kiernan Ave. Suite 130
Modesto, CA 95356

April 12, 1994

Enclosed is a copy of our May 27th, 1993 *Emissions Compliance Testing Report* from Plant 5. Plant 5 is located in Volta, Merced County CA. Bob Bennett from our Environmental Services Department asked me to send you a copy. If you have any questions, please contact me at 572-5977.

Respectfully,

Carl Garrison

RECEIVED
APR 14 1994
SAN JOAQUIN VALLEY
UNIFIED A.P.C.D.
NO. REGION

Carl Garrison, P.E.
Project Engineer
Tri Valley Growers
2260 Tenaya Dr.
Modesto, CA 95354

TRI VALLEY GROWERS™

PLANT NO. 9
P.O. BOX 1211-95353
736 MARIPOSA ROAD
MODESTO, CA 95354
PHONE (209) 572-5754
FAX (209) 572-5298

BOB BENNETT
SUPERVISOR ENVIRONMENTAL SERVICES

1255 BATTERY STREET • POST OFFICE BOX 7114
SAN FRANCISCO, CALIFORNIA 94120-7114 • (415) 445-1600

TRI-VALLEY GROWERS

Plant 5 Boilers #1 & #2
Emissions Compliance Testing
Volta, California

Test Date: May 27, 1993

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

June 18, 1993

TRI-VALLEY GROWERS
2260 Tenaya Drive
Modesto, CA 95354

Attn: Carl Garrison

Subject: **Compliance emissions test report of two process boilers, #1 and #2 at Tri Valley Growers Plant 5.**

Test Date: May 27, 1993.

Sampling Location: Sampling was conducted at the common outlet stack of the two Nebraska Brooks 125,000 Lbs/hr steam boilers located at the Tri-Valley Growers Plant 5, 12045 S. Ingomar Grade, Volta, California.

Sampling Personnel: Sampling was performed by Regan Best and Jeff Mesloh of BEST ENVIRONMENTAL INC.

Observing Personnel: San Joaquin Valley Unified Air Pollution Control District (SJCUAPCD) personnel were not in attendance during the testing.

Process Description: The two natural gas fired Nebraska boilers are used to supply steam to Tri Valley Growers tomato packing process. The Nebraska Brooks boilers are rated at 125000 lb/hr of steam and are fired with natural gas. The boilers are equipped with Todd Low NOx Dynaswirl Boilers. Flue gas from both boilers exit through a common round stack divided in half by a steel wall.

Test Program: Triplicate 40 minute tests were performed on each boiler for nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO_2), and oxygen (O_2). Stack gas velocity was not measured during the test series due to the peculiar stack geometry. Natural gas fuel consumption rate was recorded during each test on both boilers. A fuel sample was drawn during the testing and analyzed by Zalco Laboratories of Bakersfield, CA.

Sampling and Analysis Methods: The following California Air Resources Board (CARB) sampling and analytical methods were used:

CARB Method 1-100	NOx, CO, CO_2, O_2
EPA Method 19	Volumetric Flowrate from Fuel Rate

TABLE 1
Tri-Valley Growers Plant 5 Boiler No.1 Outlet
CEMS Emissions Results

TEST	1	2	3	AVERAGE
TEST LOCATION	OUTLET	OUTLET	OUTLET	
TEST TIME	1312-1352	1359-1429	1445-1525	
TEST DATE	5-27-93	5-27-93	5-27-93	
FLOWRATE, SDCFM	20,962	20,927	21,015	20,968
O2, %	2.71	2.61	2.65	2.66
CO2, %	10.2	10.2	10.1	10.17
NOx, ppm	21.6	21.0	20.7	21.1
NOx, ppm corr. 3%, O2	21.3	20.6	20.3	20.7
NOx, lbs/hr	3.25	3.15	3.12	3.17
NOx, lbs/MMBtu	0.0258	0.0250	0.0247	0.0252
CO, ppm	37.3	29.3	30.0	32.2
CO, lbs/hr	3.42	2.68	2.75	2.95
CO, lbs/MMBtu	0.0272	0.0212	0.0218	0.0234
CO, ppm corr. 3%, O2	36.7	28.7	29.4	31.6

@ 125 [illegible] 21.3 corr

Where,

NOx = Oxides of Nitrogen (M.W. = 46)
O2 = Oxygen
CO2 = Carbon Dioxide
CO = Carbon Monoxide (M.W. = 28)
ppm = Parts Per Million Concentration
lbs/hr = Pounds Per Hour Emission Rate
SDCFM = Standard Dry Cubic Feet per minute
Lbs/MMBtu = Pounds per Million Btu Emission Factor

Calculations,

$$\text{lbs/hr} = \text{ppm} \times \text{SDCFM} \times 1.56 \times 10^{-7} \times \text{Mol. Wt.}$$

$$\text{ppm corr.} = \text{ppm} \times (17.9/20.9\text{-stack O2})$$

$$\text{lbs/MMBtu} = 8740 \times \text{ppm} \times 2.59 \times 10^{-9} \times \text{M.W.} \times (20.9/(20.9-\text{O2}))$$

TABLE 2
Tri-Valley Growers Plant 5 Boiler No.2 Outlet
CEMS Emissions Results

TEST	1	2	3	AVERAGE
TEST LOCATION	OUTLET	OUTLET	OUTLET	
TEST TIME	0900-0940	0948-1028	1038-1118	
TEST DATE	5-27-93	5-27-93	5-27-93	
FLOWRATE, SDCFM	20,279	19,878	20,075	20,077
O2, %	2.46	2.14	2.30	2.30
CO2, %	10.5	10.7	10.4	10.53
NOx, ppm	22.6	22.1	21.7	22.1
NOx, ppm corr. 3%, O2	21.9	21.1	20.9	21.3
NOx, lbs/hr	3.29	3.15	3.13	3.19
NOx, lbs/MMBtu	0.0267	0.0256	0.0254	0.0259
CO, ppm	8.9	7.3	6.1	7.4
CO, lbs/hr	0.79	0.63	0.53	0.65
CO, lbs/MMBtu	0.0064	0.0052	0.0043	0.0053
CO, ppm corr. 3%, O2	8.6	7.0	5.9	7.2

Where,

NOx = Oxides of Nitrogen (M.W. = 46)
O2 = Oxygen
CO2 = Carbon Dioxide
CO = Carbon Monoxide (M.W. = 28)
ppm = Parts Per Million Concentration
lbs/hr = Pounds Per Hour Emission Rate
SDCFM = Standard Dry Cubic Feet per minute
Lbs/MMBtu = Pounds per Million Btu Emission Factor

Calculations,

$$lbs/hr = ppm \times SDCFM \times 1.56 \times 10^{-7} \times Mol.\ Wt.$$

$$ppm\ corr. = ppm \times (17.9/20.9 - stack\ O2)$$

$$lbs/MMBtu = 8740 \times ppm \times 2.59 \times 10^{-9} \times M.W. \times (20.9/(20.0 - O2))$$

Instrumentation: The following continuous emission analyzers were used:

NOx	TECO Model 10 Chemiluminescent $NO/NO_2/NOx$ Analyzer
CO	Horiba VIA-510 Carbon Monoxide Analyzer
CO_2%	Horiba PIR-2000 Carbon Dioxide Analyzer
O_2	Teledyne Model 326A Oxygen Analyzer

Test Results: Emission results for Boiler #1 are presented in Table 1. Average NOx concentration and emission rate was 21.1 ppm and 3.17 lbs/hr. Average NOx concentration corrected to 3% O2 was 20.7 ppm. Average CO concentration and emission rate was 32.2 ppm and 2.95 lbs/hr. Average CO concentration corrected to 3% O2 was 31.6 ppm.

Emission results for Boiler #2 are presented in Table 2. Average NOx concentration and emission rate was 22.1 ppm and 3.19 lbs/hr. Average NOx concentration corrected to 3% O2 was 21.3 ppm. Average CO concentration and emission rate was 7.4 ppm and 0.65 lbs/hr. Average CO concentration corrected to 3% O2 was 7.2 ppm.

Btu content of the analyzed fuel sample gas was lower than that typically seen. Therefore it is possible that emission rates may be biased low.

Compliance test results are summarized below. Pounds per day are calculated on a 24 hour basis.

Parameter	Boiler #1	Boiler #2	SJVUADCD Limit
NOx Lbs/MMBtu	0.0252	0.0259	0.0364
NOx Lbs/day	76.1	76.6	131.0
CO Lbs/MMBtu	0.0234	0.0053	0.074
CO Lbs/day	70.8	15.6	267.0

Stack gas volumetric flowrate calculations, field data sheets, strip chart records, calibration gas certifications, laboratory reports and copies of the Autorities to Construct are appended to this report.

If you have any questions regarding this report, or if BEST ENVIRONMENTAL can be of any further assistance, please call.

Prepared by

Regan Best

Regan Best
Source Test Manager

APPENDICES

CALCULATIONS

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 1
Run 1
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.71	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2531.1	CFM
Corrected Fuel Rate(SCFM)	2531.1	SCFM
Million Btu per minute	2.154	MMBtu/min
Stack Gas Flowrate(SDCFM)	20,961.9	SDCFM
Heat Input (MMBtu/hour)	129.2	MMBtu/HR
Fuel Flowrate (SCFH)	151866.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 1
Run 2
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.61	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2540.8	CFM
Corrected Fuel Rate(SCFM)	2540.8	SCFM
Million Btu per minute	2.162	MMBtu/min
Stack Gas Flowrate(SDCFM)	20,927.2	SDCFM
Heat Input (MMBtu/hour)	129.7	MMBtu/HR
Fuel Flowrate (SCFH)	152448.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 1
Run 3
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.65	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2545.9	CFM
Corrected Fuel Rate(SCFM)	2545.9	SCFM
Million Btu per minute	2.166	MMBtu/min
Stack Gas Flowrate(SDCFM)	21,015.2	SDCFM
Heat Input (MMBtu/hour)	130.0	MMBtu/HR
Fuel Flowrate (SCFH)	152754.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 2
Run 1
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.46	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2482.3	CFM
Corrected Fuel Rate(SCFM)	2482.3	SCFM
Million Btu per minute	2.112	MMBtu/min
Stack Gas Flowrate(SDCFM)	20,279.1	SDCFM
Heat Input (MMBtu/hour)	126.7	MMBtu/HR
Fuel Flowrate (SCFH)	148938.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 2
Run 2
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.14	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2475.4	CFM
Corrected Fuel Rate(SCFM)	2475.4	SCFM
Million Btu per minute	2.106	MMBtu/min
Stack Gas Flowrate(SDCFM)	19,877.7	SDCFM
Heat Input (MMBtu/hour)	126.4	MMBtu/HR
Fuel Flowrate (SCFH)	148524.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

VOLUMETRIC FLOWRATE BY FUEL RATE CALCULATIONS

Tri-Valley Growers Plant No. 5- Boiler No. 2
Run 3
5/27/93

Gas Line Pressure(PSI)	0.0	pounds per square inch
Gross Calorific Value	850.84	Btu / cubic foot
Stack Oxygen	2.30	%
Gas F-Factor	8471.5	SDCF/MMBtu
Realtime Fuel Rate(CFM)	2478.6	CFM
Corrected Fuel Rate(SCFM)	2478.6	SCFM
Million Btu per minute	2.109	MMBtu/min
Stack Gas Flowrate(SDCFM)	20,074.7	SDCFM
Heat Input (MMBtu/hour)	126.5	MMBtu/HR
Fuel Flowrate (SCFH)	148716.0	SCFH

Calculations,

SCFM = (cfm x gas line pressure + 14.7) / 14.7

MMBTU/MIN = (SCFM x BTU/ft3) / 1,000,000

SDCFM = Gas F-Factor x MMBTU/Minute x (20.9/ 20.9 - stack 02)

SCFH = SCFM x 60

Heat Input = MMBtu/min x 60

FIELD DATA SHEETS

BEST ENVIRONMENTAL
CONTINUOUS MONITOR DATA SHEET

Plant TVG Plant 5
Date 5-27-93
Test Location Boiler No. 1 Outlet
Run Number 1, 2, 3
Operator B. Best, J. Meslah

Ambient Temperature
Barometric Pressure 29.9
Static Pressure Duct
Fuel Natural Gas
Number

Time	Sample Point	Fuel Flow	Dry Uncorrected O_2 %	CO_2 %	CO ppm	SO_2 ppm	NO ppm	NO_x ppm	3% O_2 Dry ppm	NO_x ppm	Hydrocarbons THC	CH_4	Non CH_4	TOC ppm	CO2 ppm	VOC ppm	Comments
1305	CAL		7.78	11.2	37			92.9									
1312	RUN1		2.7	10.2	48			21		20.7							151,864 SCFH/gas
1322			2.75	10.15	34			21.5		21.2							
1332			2.7	10.2	35			22		21.6							
1342			2.7	10.2	35			22		21.6							
1352	End		(2.71)	(10.2)	(37.3)			(21.6)		(21.0)							Average
			0	0	0			0									zero
			7.8	11.2	39			92.5									Span
1359	RUN2		2.65	10.2	35			20.5		20.1							
1409			2.6	10.2	28			21		20.5							151,451 SCFH/gas
1419			26	10.2	28			20.5		20.5							
1429			2.6	10.2	26			21.4		20.9							
1439	End		(2.61)	(10.2)	(29.3)			(21.0)		(20.5)							Average
			0	0	0			0									zero
			11.2	7.25	59			91.5									Span
1445	RUN3		2.65	10.2	30			20.5		20.1							
1455		2.6	2.64	10.1	29			20.7		20.2							
1505			2.65	10.1	50			20.7		20.3							
1515			2.65	10.1	31			20.7		20.3							
1525	End		(2.65)	(10.1)	(30)			(20.7)		(20.2)							Average
			0	0	0			0									zero
			7.25	11.2	57			90.8									Span

BEST ENVIRONMENTAL
CONTINUOUS MONITOR DATA SHEET

Plant TVG Plant 5
Date 5-27-93
Test Location Aeriator No. 2 Outlet
Run Number 1, 2, 3
Operator R. Scott / D. Marsh

Ambient Temperature
Barometric Pressure 29.90
Static Pressure Duct
Fuel Natural 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	CO_2 ppm	VOC ppm	Comments
Cal	885Y		7.78	11.22	39.0			90.4									Leak check O.K
0900	Start ①		2.5	10.4	8.5			22.5		21.9							~~145 895~~ SCFH gas
0910			2.45	10.4	9.0			22.5		21.8							148,934
0920			2.4	10.5	9.0			22.9		21.8							
0930			2.4	10.5	9.0			22.7		22.0							
0940	End		(2.46)	(10.46)	(8.9)			(22.6)		(21.9)							Average
			0	0	41.2			73									zero
			8.4	11.2	41			91									span
0948	RUN 2		2.1	10.7	8.5			20.5		19.5							148,523 SCFH gas
0958			2.05	10.8	8.0			21.5		20.4							
1008			2.2	10.7	6.0			23.5		22.5							
1018			2.2	10.75	6.5			23		22.0							
1028	End		(2.19)	(10.7)	(7.3)			(22.1)		(21.1)							Average
			0	0	40.7			+1.5									zero
			7.8	11.0	39.4			92.5									span
1038	RUN 3		2.25	10.4	6.2			21.2		20.3							
1048			2.3	10.4	6.0			21.7		20.8							148,718 SCFH Gas
1058			2.3	10.4	6.0			21.7		20.8							
1108			2.3	10.4	6.0			22.0		21.2							
1118	End		(2.3)	(10.4)	(6.05)			(21.7)		(20.8)							Average
			0	0	40.7			71									zero
			7.8	11.2	39.7			90.5									Span

TRI-VALLEY GROWERS

BOILER #2
BOILER #1 (A RUN)

RUN 1 $\frac{300}{32.59} \times 3600 \times \frac{64.99}{14.7} \times \left(\frac{520}{460+51.52}\right) =$ 148,939 9.25 A.M.

RUN 1A 31.99 64.94 50.84 = 151,864.63 (13:17)

RUN 2 $\frac{300}{32.65} \times 3000 \times \frac{64.90}{14.7} \times \left(\frac{520}{460+51.31}\right) =$ 148,523.6

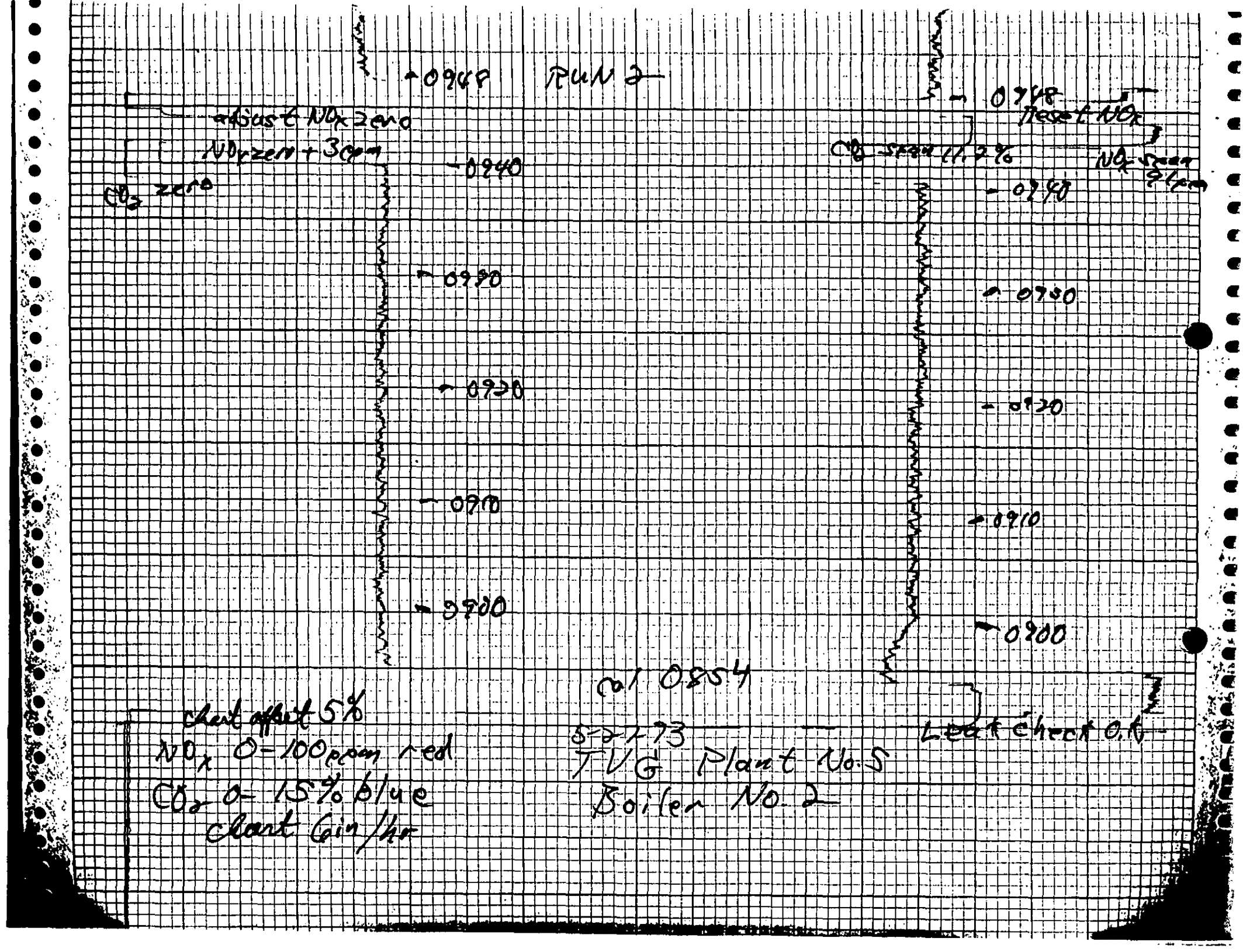
RUN 2A 31.35 64.91 50.72 = 152,450.6

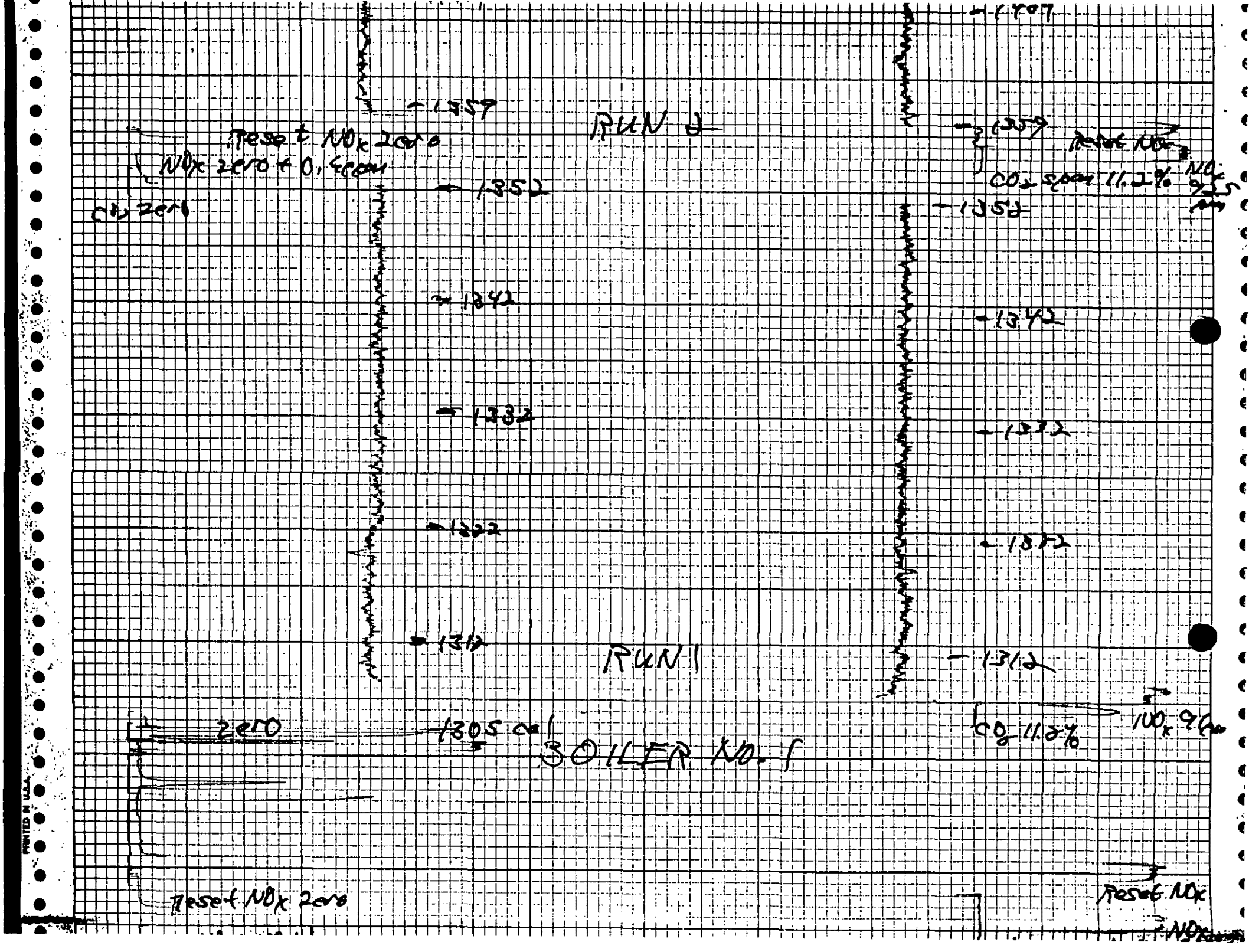
RUN 3 $\frac{300}{32.61} \times 3600 \times \frac{64.88}{14.7} \times \left(\frac{520}{460+51.14}\right) =$ 148,718.1

RUN 3A 31.90 64.94 50.75 = 152,751.876

BASELINE $\frac{\text{DIAL REV} \times 100}{\text{TIME}} \times 3600 \times \frac{\text{PSIA}}{14.7} \times \left(\frac{520}{460 + \text{TEMP}}\right) =$ SCFH

STRIP CHART RECORDS


0948 RUN 2
exhaust NOx zero
NOx zero + 30%
CO2 zero
0940
0930
0920
0910
0900
0948
reset NOx
CO2 span 11.2%
NOx span
0940
0930
0920
0910
0900
Leak check O.K.
chart offset 5%
NOx 0-100 ppm red
CO2 0-15% blue
chart 6in/hr
COI 0854
5-2-73
TVG Plant No. 5
Boiler No. 2


RUN 3
Reset NOx zero
NOx zero + 0.4 span
CO2 zero
1357
1352
1347
1342
1337
1332
1327
1322
1317
1312
1307
1357
1352
1347
1342
1337
1332
1327
1322
1317
1312
Reset NOx
CO2 span 11.2% NOx span
RUN 1
BOILER NO. 1
zero
1305 cal
CO2 11.2%
NOx span
Reset NOx zero
Reset NOx
NOx

RUN 3

NOx zero + 0.8 ppm

CO_2 zero

1525

1515

1505

1495

(adjusted NO_x zero)

NO_x zero + (ppm)

1445

1439

CO_2 zero

1429

1419

NOx 90.8 ppm

CO_2 span 11.2%

1525

1515

1505

1495

1445

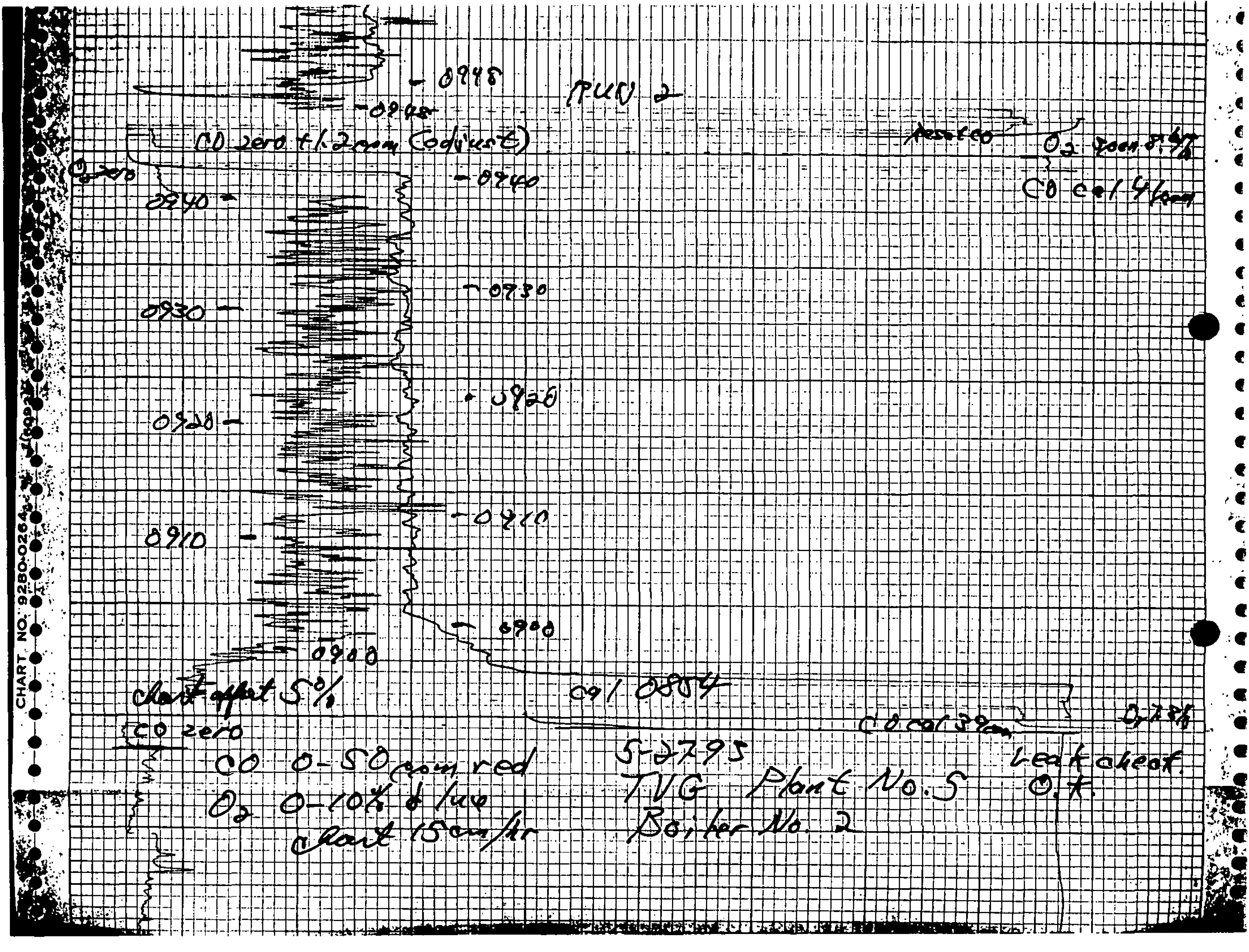
CO_2 span 11.2%

NOx 91.4 ppm

1437

1429

1419


RUN 2
0948
0940
0930
0920
0910
0900
CO zero +1.2ppm (adjust)
O2 zero
cal 0854
chart offset 5%
CO zero
CO 0-50ppm red
O2 0-10% blue
chart 15cm/hr
5-2795
TVG Plant No. 5
Boiler No. 2
Leak check O.K.
CHART NO. 9280-0264

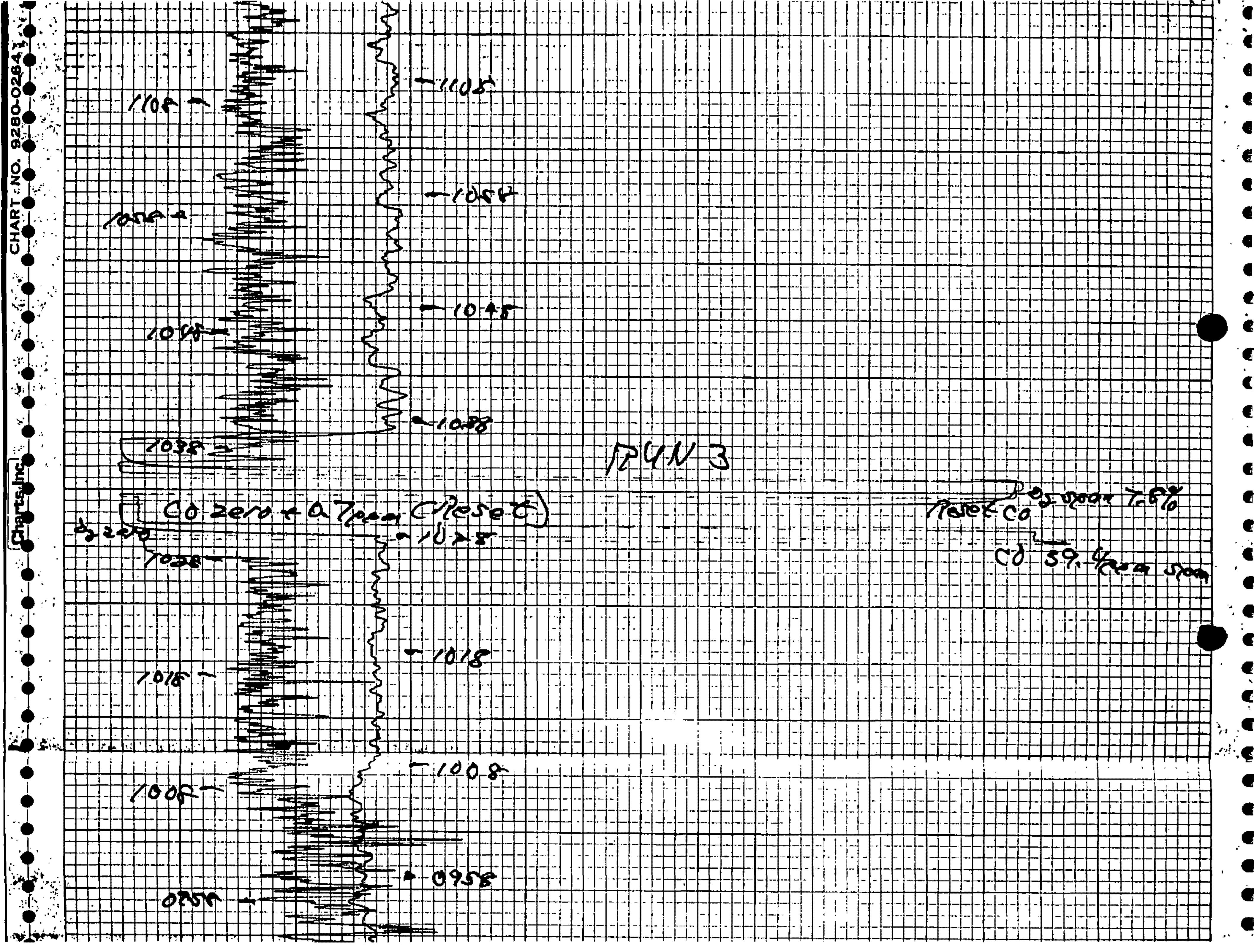


CHART NO. 9280-0264
Charts, Inc.
1108
1105
1058
1054
1048
1045
1038
1038
CO zero + 0.7ppm (Reset)
O2 zero
1028
1028
RUN 3
Reset CO
O2 span 7.6%
CO 39.4ppm span
1018
1018
1008
1008
0958
0958

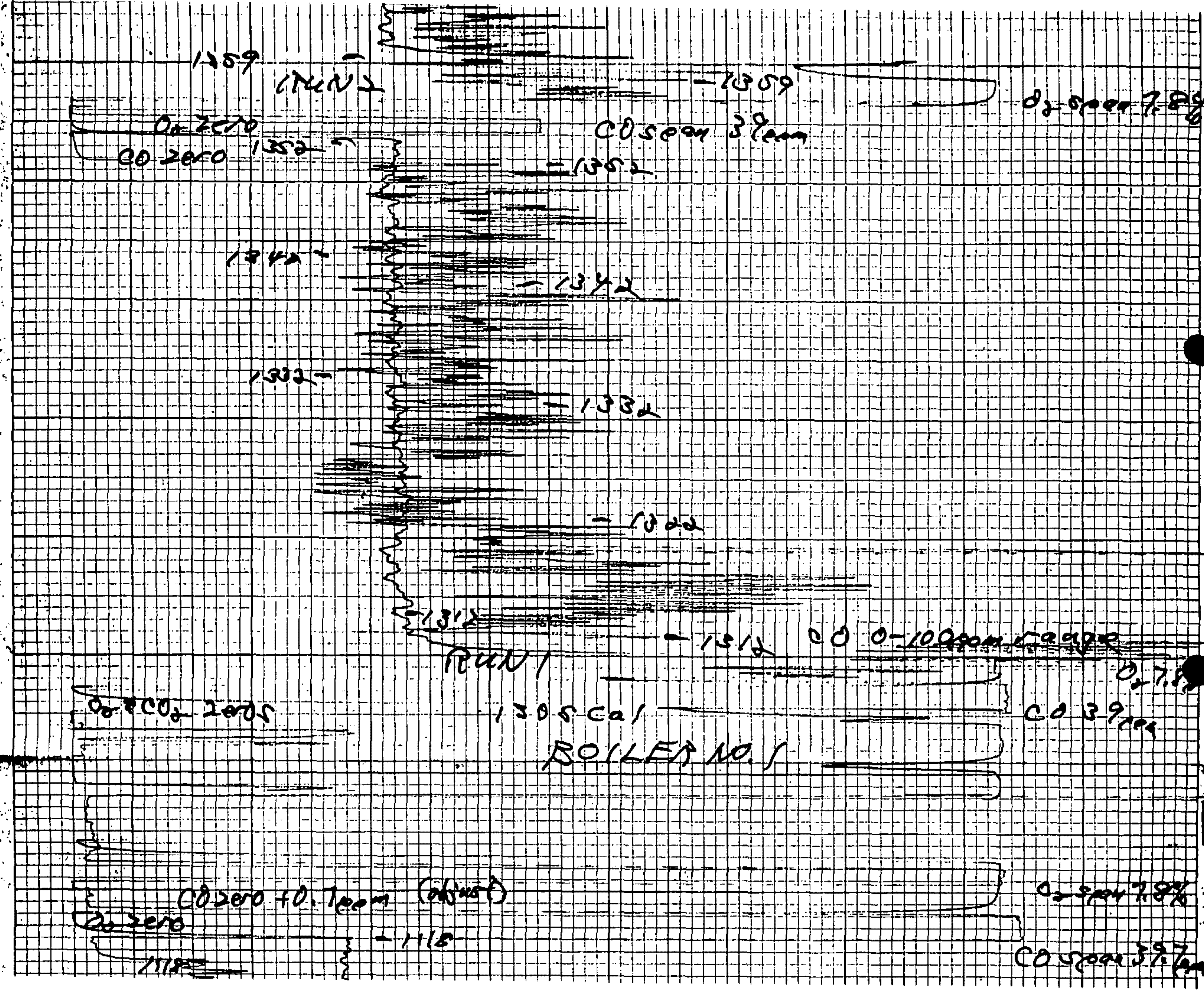
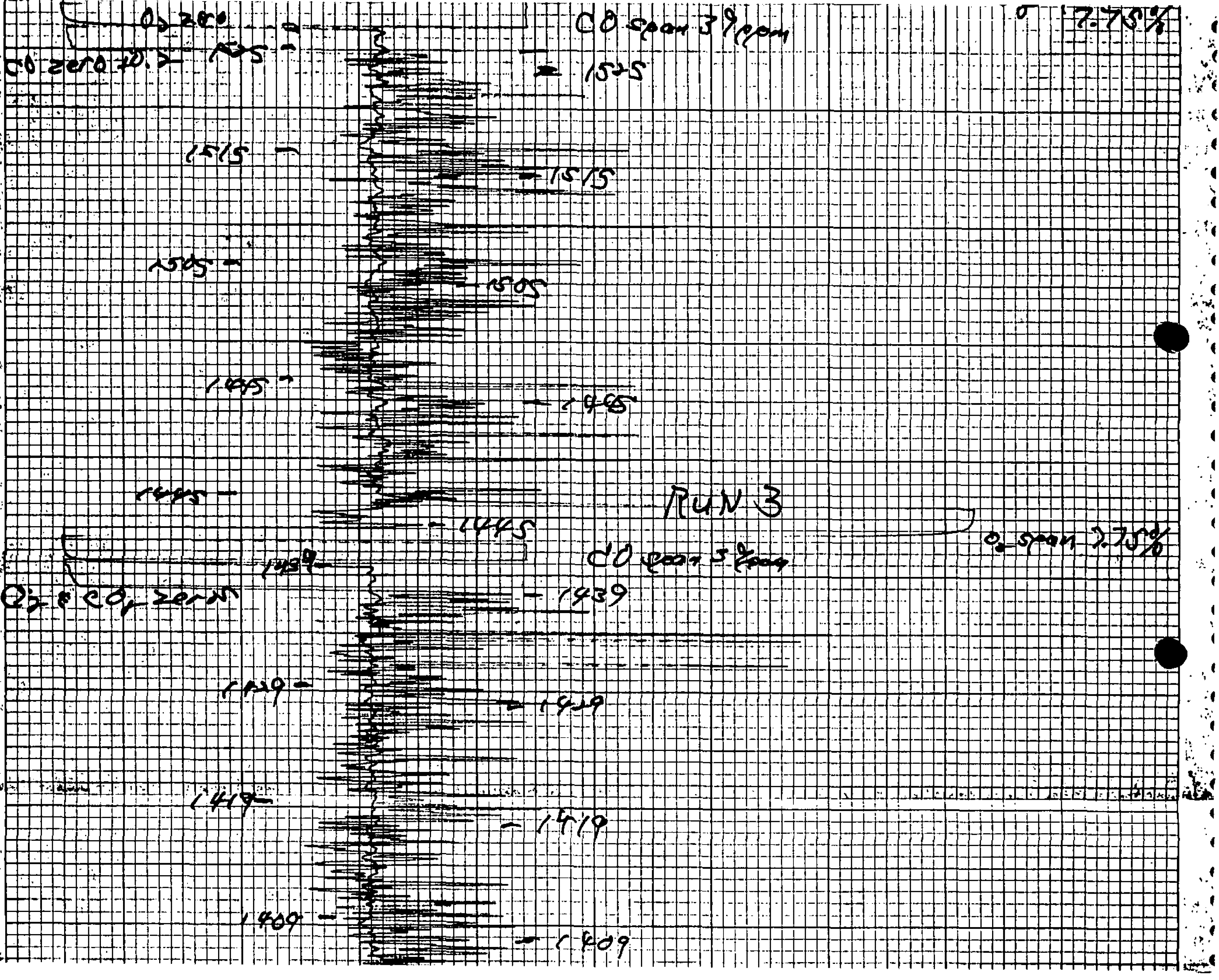

1359
RUN 2
-1359
O_2 span 7.8%
O_2 zero
CO span 39ppm
CO zero 1352
-1352
1342
-1342
1332
-1332
-1322
1312
-1312
CO 0-100ppm range
RUN 1
O_2 7.8
O_2 & CO_2 zeros
1305 cal
CO 39ppm
BOILER NO. 1
CO zero +0.1ppm (adjust)
O_2 span 7.8%
O_2 zero
-1118
1118
CO span 39.7ppm

CHART NO. 9280-0264 (6092)



CALIBRATION GAS CERTIFICATIONS

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: 07/09/92

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

CUSTOMER ORDER NUMBER: 8443

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CC91314	Nitric Oxide Nitrogen,O2-Free	208.4 ± 2.1 ppm Balance	SRM 1686b
CC86207	Nitric Oxide Nitrogen,O2-Free	89.1 ± 0.9 ppm Balance	SRM 1684b
CC66837	Nitric Oxide Nitrogen,O2-Free	90.9 ± 0.9 ppm Balance	SRM 1684b
CC240	Carbon Monoxide Nitrogen	916 ± 9 ppm Balance	SRM 1681b

ppm = umole/mole % = mole-%

The above analyses are traceable to the National Institute of Standards ard 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 232.09/202491.

Analyst: _____ B.M. Marrin

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: 12/11/92

CRAIG THIRY
BEST ENVIRONMENTAL
15890 FOOTHILL BLVD
SAN LEANDRO, CA 94578-2101

CUSTOMER ORDER NUMBER: 8503

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CC119816	Carbon Monoxide	428 ± 4 ppm	SRM 1680b
	Carbon Dioxide	11.21 ± 0.11 %	SRM 1675b
	Oxygen	7.78 ± 0.08 %	SRM 2658a
	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 232.09/202491.

Analyst: _____ M.S. Calhoun

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:

Craig Thiry
Best Environmental
15890 Foothill Blvd.
San Leandro, CA 94578-2101

DATE: 04/01/92

CUSTOMER ORDER NUMBER: 8406

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CC81222	Carbon Monoxide Nitrogen	39.0 ± 0.4 ppm Balance	SRM 2614a

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: Mark Monson
M.J. Monson

Approved:
J.T. Marrin

LAB REPORTS

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

Lab. No.: 036051_002
Received: Jun 1, 1993
Reported: Jun 2, 1993

Attention: Craig Thiry

Sample Description: R-2 Methane 5/26/93

* CHROMATOGRAPHIC ANALYSIS (Z 1635) *

Components	Mole %	Wt %	CHONS	Wt %
Hydrogen	0.000	0.000	CARBON	54.74
Carbon Dioxide	.388	.917	HYDROGEN	18.08
Oxygen	3.773	6.490	OXYGEN	7.16
Nitrogen	13.293	20.016	NITROGEN	20.02
Carbon Monoxide	0.000	0.000	SULFUR	0.00
Hydrogen Sulfide	0.000	0.000		
Methane	80.873	69.736	Totals	99.99
Ethane	1.530	2.473	Total H/C	.33
Propane	.112	.265		
IsoButane	.013	.040		
N-Butane	.011	.034		
IsoPentane	.004	.017		
N-Pentane	0.000	0.000		
Hexanes+	.002	.011		
Totals =	100.000	100.000		

SPECIFIC GRAVITY (Air = 1)		.6431
SPECIFIC VOLUME, cu.ft./lb	*	20.37
GROSS CALORIFIC VALUE, BTU/cu.ft.	*	836.37
GROSS CALORIFIC VALUE, BTU/cu.ft.	**	850.84
GROSS CALORIFIC VALUE, BTU/lb	**	17334.21
NET CALORIFIC VALUE, BTU/cu.ft.	**	766.56
NET CALORIFIC VALUE, BTU/lb	**	15617.17
DSCF EXHAUST PER SCF FUEL (0% Oxygen)		7.3726
COMPRESSIBILITY FACTOR 'Z' (60 F,1 ATM)		.9984
EPA 'F' Factor @ 68 F:	8600.502 DSCF / MM Btu.	
KCAPCD 'F' Factor @ 60 F:	8471.495 DSCF / MM Btu.	

* Water Saturated ** Dry Gas @ 60 F, 14.73 psia

Analyst

Jim Etherton
Laboratory Director

4309 Armour Avenue Bakersfield, California 93308
(805) 395-0539 FAX (805) 395-3069

BEST ENVIRONMENTAL
15890 Foothill Boulevard
San Leandro, CA 94578
Phone (510) 276-4011 Fax (510) 276-4018

P.O.#=

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST Pg. 1 of 1

Project Manager: R. Best

Lab Name Zalco

Client: MCL

location: fuel inlet

I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler Name (Print):

Field Sample ID	Volume	# CONTAINERS	Matrix: WATER	AIR	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME	CARB 429 (PAH's)	CARB 428 (Dioxins)	CARB 410A 410B (Benzene)	CARB 430 (Aldehydes)	CARB 421 (HCl)	CARB 425 (Cr & Cr 6)	CARB 422 (Halogen Org's)	CARB 106 (Vinyl Chloride)	EPA 6010 [Full] (Total metals; chlorides)	CARB 426 (Cyanide)	CARB 423 (Arsenic)	CARB 427 (Asbestos)	CARB 436 fuel analysis
R1Methane		1			✓																					✓
R2 Methane		1			✓																					✓

SPECIAL HANDLING
24 HOURS ☐
EXPEDITED 48 Hours ☐
NTAT ☑
OTHER _____(#) BUSINESS DAYS

Return tedlars ✓
Return cooler ____
Return bottles ____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS
Air samples- total qty. to be reported

REMARKS:
analyze (R1 Methane) for fuel compliance if it is good disregard second sample (R2 Methane) if not analyze as well.

CUSTODY RECORD

Relinquished by Sampler:	Relinquished by:	Relinquished by:
Date: 5/28/91	Date:	Date:
Time:	Time:	Time:
Received by:	Received by:	Received by Laboratory:
		Way bill #

AUTHORITY TO CONSTRUCT

DEPARTMENT OF PUBLIC HEALTH

POST OFFICE BOX 471 - 240 E. 15TH STREET
MERCED, CALIFORNIA 95341-0471

MICHAEL FORD M.P.H.
Director of Public Health
Information
385 7710
Administration
385-7700
Laboratory
385-7707
Personal Health Services
385-7710
Jeff Palsgaard M.S., Director
Division of Environmental Health
385 E. 13th St.
385-7391

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY TO CONSTRUCT

ISSUED TO:

Tri-Valley Growers
Plant 5 - Volta

EQUIPMENT LOCATION:

12045 S. Ingomar Grade
Volta, CA 93635

EQUIPMENT DESCRIPTION:

Boiler Modification
Installation of Todd Low NOx Dynaswirl Burner

CONDITIONS:

(See Attached For Additional Conditions)

THIS AUTHORITY TO CONSTRUCT PERMIT IS ISSUED FOR THE INSTALLATION OF THE EQUIPMENT AT THE LOCATION AND IN ACCORDANCE WITH THE CONDITIONS DESCRIBED ABOVE AND AS SHOWN ON THE APPROVED PLANS AND SPECIFICATIONS.

APPROVAL OR DENIAL OF THE SUBSEQUENT PERMIT TO OPERATE THE ABOVE EQUIPMENT WILL BE MADE AFTER A FINAL PLANT INSPECTION TO INSURE THAT THE EQUIPMENT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVAL PLANS AND SPECIFICATIONS AND THAT THE EQUIPMENT CAN BE OPERATED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE DISTRICT. PLEASE CONTACT THIS OFFICE WHEN READY FOR FINAL OPERATIONAL INSPECTION.
THE AUTHORITY TO CONSTRUCT PERMIT WILL EXPIRE AND THE APPLICATION, CANCELLED TWO YEARS FROM THE DATE OF ISSUANCE (Rule 205).

VALID: 04/01/91 **TO:** 04/01/93
NUMBER: 3030010102

AIR POLLUTION CONTROL OFFICER
BY: Roland D. Brock

4. Emission Controls. The boiler shall be equipped with low NOx burner and flue gas recirculation.

5. Source Testing.

   a. Source testing shall be conducted using methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit-to-Operate conditions within 90 days of initial startup. Source testing shall be conducted annually thereafter.

   b. Source testing shall be conducted using the methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit to Operate conditions as requested by MCAPCD.

   c. A pretest plan outlining the test methods, procedures, and operating parameters shall be submitted for District approval at least 30 days prior to each test.

   d. The results of each test shall be submitted for the Districts evaluation no later than 60 days following each testing date.

6. Operating Schedule. The 125000 lb/hr Nebraska Boiler may operate 24 hours/day and 7 days/week.

7. Seasonal Source. Ninety percent of the facility's annual emissions shall occur within a consecutive 120 day period.

8. Recording Requirements. A daily log shall be maintained on the premises at all times and shall be made available for District inspection upon request. The log shall include the following:

   a. Record of daily fuel consumption per boiler. This information may be based on steam flow data and total facility natural gas consumption.

   b. Additional requirements as required to comply with NSPS CFR 60, Subpart D_b. This shall include a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

   c. The facility shall provide the District with the above information within a reasonable length of time upon request.

5. Right of Entry

The Air Pollution Control Officer, the Executive Officer of the California Air Resources Board, EPA Regional Administrator, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

a. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority-to-Construct, and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority-to-Construct, and

c. to inspect any equipment, operation, or method required in this Authority-to-Construct, and

d. to sample emissions from the source or require samples to be taken.

6. District Rules and Regulations

The facility shall comply with all applicable District rules and regulations.

7. Other Applicable Rules

The permittee shall comply with all other applicable local, State, and Federal rules and regulations.

SPECIAL CONDITIONS -

1. Fuels. The 125000 lb/hr Nebraska Boiler shall be fired on natural gas. The maximum consumption rate of natural gas shall be 150000 scfh. The maximum consumption rate of LPG shall be 1596 gal/hr (@ 94,000 Btu/gal).

2. Daily Emission Limitations. The emissions from this boiler shall not exceed the following emission limitations:

	Natural Gas & LPG Emission Limitations	
Pollutant	(lb/mmBtu)	(lb/day)
PM10	0.005	18.0
NOx	0.0364	131.0
SOx	0.0006	2.2
CO	0.074	267.0
ROG	0.0014	5.0

3. Visible Emissions. No air contaminant shall be released into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringlemann 1 or equivalent opacity.

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY-TO-CONSTRUCT CONDITIONS

GENERAL CONDITIONS

1. Notification of Start-up

   The Merced Zone Office shall be notified in writing of the anticipated date of start-up by the permittee at least 7 days prior to such date.

2. Facilities Construction

   The facility shall be constructed in accordance with the plans and specifications contained in the application and subject to the conditions of the Authority-to-Construct.

3. Facilities Operation

   All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this Authority-to-Construct shall be maintained in good working order and be operated as efficiently as possible so as to minimize air pollution emissions and shall comply with all other applicable local, State and Federal rules and regulations.

4. Malfunction

   The Merced Zone Office shall be notified immediately of any failure of air pollution control equipment, emission monitoring equipment, or any process which results in an increase in emissions above any of the allowable emissions limits of these conditions or any State or Federal emission standards. In addition, the Merced Zone Office shall be notified in writing within ten (10) days following the malfunction. This notification shall include a description of the equipment malfunction or abnormal operation, the date of the initial failure or equipment malfunction, the cause of the failure, the estimated emissions in excess of those allowed by these conditions, and the methods utilized to restore normal operations.

DEPARTMENT OF PUBLIC HEALTH

POST OFFICE BOX 471 · 240 E. 15TH STREET
MERCED, CALIFORNIA 95341-0471

MICHAEL FORD M.P.H.
Director of Public Health
Information
385 7710
Administration
385-7700
Laboratory
385-7707
Personal Health Services
385-7710
Jeff Palsgaard M.S., Director
Division of Environmental Health
385 E. 13th St.
385-7391

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY TO CONSTRUCT

ISSUED TO:

Tri-Valley Growers
Plant 5 - Volta

EQUIPMENT LOCATION:

12045 S. Ingomar Grade
Volta, CA 93635

EQUIPMENT DESCRIPTION:

Boiler Modification
Installation of Todd Low NOx Dynaswirl Burner

CONDITIONS:

(See Attached For Additional Conditions)

THIS AUTHORITY TO CONSTRUCT PERMIT IS ISSUED FOR THE INSTALLATION OF THE EQUIPMENT AT THE LOCATION AND IN ACCORDANCE WITH THE CONDITIONS DESCRIBED ABOVE AND AS SHOWN ON THE APPROVED PLANS AND SPECIFICATIONS.

APPROVAL OR DENIAL OF THE SUBSEQUENT PERMIT TO OPERATE THE ABOVE EQUIPMENT WILL BE MADE AFTER A FINAL PLANT INSPECTION TO INSURE THAT THE EQUIPMENT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVAL PLANS AND SPECIFICATIONS AND THAT THE EQUIPMENT CAN BE OPERATED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE DISTRICT. PLEASE CONTACT THIS OFFICE WHEN READY FOR FINAL OPERATIONAL INSPECTION.
THE AUTHORITY TO CONSTRUCT PERMIT WILL EXPIRE AND THE APPLICATION, CANCELLED TWO YEARS FROM THE DATE OF ISSUANCE (Rule 205).

VALID: 04/01/91 **TO:** 04/01/93
NUMBER: 3030010101

AIR POLLUTION CONTROL OFFICER
BY: Roland D. Brook

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY-TO-CONSTRUCT CONDITIONS

GENERAL CONDITIONS

1. Notification of Start-up

   The Merced Zone Office shall be notified in writing of the anticipated date of start-up by the permittee at least 7 days prior to such date.

2. Facilities Construction

   The facility shall be constructed in accordance with the plans and specifications contained in the application and subject to the conditions of the Authority-to-Construct.

3. Facilities Operation

   All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this Authority-to-Construct shall be maintained in good working order and be operated as efficiently as possible so as to minimize air pollution emissions and shall comply with all other applicable local, State and Federal rules and regulations.

4. Malfunction

   The Merced Zone Office shall be notified immediately of any failure of air pollution control equipment, emission monitoring equipment, or any process which results in an increase in emissions above any of the allowable emissions limits of these conditions or any State or Federal emission standards. In addition, the Merced Zone Office shall be notified in writing within ten (10) days following the malfunction. This notification shall include a description of the equipment malfunction or abnormal operation, the date of the initial failure or equipment malfunction, the cause of the failure, the estimated emissions in excess of those allowed by these conditions, and the methods utilized to restore normal operations.

5. Right of Entry

The Air Pollution Control Officer, the Executive Officer of the California Air Resources Board, EPA Regional Administrator, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

a. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority-to-Construct, and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority-to-Construct, and

c. to inspect any equipment, operation, or method required in this Authority-to-Construct, and

d. to sample emissions from the source or require samples to be taken.

6. District Rules and Regulations

The facility shall comply with all applicable District rules and regulations.

7. Other Applicable Rules

The permittee shall comply with all other applicable local, State, and Federal rules and regulations.

SPECIAL CONDITIONS -

1. Fuels. The 125000 lb/hr Nebraska Boiler shall be fired on natural gas. The maximum consumption rate of natural gas shall be 150000 scfh. The maximum consumption rate of LPG shall be 1596 gal/hr (@ 94,000 Btu/gal).

2. Daily Emission Limitations. The emissions from this boiler shall not exceed the following emission limitations:

	Natural Gas & LPG Emission Limitations	
Pollutant	(lb/mmBtu)	(lb/day)
PM10	0.005	18.0
NOx	0.0364	131.0
SOx	0.0006	2.2
CO	0.074	267.0
ROG	0.0014	5.0

3. Visible Emissions. No air contaminant shall be released into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringlemann 1 or equivalent opacity.

4. Emission Controls. The boiler shall be equipped with low NOx burner and flue gas recirculation.

5. Source Testing.

   a. Source testing shall be conducted using methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit-to-Operate conditions within 90 days of initial startup. Source testing shall be conducted annually thereafter.

   b. Source testing shall be conducted using the methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit to Operate conditions as requested by MCAPCD.

   c. A pretest plan outlining the test methods, procedures, and operating parameters shall be submitted for District approval at least 30 days prior to each test.

   d. The results of each test shall be submitted for the Districts evaluation no later than 60 days following each testing date.

6. Operating Schedule. The 125000 lb/hr Nebraska Boiler may operate 24 hours/day and 7 days/week.

7. Seasonal Source. Ninety percent of the facility's annual emissions shall occur within a consecutive 120 day period.

8. Recording Requirements. A daily log shall be maintained on the premises at all times and shall be made available for District inspection upon request. The log shall include the following:

   a. Record of daily fuel consumption per boiler. This information may be based on steam flow data and total facility natural gas consumption.

   b. Additional requirements as required to comply with NSPS CFR 60, Subpart D_b. This shall include a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

   c. The facility shall provide the District with the above information within a reasonable length of time upon request.

Merced County Air Pollution Control District
385 East 13TH Street
Merced, CA 95340

Engineering Evaluation

Tri-Valley Growers
Plant 5 - Volta

Boiler Modification
Application No. 90-25

Permit No. 3030010101

..REQUESTED BIENNIAL SOURCE TESTING 3-20-9
MLC

March 10, 1991
(Revised March 16, 1991)

ENGINEERING EVALUATION

Prepared By:

John E. Lathrop

Air Pollution Control Engineer

Approved By:

Roland D. Brooks

Air Pollution Control Manager

COPY

1 - 11675

11672

I. INTRODUCTION

The applicant, Tri/Valley Growers, proposes to install a new burner into the existing boiler PO#3030010101 at Plant 5 near Volta. The application was submitted on 2/27/90.

II. PROJECT LOCATION

Tri-Valley Growers Plant 5 is located at 12045 S. Ingomar Grade near Volta, CA.

III. EQUIPMENT DESCRIPTION

The application was submitted to modify one emission unit as follows:

Install New Todd Low NOx Dynaswirl Burner

New Burner Information:

Excess Air = 15%
Fuel Type = Natural Gas (LPG backup fuel)
Fuel Consumption = 150000 ft^3/hr

Existing Boiler Information:

Nebraska NS-G-99
Serial No. 2D-1690

Additional information:

Steam Pressure:	150 psig
Boiler Rating:	125,000 lb/hr of Steam
Emission Guarantee:	30 ppmvd NOx @ 3% O_2
	100 ppmvd CO @ 3% O_2

Air Pollution Control Devices:

Flue Gas Recirculation
Oxygen Trim

IV. OPERATING SCHEDULE

24 Hours per Day, Maximum
7 Days per Week
4 Months: June through September, typical (<3000 hr/season)

V. PERMIT SUMMARY

The permit application summary, Table 1, indicates that all pervious emission units were permitted prior to May 21, 1979.

Table 1. TRI-VALLEY GROWERS PLANT 5
Permit Application Summary

Date Received	Eventual P/O #'s	Description
09-13-74	3030010101	Nebraska NS-G-99, 125,000 lb/hr Steam
09-13-74	3030010102	Nebraska NS-G-99, 125,000 lb/hr Steam

VI. EMISSION CALCULATIONS

A. Emission Unit Current Emissions (BOILER S/N 2D-1690)

The historical fuel consumption and operating days are as follows:

	Fuel Consumption		
	Natural Gas	#6 Oil	
Year	(10^6 ft^3)	(10^3 gal)	Operating Days
1988	145.3	0	60
1989	132.9	51.25	67
1990	82.72	444.73	58

The estimated "current emissions" (three year average) are as follows, assuming 1) seasonal operation, 2) fuel consumption and days of operation as specified by the applicant for 1988, 1989 and 1990, 3) Fuel oil #6 sulfur content of 0.5% and 4) emission factors per AP42:

	Current Emissions, lb/day				
Year	PM10	NOx	SOx	CO	ROG
1988	12.1	1329.2	1.5	96.7	3.4
1989	19.9	1142.2	61.2	83.2	3.4
1990	106.8	1298.2	602.8	95.4	7.8
AVG	46.3	1256.5	221.8	91.7	4.9

B. Emission Unit Proposed Emissions

The "proposed emissions" from this boiler ~~is~~ are as follows, assuming 1) 30 ppmvd NOx @ 3% O_2, 2) Natural gas consumption @ 150,000 ft^3/hr (LPG emissions are assumed to be equivalent), 3) 24hr/day of operation, and 4) 100 ppmvd CO @ 3% O_2:

Proposed Emissions, lb/day				
PM10	NOx	SOx	CO	ROC
18	131 (90.9)	2.2	267 (50)	5.0

C. Emission Unit Net Emission Change (Proposed - Current)

Net Emission Change, lb/day				
PM10	NOx	SOx	CO	ROC
-28.3	-1125.5	-219.6	175.3	0.1

D. Facility Net Emission Change (Added March 16, 1991)

In accordance with Rule 210.1 Part III.F.2 all negative emission changes are multiplied by 0.9 prior to determining the facility net emissions change. The balance of the emissions change shall be preserved in the small source siting allowance.

Facility Net Emission Change, lb/day					
	PM10	NOx	SOx	CO	ROG
Existing Units	0	0	0	0	0
Current Mod	-25.5	-1013.0	-197.6	175.3	0.1
Facility NEC	-25.5	-1013.0	-197.6	175.3	0.1

VII. NSPS SUBPART D_b

This subpart is applicable to boilers with a heat input of 100 mmBtu/hr or greater. This subpart requires 1) Continuous emission monitors, or 2) monitor operating conditions to predict NOx emissions.

The applicant states that Tri-Valley Growers will set up a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

VIII. COMPLIANCE WITH APPLICABLE RULES

A. Applicable rules include the following:

Rule 210.1	-	New and Modified Stationary Source Review (NSR)
Rule 401	-	Visible Emissions
Rule 404	-	Particulate Matter Concentration
Rule 407	-	Sulfur Compounds
Rule 408	-	Fuel Burning Equipment
Rule 422	-	Code of Federal Regulations New Source Performance Standards (NSPS)

B. Rule 210.1 - NSR

1. Best Available Control Technology (BACT)

   The proposed equipments specified herein complies with the District's BACT requirement.

2. Offsets

   The estimated daily emission levels do not exceed the applicable offset triggers. Therefore, offsets are not required.

C. Rule 401 - Visible Emissions

Under normal circumstances, with proper air/fuel ratio, the visible emissions will be substantially below the Ringlemann 1 or equivalent opacity

D. Rule 404 - Particulate Matter Concentration

When firing on natural gas the particulate matter concentration will be as follows:

F_d = Dry F factor = 8710 dscf/10^6Btu[1] @ 68°F & 29.92 in. Hg

= 8578 dscf/10^6Btu @ 60°F & 29.92 in. Hg

---

[1] Reference CFR 40, Pt. 60, App. A, Meth 19, Pg 958, July 1, 1990.

Q_{sd} = Gas Flow = $\frac{(170 \times 10^6 \text{ Btu/hr})(8578 \text{ dscf}/10^6\text{Btu})}{(60 \text{ min/hr})}$

= 24304 dscfm

PM10 conc = $\frac{(0.75 \text{ lb/hr})(7000 \text{ gr/lb})}{(24304 \text{ dscfm})(60 \text{ min})}$

= 0.004 gr/dscf

Therefore, the PM matter concentration will be much less than 0.1 gr/dscf.

E. Rule 407 - Sulfur Compounds

When firing on natural gas, the SO_2 concentration will be as follows:

SO_2 conc. = $\frac{(0.1 \text{ lb/hr})}{(64 \text{ lb/lb mole})(24304 \text{ dscfm})(1.58 \times 10^{-7})}$

= 0.41 ppmvd

Therefore, the maximum SO_2 concentration will be much less than 2000 ppm by volume.

F. Rule 422 - NSPS

The proposed monitoring and reporting plan specified herein complies with the District interpretation of 40CFR Subpart Db.

IX. CONCLUSION

Issue an Authority to Construct subject to the following conditions to assure compliance with all applicable rules and regulations:

GENERAL CONDITIONS

1. Facilities Operation

   All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this Authority-to-Construct shall be maintained in good working order and be operated as efficiently as possible so as to minimize air pollution emissions and shall comply with all other applicable local, State and Federal rules and regulations.

2. Malfunction

   The Merced County Air Pollution Control District shall be notified immediately of any failure of air pollution control equipment, emission monitoring equipment, or any process which results in an increase in emissions above any of the allowable emissions limits of these conditions or any State or Federal emission standards. In addition, the Merced County Air Pollution Control District shall be notified in writing within ten (10) days following the malfunction. This notification shall include a description of the equipment malfunction or abnormal operation, the date of the initial failure or equipment malfunction, the cause of the failure, the estimated emissions in excess of those allowed by these conditions, and the methods utilized to restore normal operations.

3. Right of Entry

   The Merced County Air Pollution Control Officer, the Executive Officer of the California Air Resources Board, EPA Regional Administrator, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

   a. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority-to-Construct, and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority-to-Construct, and

c. to inspect any equipment, operation, or method required in this Authority-to-Construct, and

d. to sample emissions from the source or require samples to be taken.

4. Public Nuisance

No air contaminant shall be released into the atmosphere which causes a public nuisance.

5. MCAPCD Rules and Regulations

The facility shall comply with all applicable MCAPCD rules and regulations.

6. Other Applicable Rules

The permittee shall comply with all other applicable local, State, and Federal rules and regulations.

SPECIAL CONDITIONS

1. Fuels. The 125000 lb/hr Nebraska Boiler shall be fired on natural gas. The maximum consumption rate of natural gas shall be 150000 scfh. The maximum consumption rate of LPG shall be 1596 gal/hr (@ 94,000 Btu/gal).

2. Daily Emission Limitations. The emissions from this boiler shall not exceed the following emission limitations:

	Natural Gas & LPG Emission Limitations	
Pollutant	(lb/mmBtu)	(lb/day)
PM10	0.005	18.0
NOx	0.0364	131.0
SOx	0.0006	2.2
CO	0.074	267.0
ROG	0.0014	5.0

3. Visible Emissions. No air contaminant shall be released into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringlemann 1 or equivalent opacity.

4. Emission Controls. The boiler shall be equipped with low NOx burner and flue gas recirculation.

5. Source Testing.

   a. Source testing shall be conducted using methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit-to-Operate conditions within 90 days of initial startup. Source testing shall be conducted annually thereafter.

   b. Source testing shall be conducted using the methods and procedures approved by the District to demonstrate compliance with all applicable rules, regulations and Permit to Operate conditions as requested by MCAPCD.

   c. A pretest plan outlining the test methods, procedures, and operating parameters shall be submitted for District approval at least 30 days prior to each test.

   d. The results of each test shall be submitted for the Districts evaluation no later than 60 days following each testing date.

6. Operating Schedule. The 125000 lb/hr Nebraska Boiler may operate 24 hours/day and 7 days/week.

7. Seasonal Source. Ninety percent of the facility's annual emissions shall occur within a consecutive 120 day period.

8. Recording Requirements. A daily log shall be maintained on the premises at all times and shall be made available for District inspection upon request. The log shall include the following:

   a. Record of daily fuel consumption per boiler. This information may be based on steam flow data and total facility natural gas consumption.

   b. Additional requirements as required to comply with NSPS CFR 60, Subpart D_b. This shall include a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri-Valley Growers will submit a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

   c. The facility shall provide the District with the above information within a reasonable length of time upon request.

JERRY; FYI

PLEASE ADDRESS REPLY TO:

2260 TENAYA DRIVE
MODESTO, CA 95354

TVG TRI VALLEY GROWERS™

February 28, 1991

Mr. John Lathrop, E.I.T.
Air Pollution Control Engineer
Merced County
Department of Public Health
P.O. Box 471
Merced, CA 95341-0471

Dear Mr. Lathrop:

As you requested, please use the following information to complete our application Nos. 90-25 and 90-26 for modifications to the 125,000 lb/hr steam boilers at Plant 5.

1. Operating Schedule: At maximum, 24 hours per day, seven days per week, 2928 hrs per season, during the months of June through September.

2. Emission Guarantees for NOx: Todd Combustion, the burner manufacturer, will guarantee 30 ppm Nox corrected to 3% O_2.
Emission Guarantees for CO: Todd Combustion, the burner manufacturer, will guarantee 100 ppm CO.

3. Compliance with NSPS Subpart D_b: Tri Valley Growers proposes to set up a correlation of emission generation versus firing rate, based on seasonal source test data, as a method of predicting NOx emissions. Tri Valley proposes submitting a monthly emission report listing average daily firing rate, totalized daily gas consumption and totalized calculated daily emissions during the operating season.

P.O. Box 7114, 1255 Battery St., San Francisco, California 94120-7114 Phone: (415) 445-1600 Telex: 27-9046 FAX: (415) 445-1628

4. Fuel consumption data:

	boiler 1		boiler 2	
	gas ($ft^3 x10^6$)	#6 oil (kgal)	gas ($ft^3 x10^6$)	#6 oil (kgal)
1988	145.3	0	145.3	0
1989	132.9	51.25	132.9	51.25
1990	82.72	444.73	82.72	444.73

5. Operating days per boiler: With very few exceptions, during the operating season both boilers run simultaneously and at virtually identical firing rates. Listed below are the operating days corresponding to the past three seasons.

1988	JUL 5 - SEP 2	60 DAYS
1989	JUN 25 - SEP 9	67 DAYS
1990	JUL 5 - SEP 9	58 DAYS

6. Actual Fuel Oil Sulfur Content: Specified by the supplier not to exceed .5% by weight.

7. See 3 above.

8. The Keller boiler was never installed. Last year the boiler was dismantled and sold for scrap.

If you have any questions, please contact me immediately at (209)572-5963. I would like to ensure our applications are deemed complete prior to the NSR workshop. Thank you for your help and cooperation in this important matter.

Respectfully,

M. C. Diroll

Michael C. Diroll
Project Engineer

San Joaquin Valley
Unified Air Pollution Control District

COPY

August 24, 1993

Robert Bennett, Supervisor Environmental Services
Tri Valley Growers
P.O. Box 7114
San Francisco, CA 94120

Re: Application No. N-1399-2 & 3
Project Description: Lower emission limitations on two Nebraska boilers to generate ERCs

Dear Mr. Bennett:

Your application for Emission Reduction Credits for the above referenced project has been reviewed for completeness by the Air Pollution Control District. Based on this preliminary review, the application appears to be complete. However, during the processing of this application, the District may request additional information to clarify, correct or otherwise supplement the information on file.

Thank you for your cooperation. Should you have any questions, please contact Anthony Mendes of Permit Services at (209) 545-7000.

Sincerely,

Seyed Sadredin
District Manager of Permit Services

Anthony Mendes
Permit Services Manager

SS/AM/TP

David L. Crow
Executive Director/Air Pollution Control Officer

1999 Tuolumne Street, Suite 200 • Fresno, CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue, Suite 130 • Modesto, CA 95356
(209) 545-7000 • Fax (209) 545-8652

Central Region
1999 Tuolumne Street, Suite 200 • Fresno, CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street, Suite 275 • Bakersfield, CA 93301
(805) 861-3682 • Fax (805) 861-2060

DEPARTMENT OF PUBLIC HEALTH

POST OFFICE BOX 471 - 240 E. 15TH STREET
MERCED, CALIFORNIA 95341-0471

MICHAEL FY
Director of Pub...
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Division of Environmental Health
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385-7391

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY TO CONSTRUCT

ISSUED TO:

Tri-Valley Growers
Plant 5 - Volta

EQUIPMENT LOCATION:

12045 S. Ingomar Grade
Volta, CA 93635

EQUIPMENT DESCRIPTION:

Boiler Modification
Installation of Todd Low NOx Dynaswirl Burner

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(See Attached For Additional Conditions)

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THE AUTHORITY TO CONSTRUCT PERMIT WILL EXPIRE AND THE APPLICATION, CANCELLED TWO YEARS FROM THE DATE OF ISSUANCE (Rule 205).

VALID: 04/01/91 **TO:** 04/01/93
NUMBER: 3030010102

AIR POLLUTION CONTROL OFFICER
BY: Roland D. Brooks

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT
Merced Zone

AUTHORITY-TO-CONSTRUCT CONDITIONS

GENERAL CONDITIONS

1. Notification of Start-up

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11.12.95

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   c. The facility shall provide the District with the above information within a reasonable length of time upon request.

1399 N-33-1a VOC

fuel oil #6 & NG

Total emission (only 3rd quarter usage of fuel oil)

290 lbs/3rd qtr = NG
372 lb/3rd qtr

AERs NG = 0
fuel oil #6 = 268 lb/3rd qtr

final Granted = 241 for fuel oil #6

.0049 x 241 lb/3rd qtr = amount of ~~Hexane~~ Ethane in gasses

1.2 lb/3rd quarter = ETHANE