

# Emission Reduction Credit Certificate C-794-1

**ISSUED TO:** 

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

April 30, 2007

**LOCATION OF** 

39936 W NORTH AVE

REDUCTION: N

**MENDOTA, CA 93640** 

# For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	40 lbs

[ ] Conditions Attache
------------------------

#### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

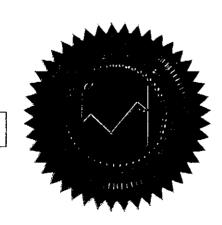
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seved Sadredin, Executive Director / APCO





# **Emission Reduction Credit Certificate** C-794-2

**ISSUED TO:** 

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

April 30, 2007

LOCATION OF REDUCTION:

**39936 W NORTH AVE** MENDOTA, CA 93640

# For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	734 lbs

Γ '	Co	nditions	Attached
		HUNIUNS	Muacheu

#### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

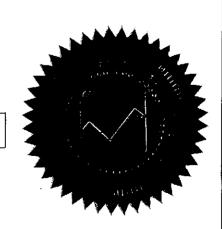
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seved Sadredin, Executive Director / APCO





# Emission Reduction Credit Certificate C-794-3

**ISSUED TO:** 

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

April 30, 2007

LOCATION OF REDUCTION:

**39936 W NORTH AVE** 

**MENDOTA, CA 93640** 

# For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	147 lbs

Γ '	1 Co	nditions	s Attached
		HUHUUH	5 Milaciicu

#### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

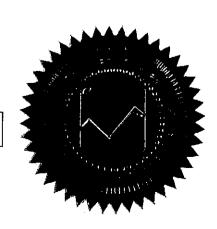
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Sexed Sadredin, Executive Director / APCO





# Emission Reduction Credit Certificate C-794-4

ISSUED TO:

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

April 30, 2007

LOCATION OF REDUCTION:

39936 W NORTH AVE

**MENDOTA, CA 93640** 

# For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	18,935 lbs

#### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

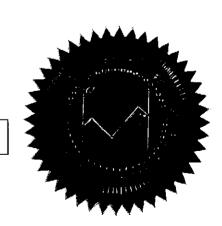
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO





# Emission Reduction Credit Certificate C-794-5

**ISSUED TO:** 

EAGLE VALLEY GINNING LLC

**ISSUED DATE:** 

April 30, 2007

LOCATION OF REDUCTION:

39936 W NORTH AVE

**MENDOTA, CA 93640** 

# For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	5 lbs

Γ ]	Cor	nditions	Attached
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#### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

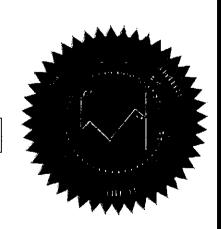
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Pitrector / APCO



# PROJECT ROUTING FORM

FACILITY NAME: <u>EAGLE VALLEY</u> C	SINNING LLC				
FACILITY ID: C-213	_ PROJECT N	NUMBE	R: <u>C-10</u>	63777	
PERMIT #'s:					
DATE RECEIVED: <u>DECEMBER 18,</u>	2006				
PRELIMINARY REVIEW	ENGR	D	ATE	SUPR	DATE
A. Application Deemed Incomplete					
Second Information Letter					
B. Application Deemed Complete	OP	17	4/07	)0	W 1/11/27
C. Application Pending Denial					
D. Application Denied					
		1			
ENGINEERING EVALUA	TION		INI <sup>*</sup>	TIAL	DATE
E. Engineering Evaluation Complete			DP		3/20/87
F. Supervising Engineer Approval				7	3/20/07
G. Compliance Division Approval			E	20	
H. Applicant's Review of Draft Authority to Co [ ] 3-day Review [ ] 10-day Review [ ] No Review Requested	nstruct Completed				
I. Permit Services Regional Manager Approva	al				
DIRECTOR RE	EVIEW: [ ] Not Re	equired	[ ] Requir	red '	
DIRECTOR REVIEW	1		INI	TIAL	DATE
J. Preliminary Approval to Director	To	du			
K. Final Approval to Director	76 B	,	A,	v 30 200	7 An_
			1		

NSPS/NESHAP TRIGGERED: [ ] Yes [ ] No

If "Yes" then do the following:

2. Send or email form to Compliance (Tanya Good) after management approval of project.

<sup>1.</sup> Complete form (on AIRnet at <u>Per</u> » <u>General</u> » <u>Internal Forms</u> : Miscellaneous: NSPS/NESHAP Report) and attach copy to engineering evaluation.



NORTHERN I	REGION
CENTRAL RE	
SOUTHERN F	PROJECT #s: <u>C-1063777</u>
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
√ ⊠	Newspaper Notice Emailed to Clerical (Check box and tab to generate Notice)
ENCLOSED	DOCUMENTS REQUIRE:
	Enter Correct Date, Print All Documents from File and Obtain Directors Signature
√	Send <i>FINAL</i> Notice Letters to CARB, EPA and Applicant; Including the Following Attachments:  Application Evaluation  Other <u>Public Notice</u>
<u> </u>	Send FINAL Public Notice for Publication to Fresno Bee
<u>.√</u>	Send Signed Copies of <i>FINAL</i> Notice Letters to Regional Office Attn: <u>Darrin Pampaian</u>
<u> </u>	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:
√	Send Copies of Signed and Seal Embossed ERC Certificates and Signed cover letter to Regional Office Attn: <u>Darrin Pampaian</u>
<u> </u>	Assign Mailing Date: ID# <u>C-213</u> Project #: <u>C-x63777</u> Other Special Instructions (please specify):
Date Comple	ted <u>April 30, 2007</u> /By <u>Joven Refuerzo</u>

-

Account: 2306000SAN Class: 894 Last user: JALONZO

Ad Start: 5/07/07 Ad Stop: 5/07/07 Total Cost: \$205.32 Run Days: mon

Pas

#### PUBLIC NOTICE

#### #26368

#### NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Eagle Valley Ginning, LLC for emission reductions generated by the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs to be issued is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

No comments were received following the District's preliminary decision on this project.

The application review for Project #C-1063777 is available for public inspection at the SAN JOAQUIN VALLEY UNIFIED AIR POLLJTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

(PUB: May 7, 2007)

Proofreaders Copy



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		EPARTMENT	ATTN FINANCE D
PROOF OF PUBLICATION		JRG AVE	1990 E GETTYSE
RECEIVED	93726	, CA	FRESNO

MAY 1 0 2007 EJNANCE

# COUNTY OF FRESNO STATE OF CALIFORNIA

### EXHIBIT A.

2

PUBLIC NOTICE

#26368

NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS

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(PUB: May 7, 2007)

The undersigned states:

McClatchy Newspapers in and on all dates herein stated was a corporation, and the owner and publisher of The Fresno Bee.

The Fresno Bee is a daily newspaper of general circulation now published, and on all-the-dates herein stated was published in the City of Fresno, County of Fresno, and has been adjudged a newspaper of general circulation by the Superior Court of the County of Fresno, State of California, under the date of November 22, 1994, Action No. 520058-9.

The undersigned is and on all dates herein mentioned was a citizen of the United States, over the age of twenty-one years, and is the principal clerk of the printer and publisher of said newspaper; and that the notice, a copy of which is hereto annexed, marked Exhibit A, hereby made a part hereof, was published in The Fresno Bee in each issue thereof (in type not smaller than nonpareil), on the following dates.

May 7, 2007

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

Dated

MAX 7,2007



MAY - 1 2007

**Bob Lange** Eagle Valley Ginning, LLC 27480 S. Bennett Rd. Firebaugh, CA 93622

RE:

Notice of Final Action - Emission Reduction Credits

Project Number: C-1063777

Dear Mr. Lange:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Eagle Valley Ginning, LLC for emission reductions generated by the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs to be issued is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

Enclosed are the ERC Certificates and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the ERC Certificates was published on March 28, 2007. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on March 21, 2007. No comments were received following the District's preliminary decision on this project.

Also enclosed is an invoice for the engineering evaluation fees pursuant to District Rule 3010. Please remit the amount owed, along with a copy of the attached invoice, within 60 days.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Arnaud Marjollet at (559) 230-5900.

Sincerely,

David Warner

Director of Permit Services

DW:dp

**Enclosures** 

Seved Sadredia Executive Director/Air Pollution Control Officer



Due Date 5/30/2007 Amount Due \$ 949.60



ERCFEE 213 C111260 4/30/2007

#### RETURN THIS TOP PORTION ONLY, WITH REMITTANCE TO:

EAGLE VALLEY GINNING LLC 27480 S BENNETT RD FIREBAUGH, CA 93622 SJVAPCD 1990 E. Gettysburg Avenue Fresno, CA 93726-0244

Jhank You!



San Joaquin Valley Unified Air Pollution Control District

SJVAPCD Tax ID: 77-0262563

EAGLE VALLEY GINNING LLC 39936 W NORTH AVE MENDOTA, CA 93640 Facility ID .... C213 Invoice Date 4/30/2007

Invoice Number

Invoice Type
Project: C1063777

**PROJECT NUMBER: 1063777** 

APPLICATION FILING FEES
ENGINEERING TIME FEES
TOTAL FEES
LESS PREVIOUSLY PAID PROJECT FEES APPLIED TO THIS INVOICE
PROJECT FEES DUE (Enclosed is a detailed statement outlining the fees for each item.)

\$ 949.60 \$ 1,599.60 (\$ 650.00)

\$650.00

\$ 949.60

#### San Joaquin Valley Air Pollution Control District

## **Invoice Detail**

Facility ID: C213

**EAGLE VALLEY GINNING LLC** 

39936 W NORTH AVE MENDOTA, CA 93640

Invoice Nbr:

C111260

Invoice Date: Page:

4/30/2007

**Application Filing Fees** 

Project Nbr Remit Number Description Application Fee C1063777 C-213-1063777-0 Emission Reduction Credit Banking Evaluation Fee \$650.00

Total Application Filing Fees: \$650.00

**Engineering Time Fees** 

Project Nbr	Onaniiy	Rate/1997	Description	tr free
C1063777	18.6 hours	\$ 86.00 /h	Standard Engineering Time	\$ 1,599.60
			Less Credit For Application Filing Fees	(\$ 650.00)
			Standard Engineering Time SubTotal	\$ 949.60

**Total Engineering Time Fees:** 

\$ 949.60

#### NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS

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MAY - 1 2007

Mike Tollstrup, Chief Project Assessment Branch Stationary Source Division California Air Resources Board PO Box 2815 Sacramento, CA 95812-2815

RE:

Notice of Final Action - Emission Reduction Credits

Project Number: C-1063777

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Eagle Valley Ginning, LLC for emission reductions generated by the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs to be issued is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

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Sincerely.

David Warner

**Director of Permit Services** 

ab:WD

**Enclosures** 

Seyed Sadredin Executive Director/Air Pollution Control Officer



MAY - 1 2007

Gerardo C. Rios (AIR 3) Chief, Permits Office Air Division U.S. E.P.A. - Region IX 75 Hawthorne Street San Francisco, CA 94105

RE:

Notice of Final Action - Emission Reduction Credits

Project Number: C-1063777

Dear Mr. Rios:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Eagle Valley Ginning, LLC for emission reductions generated by the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs to be issued is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

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Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Arnaud Marjollet at (559) 230-5900.

Sincerely.

David Warner

**Director of Permit Services** 

DW:dp

**Enclosures** 

Seyed Sadredin

Executive Director/Air Pollution Control Officer

<b>24</b>			
SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	, and the same of	CONTRACTOR AND ANY
<ul> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailplece,</li> </ul>	A. Signature  X	U.S. Postal Service TM CERTIFIED MAILTM REC (Domestic Mail Only; No Insurance C	Coverage Provided)
or on the front if space permits.	D. Is delivery address different from item 17	- OFFICIAL	USE.
1. Article Addressed to:  Bob Lange Eagle Valley Ginning, LLC	If YES, enter delivery address below: □ No	Postage \$  Certified Fee Return Receipt Fee (Endorsement Required)	Postmark Here
27480 S. Bennett Rd. Firebaugh, CA 93622	3. Service Type  Certified Mail	Restricted Delivery Fee (Endorsement Required)  Total Po Bob Lange  Eagle Valley Ginning, LL Street, Apr 27480 S. Bennett Rd.	.c
7006 3450 0000 0414 55	ERC Proj #C-1063777	r or PO Box Firebaugh, CA 93622	
PS Form 3811, February 2004 Domestic R	eturn Receipt 102595-02-M-1540	PS Form 3800, August 2006	See Reverse for Instructions

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- For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3B11) to the article and add applicable postage to cover the fee. Endorse mailpiece 'Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mallpiece with the endorsement "Restricted Delivery".
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry. PS Form 3800, August 2006 (Reverse) PSN 7530-02-000-9047

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Sender: Please print your name, address, and ZIP+4 in this box

SAN JOAQUIN VALLEY APCD **ATTN PERMIT SERVICES** 1990 E. GETTYSBURG AVE. FRESNO, CA 93726-0244

# San Joaquin Valley Air Pollution Control District **ERC Application Final Review** Cotton Gin

Facility Name: Eagle Valley Ginning, LLC

Date: March 20, 2007

Mailing Address:

27480 S. Bennett Rd.

Engineer: Darrin Pampaian

Firebaugh, CA 93622

Lead Engineer: Joven Refuerzo

Contact Person: Bob Lange

Telephone: (209) 364-6162

Project #: C-1063777

Submitted: December 18, 2006

Deemed Complete: December 29, 2006

#### **Summary:**

The primary business of this facility is a cotton ginning. Eagle Valley Ginning, LLC has surrendered their Permit to Operate C-0213-1-5 following the permanent shutdown of the operation as of December 14, 2006 and has submitted an application to bank the emission reduction credits (ERCs) for the decreased emissions. A copy of the surrendered Permit to Operate (PTO) is included in Attachment I of this report.

The following emission reductions have been found to qualify for ERC banking certificates C-794-1 (VOC), C-794-2 (NO<sub>X</sub>), C-794-3 (CO), C-794-4 (PM<sub>10</sub>), and C-794-5 (SO<sub>X</sub>):

Summary of ERC Amounts						
	VOC	NO <sub>X</sub>	СО	PM <sub>10</sub>	SO <sub>X</sub>	
ERC Number	C-794-1	C-794-2	C-794-3	C-794-4	C-794-5	
1 <sup>st</sup> Quarter	0	0	. 0	0	0	
2 <sup>nd</sup> Quarter	0	0	0	0	0	
3 <sup>rd</sup> Quarter	0	0	0	0	0	
4 <sup>th</sup> Quarter	40	734	147	18,935	5	

## II. Applicable Rules:

Rule 2201

New and Modified Stationary Source Review Rule (9/21/06)

Rule 2301

Emission Reduction Credit Banking (12/17/92)

#### III. Location of Reduction:

The physical location of the equipment involved with this application is 39936 W. North Ave. in Mendota, CA.

#### IV. Method of Generating Reductions:

The emissions reduction is generated by the shutdown of a permitted cotton ginning operation. At this facility the unloading system was controlled by 1D-3D cyclones, the 1A, 1B, 2A, and 2B pre-cleaning, the overflow, main trash, feeder trash, motes and motes transfer systems were controlled by 2D-2D cyclones, and the 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning systems were controlled with a screen room. The gin was limited by permit condition to a ginning rate of 480 bales per day and 48,000 bales per year. The applicant surrendered their PTO on December 14, 2006 as part of this application (see Attachment II).

#### V. Calculations:

#### A. Assumptions and Emission Factors

#### Assumptions:

- PM<sub>10</sub> emissions assumed to equal 50% of PM emissions, per NSR Section 4.11.2.
- Annual emissions will be rounded to the nearest pound in accordance with the District Policy APR-1105 (dated 7/16/1992).
- The exhaust from the burners flows through the process air and exits at the cyclone collectors. In this case, PM<sub>10</sub> amounts exhausted from the cyclones include emissions from both the burners and the ginning process. Therefore, the ginning PM<sub>10</sub> emissions are not added to those calculated for the burners to determine the HAE.
- Bales are standardized to 500 lb/bale.
- Natural Gas Heating Value is 1,000 Btu/scf (District Policy APR-1720, dated 12/20/01).
- One therm of natural gas is equal to 0.100 MMBtu.
- F-Factor for Natural Gas is 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B).
- Hourly throughput rate is 20 bales/hr, calculated as 480 bales/day (permit limit) ÷ 24 hrs/day)

#### **Emission Factors:**

The gin is permitted to fire their burners on both natural gas and LPG/propane, however the fuel records that were provided by the facility indicate that natural gas was the only fuel combusted for the last five years. Therefore, only emission factors for natural gas combustion will be used to determine facility's emissions.

The gin equipment included burners providing heated air to control the moisture content of the cotton. These burners were fired on natural gas and ERCs are requested from their shutdown. The PTO does not indicate natural gas combustion emission factors for SO<sub>X</sub> and VOC, so AP-42 Emissions Factors and P G & E historical sulfur concentration tests shall be used (see Attachment III).

The  $SO_X$  EF for natural gas combustion is 0.00285 lb- $SO_X$ /MMBtu, as identified in District Policy APR 1720 - Generally Accepted  $SO_X$  Emission Factor for Combustion of PUC-quality Natural Gas (dated 12/20/01).

Per previous EPA comments and District Policy APR 1110 - Use of Revised Emission Factors (dated 4/28/04), the  $SO_X$  EF will be revised according to P G & E's historical records of sulfur concentration in their pipelines. Therefore the  $SO_X$  EF will be calculated using 0.25 gr-S/100 scf as follows:

 $SO_X$  EF (lb/MMBtu) = (0.25 gr-S/100 scf) x (1 scf/1,000 Btu) x (1 x10<sup>6</sup> Btu/MMBtu) x (1 lb/7,000 gr) x (2  $SO_2/S$ )

 $SO_X$  EF = 0.00071 lb- $SO_X$ /MMBtu

AP-42 (07/98) Table 1.4-2 lists the VOC emission factor for the combustion of natural gas as 0.0055 lb/MMBtu. This value will be used to determine VOC emissions from the burners.

Natural Gas Emission Factors					
Pollutant	EF (lb/MMBtu)	Source			
VOC	0.0055	AP-42 (07/98) Table 1.4-2			
NO <sub>X</sub>	0.1	Current Permit			
CO	0.02	Current Permit			
SO <sub>X</sub>	0.00071	P G & E Gas Line Source Tests			

The PTO specifies an EF of 1.67 lb-PM $_{10}$ /bale (Attachment I, permit condition 8). The facility was also never required to perform source tests of specific cyclone systems at the facility. In the absence of other data the District generally uses emission factors from the California Cotton Ginners Association (CCGA) emission factor handbook to represent PM $_{10}$  emissions from gins in the San Joaquin Valley, since the handbook is a compilation of source tests of San Joaquin Valley cotton gins.

All three sources of emissions factors are compared in the following table. Generally, the District uses the most accurate information available. For instance, where facility-specific source test data is available, we will use it (unless it is in violation of permit conditions or other requirements). The next most accurate information that exists is the data from the Cotton Ginners handbook, because it is based on a compilation of emissions factors. However, where a conflict exists between the data that are not based on facility-specific source tests, we will use the more conservative emissions factor to determine the amount of ERCs available for banking. See the following table for specific explanations.

## Comparison of CCGA Emission Factors Handbook Summary, Permitted Emissions Factors, Engineering Evaluation **Emissions Factors, and Source Testing Emissions Factors**

		Gin 7	Гуре: SAW				
System	Cyclone Design	CCGA Handbook EFs, version 1.5 (lb-PM <sub>10</sub> /bale) Current EFs		PTO EFs (Ib-PM <sub>10</sub> /bale)	Engineering Evaluation EFs	Source Testing EFs	Proposed EFs (lb-PM <sub>10</sub> /bale)
		Average	Average + S. D.	1	(lb-PM <sub>10</sub> /bale)	(lb-PM <sub>10</sub> /bale)	(is t injustic)
Unloading (Wagon and Module Feeder)	1D-3D	0.11	0.15		0.11		0.11
#1 Precleaning (1A and 2A)	2D-2D	0.29	0.54		0.29		0.29
#2 Precleaning (1B and 2B)	2D-2D	0.21	0.41		0.23		0.23
Overflow	2D-2D		V/A <sup>1</sup>		0.06		0.06
Main Trash (Stick Machines and Unloading Collectors Trash)	2D-2D	N/A <sup>2</sup>			80.0		0.08
Feeders, Gin Stands, and Battery Condenser	Screen Basket	ľ	N/A <sup>3</sup>		0		0
#1 Stage Lint Cleaning	Screen Basket	0.48	0.48		0.23		0.23
#2 Stage Lint Cleaning	Screen Basket	0.30	0.30		0.23		0.23
Battery Condenser	Screen Basket	0.17	0.17		0.17		0.17
Feeder Trash (Gin Stand Feeder Trash)	2D-2D	. 0.04	0.04		0		0.04
Motes System	2D-2D	0.25	0.40		0.23		0.23
Motes Transfer System	2D-2D	<u> </u>	√A <sup>4</sup>		0.04		0.04
			Totals	1.67	1.67	N/A <sup>5</sup>	1.71

As shown above, the total emissions factor for this cotton gin is 1.71 lb-PM<sub>10</sub>/bale. This is greater than the total emissions factor of 1.67 lb-PM<sub>10</sub>/bale specified on the current PTO. Therefore, the more conservative figure of 1.67 lb-PM<sub>10</sub>/bale will be used to determine the amount of ERCs available for banking.

<sup>&</sup>lt;sup>1</sup>There is not a specific CCGA EF that applies to overflow systems on saw type gins with 2D-2D cyclones.

<sup>&</sup>lt;sup>2</sup>There is not a specific CCGA EF that applies to main trash systems on saw type gins with 2D-2D cyclones.

<sup>3</sup>There is not a specific CCGA EF that applies to 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning and battery condenser systems on saw type gins with screen baskets.

There is not a specific CCGA EF that applies to motes transfer systems on saw type gins with 2D-2D cyclones.

<sup>&</sup>lt;sup>5</sup>There has been no source testing of any of the equipment at this facility.

#### B. Baseline Period Determination and Data

The baseline period consists of two years immediately preceding the date of reduction, or at least two consecutive years within five years prior to the ERC application, if they are more representative of "normal source operation" (District Rule 2201, Section 3.8).

According to District Policy APR-1810 (dated 9/9/92), the date of shutdown for permitted sources shall be the date of surrender of the operating permits, unless otherwise determined as stated in the policy. The applicant has provided the historical ginning records for the 2002, 2003, 2004, 2005, and 2006 ginning seasons as presented in the following table and shown in Attachment IV.

Historical Throughput and Fuel Use for the Cotton Gin						
Season Start Date	Season End Date	Bales Produced (500 lb bales)	Natural Gas Usage (therms)			
Codoon Clare Bato	Codon End Bato	4 <sup>th</sup> and 1 <sup>st</sup> Quarter Season	4 <sup>th</sup> and 1 <sup>st</sup> Quarter Season			
October 8, 2002	December 11, 2002	23,558	72,403			
October 17, 2003	January 12, 2004	31,090	90,708			
October 4, 2004	January 11, 2005	34,254	47,779			
October 13, 2005	December 19, 2005	22,834	38,390			
October 13, 2006	N/A	0	60			
	5 Year Average:	22,347	49,868			

During the five years of operation prior to the ERC application the facility operated in the first quarter in only the 2003 and 2004 seasons. The facility has only provided data for bales produced and natural gas usage on a seasonal basis but cotton gins typically operate 24 hours per day, seven days a week until all on the cotton from the previous growing season is ginned. As required by District Rule 2201, "normal" source operation for the eight consecutive calendar quarter periods that most closely represents the five year average must be determined. Therefore, the prorated amount of bales produced and natural gas usage based on days of operation during the ginning season will be calculated for the 2003 and 2004 seasons only.

<u>Prorating Bale Production and Natural Gas Usage for the 4<sup>th</sup> and 1<sup>st</sup> Quarters for the 2003 Season:</u>

There were a total of 88 days of operation for the 2003 season (15 days in October + 30 days in November + 31 days in December + 12 days in January). Of this total, 76 days of operation occurred in the 4<sup>th</sup> quarter (88 total days – 12 days in January) and 12 days of operation occurred in the 1<sup>st</sup> quarter. Therefore, the calculated bales produced and natural gas usage for 4<sup>th</sup> and 1<sup>st</sup> quarters for the 2003 season is calculated as follows:

#### **Bale Production:**

 $4^{th}$  Qtr, Bale Production (bales/qtr) = 31,090 bales in the 2003 season x (76  $4^{th}$  quarter days ÷ 88 total days)

4<sup>th</sup> Qtr, Bale Production = 26,850 bales/qtr

1<sup>st</sup> Qtr, Bale Production (bales/qtr) = 31,090 bales in the 2003 season x (12 4<sup>th</sup> quarter days ÷ 88 total days)

1<sup>st</sup> Qtr, Bale Production = 4,240 bales/qtr

#### Fuel Usage:

 $4^{th}$  Qtr, Fuel Usage (therms/qtr) = 90,708 therms in the 2003 season x (76  $4^{th}$  quarter days ÷ 88 total days)

4<sup>th</sup> Qtr, Fuel Usage = 78,339 therms/qtr

 $1^{st}$  Qtr, Fuel usage (therms/qtr) = 90,708 therms in the 2003 season x (12  $4^{th}$  quarter days ÷ 88 total days)

1<sup>st</sup> Qtr, Fuel Usage = 12,369 therms/qtr

<u>Prorating Bale Production and Natural Gas Usage for the 4<sup>th</sup> and 1<sup>st</sup> Quarters for the 2004 Season:</u>

There were a total of 100 days of operation for the 2004 season (28 days in October + 30 days in November + 31 days in December + 11 days in January). Of this total, 89 days of operation occurred in the 4<sup>th</sup> quarter (100 total days – 11 days in January) and 11 days of operation occurred in the 1<sup>st</sup> quarter. Therefore, the calculated bales produced and natural gas usage for 4<sup>th</sup> and 1<sup>st</sup> quarters for the 2004 season is calculated as follows:

#### **Bale Production:**

4<sup>th</sup> Qtr, Bale Production (bales/qtr) = 34,254 bales in the 2004 season x (89 4<sup>th</sup> quarter days ÷ 100 total days)

4<sup>th</sup> Qtr, Bale Production = 30,486 bales/qtr

1<sup>st</sup> Qtr, Bale Production (bales/qtr) = 34,254 bales in the 2004 season x (11 4<sup>th</sup> quarter days ÷ 100 total days)

1<sup>st</sup> Qtr, Bale Production = 3,768 bales/qtr

#### Fuel Usage:

 $4^{th}$  Qtr, Fuel Usage (therms/qtr) = 47,779 therms in the 2004 season x (89  $4^{th}$  quarter days  $\div$  100 total days)

4<sup>th</sup> Qtr, Fuel Usage = 42,523 therms/qtr

 $1^{st}$  Qtr, Fuel usage (therms/qtr) = 47,779 therms in the 2004 season x (11  $4^{th}$  quarter days ÷ 100 total days)

1<sup>st</sup> Qtr, Fuel Usage = 5,256 therms/qtr

Baseline Determination for the Cotton Gin					
Calendar Quarter	Cotton Bale Production (500 lb bales)	Eight Quarter Difference for Cotton Bale Production (500 lb bales)			
1 <sup>st</sup> 2002	0	N/A			
2 <sup>nd</sup> 2002	0	N/A			
3 <sup>rd</sup> 2002	0	N/A			
4 <sup>th</sup> 2002	23,558	N/A			
1 <sup>st</sup> 2003	0	N/A			
2 <sup>nd</sup> 2003	0	N/A			
3 <sup>rd</sup> 2003	0	N/A			
4 <sup>th</sup> 2003	26,850	714			
1 <sup>st</sup> 2004	4,240	1,244			
2 <sup>nd</sup> 2004	0	1,244			
3 <sup>rd</sup> 2004	0	1,244			
4 <sup>th</sup> 2004	30,486	2,110			
1 <sup>st</sup> 2005	3,768	2,581			
2 <sup>nd</sup> 2005	0	2,581			
3 <sup>rd</sup> 2005	0	2,581			
4 <sup>th</sup> 2005	22,834	2,079			
1 <sup>st</sup> 2006	0	1,549			
2 <sup>nd</sup> 2006	0	1,549			
3 <sup>rd</sup> 2006	0	1,549			
4 <sup>th</sup> 2006	0	2,262			
Average:	5,587				

The values in the columns labeled "Eight Quarter Difference" represent the absolute value of the difference between the facility's quarterly cotton bale production averaged over the last 5 years since the date the application was submitted and the quarterly throughput averaged over the previous eight consecutive calendar quarters starting with Q4 1998. The smallest "difference" is assumed to be the eight consecutive calendar quarter periods that most closely represents "normal" source operation. For this ERC

application the most recent representative eight consecutive calendar quarters for cotton bale production are from the 1<sup>st</sup> quarter of 2002 to the 4<sup>th</sup> quarter of 2003. These are the most recent eight consecutive calendar quarters out of the past five years that the cotton gin was operating and most closely represent the last five years of operation of the cotton gin. Based on the ginning records provided, the average bale throughput and the average natural gas usage from the representative two years (2002 and 2003) for the ERC application are calculated as follows:

Average Bale Throughput (bales/yr) =  $[2002 \text{ (bales/yr)} + 2003 \text{ (bales/yr)}] \div 2$ Average Bale Throughput bales/yr =  $(23,558 \text{ bales/yr} + 31,090 \text{ bales/yr}) \div 2$ Average Bale Throughput = 27,324 bales/yr

Average Natural Gas Usage (therms/yr) =  $[2002 \text{ (therms/yr)} + 2003 \text{ (therms/yr)}] \div 2$ Average Natural Gas Usage therms/yr =  $(72,403 \text{ therms/yr} + 90,708 \text{ therms/yr}) \div 2$ Average Natural Gas Usage = 81,556 therms/yr

With one therm of natural gas is equal to 100,000 Btu:

Average Natural Gas Usage Btu/yr = 81,556 therms/yr x 0.100 MMBtu/therm Average Natural Gas Usage = 8,156 MMBtu/yr

The baling production for 2002 and 2003 was based upon annual records. The same 2002 and 2003 baseline period was used for historic natural gas fuel usage. The facility has not been operated since the 2005 season; therefore the total bale throughput and propane usage for the 2006 season is equal to zero and will not be used to calculate the baseline emissions.

# C. Historical Actual Emissions (HAE)

Historical Actual Emissions (HAE) are emissions having actually occurred and are calculated using process data and recognized emission factors, per Rule 2201, Section 3.21.

### PM<sub>10</sub>:

The HAE is calculated based on the emission factor discussed in Section V.A of this evaluation and the average baling rate during the baseline period discussed in Section V.B.

 $4^{th}$  Qtr, HAE for PM<sub>10</sub> lb/qtr = 1.23 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr  $4^{th}$  Qtr, HAE for PM<sub>10</sub> = 33,609 lb-PM<sub>10</sub>/qtr

Adding the HAE from the dryers and ginning operation produces the HAE totals. Because the exhaust from the burners flows through the process air and exits at the cyclone collectors,  $PM_{10}$  amounts exhausted from the cyclones include emissions from the dryers and the ginning process. Therefore, the  $PM_{10}$  emissions from the dryers are not added to those calculated for the ginning operation to determine the HAE.

#### VOC, NO<sub>X</sub>, CO, and SO<sub>X</sub>:

The HAE for is calculated using emission factors for natural gas combustion from EPA's AP-42, the current PTO, and District Policy 1720, and the average natural gas use during the baseline period. The cotton gin was only operated during the fourth and first quarter of each year.

Historical Average Natural Gas Usage (MMBtu/yr) = 8,156 MMBtu/yr

 $HAE_{NG}$  (Ib/qtr) =  $EF_{NG}$  (Ib/MMBtu) x Historical Natural Gas Usage (MMBtu/yr) x (Days of Operation)qtr ÷ Total Days of Operation)

 $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> (lb/qtr) = (0.0055 lb-VOC/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> = 45 lb-VOC/qtr

 $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> lb/qtr = (0.1 lb-NO<sub>X</sub>/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> = 816 lb-NO<sub>X</sub>/qtr

 $4^{th}$  Qtr, HAE for  $CO_{NG}$  lb/qtr = (0.02 lb-CO/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $CO_{NG}$  = 163 lb-CO/qtr

 $4^{th}$  Qtr, HAE for  $SO_{XNG}$  lb/qtr =  $(0.00071 \text{ lb-}SO_X/\text{MMBtu}) \times 8,156 \text{ MMBtu/yr}$  $4^{th}$  Qtr, HAE for  $SO_{XNG}$  = 6 lb- $SO_X/\text{qtr}$ 

HAE for Natural Gas Combustion					
Pollutant	4 <sup>th</sup> Qtr. HAE <sub>NG</sub> (lb/qtr)				
VOC	45				
NO <sub>X</sub>	816				
CO	163				
SO <sub>X</sub>	6				

## D. Adjustments to HAE

Pursuant to Section 3.22 of Rule 2201, Historical Actual Emissions must be discounted for any emissions reduction which is:

- required or encumbered by any laws, rules, regulations, agreements, orders, or
- attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or
- proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act.

#### **Emissions Adjusted for Emission Factor Determination:**

Rule 4204 Cotton Gins was adopted on February 17, 2005 and requires cotton gins to use 1D-3D cyclones with emissions equivalent to the emission factors from the latest revision of the CCGA handbook. The emission factors from the current valid permit will be adjusted in accordance with District Rule 2201 in the Section titled *Emissions Adjusted for Rule 4204 – Cotton Gins* of this evaluation.

#### **Emissions Adjusted for Rule 4201 - Particulate Matter Concentration:**

According to Section 3.1 particulate matter (PM) emissions from each source operation should not exceed 0.1 grains per cubic foot of gas at dry standard conditions. The calculation is based on a 20 bales/hr ginning rate and the airflow through the control device. The airflow for each system is taken from District project C-1021007 (see Attachment V). Emission Factors are taken from the ones presented in Section VII.B. The following equation is used to determine the grain loading for each system and the results are listed in following table.

Baling Rate = 480 bales/day = 20.0 bales/hr

 $PM_{10}$  (gr/dscf) = (Ib-PM<sub>10</sub>/bale) x (7000 gr/lb-PM<sub>10</sub>) x (2 lb-PM/lb-PM<sub>10</sub>) x (20 bales/hr) (scf/min) x (60 min/hr)

PM Concentrations							
System	Control	EFs (lb-PM <sub>10</sub> /bale)	Air Flow (cfm)	Grain Loading (grain/dscf)			
Unloading	1D-3D	0.11	12,800	0.04			
#1 Precleaning	1D-3D	0.11	15,042	0.03			
#2 Precleaning	1D-3D	0.09	15,042	0.03			
Overflow	1D-3D	0.04	4,594	0.04			
Main Trash	1D-3D	0	7,521	0.0			
Feeders, Gin Stands, and Battery Condenser	1D-3D	0	14,103	0.0			
#1 Lint Cleaning	1D-3D	0.10	16,666	0.03			
#2 Lint Cleaning	1D-3D	0.03	10,000	0.01			
Battery Condenser	1D-3D	0.03	26,000	0.01			
Feeder Trash	1D-3D	0.08	7,521	0.05			
Motes System	1D-3D	0.07	13,349	0.02			
Motes Transfer System	1D-3D	0.03	2,042	0.07			

Since no concentration is above 0.1grain/dscf, no adjustment is needed.

#### **Emissions Adjusted for Rule 4202 Particulate Matter - Emission Rate:**

District Rule 4202 Particulate Matter — Emission Rate (12/17/92), Section 4.1 limits emissions based on process weight. The process rate in a cotton gin varies from emission point to emission point as the trash and seeds are removed from the lint, decreasing the weight. The rate starts at 1,500 lbs of seed cotton per bale of finished cotton and drops to about 500 lbs of lint cotton per bale of finished cotton.

Below, emissions are checked at unloading, lint cleaning, and the battery condenser. Any adjustments will be subtracted from the EF based on the CCGA tables. In this case, since the permitted EF is higher than the CCGA EF, the new adjusted CCGA EF will be compared to the permit limit, and the lower number will be used.

Baling Rate = 480 bales/day = 20.0 bales/hr

#### 1. Unloading:

For Process Rate (P) = 20.0 bales/hr x 1,500 lb/bale = 30,000 lb/hr of seed cotton = 15.0 tons/hr of seed cotton

The emissions limit (E), per District Rule 4202, is calculated as follows:

E =  $3.59 \times P^{0.62}$ =  $3.59 \times (15.0)^{0.62}$ = 19.2 lb-PM/hr

The emissions factor for unloading is 0.11 lb-PM<sub>10</sub>/bale (1D-3D cyclone), per CCGA Emission Factors Summary Tables. Based on this emissions factor, the emission rate for unloading is 2.20 lb-PM<sub>10</sub>/hr (20.0 bales/hr x 0.11 lb-PM<sub>10</sub>/bale). Assuming 50% of PM is PM<sub>10</sub>, this is equivalent to a PM emission rate of 4.4 lb-PM/hr. Therefore, the PM emissions are within the allowable limits of this Rule.

#### 2. Lint Cleaner:

The District has contacted the CCGA and requested the information of the process weights for lint cleaning. The CCGA has stated that they do not know the processing weights at the specified points. The process weights for these emission points will therefore be back calculated by determining the weight of material removed by each process point (between the 500 lb finished bale and the specific emission point) and adding those values to the 500 pound bale. The District's calculations will be assumed to be representative of the actual process weights, based on assumed cyclone control efficiencies and known emission rates.

#### **Emissions Factors:**

Lint Cleaning: 0.10 lb-PM<sub>10</sub>/bale + 0.03 lb-PM<sub>10</sub>/bale = 0.13 lb-PM<sub>10</sub>/bale

Battery Condenser: 0.03 lb-PM<sub>10</sub>/bale

Assuming a 90% control efficiency for the cyclones and 50% of PM emissions are PM<sub>10</sub>, we can determine the weight of material removed by the battery condenser and the lint cleaner:

#### **Lint Cleaning:**

Let X = Ib-PM/bale (pre-lint cleaning) and assuming 90% control efficiency of the cyclone

```
Mass Balance: X x (1 - 0.90) = 0.13 lb PM/bale = 0.13 lb PM/bale ÷ 0.10 
X = 1.3 lb PM/bale
```

#### **Battery Condenser:**

Let X = Ib-PM/bale (pre-battery condenser) and assuming 90% control efficiency of the cyclone

```
Mass Balance: X \times (1 - 0.90) = 0.03 lb PM/bale = 0.03 lb PM/bale ÷ 0.10 X = 0.3 lb PM/bale
```

Therefore, the process weight of the bale when it entered the lint cleaner was  $\approx$  501.6 lbs (500 + 1.3 + 0.3) and approximately 1.3 lbs of material was removed by the lint cleaner. The battery condenser process weight is  $\approx$  500.3 lbs since approximately 1.3 lbs of material is removed by lint cleaner.

#### Lint Cleaner:

```
For Process Rate (P) = 20.0 bales/hr x 501.6 lb/bale
= 10,032 lb/hr of seed cotton
= 5.02 tons/hr
```

The emissions limit (E), per District Rule 4202, is calculated as follows:

$$\dot{E} = 3.59 \times P^{0.62}$$
  
= 3.59 × (5.02)<sup>0.62</sup>  
= 9.8 lb-PM/hr

The emissions factor for the Lint Cleaner is 0.13 lb  $PM_{10}$ /bale (1D-3D), based on source test information from similar gins, as compiled in the CCGA Factors summary tables. Based on this emissions factor, the emission rate for this lint cleaner is 2.6 lb- $PM_{10}$ /hr (20.0 bales/hr x 0.13 lb- $PM_{10}$ /bale). Assuming 50% of PM is  $PM_{10}$ , this is equivalent to a PM emission rate of 5.2 lb-PM/hr. Therefore, the PM emissions are not above the allowable Rule limits, and adjustment is not necessary for the lint cleaner.

#### 3. Battery Condenser:

For Process Rate (P) = 20.0 bales/hr x 500.3 lb/bale = 10,006 lb/hr of seed cotton = 5.00 tons/hr

The emissions limit (E), per District Rule 4202, equals  $E = 3.59 \times P^{0.62}$   $= 3.59 \times (5.00)^{0.62}$  = 9.7 lb-PM/hour

The emissions factor for the battery condenser is 0.03 lb  $PM_{10}$ /bale (1D-3D), based on source test information from similar gins, as compiled in the Cotton Gin Emission Factors summary tables. Based on this emissions factor, the emission rate for the battery condenser is 0.60 lb- $PM_{10}$ /hr (20.0 bales/hr x 0.03 lb- $PM_{10}$ /bale). Assuming 50% of PM is  $PM_{10}$ , this is equivalent to a PM emission rate of 1.2 lb-PM/hr. Therefore, the PM emissions are not above the allowable Rule limits, and adjustment is not necessary for the battery condenser.

#### **Emissions Adjusted for Rule 4204 - Cotton Gins:**

Rule 4204 Cotton Gins was adopted on February 17, 2005 and requires cotton gins to use 1D-3D cyclones, with emissions equivalent to the emission factors from the latest revision of the CCGA handbook, by July 1, 2008. Pursuant to Section 3.22 of Rule 2201, Historical Actual Emissions must be discounted for any emissions reduction which is: required or encumbered by any laws, rules, regulations, agreements, orders, or , proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act. Therefore, even though the cotton gin was in compliance with this Rule at the time of the ERC application submittal, the amount of ERCs that will be allowed to be banked will be discounted for the future required compliance with this Rule.

Since at this facility the unloading system was controlled by 1D-3D cyclones, the 1A, 1B, 2A, and 2B pre-cleaning, the overflow, main trash, feeder trash, motes and motes transfer systems were controlled by 2D-2D cyclones, and the 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning systems were controlled with a screen room, adjustments to the PM<sub>10</sub> emission factors are necessary. The emission factors were compared to the current CCGA handbook emissions and source tested values as if the control devices were retrofitted to the gin. The most conservative emission factors were used and are listed in the following table:

Emission Factors Adjusted for Applicant/CCGA EFs							
	Gin Type: SAW						
System	Current Cyclone Design	Required Cyclone Design	EFs from Current PTO and/or Engineering Evaluation (lb-PM <sub>10</sub> /bale)	CCGA Average EFs Required by Rule 4204 (lb-PM <sub>10</sub> /bale)	Adjusted EFs (lb-PM <sub>10</sub> /bale)		
Unloading (Wagon and Module Feeder)	1D-3D	1D-3D	0.11	0.11	0.11		
#1 Precleaning (1A and 2A)	2D-2D	1D-3D	0.29	0.11	0.11		
#2 Precleaning (1B and 2B)	2D-2D	1D-3D	0.23	0.09	0.09		
Overflow	2D-2D	1D-3D	0.06	0.04	0.04		
Main Trash (Stick Machines and Unloading Collectors Trash)	2D-2D	1D-3D	0.08	N/A <sup>6</sup>	0.08		
Feeders, Gin Stands, and Battery Condenser	Screen Basket	1D-3D	0	0	0		
#1 Stage Lint Cleaning	Screen Basket	1D-3D	0.23	0.10	0.10		
#2 Stage Lint Cleaning	Screen Basket	1D-3D	0.23	0.03	0.03		
Battery Condenser	Screen Basket	1D-3D	0.17	0.03	0.03		
Feeder Trash (Gin Stand Feeder Trash)	2D-2D	1D-3D	0	0.08	0.08		
Motes System	2D-2D	1D-3D	0.23	0.07	0.07		
Motes Transfer System (Motes Cleaner Trash)	2D-2D	1D-3D	0.04	0.03	0.03		
	<b>Totals</b> 1.67 0.69 <b>0.77</b>						

The total emission factor for this cotton gin of 1.67 lb-PM<sub>10</sub>/bale is greater than the adjusted emission factor of 0.77 lb-PM<sub>10</sub>/bale. Therefore, the more conservative figure of 0.77 lb-PM<sub>10</sub>/bale will be used to determine the amount of ERCs available for banking. Therefore, the emissions factor has been adjusted from 1.67 lb-PM<sub>10</sub>/bale to 0.77 lb-PM<sub>10</sub>/bale.

<sup>&</sup>lt;sup>6</sup>There is not a specific CCGA EF that applies to main trash systems on saw type gins with 2D-2D cyclones.

#### **Total Adjustment**

The total adjustment is equal to the sum of the adjusted parts. In this case, the unloading equipment is controlled by 1D-3D cyclones and the rest of the equipment is controlled by 2D-2D cyclones. Therefore, an adjustment is necessary.

The PM<sub>10</sub> calculation for the gin is now:

$$4^{th}$$
 Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 0.77 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr = 21,039 lb-PM<sub>10</sub>/qtr

#### Emissions Adjusted for Rule 4309 - Dryers, Dehydrators, and Ovens:

District Rule 4309 Dryers, Dehydrators, and Ovens (12/15/05), Section 4.1.6, specifically exempts units used to dry lint cotton or cotton at cotton gins. The dryers at this facility are used to dry cotton therefore no adjustment is necessary.

#### Emissions Adjusted for Rule 4801 - Sulfur Compounds:

District Rule 4801 requires that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section V.A, the sulfur compound emissions are calculated as follows:

$$SO_X$$
 EF = 0.00071 lb- $SO_X$ /MMBtu

Volume 
$$SO_2 = n \times R \times T$$

With:

N = moles SO<sub>2</sub>  
T (Standard Temperature) = 60 °F = 520 °R  
P (Standard Pressure) = 14.7 psi  
R (Universal Gas Constant) = 
$$\frac{10.73 \,\mathrm{psi} \cdot \mathrm{ft}^3}{\mathrm{lb} \cdot \mathrm{mol} \cdot \mathrm{°R}}$$

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to:

$$Corrected \ F - factor = \left(\frac{8,710 dscf}{MMBtu}\right) \times \left(\frac{60^{\circ} F + 459.6}{68^{\circ} F + 459.6}\right) = 8,578 \frac{dscf}{MMBtu} \ at \ 60^{\circ} F$$

$$\frac{0.00071 \cdot lb - SOx}{MMBtu} \times \frac{MMBtu}{8,578 \, dscf} \times \frac{1 \, lb \cdot mol}{64 \, lb} \times \frac{10.73 \, psi \cdot ft^3}{lb \cdot mol \cdot {}^{\circ}R} \times \frac{520 \, {}^{\circ}R}{14.7 \, psi} \times \frac{1,000,000 \cdot parts}{million} = 0.49 \, \frac{parts}{million}$$

$$SulfurConcentration = 0.49 \frac{parts}{million} < 2,000 \text{ ppmv (or 0.2%)},$$

Since the sulfur concentration of the natural gas fuel is less than 2,000 ppmv, no adjustment is needed.

#### **Total Adjusted Historical Actual Emissions (HAE):**

The total adjustment is equal to the sum of the adjusted parts. There were no adjustments made to the Historical Actual Emissions for  $NO_X$ ,  $SO_X$ , CO, or VOC; however adjustments were made to the HAE for  $PM_{10}$ .

For  $PM_{10}$  emissions, the unloading equipment is controlled by 1D-3D cyclones and the rest of the equipment is controlled by 2D-2D cyclones, therefore emission factors were updated to be consistent with the 1D-3D cyclone requirements of Rule 4204, the most recent revision of the CCGA handbook, applicant proposed emissions factors, and source tested emission factors. The adjusted HAE for all criteria pollutants are calculated and presented in the following table.

Historical Average Natural Gas Usage (MMBtu/yr) = 8,156 MMBtu/yr

 $HAE_{NOx, SOx, CO, and VOC}$  (lb/qtr) =  $EF_{NG}$  (lb/MMBtu) x Historical Natural Gas Usage (MMBtu/yr)

HAE<sub>PM10</sub> (lb/qtr) = Adjusted EF lb-PM<sub>10</sub>/bale x Average bales/qtr

 $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> (lb/qtr) = (0.0055 lb-VOC/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> = 45 lb-VOC/qtr

 $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> lb/qtr = (0.1 lb-NO<sub>X</sub>/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> = 816 lb-NO<sub>X</sub>/qtr

 $4^{th}$  Qtr, HAE for  $CO_{NG}$  lb/qtr = (0.02 lb-CO/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $CO_{NG}$  = 163 lb-CO/qtr

 $4^{th}$  Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 0.77 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr  $4^{th}$  Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 21,039 lb-PM<sub>10</sub>/qtr

 $4^{th}$  Qtr, HAE for  $SO_{X NG}$  Ib/qtr = (0.00071 Ib- $SO_{X}$ /MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $SO_{X NG}$  = 6 Ib- $SO_{X}$ /qtr

Total Adjusted Historical Actual Emissions (HAE)							
Pollutant	1 <sup>st</sup> Qtr. HAE (lb/qtr)	2 <sup>nd</sup> Qtr, HAE (lb/qtr)	3 <sup>rd</sup> Qtr. HAE (lb/qtr)	4 <sup>th</sup> Qtr. HAE (lb/qtr)			
VOC	0	0	0	45			
NO <sub>X</sub>	0	0	0	816			
СО	0	0	0	163			
PM <sub>10</sub>	0	0	0	21,039			
SO <sub>X</sub>	0	0	0	6			

#### E. Actual Emissions Reductions (AER)

Per Rule 2201, Section 4.12, the Actual Emissions Reductions due to shutdown of an emissions unit is equal to the HAE – PE2.

#### AER = HAE - PE2

# 4th Quarter Actual Emissions Reductions:

 $AER_{VOC}$  (lb/yr) = 45 lb-VOC/qtr = 45 lb-VOC/qtr

 $AER_{NOx} (lb/yr) = 816 lb-NO<sub>X</sub>/qtr - 0 lb-NO<sub>X</sub>/qtr = 816 lb-NO<sub>X</sub>/qtr$ 

 $AER_{CO}$  (lb/yr) = 163 lb-CO/qtr = 163 lb-CO/qtr

 $\mathsf{AER}_{\mathsf{PM10}}\,(\mathsf{Ib/yr}) \,=\, 21,039\,\,\mathsf{Ib-PM_{10}/qtr} \,-\, 0\,\,\mathsf{Ib-PM_{10}/qtr} \,=\, 21,039\,\,\mathsf{Ib-PM_{10}/qtr}$ 

 $AER_{SOx}$  (lb/yr) = 6 lb-SO<sub>X</sub>/qtr - 0 lb-SO<sub>X</sub>/qtr = 6 lb-SO<sub>X</sub>/qtr

Actual Emission Reductions (AER)							
Pollutant	1 <sup>st</sup> Qtr. AER (lb/qtr)	2 <sup>na</sup> Qtr. AER (lb/qtr)	3 <sup>ra</sup> Qtr. AER (lb/qtr)	4 <sup>in</sup> Qtr. AER (lb/qtr)			
VOC	0	0	0	45			
NO <sub>X</sub>	0	0	0	816			
СО	0	0	0	163			
PM <sub>10</sub>	0	0	0	21,039			
SO <sub>X</sub>	0	0	0	6			

#### F. Air Quality Improvement Deduction

The Air Quality Improvement Deduction (AQID) is 10% of the AER per Rule 2201, Sections 3.5 and 4.12.1, and is summarized as follows:

Air Quality Improvement Deduction (AQID)							
Pollutant	1 <sup>st</sup> Qtr. AQID (lb/qtr)	2 <sup>na</sup> Qtr. AQID (lb/qtr)	3 <sup>ra</sup> Qtr. AQID (lb/qtr)	4 <sup>th</sup> Qtr. AQID (lb/qtr)			
VOC	0	0	0	5			
NO <sub>X</sub>	0	0	0	82			
СО	0	0	0	16			
PM <sub>10</sub>	0	0	0	2,104			
SO <sub>X</sub>	0	0	0	1			

#### G. Increases in Permitted Emissions (IPE)

No IPE is associated with this project.

#### H. Bankable Emissions Reductions Credits

The bankable emissions reductions credits, presented in following table, are determined by subtraction of the Air Quality Improvement Deduction (discussed in Section V.F) from the AER. The emission reductions occurred in the fourth quarter (see throughput records in Section V.B).

Bankable Emissions Reductions Credits (ERCs)						
Pollutant	1 <sup>st</sup> Qtr ERCs (lb/qtr)	2 <sup>na</sup> Qtr ERCs (lb/qtr)	3 <sup>ra</sup> Qtr ERCs (lb/qtr)	4 <sup>tt</sup> Qtr ERCs (lb/qtr)		
VOC	0	0	0	40		
NO <sub>X</sub>	0	0	0	734		
СО	0	0	0	147		
PM <sub>10</sub>	0	0	0	18,935		
SO <sub>X</sub>	0	0	0	5		

#### VI. Compliance:

To comply with the definition of Actual Emissions Reductions (Rule 2201, Section 3.2.1), the reductions must be:

#### A. Real

The emissions reductions were generated by the shutdown of the cotton ginning equipment. The emissions reductions were calculated from actual historic production data and recognized emission factors. The emission factor of 0.77 lb-PM<sub>10</sub>/bale is based on the District Rule 4204 Cotton Gins (2/17/05) requirement of 1D-3D cyclones on all systems. Therefore, the allowed reductions are real.

#### B. Enforceable

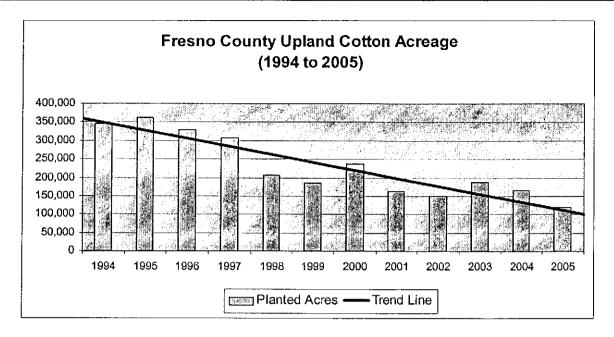
The PTO for this facility has been surrendered and the cotton gins cannot be operated without a valid PTO. Therefore, the reductions are enforceable.

#### C. Quantifiable

Reduction amounts were calculated from historic process throughput data, source test results from similar operations, CCGA emission factors, and methods according to District Rule 2201. Therefore, the reductions are quantifiable.

#### D. Permanent

The gin has been shutdown, and the PTO has been surrendered. Much of the acreage that provided the gin with cotton in the past has been retired (several hundred thousand acres are being taken out of production in Western Fresno County due to water concerns) or replaced with almonds or pistachios. In addition, the increase in the number of dairies constructed in the valley has resulted in an increase in the planting of forage crops for dairies on land that was historically used to grow cotton. This has resulted in a reduction in cotton acreage. In addition, research by the District has shown that there has been a steady decrease in the planted acreage of upland cotton since 1994. Information for the following table was provided by Cantua Creek Cooperative Gin, Inc. for project C-1061965.



As documented in the preceding table and discussed in this Section, the overall trend of upland cotton acreage planted has declined over the past 12 years and is expected to continue to decline in the future. Therefore, it can be determined that the cotton that was being processed at the Eagle Valley Ginning, LLC gin is no longer being grown and the emissions reductions in this project are permanent.

### E. Surplus

To be considered surplus, Actual Emission Reductions shall be in excess, at the time the application for an Emission Reduction Credit or an Authority to Construct authorizing such reductions is deemed complete, of any emissions reduction which:

 Is required or encumbered by any laws, rules, regulations, agreements, orders, or

No laws, rules, regulations, agreements or orders were responsible for the surrendering the facility's permits or their subsequent application for Emission Reduction Credits (ERC's).

 Is attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or

Currently there are no control measures noticed for workshop, or proposed or contained in a State Implementation Plan that require the reduction of the emissions at this facility.

 Is proposed in the APCO's adopted air quality plan pursuant to the California Clean Air Act. The shutdown of cotton gins is not proposed in the APCO's adopted air quality plan.

Shutdown of the gin was voluntary and not required by any law, rule, agreement, or regulation. These ERCs are not needed for their current or proposed operations. By using 0.77 lb-PM<sub>10</sub>/bale in our calculations for AER, we have assured that no credit was given for emissions that may have been in excess of the permitted limit of 1.67 lb-PM<sub>10</sub>/bale. Therefore, the reductions are surplus.

### F. Not used for the Approval of an Authority to Construct or as Offsets

The emission reduction credits generated by the shutdown of the cotton ginning operations were not used for the approval of any Authority to Construct or as offsets.

### G. Timely submittal

Section 5.5 of Rule 2301 – Emissions Reduction Credit Banking (12/17/92) states that ERC certificate applications for reductions shall be submitted within 180 days after the emission reduction occurs. The ERC application was received on December 18, 2006. The applicant surrendered the PTO and permanently ceased operations at this location on December 14, 2006. Therefore, the application was submitted in a timely fashion.

### VII. Recommendation:

I recommend based on the preceding analysis that Emission Reduction Credit Certificates be issued to Eagle Valley Ginning, LLC for the following applicable amounts for the fourth quarters only (see Attachment VI).

		Summary of E	RC Amounts		
	VOC	NO <sub>X</sub>	CO	PM <sub>10</sub>	SO <sub>X</sub>
ERC Number	C-794-1	C-794-2	C-794-3	C-794-4	C-794-5
1 <sup>st</sup> Quarter	0	0	0	0	0
2 <sup>nd</sup> Quarter	0	0	0	0	0
3 <sup>rd</sup> Quarter	0	0	0	0	0
4 <sup>th</sup> Quarter	40	734	147	18,935	5

#### **Attachments**

Attachment I: Permit to Operate (C-0213-1-5)

Attachment II: Permit Cancellation Letter

Attachment III: Emission Factors for Natural Gas Combustion, AP-42, Table 1.4-2 and

P G & E historical sulfur concentration tests

Attachment IV: Records of Bales Produced and Natural Gas Used

Attachment V: Cyclone System Airflows

Attachment VI: Draft ERC Certificates C-794-1, C-794-2, C-794-3, C-794-4, and C-794-5

### Attachment I: Permit to Operate C-0213-1-5

PERMIT UNIT: C-213-1-5

**EXPIRATION DATE: 03/31/2010** 

#### **EQUIPMENT DESCRIPTION:**

COTTON GIN WITH THREE SAW GIN STANDS AND FEEDERS, SEVEN LINT CLEANERS, BATTERY CONDENSER, MOTES SYSTEM, TRASH SYSTEM, AND FOUR 3 MMBTU/HR NATURAL GAS-FIRED BURNERS

### PERMIT UNIT REQUIREMENTS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
- 5. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]
- 6. Daily ginning rate shall not exceed 120 tons of baled cotton per day (480 bales/day, corrected to 500-pound bales). [District Rule 2201]
- 7. Annual ginning rate shall not exceed 12,000 tons of baled cotton per year (48,000 bales/year, corrected to 500-pound bales). [District Rule 2201]
- 8. PM10 emissions shall not exceed 6.68 pounds per ton of baled cotton (1.67 pounds per bale, corrected to 500-pound bales). [District Rule 2201]
- 9. Emissions from the natural gas-fired burners shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.02 lb-CO/MMBtu. [District Rule 2201]
- 10. Unloading (wagon and module feeder) shall be served by two 48-inch 1D-3D cyclone collectors. [District Rule 2201]
- 11. The #1A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 12. The #1B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 13. The #2A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 14. The #2B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 15. The overflow shall be served by one 42-inch 2D-2D cyclone collector. [District Rule 2201]
- 16. Main trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 17. Feeder trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 18. Feeders, gin stands and battery condenser shall be served by three screen rooms. [District Rule 2201]
- 19. Motes shall be served by one 62-inch 2D-2D, one 32-inch 2D-2D, and one 28-inch 2D-2D cyclone collectors. [District Rule 2201]
- 20. Motes transfer shall be served by one 28-inch 2D-2D cyclone collector. [District Rule 2201]
- 21. Permittee shall maintain daily records of the number and weight of bales produced. [District Rule 1070]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: EAGLE VALLEY GINNING LLC Location: 39936 W NORTH AVE, MENDOTA, CA 93640 C-213-1-5: Mar 20 2007 8: 10AM – PAMPAIAD

- 22. The trash loading area shall be enclosed with four sides that are higher than the trash auger. Two sides shall be solid. The remaining sides shall have flexible wind barriers that extend below the top of the trash trailer sides. [District Rule 4204]
- 23. Permittee shall conduct daily visual inspections of the material handling systems for leaks, breaks, or other visible signs of equipment malfunctions. [District Rule 4204]
- 24. Permittee shall maintain a record of the daily inspections of the material handling systems, including any equipment malfunctions discovered and corrective action taken to repair the malfunction, and any source test results. [District Rule 4204]
- 25. All records shall be retained on site for five years and made available to the District upon request. [District Rules 1070 and 4204]

## Attachment II: Permit Cancellation Letter

### Eagle Valley Ginning LLC



RECEIVED
DEC 1 8 2006
Permits Srvc
SJVAPCD

December 14, 2006

Mr. Dave Warner
Director of Permit Services
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg
Fresno, CA 93726

Re: Shutdown of Eagle Valley Ginning LLC (PTO#: C-213-1-5)

Dear Mr. Warner,

This letter is to officially notify you that the Eagle Valley Ginning LLC is shutting down, and hereby forfeiting, the permit to operate (PTO#: C-213-1-5) for the cotton gin located at 39936 W. North Avenue in Mendota, California.

Should you have any questions, please contact me at (209)364-6162.

Sincerely

Bob Lange Manager

C: Roger A. Isom, CCGGA

Attachment III:
Emission Factors for Natural Gas Combustion, AP-42,
Table 1.4-2 and P G & E historical sulfur concentration
tests

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION<sup>2</sup>

Pollutant	Emission Factor (lb/10 <sup>6</sup> scf)	Emission Factor Rating
CO <sub>2</sub> <sup>b</sup>	120,000	A
Lead	0.0005	D
N₂O (Uncontrolled)	2.2	E
N <sub>2</sub> O (Controlled-low-NO <sub>X</sub> burner)	0.64	E
PM (Total) <sup>c</sup>	7.6	D
PM (Condensable) <sup>c</sup>	5.7	D
PM (Filterable) <sup>c</sup>	1.9	В
SO <sub>2</sub> <sup>d</sup>	0.6	A
тос	11	В
Methane	2.3	В
VOC	5.5	C

<sup>&</sup>lt;sup>a</sup> Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10<sup>6</sup> scf to kg/10<sup>6</sup> m³, multiply by 16. To convert from lb/10<sup>6</sup> scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds.

VOC = Volatile Organic Compounds.

b Based on approximately 100% conversion of fuel carbon to CO<sub>2</sub>. CO<sub>2</sub>[lb/10<sup>6</sup> scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO<sub>2</sub>, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10<sup>4</sup> lb/10<sup>6</sup> scf.

<sup>c</sup> All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM<sub>10</sub>, PM<sub>2.5</sub> or PM<sub>1</sub> emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

<sup>d</sup> Based on 100% conversion of fuel sulfur to SO<sub>2</sub>. Assumes sulfur content is natural gas of 2,000 grains/10<sup>6</sup> scf. The SO<sub>2</sub> emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO<sub>2</sub> emission factor by the ratio of the site-specific sulfur content (grains/10<sup>6</sup> scf) to 2,000 grains/10<sup>6</sup> scf.

#### Generally Accepted SOx Emission Factor for Combustion of PUC-quality Natural Gas

Approved By: SIGN Date: 12/20/2001
Seved Sadredin

Director of Permit Services

**Purpose:** The purpose of this policy is to establish a consistent, representative, generally accepted emission factor for quantifying sulfur oxide emissions from the combustion of PUC-quality natural gas in the District.

#### I. Applicability:

For use when estimating emissions of SOx from the combustion of PUC-regulated and PUC quality natural gas.

#### II. Background:

SOx emissions from combustion of PUC-regulated and PUC quality natural gas is based on the sulfur content of the gaseous fuel. PUC-regulated natural gas is commercial pipeline natural gas transmitted and delivered throughout California by Pacific Gas and Electric, Southern California Edison, the Mojave Gas companies and others. PUC-quality natural gas is natural gas not transmitted in a PUC-regulated pipeline, but still meeting the same quality standards.

Natural gas is transmitted and distributed nationwide through a pipeline system. All pipeline systems distributing gas for other than private use are considered "public utilities" by definition, and are subject to the requirements of the Public Utilities Commission (PUC) for intrastate transmission and Federal Energy Regulatory Commission (FERC) regulations for interstate transmission.

In the past the District has used the SOx emission factor from EPA AP-42 Table 1.4-2 (rev. 1/95), of 0.6 lb SOx/MMscf of gas (as SO2), established based on mass balance, assuming an average sulfur content of 0.2 gr S/100 scf. However this emission factor may under estimate emissions from commercial pipeline natural gas in California.

Although natural gas with various sulfur contents (i.e. greater than 1 gr/100 scf) may enter the pipeline from individual producers within the state (up to 5 gr/100 scf is allowed by PUC General

Order 58-B), the natural gas suppliers (PG&E, SOCalGas, etc) regulate the quality of the gas supplied to consumers:

- Pacific Gas & Electric (PG&E) has a transportation agreement to deliver gas with a maximum total sulfur content of 1.0 gr/100 scf (actual: 0.3 to 0.5 gr/100 scf, based on source testing).
- Southern California Edison's (SoCalGas) <u>Standard Specifications for Natural Gas and Substitute Fuel Gases</u> (from SoCal Gas Company Procedures, 12/26/85) has a recommended total sulfur limit of 0.75 gr/100 scf.
- Mojave Gas Company's <u>FERC Gas Tariff General Terms and Conditions</u> (12/30/91) requires delivered natural gas to contain no more than 0.75 gr/100 scf total sulfur.

The California Air Resource Board (ARB), in their document <u>Guidance for Power Plant Siting</u> (Stationary Source Div., 6/99), determined that 1.0 gr S/100 scf is the sulfur content of gas supplied by a utility regulated by the Public Utilities Commission (PUC).

District-issued federal permits (Title V permits) have generally used a sulfur content of 5 gr/100 scf of gas, as limited by General Order 58-B of the PUC, to estimate SOx emissions from commercial natural gas combustion, which highly over estimates actual SOx emissions.

### II. District Approved Emission Factor for SOx from Natural Gas Combustion

As of the date of this policy, all calculations of SOx emissions from the combustion of PUC-regulated and PUC-quality natural gas shall use an emission factor of 0.00285 lb SOx/MMBtu (as  $SO_2$ ), based on an natural gas HHV of 1000 Btu/scf and a total sulfur content of 1.0 gr/100 scf of gas. A total sulfur content of 1.0 gr/100 scf gas is conservatively high, thus guaranteeing compliance for PUC-regulated and PUC-quality natural gas, and is also more realistic than either EPA's AP-42 level of 0.2 gr S/100 scf or the PUC standard of 5 gr/100 scf.

Because this emissions factor is conservative and compliance is assured, no additional source testing or exhaust monitoring will be required to assure compliance with SOx emission limits based upon 1.0 gr S/100 scf gas when PUC-regulated gas is used.

### III. Utilizing The New Emission Factor

See policy on use of revised generally accepted emission factors, APR 1110.

#### IV. Permit Exemption, District Rule 2020, 5.1.1

The permit exemption for natural gas-fired boilers less than 5 MMBtu/hr heat input (District Rule 2020 section 6.1.1) requires that the sulfur content of the natural gas be no greater than 0.75 gr S/100 scf. For the purpose of determining compliance with this section, the District considers commercially available natural gas as equivalent to 0.75 gr S/100 scf. If the natural gas source is not from a utility pipeline, additional information (gas or emissions source testing results) must be submitted to verify sulfur content of less than 0.75 gr/100 scf.

## Attachment IV: Records of Bales Produced and Natural Gas Used

### SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT SUPPLEMENTAL APPLICATION FORM

### COTTON GINS Emission Reduction Credit (ERC)

(This form must be accompanied by a completed Application for Emission Reduction Credit form.)

Certificate to be Issued to:	Eagle Valley Ginning LLC
Gin Location:	39936 W. North Avenue, Mendota, CA

1. Are the emission reductions due to the installation of control equipment at an existing cotton gin? **n/a** 

If "yes", please list the Authority (-ies) to Construct authorizing the installation: **n/a** 

Are the emission reductions due to the shut-down of a cotton gin?

If "yes", please list the applicable Permit to Operate number(s): C-213-1-5

3. What date did the emission reductions occur? (if #1 above applies, when was the gin first operated after control equipment was installed? If #2 applies, when was the gin last operated, or when was the Permit to Operate surrendered?)

MM/DD/YY: <u>12 /15 / 06</u>

4. Submit operational data for the five consecutive seasons prior to the reduction (if the emission reductions are result of the installation of control equipment, submit for the five years prior to the issuance of the applicable ATC):

Season	2002	2003	2004	2005	2006
Start MM/DD/YY	10/08/02	10/17/03	10/04/04	10/13/05	
End MM/DD/YY	12/11/02	01/12/04	01/11/05	12/19/05	
No. of Bales*	23558	31090	34254	22834	0

Number of bales after correcting to 500 pounds per bale.

### Proposal for Emission Reduction Credits (ERCs) for the Shutdown of Eagle Valley Ginning LLC located at 39936 W. North Avenue, Mendota, CA 93640

### Historical Production Data (Bales Ginned and therms of Natural Gas Consumed) -

PRODUCTION DATA				
Year	Bales Ginned	Therms Natural Gas Consumed		
2006	0	60		
2005	22834	72403		
2004	34254	90708		
2003	31090	47799		
2002	23558	38390		

### Baseline Period -

Two consecutive years = 2002 and 2003

[Note: This two year average most closely reflects the 10 year average bale production for this gin - see attached]

Bales = (23,558 + 31,090)/2

Bales = 27,324.0

Therms Natural Gas consumed = (38390 + 47799)/2

Therms Natural Gas consumed = 43,094.5

### Historical Actual Emissions (HAE) -

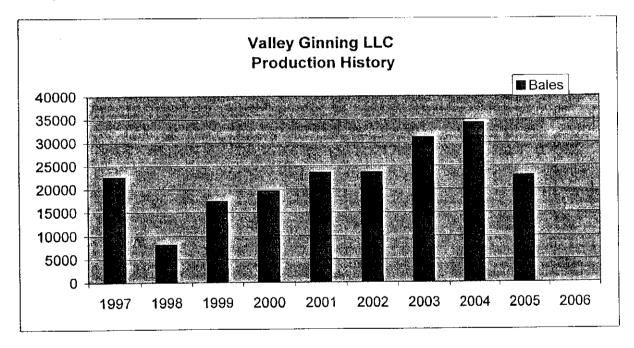
#### Cotton Gin Emission Factor -

As listed in permit condition No. 8 (PTO#: C-213-1-5), emissions from this gin are equal to 1.67 lbs. PM10/bale. However, this reflects the use of "2D-2D" cyclones as control equipment. With the passage of Rule 4204 – Cotton Gins, the emission factor must be revised to reflect the use of "1D-3D" cyclones as the required control technology. Therefore, the revised emission factor, based upon the latest version of the California Cotton Ginners Association's Cotton Gin Emission Factor Handbook, is proposed to be 0.78 lbs. PM10 per bale.

### Valley Ginning LLC

Year	Bales	2 yr. Averages	Comp. w/ 10 yr.	_
1997	22519			
1998	8067			
1999	17363			
2000	19635			
2001	23520			
2002	23558			
2003	31090	27324.0	7040	Most Closely Matches 5 yr. average
2004	34254	32672.0	12388	,
2005	22834	28544.0	8260	
2006	0	11417.0	8867	_
Average =	20284.0			-

Average = 20284.0



### Attachment V: Cyclone System Airflows

### POST EMISSIONS

Date: 3/30/2002

Client : Valley Ginning LLC

GIN RATE: 20

врн

SYSTEM: 2D existing and 1D-3D on Condensers; Motes and Condenser collector robber system.	LB./PM10 BALE	C.F.M.	G/DSCF PM10	G/DSCF TSP
Unloading	0.11	12,800	0.020	0.040
#1 moist air	0.29	15,042	0.045	0.090
#2 moist air	0.23	15,042	0.036	0.071
Main trash	0.08		0.025	0.050
Over Flow	0.06	4,594	_ 030.و 🗸	0.061
Motes A & B	0.07	20,000	0.008	0.016
Motes transfer	0.04	2,000	0.047	0.093
#1 & 2 Lint cleaner condenser	0.11	52,500	0.005	0.010
Battery Condenser	0.03	26,000	0.003	0.005
Condenser collector robber system	0.07	14,130	0.012	0.023
	1.09	169,628		
	TSP =	2.18	LB. PM/BALE	
	TSP =	= 0.03	G/DSCF	

#### 12/18/2002

San Joaquin Valley Unified Air Pollution Control District 1990 East Gettysburg Avenue Fresno, CA 93726-0244

Rea: Valley Ginning LLC 39936 W. North Ave. Mendota, CA 93640

ATC/PTO: C-213-1-1

Post Emission Factors.

This is the composition of emission factors that has been summarized in the ATC application dated 11-18-02 under emission factors - gin systems:

1.	Unloading. (CCGA emission factor handbook)		0.11
2.	<pre>#1 Dryer &amp; Cleaner. (CCGA emission factor handbook)</pre>		0.11
3.	#2 Dryer & Cleaner. (CCGA emission factor handbook) & Mote cleaner trash (CCGA emission factor handbook)	0.08	0.10
4.	Feeder dust, super jet trash positive (CCGA emission factor handbook interpolating from lint trash robber system, motes cleaners trash)	0.05	0.05
5.	Overflow. (CCGA emission factor handbook)		0.04

### Valley Ginning continued:

6.	Main trash, stick Machine trash, Unloading collector bleed, (CCGA emission factor handbook interpolating to stay under	.09	
	maximum allowable emissions)	.04	0.13
7.	Motes A & B. (CCGA emission factor handbook interpolating to stay under		
	maximum-allowable-emissions)		0.07
8.	Mote transfer. (CCGA emission factor handbook interpolating to stay under		
	maximum allowable emissions)		0.04
9.	Lint trash robber system (CCGA emission factor handbook)		0.07
10.	Lint cleaning. (CCGA emission factor handbook)		0.11
11.	Battery Condenser. (CCGA emission factor handbook)		0.03
		Total	0.86

Attachment VI:
Draft ERC Certificates
C-794-1, C-794-2, C-794-3, C-794-4, and C-794-5

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

# Emission Reduction Credit Certificate C-794-1

**ISSUED TO:** 

EAGLE VALLEY GINNING LLC

**ISSUED DATE:** 

<DRAFT>

LOCATION OF

**39936 W NORTH AVE** 

REDUCTION:

**MENDOTA, CA 93640** 

### For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	40 lbs

[ ] Conditions Attached

### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

# Emission Reduction Credit Certificate C-794-2

**ISSUED TO:** 

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

<DRAFT>

LOCATION OF

**39936 W NORTH AVE** 

REDUCTION:

**MENDOTA, CA 93640** 

### For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	734 lbs

ГЪ	Cor	nditions	Attache	Ы

### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

# Emission Reduction Credit Certificate C-794-3

**ISSUED TO:** 

EAGLE VALLEY GINNING LLC

**ISSUED DATE:** 

<DRAFT>

LOCATION OF

**39936 W NORTH AVE** 

REDUCTION:

**MENDOTA, CA 93640** 

### For CO Reduction In The Amount Of:

Quarter 1 Quarter 2		Quarter 3	Quarter 4	
None	None	None	147 lbs	

### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

# Emission Reduction Credit Certificate C-794-4

ISSUED TO:

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

<DRAFT>

**LOCATION OF** 

**39936 W NORTH AVE** 

REDUCTION:

**MENDOTA, CA 93640** 

### For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	18,935 lbs

г	1	Conditions	Attached
L	1	<b>Conditions</b>	Attached

### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

# Emission Reduction Credit Certificate C-794-5

**ISSUED TO:** 

**EAGLE VALLEY GINNING LLC** 

**ISSUED DATE:** 

<DRAFT>

LOCATION OF

**39936 W NORTH AVE** 

REDUCTION:

**MENDOTA, CA 93640** 

### For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	None	5 lbs

[ ] Conditions Attached

### **Method Of Reduction**

[X] Shutdown of Entire Stationary Source

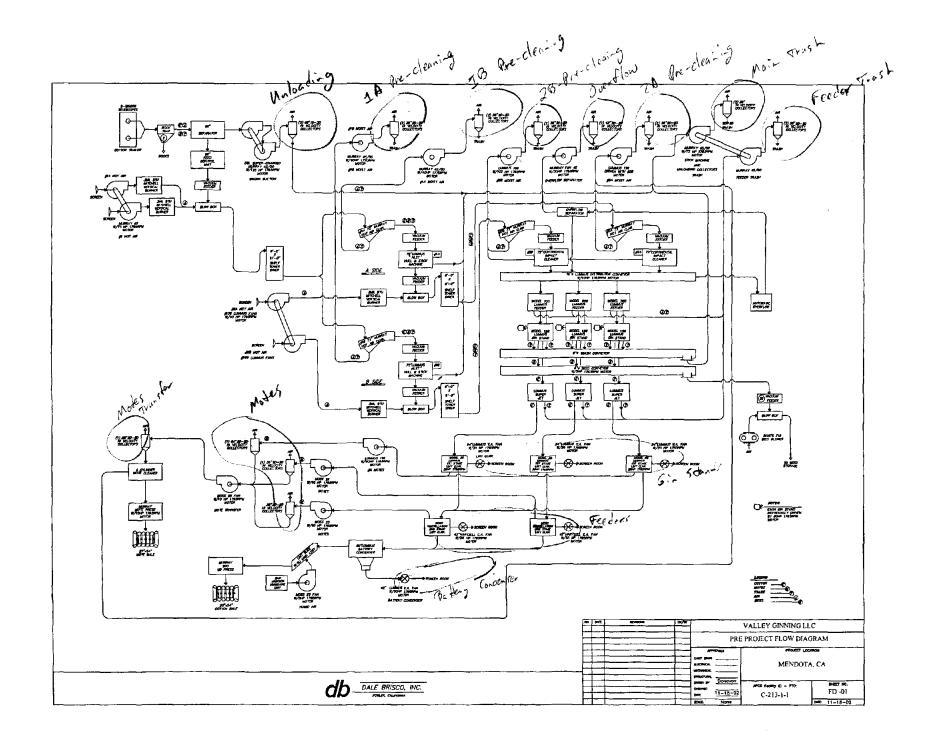
[ ] Shutdown of Emissions Units

[ ] Other

SHUTDOWN OF A COTTON GIN

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO



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Sale Marie

### San Joaquin Valley Air Pollution Control District ERC Application Preliminary Review

Facility Name: Eagle Valley Ginning, LLC

Date: January 4, 2007

Mailing Address: 27480 S. Bennett Rd.

Engineer: Darrin Pampaian

Firebaugh, CA 93622

Lead Engineer: Joven Refuerzo

Contact Person: Bob Lange

Telephone: (209) 364-6162

Project #: C-1063777

Submitted: December 18, 2006

Deemed Complete: December 29, 2006

### I. Summary:

The primary business of this facility is a cotton ginning. Eagle Valley Ginning, LLC has surrendered their Permit to Operate C-0213-1-5 following the permanent shutdown of the operation as of December 14, 2006 and submitted an application to bank the emission reduction credits (ERCs) for the decreased emissions. A copy of the surrendered Permit to Operate (PTO) is included in Appendix A of this report.

### II. Applicable Rules:

Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)

Rule 2301 Emission Reduction Credit Banking (12/17/92)

### III. Location of Reduction:

The physical location of the equipment involved with this application is 39936 W. North Ave. in Mendota, CA.

### IV. Method of Generating Reductions:

The emissions reduction is generated by the shutdown of a permitted cotton ginning operation. At this facility the unloading system was controlled by 1D-3D cyclones, the 1A, 1B, 2A, and 2B pre-cleaning, the overflow, main trash, feeder trash, motes and motes transfer systems were controlled by 2D-2D cyclones, and the 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning systems were controlled with a screen room. The gin was limited by permit condition to a ginning rate of 480 bales per day and 48,000 bales per year. The applicant surrendered their PTO on December 14, 2006 as part of this application.

### V. Calculations:

### A. Assumptions and Emission Factors

### Assumptions:

- PM<sub>10</sub> emissions assumed to equal 50% of PM emissions, per NSR Section 4.11.2.
- Annual emissions will be rounded to the nearest pound in accordance with the District Policy APR-1105 (dated 7/16/1992).
- The exhaust from the burners flows through the process air and exits at the cyclone collectors. In this case, PM<sub>10</sub> amounts exhausted from the cyclones include emissions from both the burners and the ginning process. Therefore, the ginning PM<sub>10</sub> emissions are not added to those calculated for the burners to determine the HAE.
- Bales are standardized to 500 lb/bale.
- Natural Gas Heating Value is 1,000 Btu/scf (District Policy APR-1720, dated 12/20/01).
- One therm of natural gas is equal to 0.100 MMBtu.
- F-Factor for Natural Gas is 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B).
- Hourly throughput rate is 20 bales/hr, calculated as 480 bales/day (permit limit) ÷ 24 hrs/day)

### **Emission Factors:**

The gin is permitted to fire their burners on both natural gas and LPG/propane, however the fuel records that were provided by the facility indicate that natural gas was the only fuel combusted for the last five years. Therefore, only emission factors for natural gas combustion will be used to determine facility's emissions.

The gin equipment included burners providing heated air to control the moisture content of the cotton. These burners were fired on natural gas and ERCs are requested from their shutdown. The PTO does not indicate natural gas combustion emission factors for  $SO_X$  and VOC, so AP-42 Emissions Factors and P G & E historical sulfur concentration tests shall be used.

The  $SO_X$  EF for natural gas combustion is 0.00285 lb- $SO_X$ /MMBtu, as identified in District Policy APR 1720 - Generally Accepted  $SO_X$  Emission Factor for Combustion of PUC-quality Natural Gas (dated 12/20/01).

Per previous EPA comments and District Policy APR 1110 - Use of Revised Emission Factors (dated 4/28/04), the SO<sub>X</sub> EF will be revised according to P G & E's historical records of sulfur concentration in their pipelines. Therefore the SO<sub>X</sub> EF will be calculated using 0.25 gr-S/100 scf as follows:

 $SO_X$  EF (lb/MMBtu) = (0.25 gr-S/100 scf) x (1 scf/1,000 Btu) x (1 x10<sup>6</sup> Btu/MMBtu) x (1 lb/7,000 gr) x (2  $SO_2/S$ )

 $SO_X$  EF = 0.00071 lb- $SO_X$ /MMBtu

AP-42 (07/98) Table 1.4-2 lists the VOC emission factor for the combustion of natural gas as 0.0055 lb/MMBtu. This value will be used to determine VOC emissions from the burners.

Na	Natural Gas Emission Factors						
Pollutant EF (lb/MMBtu) Source							
VOC	0.0055	AP-42 (07/98) Table 1.4-2					
NO <sub>X</sub>	0.1	Current Permit					
CO	0.02	Current Permit					
SO <sub>X</sub>	0.00071	P G & E Gas Line Source Tests					

The PTO specifies an EF of 1.67 lb-PM<sub>10</sub>/bale (see Appendix A, permit condition 8). The following table compares emissions factors from the California Cotton Ginners Association (CCGA) emission factor handbook, the current permitted emissions factors, emissions factors from the existing engineering evaluation, and source tested emissions factors. All of the sources of emissions factors are compared in the following table to determine the amount of ERCs available for banking.

### Comparison of CCGA Emission Factors Handbook Summary, Permitted Emissions Factors, Engineering Evaluation **Emissions Factors, and Source Testing Emissions Factors**

		Gin 1	Гуре: SAW				
System	CCGA Handbook EFs, version 1.5  Cyclone (lb-PM <sub>10</sub> /bale)  Design Current EFs		PTO EFs (lb-PM <sub>10</sub> /bale)	Engineering Evaluation EFs	Source Testing EFs	Proposed EFs (lb-PM <sub>10</sub> /bale)	
	_	Average	Average + S. D.		(lb-PM₁₀/bale)	(lb-PM <sub>10</sub> /bale)	
Unloading (Wagon and Module Feeder)	1D-3D	0.11	0.15		0.11		0.11
#1 Precleaning (1A and 2A)	2D-2D	0.29	0.54	der ld-	0.29		0.29
#2 Precleaning (1B and 2B)	2D-2D	0.21	0.41		0.23		0.23
Overflow	2D-2D		V/A <sup>1</sup>		0.06		0.06
Main Trash (Stick Machines and Unloading Collectors Trash)	2D-2D	N/A <sup>2</sup>			0.08		0.08
Feeders, Gin Stands, and Battery Condenser	Screen Basket	N/A <sup>3</sup>			0		0
#1 Stage Lint Cleaning	Screen Basket	0.48	0.48		0.23		0.23
#2 Stage Lint Cleaning	Screen Basket	0.30	0.30		0.23		0.23
Battery Condenser	Screen Basket	0.17	0.17		0.17		0.17
Feeder Trash (Gin Stand Feeder Trash)	2D-2D	0.04	0.04		0		0.04
Motes System	2D-2D	0.25	0.40		0.23		0.23
Motes Transfer System	2D-2D		V/A <sup>4</sup>		0.04		0.04
			Totals	1.67	1.67	N/A <sup>5</sup>	1.71

As shown above, the total emissions factor for this cotton gin is 1.71 lb-PM<sub>10</sub>/bale. This is greater than the total emissions factor of 1.67 lb-PM<sub>10</sub>/bale specified on the current PTO. Therefore, the more conservative figure of 1.67 lb-PM<sub>10</sub>/bale will be used to determine the amount of ERCs available for banking.

<sup>4</sup>There is not a specific CCGA EF that applies to motes transfer systems on saw type gins with 2D-2D cyclones.

<sup>5</sup>There has been no source testing of any of the equipment at this facility.

<sup>&</sup>lt;sup>1</sup>There is not a specific CCGA EF that applies to overflow systems on saw type gins with 2D-2D cyclones.

<sup>&</sup>lt;sup>2</sup>There is not a specific CCGA EF that applies to main trash systems on saw type gins with 2D-2D cyclones.

<sup>3</sup>There is not a specific CCGA EF that applies to 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning and battery condenser systems on saw type gins with screen baskets.

#### B. Baseline Period Determination and Data

The baseline period consists of two years immediately preceding the date of reduction, or at least two consecutive years within five years prior to the ERC application, if they are more representative of "normal source operation" (District Rule 2201, Section 3.8).

According to District Policy APR-1810 (dated 9/9/92), the date of shutdown for permitted sources shall be the date of surrender of the operating permits, unless otherwise determined as stated in the policy. The applicant has provided the historical ginning records for the 2002, 2003, 2004, 2005, and 2006 ginning seasons (see Appendix B).

Historical Throughput and Fuel Use for the Cotton Gin						
Season Start Date	Season End Date	Bales Produced (500 lb bales)	Natural Gas Usage (therms)			
Coddon Start Bato	Ocason End Date	4 <sup>th</sup> and 1 <sup>st</sup>	4 <sup>th</sup> and 1 <sup>st</sup>			
		Quarter Season_	Quarter Season			
October 8, 2002	December 11, 2002	23,558	72,403			
October 17, 2003	January 12, 2004	31,090	90,708			
October 4, 2004	January 11, 2005	34,254	47,779			
October 13, 2005 December 19, 2005		22,834	38,390			
October 13, 2006 N/A		0	60			
	5 Year Average:	22,347	49,868			

During the five years of operation prior to the ERC application the facility operated in the first quarter in only the 2003 and 2004 seasons. The facility has only provided data for bales produced and natural gas usage on a seasonal basis but cotton gins typically operate 24 hours per day, seven days a week until all on the cotton from the previous growing season is ginned. As required by District Rule 2201, "normal" source operation for the eight consecutive calendar quarter periods that most closely represents the five year average must be determined. Therefore, the prorated amount of bales produced and natural gas usage based on days of operation during the ginning season will be calculated for the 2003 and 2004 seasons only.

<u>Prorating Bale Production and Natural Gas Usage for the 4<sup>th</sup> and 1<sup>st</sup> Quarters for the 2003 Season:</u>

There were a total of 88 days of operation for the 2003 season (15 days in October + 30 days in November + 31 days in December + 12 days in January). Of this total, 76 days of operation occurred in the 4<sup>th</sup> quarter (88 total days – 12 days in January) and 12 days of operation occurred in the 1<sup>st</sup> quarter. Therefore, the calculated bales produced and natural gas usage for 4<sup>th</sup> and 1<sup>st</sup> quarters for the 2003 season is calculated as follows:

### **Bale Production:**

4<sup>th</sup> Qtr, Bale Production (bales/qtr) = 31,090 bales in the 2003 season x (76 4<sup>th</sup> quarter days ÷ 88 total days)

4th Qtr, Bale Production = 26,850 bales/qtr

1<sup>st</sup> Qtr, Bale Production (bales/qtr) = 31,090 bales in the 2003 season x (12 4<sup>th</sup> quarter days ÷ 88 total days)

1<sup>st</sup> Qtr, Bale Production = 4,240 bales/qtr

### Fuel Usage:

4<sup>th</sup> Qtr, Fuel Usage (therms/qtr) = 90,708 therms in the 2003 season x (76 4<sup>th</sup> quarter days ÷ 88 total days)

4<sup>th</sup> Qtr, Fuel Usage = 78,339 therms/qtr

1<sup>st</sup> Qtr, Fuel usage (therms/qtr) = 90,708 therms in the 2003 season x (12 4<sup>th</sup> quarter days ÷ 88 total days)

1<sup>st</sup> Qtr, Fuel Usage = 12,369 therms/qtr

Prorating Bale Production and Natural Gas Usage for the 4<sup>th</sup> and 1<sup>st</sup> Quarters for the 2004 Season:

There were a total of 100 days of operation for the 2004 season (28 days in October + 30 days in November + 31 days in December + 11 days in January). Of this total, 89 days of operation occurred in the 4<sup>th</sup> quarter (100 total days – 11 days in January) and 11 days of operation occurred in the 1<sup>st</sup> quarter. Therefore, the calculated bales produced and natural gas usage for 4<sup>th</sup> and 1<sup>st</sup> quarters for the 2004 season is calculated as follows:

### Bale Production:

4<sup>th</sup> Qtr, Bale Production (bales/qtr) = 34,254 bales in the 2004 season x (89 4<sup>th</sup> quarter days ÷ 100 total days)

4<sup>th</sup> Qtr, Bale Production = 30,486 bales/qtr

1<sup>st</sup> Qtr, Bale Production (bales/qtr) = 34,254 bales in the 2004 season x (11 4<sup>th</sup> quarter days ÷ 100 total days)

1<sup>st</sup> Qtr, Bale Production = 3,768 bales/qtr

### Fuel Usage:

4<sup>th</sup> Qtr, Fuel Usage (therms/qtr) = 47,779 therms in the 2004 season x (89 4<sup>th</sup> quarter days ÷ 100 total days)

4<sup>th</sup> Qtr, Fuel Usage = 42,523 therms/qtr

1<sup>st</sup> Qtr, Fuel usage (therms/qtr) = 47,779 therms in the 2004 season x (11 4<sup>th</sup> quarter days ÷ 100 total days)

1<sup>st</sup> Qtr, Fuel Usage = 5,256 therms/qtr

Baseline Determination for the Cotton Gin						
Calendar Quarter	Cotton Bale Production (500 lb bales)	Eight Quarter Difference for Cotton Bale Production (500 lb bales)				
1 <sup>st</sup> 2002	0	N/A				
2 <sup>nd</sup> 2002	0	N/A				
3 <sup>rd</sup> 2002	0	N/A				
4 <sup>th</sup> 2002	23,558	N/A				
1 <sup>st</sup> 2003	0	N/A				
2 <sup>nd</sup> 2003	0	N/A				
3 <sup>rd</sup> 2003	0	N/A				
4 <sup>th</sup> 2003	26,850	714				
1 <sup>st</sup> 2004	4,240	1,244				
2 <sup>nd</sup> 2004	0	1,244				
3 <sup>rd</sup> 2004	0	1,244				
4 <sup>th</sup> 2004	30,486	2,110				
1 <sup>st</sup> 2005	3,768	2,581				
2 <sup>nd</sup> 2005	0	2,581				
3 <sup>rd</sup> 2005	0	2,581				
4 <sup>th</sup> 2005	22,834	2,079				
1 <sup>st</sup> 2006	0	1,549				
2 <sup>nd</sup> 2006	0	1,549				
3 <sup>rd</sup> 2006	0	1,549				
4 <sup>th</sup> 2006	0	2,262				
Average:	5,587					

The values in the columns labeled "Eight Quarter Difference" represent the absolute value of the difference between the facility's quarterly cotton bale production averaged over the last 5 years since the date the application was submitted and the quarterly throughput averaged over the previous eight consecutive calendar quarters starting with Q4 1998. The smallest "difference" is assumed to be the eight consecutive calendar quarter periods that most closely represents "normal" source operation. For this ERC

application the most recent representative eight consecutive calendar quarters for cotton bale production are from the 1<sup>st</sup> quarter of 2002 to the 4<sup>th</sup> quarter of 2003. These are the most recent eight consecutive calendar quarters out of the past five years that the cotton gin was operating and most closely represent the last five years of operation of the cotton gin. Based on the ginning records provided, the average bale throughput and the average natural gas usage from the representative two years (2002 and 2003) for the ERC application are calculated as follows:

Average Bale Throughput (bales/yr) =  $[2002 \text{ (bales/yr)} + 2003 \text{ (bales/yr)}] \div 2$ Average Bale Throughput bales/yr =  $(23,558 \text{ bales/yr} + 31,090 \text{ bales/yr}) \div 2$ Average Bale Throughput = 27,324 bales/yr

Average Natural Gas Usage (therms/yr) =  $[2002 \text{ (therms/yr)} + 2003 \text{ (therms/yr)}] \div 2$ Average Natural Gas Usage therms/yr =  $(72,403 \text{ therms/yr} + 90,708 \text{ therms/yr}) \div 2$ Average Natural Gas Usage = 81,556 therms/yr

With one therm of natural gas is equal to 100,000 Btu:

Average Natural Gas Usage Btu/yr = 81,556 therms/yr x 0.100 MMBtu/therm Average Natural Gas Usage = 8,156 MMBtu/yr

The baling production for 2002 and 2003 was based upon annual records. The same 2002 and 2003 baseline period was used for historic natural gas fuel usage. The facility has not been operated since the 2005 season; therefore the total bale throughput and propane usage for the 2006 season is equal to zero and will not be used to calculate the baseline emissions.

### C. Historical Actual Emissions (HAE)

Historical Actual Emissions (HAE) are emissions having actually occurred and are calculated using process data and recognized emission factors, per Rule 2201, Section 3.21.

### <u>РМ<sub>10</sub>:</u>

The HAE is calculated based on the emission factor discussed in Section V.A of this evaluation and the average baling rate during the baseline period discussed in Section V.B.

 $4^{th}$  Qtr, HAE for PM<sub>10</sub> lb/qtr = 1.23 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr  $4^{th}$  Qtr, HAE for PM<sub>10</sub> = 33,609 lb-PM<sub>10</sub>/qtr

Adding the HAE from the dryers and ginning operation produces the HAE totals. Because the exhaust from the burners flows through the process air and exits at the cyclone collectors, PM<sub>10</sub> amounts exhausted from the cyclones include emissions from the dryers and the ginning process. Therefore, the PM<sub>10</sub> emissions from the dryers are not added to those calculated for the ginning operation to determine the HAE.

### VOC, $NO_X$ , CO, and $SO_X$ :

The HAE for is calculated using emission factors for natural gas combustion from EPA's AP-42, the current PTO, and District Policy 1720 and the average natural gas use during the baseline period. The cotton gin was only operated during the fourth and first quarter of each year.

Historical Average Natural Gas Usage (MMBtu/yr) = 8,156 MMBtu/yr

 $HAE_{NG}$  (lb/qtr) =  $EF_{NG}$  (lb/MMBtu) x Historical Natural Gas Usage (MMBtu/yr) x (Days of Operation/qtr ÷ Total Days of Operation)

 $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> (lb/qtr) = (0.0055 lb-VOC/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> = 45 lb-VOC/qtr

 $4^{th}$  Qtr, HAE for NO<sub>XNG</sub> lb/qtr = (0.1 lb-NO<sub>X</sub>/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for NO<sub>XNG</sub> = 816 lb-NO<sub>X</sub>/qtr

 $4^{th}$  Qtr, HAE for  $CO_{NG}$  lb/qtr = (0.02 lb-CO/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $CO_{NG}$  = 163 lb-CO/qtr

 $4^{th}$  Qtr, HAE for  $SO_{XNG}$  lb/qtr = (0.00071 lb- $SO_{X}$ /MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $SO_{XNG}$  = 6 lb- $SO_{X}$ /qtr

HAE for Natural Gas Combustion				
Pollutant 4 <sup>th</sup> Qtr. HAE <sub>NG</sub> (lb/qtr)				
VOC	45			
NO <sub>X</sub>	816			
CO	163			
SO <sub>X</sub>	6			

### D. Adjustments to HAE

Pursuant to Section 3.22 of Rule 2201, Historical Actual Emissions must be discounted for any emissions reduction which is:

- · required or encumbered by any laws, rules, regulations, agreements, orders, or
- attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or
- proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act.

### **Emissions Adjusted for Emission Factor Determination:**

Rule 4204 Cotton Gins was adopted on February 17, 2005 and requires cotton gins to use 1D-3D cyclones with emissions equivalent to the emission factors from the latest revision of the CCGA handbook. The emission factors from the current valid permit will be adjusted in accordance with District Rule 2201 in the Section titled *Emissions Adjusted for Rule 4204 – Cotton Gins* of this evaluation.

### **Emissions Adjusted for Rule 4201 - Particulate Matter Concentration:**

According to Section 3.1 particulate matter (PM) emissions from each source operation should not exceed 0.1 grains per cubic foot of gas at dry standard conditions. The calculation is based on a 20 bales/hr ginning rate and the airflow through the control device. The airflow for each system is taken from District project C-1021007 (see Appendix C). Emission Factors are taken from the ones presented in Section VII.B. The following equation is used to determine the grain loading for each system and the results are listed in following table.

Baling Rate = 480 bales/day = 20.0 bales/hr

 $PM_{10}$  (gr/dscf) = (Ib- $PM_{10}$ /bale) x (7000 gr/lb- $PM_{10}$ ) x (2 lb-PM/lb- $PM_{10}$ ) x (20 bales/hr) (scf/min) x (60 min/hr)

PM Concentrations						
System	Control	EFs (lb-PM <sub>10</sub> /bale)	Air Flow (cfm)	Grain Loading (grain/dscf)		
Unloading	1D-3D	0.11	12,800	0.04		
#1 Precleaning	1D-3D	0.11	15,042	0.03		
#2 Precleaning	1D-3D	0.09	15,042	0.03		
Overflow	1D-3D	0.04	4,594	0.04		
Main Trash	1D-3D	0	7,521	0.0		
Feeders, Gin Stands, and Battery Condenser	1D-3D	0	14,103	0.0		
#1 Lint Cleaning	1D-3D	0.10	16,666	0.03		
#2 Lint Cleaning	1D-3D	0.03	10,000	0.01		
Battery Condenser	1D-3D	0.03	26,000	0.01		
Feeder Trash	1D-3D	0.08	7,521	0.05		
Motes System	1D-3D	0.07	13,349	0.02		
Motes Transfer System	1D-3D	0.03	2,042	0.07		

Since no concentration is above 0.1grain/dscf, no adjustment is needed.

### Emissions Adjusted for Rule 4202 Particulate Matter - Emission Rate:

District Rule 4202 Particulate Matter – Emission Rate (12/17/92), Section 4.1 limits emissions based on process weight. The process rate in a cotton gin varies from emission point to emission point as the trash and seeds are removed from the lint, decreasing the weight. The rate starts at 1,500 lbs of seed cotton per bale of finished cotton and drops to about 500 lbs of lint cotton per bale of finished cotton.

Below, emissions are checked at unloading, lint cleaning, and the battery condenser. Any adjustments will be subtracted from the EF based on the CCGA tables. In this case, since the permitted EF is higher than the CCGA EF, the new adjusted CCGA EF will be compared to the permit limit, and the lower number will be used.

Baling Rate = 480 bales/day = 20.0 bales/hr

### 1. Unloading:

For Process Rate (P) = 20.0 bales/hr x 1,500 lb/bale = 30,000 lb/hr of seed cotton = 15.0 tons/hr of seed cotton

The emissions limit (E), per District Rule 4202, is calculated as follows:

E =  $3.59 \times P^{0.62}$ =  $3.59 \times (15.0)^{0.62}$ = 19.2 lb-PM/hr

The emissions factor for unloading is 0.11 lb-PM $_{10}$ /bale (1D-3D cyclone), per CCGA Emission Factors Summary Tables. Based on this emissions factor, the emission rate for unloading is 2.20 lb-PM $_{10}$ /hr (20.0 bales/hr x 0.11 lb-PM $_{10}$ /bale). Assuming 50% of PM is PM $_{10}$ , this is equivalent to a PM emission rate of 4.4 lb-PM/hr. Therefore, the PM emissions are within the allowable limits of this Rule.

#### 2. Lint Cleaner:

The District has contacted the CCGA and requested the information of the process weights for lint cleaning. The CCGA has stated that they do not know the processing weights at the specified points. The process weights for these emission points will therefore be back calculated by determining the weight of material removed by each process point (between the 500 lb finished bale and the specific emission point) and adding those values to the 500 pound bale. The District's calculations will be assumed to be representative of the actual process weights, based on assumed cyclone control efficiencies and known emission rates.

### **Emissions Factors:**

Lint Cleaning:  $0.10 \text{ lb-PM}_{10}/\text{bale} + 0.03 \text{ lb-PM}_{10}/\text{bale} = 0.13 \text{ lb-PM}_{10}/\text{bale}$ 

Battery Condenser: 0.03 lb-PM<sub>10</sub>/bale

Assuming a 90% control efficiency for the cyclones and 50% of PM emissions are PM<sub>10</sub>, we can determine the weight of material removed by the battery condenser and the lint cleaner:

### Lint Cleaning:

Let X = Ib-PM/bale (pre-lint cleaning) and assuming 90% control efficiency of the cyclone

```
Mass Balance: X \times (1 - 0.90) = 0.13 lb PM/bale = 0.13 lb PM/bale ÷ 0.10 X = 1.3 lb PM/bale
```

### Battery Condenser:

Let X = lb-PM/bale (pre-battery condenser) and assuming 90% control efficiency of the cyclone

```
Mass Balance: X \times (1 - 0.90) = 0.03 lb PM/bale = 0.03 lb PM/bale ÷ 0.10 X = 0.3 lb PM/bale
```

Therefore, the process weight of the bale when it entered the lint cleaner was  $\approx$  501.6 lbs (500 + 1.3 + 0.3) and approximately 1.3 lbs of material was removed by the lint cleaner. The battery condenser process weight is  $\approx$  500.3 lbs since approximately 1.3 lbs of material is removed by lint cleaner.

### Lint Cleaner:

```
For Process Rate (P) = 20.0 bales/hr x 501.6 lb/bale
= 10,032 lb/hr of seed cotton
= 5.02 tons/hr
```

The emissions limit (E), per District Rule 4202, is calculated as follows:

$$E = 3.59 \times P^{0.62}$$
  
= 3.59 x (5.02)<sup>0.62</sup>  
= 9.8 lb-PM/hr

The emissions factor for the Lint Cleaner is 0.13 lb  $PM_{10}$ /bale (1D-3D), based on source test information from similar gins, as compiled in the CCGA Factors summary tables. Based on this emissions factor, the emission rate for this lint cleaner is 2.6 lb- $PM_{10}$ /hr (20.0 bales/hr x 0.13 lb- $PM_{10}$ /bale). Assuming 50% of PM is  $PM_{10}$ , this is equivalent to a PM emission rate of 5.2 lb-PM/hr. Therefore, the PM emissions are not above the allowable Rule limits, and adjustment is not necessary for the lint cleaner.

### 3. Battery Condenser:

For Process Rate (P) = 20.0 bales/hr x 500.3 lb/bale = 10,006 lb/hr of seed cotton = 5.00 tons/hr

The emissions limit (E), per District Rule 4202, equals  $E = 3.59 \times P^{0.62}$   $= 3.59 \times (5.00)^{0.62}$  = 9.7 lb-PM/hour

The emissions factor for the battery condenser is 0.03 lb  $PM_{10}$ /bale (1D-3D), based on source test information from similar gins, as compiled in the Cotton Gin Emission Factors summary tables. Based on this emissions factor, the emission rate for the battery condenser is 0.60 lb- $PM_{10}$ /hr (20.0 bales/hr x 0.03 lb- $PM_{10}$ /bale). Assuming 50% of PM is  $PM_{10}$ , this is equivalent to a PM emission rate of 1.2 lb-PM/hr. Therefore, the PM emissions are not above the allowable Rule limits, and adjustment is not necessary for the battery condenser.

### **Emissions Adjusted for Rule 4204 - Cotton Gins:**

Rule 4204 Cotton Gins was adopted on February 17, 2005 and requires cotton gins to use 1D-3D cyclones, with emissions equivalent to the emission factors from the latest revision of the CCGA handbook, by July 1, 2008. Pursuant to Section 3.22 of Rule 2201, Historical Actual Emissions must be discounted for any emissions reduction which is: required or encumbered by any laws, rules, regulations, agreements, orders, or , proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act. Therefore, even though the cotton gin was in compliance with this Rule at the time of the ERC application submittal, the amount of ERCs that will be allowed to be banked will be discounted for the future required compliance with this Rule.

Since at this facility the unloading system was controlled by 1D-3D cyclones, the 1A, 1B, 2A, and 2B pre-cleaning, the overflow, main trash, feeder trash, motes and motes transfer systems were controlled by 2D-2D cyclones, and the 1<sup>st</sup> and 2<sup>nd</sup> stage lint cleaning systems were controlled with a screen room, adjustments to the PM<sub>10</sub> emission factors are necessary. The emission factors were compared to the current CCGA handbook emissions and source tested values as if the control devices were retrofitted to the gin. The most conservative emission factors were used and are listed in the following table:

Emission Factors Adjusted for Applicant/CCGA EFs						
	Gin Type: SAW					
System	Current Cyclone Design	Required Cyclone Design	EFs from Current PTO and/or Engineering Evaluation (lb-PM <sub>10</sub> /bale)	CCGA Average EFs Required by Rule 4204 (lb-PM <sub>10</sub> /bale)	Adjusted EFs (lb-PM <sub>10</sub> /bale)	
Unloading (Wagon and Module Feeder)	1D-3D	1D-3D	0.11	0.11	0.11	
#1 Precleaning (1A and 2A)	2D-2D	1D-3D	0.29	0.11	0.11	
#2 Precleaning (1B and 2B)	2D-2D	1D-3D	0.23	0.09	0.09	
Overflow	2D-2D	1D-3D	0.06	0.04	0.04	
Main Trash (Stick Machines and Unloading Collectors Trash)	2D-2D	1D-3D	0.08	N/A <sup>6</sup>	0.08	
Feeders, Gin Stands, and Battery Condenser	Screen Basket	1D-3D	0	0	0	
#1 Stage Lint Cleaning	Screen Basket	1D-3D	0.23	0.10	0.10	
#2 Stage Lint Cleaning	Screen Basket	1D-3D	0.23	0.03	0.03	
Battery Condenser	Screen Basket	1D-3D	0.17	0.03	0.03	
Feeder Trash (Gin Stand Feeder Trash)	2D-2D	1D-3D	0	0.08	0.08	
Motes System	2D-2D	1D-3D	0.23	0.07	0.07	
Motes Transfer System (Motes Cleaner Trash)	2D-2D	1D-3D	0.04	0.03	0.03	
		Totals	1.67	0.69	0.77	

The total emission factor for this cotton gin of 1.67 lb-PM<sub>10</sub>/bale is greater than the adjusted emission factor of 0.77 lb-PM<sub>10</sub>/bale. Therefore, the more conservative figure of 0.77 lb-PM<sub>10</sub>/bale will be used to determine the amount of ERCs available for banking. Therefore, the emissions factor has been adjusted from 1.67 lb-PM<sub>10</sub>/bale to 0.77 lb-PM<sub>10</sub>/bale.

<sup>&</sup>lt;sup>6</sup>There is not a specific CCGA EF that applies to main trash systems on saw type gins with 2D-2D cyclones.

### **Total Adjustment**

The total adjustment is equal to the sum of the adjusted parts. In this case, the unloading equipment is controlled by 1D-3D cyclones and the rest of the equipment is controlled by 2D-2D cyclones. Therefore, an adjustment is necessary.

The PM<sub>10</sub> calculation for the gin is now:

$$4^{th}$$
 Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 0.77 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr = 21,039 lb-PM<sub>10</sub>/qtr

### Emissions Adjusted for Rule 4309 - Dryers, Dehydrators, and Ovens:

District Rule 4309 Dryers, Dehydrators, and Ovens (12/15/05), Section 4.1.6 specifically exempts units used to dry lint cotton or cotton at cotton gins. The dryers at this facility are used to dry cotton therefore no adjustment is necessary.

### Emissions Adjusted for Rule 4801 - Sulfur Compounds:

District Rule 4801 requires that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section V.A, the sulfur compound emissions are calculated as follows:

$$SO_X EF = 0.00071 lb-SO_X/MMBtu$$

Volume 
$$SO_2 = n \times R \times T$$

With:

N = moles SO<sub>2</sub>  
T (Standard Temperature) = 60 °F = 520 °R  
P (Standard Pressure) = 14.7 psi  
R (Universal Gas Constant) = 
$$\frac{10.73 \, \text{psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^{\circ}\text{R}}$$

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to:

Corrected 
$$F - factor = \left(\frac{8,710 dscf}{MMBtu}\right) \times \left(\frac{60^{\circ} F + 459.6}{68^{\circ} F + 459.6}\right) = 8,578 \frac{dscf}{MMBtu}$$
 at  $60^{\circ} F$ 

$$\frac{0.00071 \cdot lb - SOx}{MMBtu} \times \frac{MMBtu}{8,578 \, dscf} \times \frac{1lb \cdot mol}{64 \, lb} \times \frac{10.73 \, psi \cdot ft^3}{lb \cdot mol \cdot {}^{\circ}R} \times \frac{520 {}^{\circ}R}{14.7 \, psi} \times \frac{1,000,000 \cdot parts}{million} = 0.49 \, \frac{parts}{million}$$

$$SulfurConcentration = 0.49 \frac{parts}{million} < 2,000 \text{ ppmv (or 0.2\%)},$$

Since the sulfur concentration of the natural gas fuel is less than 2,000 ppmv, no adjustment is needed.

### Total Adjusted Historical Actual Emissions (HAE):

The total adjustment is equal to the sum of the adjusted parts. There were no adjustments made to the Historical Actual Emissions for  $NO_X$ ,  $SO_X$ , CO, or VOC; however adjustments were made to the HAE for  $PM_{10}$ .

For PM<sub>10</sub> emissions, the unloading equipment is controlled by 1D-3D cyclones and the rest of the equipment is controlled by 2D-2D cyclones, therefore emission factors were updated to be consistent with the 1D-3D cyclone requirements of Rule 4204, the most recent revision of the CCGA handbook, applicant proposed emissions factors, and source tested emission factors. The adjusted HAE for all criteria pollutants are calculated and presented in the following table.

Historical Average Natural Gas Usage (MMBtu/yr) = 8,156 MMBtu/yr

 $HAE_{NOx, SOx, CO, and VOC}$  (lb/qtr) =  $EF_{NG}$  (lb/MMBtu) x Historical Natural Gas Usage (MMBtu/yr)

 $HAE_{PM10}$  (lb/qtr) = Adjusted EF lb-PM<sub>10</sub>/bale x Average bales/qtr

 $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> (lb/qtr) = (0.0055 lb-VOC/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for VOC<sub>NG</sub> = 45 lb-VOC/qtr

 $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> lb/qtr = (0.1 lb-NO<sub>X</sub>/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for NO<sub>X NG</sub> = 816 lb-NO<sub>X</sub>/qtr

 $4^{th}$  Qtr, HAE for  $CO_{NG}$  lb/qtr = (0.02 lb-CO/MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $CO_{NG}$  = 163 lb-CO/qtr

 $4^{th}$  Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 0.77 lb-PM<sub>10</sub>/bale x 27,324 bales/qtr  $4^{th}$  Qtr, HAE for PM<sub>10</sub> (lb/qtr) = 21,039 lb-PM<sub>10</sub>/qtr

 $4^{th}$  Qtr, HAE for  $SO_{XNG}$  lb/qtr = (0.00071 lb- $SO_{X}$ /MMBtu) x 8,156 MMBtu/yr  $4^{th}$  Qtr, HAE for  $SO_{XNG}$  = 6 lb- $SO_{X}$ /qtr

Т	Total Adjusted Historical Actual Emissions (HAE)					
Pollutant	ollutant 1 <sup>st</sup> Qtr. HAE 2 <sup>nd</sup> Qtr. HAE 3 <sup>rd</sup> Qtr. HAE 4 <sup>th</sup> Qtr. HAI (lb/qtr) (lb/qtr) (lb/qtr)					
VOC	0	0	0	45		
NO <sub>X</sub>	0	0	0	816		
CO	0	0	0	163		
PM <sub>10</sub>	0	0	0	21,039		
SO <sub>X</sub>	0	0	0	6		

### E. Actual Emissions Reductions (AER)

Per Rule 2201, Section 4.12, the Actual Emissions Reductions due to shutdown of an emissions unit is equal to the HAE - PE2.

### AER = HAE - PE2

### 4<sup>th</sup> Quarter Actual Emissions Reductions:

 $\begin{array}{ll} \text{AER}_{\text{VOC}} \text{ (lb/yr)} &= 45 \text{ lb-VOC/qtr} - 0 \text{ lb-VOC/qtr} = 45 \text{ lb-VOC/qtr} \\ \text{AER}_{\text{NOx}} \text{ (lb/yr)} &= 816 \text{ lb-NO}_{\text{X}} / \text{qtr} - 0 \text{ lb-NO}_{\text{X}} / \text{qtr} = 816 \text{ lb-NO}_{\text{X}} / \text{qtr} \\ \text{AER}_{\text{CO}} \text{ (lb/yr)} &= 163 \text{ lb-CO/qtr} - 0 \text{ lb-CO/qtr} = 163 \text{ lb-CO/qtr} \end{array}$ 

 $AER_{PM10}$  (lb/yr) = 21,039 lb-PM<sub>10</sub>/qtr - 0 lb-PM<sub>10</sub>/qtr = 21,039 lb-PM<sub>10</sub>/qtr

 $AER_{SOx}$  (lb/yr) = 6 lb-SO<sub>x</sub>/qtr - 0 lb-SO<sub>x</sub>/qtr = 6 lb-SO<sub>x</sub>/qtr

	Actual Emission Reductions (AER)						
Pollutant	pllutant $\begin{pmatrix} 1^{st} \text{ Qtr. AER} & 2^{nd} \text{ Qtr. AER} & 3^{rd} \text{ Qtr. AER} & 4^{tn} \text{ Qtr. AER} \\ (lb/qtr) & (lb/qtr) & (lb/qtr) & (lb/qtr) & (lb/qtr) \end{pmatrix}$						
VOC	0	0	0	45			
NO <sub>x</sub>	0	0	0	816			
CO	0	0	0	163			
PM <sub>10</sub>	0	0	0	21,039			
SO <sub>x</sub>	0	0	0	6			

### F. Air Quality Improvement Deduction

The Air Quality Improvement Deduction (AQID) is 10% of the AER per Rule 2201, Sections 3.5 and 4.12.1, and is summarized as follows:

Air Quality Improvement Deduction (AQID)						
Pollutant	1 <sup>st</sup> Qtr. AQID (lb/qtr)	2 <sup>na</sup> Qtr. AQID (lb/qtr)	3 <sup>ra</sup> Qtr. AQID (lb/qtr)	4 <sup>tn</sup> Qtr. AQID (lb/qtr)		
VOC	0	0	0	5		
NO <sub>x</sub>	0	0	0	82		
CO	0	0	0	16		
PM <sub>10</sub>	0	0	0	2,104		
SOx	0	0	0	1		

### G. Increases in Permitted Emissions (IPE)

No IPE is associated with this project.

### H. Bankable Emissions Reductions Credits

The bankable emissions reductions credits, presented in following table, are determined by subtraction of the Air Quality Improvement Deduction (discussed in Section V.F) from the AER. The emission reductions occurred in the fourth and first quarters (see throughput records in Section V.B).

Bankable Emissions Reductions Credits (ERCs)					
Pollutant	1 <sup>st</sup> Qtr ERCs (lb/qtr)	2 <sup>na</sup> Qtr ERCs (lb/qtr)	3 <sup>ra</sup> Qtr ERCs (lb/qtr)	4 <sup>th</sup> Qtr ERCs (lb/qtr)	
VOC	0	0	0	40	
NO <sub>x</sub>	0	0	0	734	
CO	0	0	0	147	
PM <sub>10</sub>	0	0	0	18,935	
SO <sub>x</sub>	0	0	0	5	

### VI. Compliance:

To comply with the definition of Actual Emissions Reductions (Rule 2201, Section 3.2.1), the reductions must be:

### A. Real

The emissions reductions were generated by the shutdown of the cotton ginning equipment. The emissions reductions were calculated from actual historic production data and recognized emission factors. The emission factor of 0.77 lb-PM<sub>10</sub>/bale is based on the District Rule 4204 Cotton Gins (2/17/05) requirement of 1D-3D cyclones on all systems. Therefore, the allowed reductions are real.

### B. Enforceable

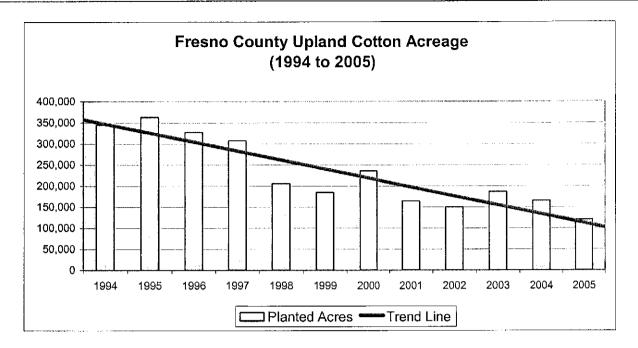
The PTO for this facility has been surrendered and the cotton gins cannot be operated without a valid PTO. Therefore, the reductions are enforceable.

### C. Quantifiable

Reduction amounts were calculated from historic process throughput data, source test results from similar operations, CCGA emission factors, and methods according to District Rule 2201. Therefore, the reductions are quantifiable.

### D. Permanent

The gin has been shutdown, and the PTO has been surrendered. Much of the acreage that provided the gin with cotton in the past has been retired (several hundred thousand acres are being taken out of production in Western Fresno County due to water concerns) or replaced with almonds or pistachios. In addition, the increase in the number of dairies constructed in the valley has resulted in an increase in the planting of forage crops for dairies on land that was historically used to grow cotton. This has resulted in a reduction in cotton acreage. In addition, research by the District has shown that there has been a steady decrease in the planted acreage of upland cotton since 1994. Information for the following table was provided by Cantua Creek Cooperative Gin, Inc. for project C-1061965 (see Appendix C).



As documented in the previous table and discussed in this Section, the overall trend of upland cotton acreage planted has declined over the past 12 years and is expected to continue to decline in the future. Therefore, it can be determined that the cotton that was being processed at the Eagle Valley Ginning, LLC gin is no longer being grown and the emissions reductions in this project are permanent.

### E. Surplus

To be considered surplus, Actual Emission Reductions shall be in excess, at the time the application for an Emission Reduction Credit or an Authority to Construct authorizing such reductions is deemed complete, of any emissions reduction which:

 Is required or encumbered by any laws, rules, regulations, agreements, orders, or

No laws, rules, regulations, agreements or orders were responsible for the surrendering the facility's permits or their subsequent application for Emission Reduction Credits (ERC's).

 Is attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or

Currently there are no control measures noticed for workshop, or proposed or contained in a State Implementation Plan that require the reduction of the emissions at this facility.

 Is proposed in the APCO's adopted air quality plan pursuant to the California Clean Air Act. The shutdown of cotton gins is not proposed in the APCO's adopted air quality plan.

Shutdown of the gin was voluntary and not required by any law, rule, agreement, or regulation. These ERCs are not needed for their current or proposed operations. By using 0.77 lb- $PM_{10}$ /bale in our calculations for AER, we have assured that no credit was given for emissions that may have been in excess of the permitted limit of 1.67 lb- $PM_{10}$ /bale. Therefore, the reductions are surplus.

### F. Not used for the Approval of an Authority to Construct or as Offsets

The emission reduction credits generated by the shutdown of the cotton ginning operations were not used for the approval of any Authority to Construct or as offsets.

### G. Timely submittal

Section 5.5 of Rule 2301 – Emissions Reduction Credit Banking (12/17/92) states that ERC certificate applications for reductions shall be submitted within 180 days after the emission reduction occurs. The ERC application was received on December 18, 2006. The applicant surrendered the PTO and permanently ceased operations at this location on December 14, 2006. Therefore, the application was submitted in a timely fashion.

### VII. Recommendation:

I recommend based on the analysis above that Emission Reduction Credit application for Eagle Valley Ginning, LLC is complete and final review can proceed.

### **List of Appendixes**

- A. Permit to Operate
- B. Annual Records
- C. Other Support Information

Appendix A: Permit to Operate C-0213-1-5

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-213-1-5

**EXPIRATION DATE: 03/31/2010** 

### **EQUIPMENT DESCRIPTION:**

COTTON GIN WITH THREE SAW GIN STANDS AND FEEDERS, SEVEN LINT CLEANERS, BATTERY CONDENSER, MOTES SYSTEM, TRASH SYSTEM, AND FOUR 3 MMBTU/HR NATURAL GAS-FIRED BURNERS

### PERMIT UNIT REQUIREMENTS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
- 5. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]
- 6. Daily ginning rate shall not exceed 120 tons of baled cotton per day (480 bales/day, corrected to 500-pound bales). [District Rule 2201]
- 7. Annual ginning rate shall not exceed 12,000 tons of baled cotton per year (48,000 bales/year, corrected to 500-pound bales). [District Rule 2201]
- 8. PM10 emissions shall not exceed 6.68 pounds per ton of baled cotton (1.67 pounds per bale, corrected to 500-pound bales). [District Rule 2201]
- 9. Emissions from the natural gas-fired burners shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.02 lb-CO/MMBtu. [District Rule 2201]
- 10. Unloading (wagon and module feeder) shall be served by two 48-inch 1D-3D cyclone collectors. [District Rule 2201]
- 11. The #1A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 12. The #1B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 13. The #2A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 14. The #2B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 15. The overflow shall be served by one 42-inch 2D-2D cyclone collector. [District Rule 2201]
- 16. Main trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 17. Feeder trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 18. Feeders, gin stands and battery condenser shall be served by three screen rooms. [District Rule 2201]
- 19. Motes shall be served by one 62-inch 2D-2D, one 32-inch 2D-2D, and one 28-inch 2D-2D cyclone collectors. [District Rule 2201]
- 20. Motes transfer shall be served by one 28-inch 2D-2D cyclone collector. [District Rule 2201]
- 21. Permittee shall maintain daily records of the number and weight of bales produced. [District Rule 1070]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: EAGLE VALLEY GINNING LLC Location: 39936 W NORTH AVE, MENDOTA, CA 93640 C-213-1-5: Dec 29 2006 8:21AM -- PAMPAIAD

- 22. The trash loading area shall be enclosed with four sides that are higher than the trash auger. Two sides shall be solid. The remaining sides shall have flexible wind barriers that extend below the top of the trash trailer sides. [District Rule 4204]
- 23. Permittee shall conduct daily visual inspections of the material handling systems for leaks, breaks, or other visible signs of equipment malfunctions. [District Rule 4204]
- 24. Permittee shall maintain a record of the daily inspections of the material handling systems, including any equipment malfunctions discovered and corrective action taken to repair the malfunction, and any source test results. [District Rule 4204]
- 25. All records shall be retained on site for five years and made available to the District upon request. [District Rules 1070 and 4204]

## Appendix B: Annual Records

## SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT SUPPLEMENTAL APPLICATION FORM

### COTTON GINS Emission Reduction Credit (ERC)

(This form must be accompanied by a completed Application for Emission Reduction Credit form.)

Certificate to be Issued to:	Eagle Valley Ginning LLC
Gin Location:	39936 W. North Avenue, Mendota, CA

1. Are the emission reductions due to the installation of control equipment at an existing cotton gin? **n/a** 

If "yes", please list the Authority (-ies) to Construct authorizing the installation:

<u>n/a</u>

Are the emission reductions due to the shut-down of a cotton gin?

If "yes", please list the applicable Permit to Operate number(s): C-213-1-5

3. What date did the emission reductions occur? (if #1 above applies, when was the gin first operated after control equipment was installed? If #2 applies, when was the gin last operated, or when was the Permit to Operate surrendered?)

MM/DD/YY: <u>12 /15 / 06</u>

4. Submit operational data for the five consecutive seasons prior to the reduction (if the emission reductions are result of the installation of control equipment, submit for the five years prior to the issuance of the applicable ATC):

Season	2002	2003	2004	2005	2006
Start MM/DD/YY	10/08/02	10/17/03	10/04/04	10/13/05	
End MM/DD/YY	12/11/02	01/12/04	01/11/05	12/19/05	
No. of Bales*	23558	31090	34254	22834	0

<sup>\*</sup>Number of bales after correcting to 500 pounds per bale.

### Proposal for Emission Reduction Credits (ERCs) for the Shutdown of Eagle Valley Ginning LLC located at 39936 W. North Avenue, Mendota, CA 93640

### Historical Production Data (Bales Ginned and therms of Natural Gas Consumed) -

	PRODUCTION DATA				
Year	Bales Ginned	Therms Natural Gas Consumed			
2006	0	60			
2005	22834	72403			
2004	34254	90708			
2003	31090	47799			
2002	23558	38390			

### Baseline Period -

Two consecutive years = 2002 and 2003

[Note: This two year average most closely reflects the 10 year average bale production for this gin - see attached]

Bales = (23,558 + 31,090)/2

Bales = 27,324.0

Therms Natural Gas consumed = (38390 + 47799)/2

Therms Natural Gas consumed = 43,094.5

### Historical Actual Emissions (HAE) -

### Cotton Gin Emission Factor -

As listed in permit condition No. 8 (PTO#: C-213-1-5), emissions from this gin are equal to 1.67 lbs. PM10/bale. However, this reflects the use of "2D-2D" cyclones as control equipment. With the passage of Rule 4204 — Cotton Gins, the emission factor must be revised to reflect the use of "1D-3D" cyclones as the required control technology. Therefore, the revised emission factor, based upon the latest version of the California Cotton Ginners Association's Cotton Gin Emission Factor Handbook, is proposed to be 0.78 lbs. PM10 per bale.

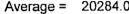
### 5. Provide emission factors (EF) in pounds of PM<sub>10</sub> emissions per 500 pound bale:

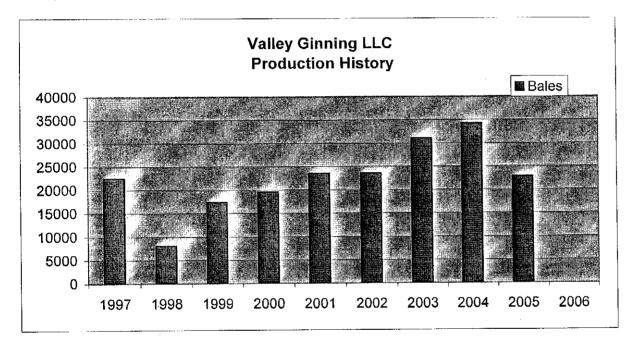
System	Pre-mod or Pre-shutdown EF	References
Unloading	0.11	(1)
#1 Precleaning	0.11	(1)
#2 Precleaning	0.09	(1)
Overflow	0.04	(1)
Gin Stand/Feeder Trash	0.08	(1)
#1 Lint Cleaning	0.10	(1)
#2 Lint Cleaning	0.03	(1)
Main Trash	0.09	(1)
Motes	.07	(1)
Motes Trash	.03	(1)
Battery Condenser	.03	(1)
Totals	0.78	

<sup>(1) -</sup> CCGA Cotton Gin Emission Factor Handbook

## Valley Ginning LLC

Year	Bales	2 yr. Averages	Comp. w/ 10 yr.	_
1997	22519			
1998	8067			
1999	17363			
2000	19635			
2001	23520			
2002	23558			
2003	31090	27324.0	7040	Most Closely Matches 5 yr. average
2004	34254	32672.0	12388	
2005	22834	28544.0	8260	
2006	0	11417.0	8867	_
Average =	20284.0			_





## Appendix C: Other Support Information

### VII. CALCULATIONS

### A. Assumptions

- Maximum operating schedule shall be 24 hours/day (worst-case scenario).
- Ginning rate for the saw-type gin shall remain at 480 bales per day.
- Annual ginning rate shall not exceed 8,750 tons of baled cotton per season (35,000 bales per season, adjusted to 500-pound bales).

### B. Emission Factors

Both gins are equipped with tower dryers fueled by natural gas.

Emission Factors for Combustion of Natural gas				
Pollutant	Emission Factor [lb/MMBtu]			
NO <sub>X</sub>	0.1			
ÇO	0.02			
VOC	0.006			
PM <sub>10</sub>				
SO <sub>X</sub>	0.0029 <sup>3</sup>			

1 Emission Factors for natural gas obtained from District letter, dated February 26, 2001

The pre-project emission factors are taken from Project #1021007 and are listed in the table below. All emission factors were cited from the California Cotton Ginners Association's (CCGA) Cotton Gin Emission Factor Handbook (see Appendix C).

Pre-Pro	ject Ginning Emission f	actors (Saw-Type)	
Process	Control Device	Emission Factor [lb PM <sub>10</sub> /bale]	
Unloading	1D-3D Cyclone	0.11	
#1 Precleaning	2D-2D Cyclone	0.29	
#2 Precleaning	2D-2D Cyclone	0.23	
Overflow	2D-2D Cyclone	0.06	
Main Trash	2D-2D Cyclone	0.08	
#1 Lint Cleaner	Screen Basket	0.23	
#2 Lint Cleaner	Screen Basket	0.23	
Battery Condenser	Screen Basket	0.17	
Motes	2D-2D Cyclone	0.23	
Mote Transfer	2D-2D Cyclone	0.04	
	TOTAL	, 1.67	

<sup>2</sup> Since the dryers' combustion is discharged through the cyclones, its PM<sub>10</sub> emissions are assumed included with the ginning emissions.

<sup>3</sup> Based on a sulfur content of 1.0 gr/100 scf pursuant to District Policy APR 1720

Valley Ginning, LLC Facility Number: C-213 Project # 1021007

### VIII. COMPLIANCE (Continued)

**RULE 4102:** 

Nuisance

Section 4.0 prohibits discharge of air contaminants that could cause injury, detriment, nuisance or annoyance to the public. This operation is not expected to produce a public nuisance based on past operations at this facility. No past complaints have been noted against this facility.

### CH&SC 41700 California Health and Safety Code

The Risk Management Policy for Permitting New and Modified Source (APR 1905, 3/2/01) only applies to new and modified sources as defined in District Rule 2201. Since this facility has no increase in emissions or hazardous air pollutants (HAPs), then pursuant to the District's toxic policy a Health Risk Assessment is not required.

**RULE 4201:** 

Particulate Matter Concentration

According to Section 3.1 particulate matter (PM) emissions from each source operation should not exceed 0.1 grains per cubic foot of gas at dry standard conditions. The calculation is based on a 480 bales/day ginning rate and the airflow of the cyclone(s). Emission Factors are from Section VII.B of this evaluation.

 $PM_{10}$  (gr/dscf) = (lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ ) (2 lb PM/lb PM10)(bales/day) (scf/min) (1440 min/day)

Unloading:

 $PM_{10}$  (gr/dscf) = (0.11 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ ) (2)(480 bales/day) (12,800 cfm) (1440 min/day)

PM (gr/dscf) =  $0.04 \le 0.1$  gr/dscf

#1 Precleaner:

 $PM_{10}$  (gr/dscf) = (0.29 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2)(480 bales/day) (15,042 cfm) (1440 min/day)

PM (gr/dscf) =  $0.09 \le 0.1$  gr/dscf

Valley Ginning, LLC Facility Number: C-213 Project # 1021007

### VIII. COMPLIANCE (Continued)

#2 Precleaner:

 $PM_{10}$  (gr/dscf) = (0.23 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (15.042 cfm) (1440 min/day)

PM (gr/dscf) =  $0.07 \le 0.1$  gr/dscf

Overflow:

 $PM_{10}$  (gr/dscf) = (0.06 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (4.594 cfm) (1440 min/day)

PM  $(gr/dscf) = 0.06 \le 0.1 gr/dscf$ 

Main Trash

 $PM_{10}$  (gr/dscf) = (0.08 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (7.521 cfm) (1440 min/day)

PM (gr/dscf) =  $0.05 \le 0.1$  gr/dscf

#1 Lint Cleaner:

 $PM_{10}$  (gr/dscf) = (0.23 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (16,666 cfm) (1440 min/day)

PM (gr/dscf) =  $0.06 \le 0.1$  gr/dscf

#2 Lint Cleaner:

 $PM_{10}$  (gr/dscf) = (0.23 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (10,000 cfm) (1440 min/day)

PM (gr/dscf) =  $0.1 \le 0.1$  gr/dscf

Battery Condenser:

 $PM_{10}$  (gr/dscf) = (0.17 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (26,000 cfm) (1440 min/day)

PM (gr/dscf) =  $0.03 \le 0.1$  gr/dscf

Valley Ginning, LLC Facility Number: C-213 Project # 1021007

### VIII. COMPLIANCE (Continued)

Motes:

 $PM_{10}$  (gr/dscf) = (0.23 lb  $PM_{10}$ /bale)(7000 gr/lb  $PM_{10}$ )(2) (480 bales/day) (13,349 cfm) (1440 min/day)

PM (gr/dscf) =  $0.08 \le 0.1$  gr/dscf

Motes Transfer:

 $PM_{10}$  (gr/dscf) =  $(0.04 \text{ lb } PM_{10}/\text{bale})(7000 \text{ gr/lb } PM_{10})(2) (480 \text{ bales/day})$ (2,042 cfm) (1440 min/day)

PM (gr/dscf) =  $0.09 \le 0.1$  gr/dscf

All systems are being presented to show compliance. Only the unloading system, preplanning system #1, preplanning system #2 and the motes cleaner system are being modified.

Therefore compliance with this rule is expected.

RULE 4202: Particulate Matter Emission Rate

Section 4.1 limits emissions based on process weight. The process rate in a cotton gin varies from emission point to emission point as the trash and seeds are removed from the lint, decreasing the weight. The rate starts at about 1,500 lb of seed cotton per bale of finished cotton (per applicant) and drops to about 500 lb of lint cotton per bale of finished cotton, but the process weights for points in between are unknown.

Below, emissions are checked at the unloading and the #1 lint cleaner points (i.e. beginning and near the end of the ginning process), where the emission rates are the highest.

1. unloading:

For Process Rate (P) = 20.0 bales/hr x 1,500 lb/bale

= 30,000 lb/hr of seed cotton

= 15.0 tons/hr

### POST EMISSIONS

Date: 3/30/2002

Client : Valley Ginning LLC

GIN RATE: 20 BPH

SYSTEM: 2D existing and 1D-3D on Condensers; Motes and Condenser collector robber system.	LB./PM10 BALE	C.F.M.	G/DSCF PM10	G/DSCF TSP
Unloading	0.11		0.020	0.040
#1 moist air	0.29	15,042	0.045	0.090
#2 moist air	0.23		0.036	0.071
Main trash	0.08		0.025	0.050
Over Flow	0.06	4,594	0.030 و	0.061
Motes A & B	0.07	20,000		0.016
Motes transfer	0.04	2,000	0.047	0.093
#1 & 2 Lint cleaner condenser	0.11		0.005	0.010
Battery Condenser	0.03	26,000	0.003	0.005
Condenser collector robber system	0.07	14,130	0.012	0.023
	1.09	169,628		
	TSP =	= 2.18	LB. PM/BALE	
	TSP =	= 0.03	G/DSCF	

### 12/18/2002

San Joaquin Valley Unified Air Pollution Control District 1990 East Gettysburg Avenue Fresno, CA 93726-0244

Rea: Valley Ginning LLC 39936 W. North Ave. Mendota, CA 93640

ATC/PTO: C-213-1-1

Post Emission Factors.

This is the composition of emission factors that has been summarized in the ATC application dated 11-18-02 under emission factors - gin systems:

1.	Unloading. (CCGA emission factor handbook)		0.11
2.	#1 Dryer & Cleaner. (CCGA emission factor handbook)		0.11
3.	#2 Dryer & Cleaner. (CCGA emission factor handbook) & Mote cleaner trash (CCGA emission factor handbook)	0.08	0.10
4.	Feeder dust, super jet trash p (CCGA emission factor handbook interpolating from lint trash robber system, motes cleaners trash)	0.05	0.05
5.	Overflow. (CCGA emission factor handbook)		0.04

### Valley Ginning continued:

6.	Main trash, stick Machine trash, Unloading collector bleed, (CCGA emission factor handbook interpolating to stay under		
	maximum allowable emissions)	.04	0.13
7.	Motes A & B.  (CCGA emission factor handbook interpolating to stay under maximum allowable emissions)		0.07
8.	Mote transfer. (CCGA emission factor handbook interpolating to stay under maximum allowable emissions)		0.04
9.	Lint trash robber system (CCGA emission factor handbook)		0.07
10.	Lint cleaning. (CCGA emission factor handbook)		0.11
11.	Battery Condenser. (CCGA emission factor handbook)		0.03
		Total	0.86

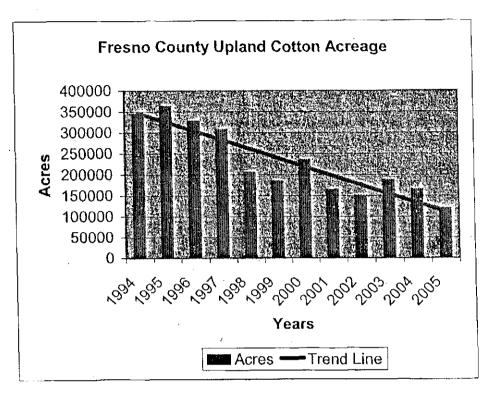
120 Modes = Moder Transfer

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### Fresno County Upland Cotton Acreage

Acres
345000
363000
328000
308000
206000
185000
236000
164500
150000
187000
165140
120190



NORTHERN F	REGION
CENTRAL RE	GION ERC/PUBLIC NOTICE CHECK LIST
SOUTHERN R	EGION PROJECT #s: <u>C-1063777</u>
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
√ ⊠	Newspaper Notice Emailed to Clerical (Check box and tab to generate Notice)
ENCLOSED	DOCUMENTS REQUIRE:
	Enter Correct Date, Print All Documents from File and Obtain Directors Signature
√ ✓	Send <i>PRELIMINARY</i> Notice Letters to CARB, EPA and Applicant; Including the Following Attachments:
√ √	Send PRELIMINARY Public Notice for Publication to Fresno Bee
<u>1</u> <u>1</u>	Send Signed Copies of <i>PRELIMINARY</i> Notice Letters to: <u>Darrin Pampaian</u>
	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 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 Comple	eted March 20, 2007 /By Joven Refuerzo

### NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Eagle Valley Ginning, LLC for the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs proposed for banking is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

The analysis of the regulatory basis for these proposed actions, Project #C-1063777, is available for public inspection at the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

D. Pampaian

Story #117769 System FRSCZ

by JALONZO

Time 11:48:03 Date 3/26/07

Account: 2306000SAN Class: 894 Last user: JALONZO

Ad Start: 3/28/07 Ad Stop: 3/28/07 Total Cost: \$219.96 Run Days: wed

Pag

#### **PUBLIC NOTICE**

### #182366

#### NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Eagle Valley Ginning, LLC for the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs proposed for banking is 40 tb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

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(PUB: March 28, 2007)

RECEIVED

SAN JOAQUIN VALI	LEY APCD	<u> </u>	APR n 2 2007
ATTN FINANCE DEI	PARTMENT	·	
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FRECNO		02726	

## COUNTY OF FRESNO STATE OF CALIFORNIA

### **EXHIBIT A.**

PUBLIC NOTICE

# #182366 NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS

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(PUB: March 28, 2007)

The undersigned states:

McClatchy Newspapers in and on all dates herein stated was a corporation, and the owner and publisher of The Fresno Bee.

The Fresno Bee is a daily newspaper of general circulation now published, and on all-the-dates herein stated was published in the City of Fresno, County of Fresno, and has been adjudged a newspaper of general circulation by the Superior Court of the County of Fresno, State of California, under the date of November 22, 1994, Action No. 520058-9.

The undersigned is and on all dates herein mentioned was a citizen of the United States, over the age of twenty-one years, and is the principal clerk of the printer and publisher of said newspaper; and that the notice, a copy of which is hereto annexed, marked Exhibit A, hereby made a part hereof, was published in The Fresno Bee in each issue thereof (in type not smaller than nonpareil), on the following dates.

March		2007	
special and the special specia	। <b>सामामान्यानः १</b> १ किन्तुनीरिनेन्द्रान्त्रितास्य ताताःस्र	AMANTANAN PRINTER BERTANDAN PARAMETER BERTANDAN PARAMETER BERTANDAN PARAMETER BERTANDAN PARAMETER BERTANDAN P	HRPPAN AND THE STATE OF THE STA
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I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated

MARCH

28.2007

**FPROOFAD** 

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	Address 1990 E GETTYSBURG	AVE	<u> </u>		ept/Floor/Suits/Floom
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2	Your Internal Billing Reference C-1063	232	obtioner-	1063	777
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	8 NEW Residential Delivery Signature Options Hypotroquire adjustment, check Direct or Indirect.	NO POUCH NEEDED.
	No Signature Required Package many be left with- tot delivery.  Direct Signature Amone at recipients and for one is available at recipients address, anyone at a neighboring address may sign for delivery. Fee applies:	)

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Store your addresses at ledex.com.
Simplify your shipping: Manage your account. Access all the tools you need.

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Rev. Data 11/05-Part #158279-©1994-2005 FedEx-PRINTED IN U.S.A.\*SRF



MAR 2 1 2007

Bob Lange Eagle Valley Ginning, LLC 27480 S. Bennett Rd. Firebaugh, CA 93622

Re:

**Notice of Preliminary Decision - Emission Reduction Credits** 

Project Number: C-1063777

Dear Mr. Lange:

Enclosed for your review and comment is the District's analysis of Eagle Valley Ginning, LLC's application for Emission Reduction Credits (ERCs) resulting from the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs proposed for banking is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

The notice of preliminary decision for this project 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. If you have any questions regarding this matter, please contact Mr. Darrin Pampaian of Permit Services at (559) 230-5899.

Sincerely,

David Warner

**Director of Permit Services** 

DW:dp

**Enclosures** 

Seyed Sadredin
Executive Director/Air Pollution Control Officer



MAR 2 1 2007

Mike Tollstrup, Chief **Project Assessment Branch** Stationary Source Division California Air Resources Board PO Box 2815 Sacramento, CA 95812-2815

Notice of Preliminary Decision - Emission Reduction Credits

Project Number: C-1063777

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Eagle Valley Ginning, LLC's application for Emission Reduction Credits (ERCs) resulting from the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs proposed for banking is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

The notice of preliminary decision for this project 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. If you have any questions regarding this matter, please contact Mr. Darrin Pampaian of Permit Services at (559) 230-5899.

Sincerely.

**David Warner** 

Director of Permit Services

DW:dp

Enclosure

Seved Sadredin Executive Director/Air Pollution Control Officer



MAR 2 1 2007

Gerardo C. Rios (AIR 3) Chief, Permits Office Air Division U.S. E.P.A. - Region IX 75 Hawthorne Street San Francisco, CA 94105

Re:

**Notice of Preliminary Decision - Emission Reduction Credits** 

Project Number: C-1063777

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Eagle Valley Ginning, LLC's application for Emission Reduction Credits (ERCs) resulting from the shutdown of a cotton gin, at 39936 W. North Ave., in Mendota. The quantity of ERCs proposed for banking is 40 lb-VOC-yr, 734 lb-NOx/yr, 147 lb-CO/yr, 18,935 lb-PM10/yr, and 5 lb-SOx/yr.

The notice of preliminary decision for this project 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. If you have any questions regarding this matter, please contact Mr. Darrin Pampaian of Permit Services at (559) 230-5899.

Sincerely,

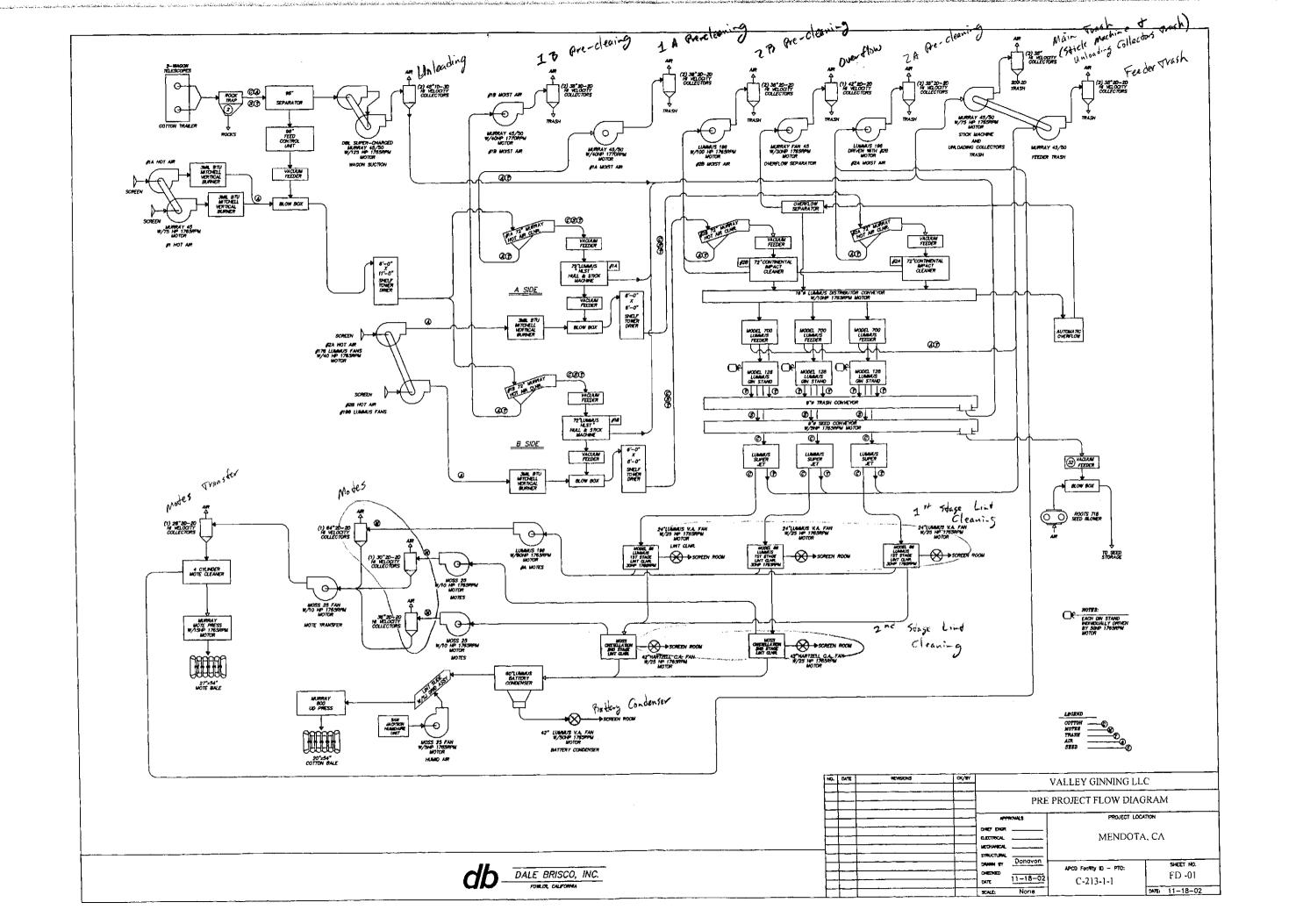
David Warner

**Director of Permit Services** 

qb:WD

**Enclosure** 

Seyed Sadredin Executive Director/Air Pollution Control Officer







MAR 2 0 2007

**Bob Lange** Eagle Valley Ginning, LLC 27480 S. Bennett Rd. Firebaugh, CA 93622

Notice of Receipt of Complete Application - Emission Reduction Credits

Project Number: C-1063777

Dear Mr. Lange:

The District has completed a preliminary review of your application for Emission Reduction Credits (ERCs) resulting from the shutdown of the cotton gin, at 39936 W. North Ave. in Mendota.

Based on this preliminary review, the application appears to be complete. However, during processing of your application, the District may request additional information to clarify, correct, or otherwise supplement, the information on file.

Pursuant to District Rule 3010, section 3.0, your application may be subject to an hourly Engineering Evaluation Fee. If the applicable fees exceed the submitted application filing fee, the District will notify you at the conclusion of our review.

Thank you for your cooperation. Should you have any questions, please contact Mr. Arnaud Marjollet at (559) 230-5900.

Sincerely,

David Warner

Director of Permit Services

Arnaud Marjollet

Permit Services Manager

DW:dp

Seved Sadredin

Executive Director/Air Pollution Control Officer

## Eagle Valley Ginning LLC



RECEIVED
DEC 1 8 2006
Permits Srvc

December 14, 2006

Mr. Dave Warner Director of Permit Services San Joaquin Valley Unified Air Pollution Control District 1990 E. Gettysburg Fresno, CA 93726

Re: Shutdown of Eagle Valley Ginning LLC (PTO#: C-213-1-5)

Dear Mr. Warner,

This letter is to officially notify you that the Eagle Valley Ginning LLC is shutting down, and hereby forfeiting, the permit to operate (PTO#: C-213-1-5) for the cotton gin located at 39936 W. North Avenue in Mendota, California.

Should you have any questions, please contact me at (209)364-6162.

Sincerely

Bob Lange Manager

C: Roger A. Isom, CCGGA



## **Permit to Operate**

FACILITY: C-213

**EXPIRATION DATE:** 03/31/2010

**LEGAL OWNER OR OPERATOR:** 

FAGLE VALLEY GINNING LLC

MAILING ADDRESS:

27480 S BENNETT RD FIREBAUGH, CA 93622

**FACILITY LOCATION:** 

39936 W NORTH AVE MENDOTA, CA 93640

**FACILITY DESCRIPTION:** 

**COTTON GINNING** 

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

David L. Crow
Executive Director / APCO

David Warner
Director of Permit Services

## San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-213-1-5

EXPIRATION DATE: 03/31/2010

#### **EQUIPMENT DESCRIPTION:**

COTTON GIN WITH THREE SAW GIN STANDS AND FEEDERS, SEVEN LINT CLEANERS, BATTERY CONDENSER, MOTES SYSTEM, TRASH SYSTEM, AND FOUR 3 MMBTU/HR NATURAL GAS-FIRED BURNERS

## PERMIT UNIT REQUIREMENTS

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 2.
- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule]
- Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]
- Daily ginning rate shall not exceed 120 tons of baled cotton per day (480 bales/day, corrected to 500-pound bales). [District Rule 2201]
- Annual ginning rate shall not exceed 12,000 tons of baled cotton per year (48,000 bales/year, corrected to 500-pound bales). [District Rule 2201]
- PM10 emissions shall not exceed 6.68 pounds per ton of baled cotton (1.67 pounds per bale, corrected to 500-pound bales), [District Rule 2201]
- Emissions from the natural gas-fired burners shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.02 lb-CO/MMBtu. [District Rule 2201]
- 10. Unloading (wagon and module feeder) shall be served by two 48-inch 1D-3D cyclone collectors. [District Rule 2201]
- 11. The #1A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors, [District Rule 2201]
- 12. The #1B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 13. The #2A pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 14. The #2B pre-cleaning system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 15. The overflow shall be served by one 42-inch 2D-2D cyclone collector. [District Rule 2201]
- 16. Main trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 17. Feeder trash system shall be served by two 38-inch 2D-2D cyclone collectors. [District Rule 2201]
- 18. Feeders, gin stands and battery condenser shall be served by three screen rooms. [District Rule 2201]
- 19. Motes shall be served by one 62-inch 2D-2D, one 32-inch 2D-2D, and one 28-inch 2D-2D cyclone collectors. [District Rule 2201]
- 20. Motes transfer shall be served by one 28-inch 2D-2D cyclone collector. [District Rule 2201]
- 21. Permittee shall maintain daily records of the number and weight of bales produced. [District Rule 1070]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: EAGLE VALLEY GINNING LLC

39936 W NORTH AVE, MENDOTA, CA 93640 Location:

C-213-1-5 Jan 25 2008 7:39AM - ODONNELM

- 22. The trash loading area shall be enclosed with four sides that are higher than the trash auger. Two sides shall be solid. The remaining sides shall have flexible wind barriers that extend below the top of the trash trailer sides. [District Rule 4204]
- 23. Permittee shall conduct daily visual inspections of the material handling systems for leaks, breaks, or other visible signs of equipment malfunctions. [District Rule 4204]
- 24. Permittee shall maintain a record of the daily inspections of the material handling systems, including any equipment malfunctions discovered and corrective action taken to repair the malfunction, and any source test results. [District Rule 42041
- 25. All records shall be retained on site for five years and made available to the District upon request. [District Rules 1070 and 42041

Location: 39936 W NORTH AVE, MENDOTA, CA 93640

December 14, 2006

Mr. Dave Warner Director of Permit Services San Joaquin Valley Unified Air Pollution Control District 1990 E. Gettysburg Fresno, CA 93726

Re: Shutdown of Eagle Valley Ginning LLC (PTO#: C-213-1-5)

Dear Mr. Warner,

Enclosed is an application to shut down the cotton ginning operation located at 39936 W. North Avenue in Mendota, California. Due to the serious reduction in cotton acreage, it is no longer economically feasible to maintain and operate this cotton gin.

Enclosed are the following:

- ☑ Check in the amount of \$650 for the ERC application filing fee
- ERC application
- Supplemental Cotton Gin ERC application
- Production history (bales ginned and fuel consumed)
- Emission Calculations
- Letter forfeiting the permit to operate (w/ copy of permit to operate)

The attached documentation should provide the District with the information necessary to complete the processing of the ERC application. However, should you need additional information, please contact me at (209)364-6162.

Sincerely

Bob Lange Manager

C: Roger A. Isom, CCGGA

# San Joaquin Valley Air Pollution Control District CEIVED

**Application for** 

DEC 1 8 2006

	EMISSION REDUCTION C	REDIT (ER	C)	CON	SOLIDATIO	ON OF ERC CERT	rid <b>ar</b> diti	nits Srvc	
1.	ERC TO BE ISSUED TO: Eagle	Valley (	Ginning LLC				Facility (if kn		
2.	MAILING ADDRESS: Street/P.O. Bo	27480	S. Bennett Roa	ıd				w	
	· ·	ty:Firebau				State: CA Zip C	Ode: 936	22	
3.	LOCATION OF REDUCTION: Street: 39936 W. North Ave	nue				4. DATE OF RED	OUCTION:	:	
	City: Mendota, California			<del></del>		12/15/06			
		TOWNSHIP	RANC	GB					
5.	PERMIT NO(S): C-213-1-5		EXISTING EI						
6.	METHOD RESULTING IN EMISS	ION REDUC	CTION:						
	• SHUTDOWN	RETRO	eit 🗀	PROCESS CHAN	NGE	OTHER			
	DESCRIPTION: Shutdown of existing cotton gin.				ecessary)				
7.	REQUESTED ERCs (In Pounds Po	er Calendar	Quarter):						i
		voc	NOx	со	PM1	0 SOx		OTHER	
	IST QUARTER								
	2ND QUARTER								
	3RD QUARTER		F40.0	70.7	40.404	4 42 0			
	4TH QUARTER 19.4		542.9	73.7	19,181.	4 13.6			<u> </u>
8.	SIGNATURE OF APPLICANT:			TYPE OR I Manag		E OF APPLICANT	r:		
9.	TYPE OR PRINT NAME OF APPL Bob Lange	JCANT:				DATE: 12/15/06		ернопе по: 9-364-6162	• •
FOR	APCD USE ONLY:								
	DATE STAMP		FILING FEE RECEIVED: \$	2/18/0	6		-21	3	

## SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT SUPPLEMENTAL APPLICATION FORM

### COTTON GINS Emission Reduction Credit (ERC)

(This form must be accompanied by a completed Application for Emission Reduction Credit form.)

Certificate to be Issued to:	Eagle Valley Ginning LLC
Gin Location:	39936 W. North Avenue, Mendota, CA

1. Are the emission reductions due to the installation of control equipment at an existing cotton gin? **n/a** 

If "yes", please list the Authority (-ies) to Construct authorizing the installation:

2. Are the emission reductions due to the shut-down of a cotton gin? Yes

If "yes", please list the applicable Permit to Operate number(s): C-213-1-5

3. What date did the emission reductions occur? (if #1 above applies, when was the gin first operated after control equipment was installed? If #2 applies, when was the gin last operated, or when was the Permit to Operate surrendered?)

MM/DD/YY: <u>12 /15 / 06</u>

4. Submit operational data for the five consecutive seasons prior to the reduction (if the emission reductions are result of the installation of control equipment, submit for the five years prior to the issuance of the applicable ATC):

Season	2002	2003	2004	2005	2006
Start MM/DD/YY	10/08/02	10/17/03	10/04/04	10/13/05	
End MM/DD/YY	12/11/02	01/12/04	01/11/05	12/19/05	
No. of Bales*	23558	31090	34254	22834	0

<sup>\*</sup>Number of bales after correcting to 500 pounds per bale.

## 5. Provide emission factors (EF) in pounds of PM<sub>10</sub> emissions per 500 pound bale:

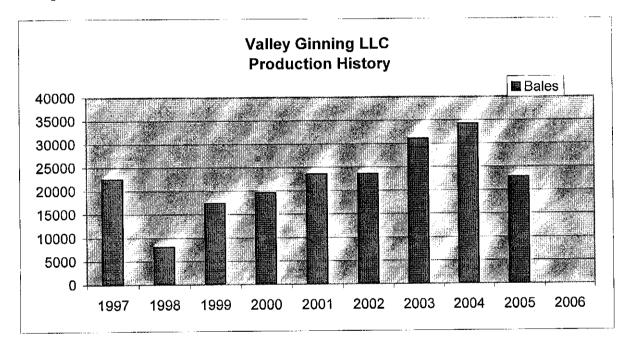
System	Pre-mod or Pre-shutdown EF	References
Unloading	0.11	(1)
#1 Precleaning	0.11	(1)
#2 Precleaning	0.09	(1)
Overflow	0.04	(1)
Gin Stand/Feeder Trash	0.08	(1)
#1 Lint Cleaning	0.10	(1)
#2 Lint Cleaning	0.03	(1)
Main Trash	0.09	(1)
Motes	.07	(1)
Motes Trash	.03	(1)
Battery Condenser	.03	(1)
Totals	0.78	

<sup>(1) -</sup> CCGA Cotton Gin Emission Factor Handbook

## Valley Ginning LLC

Year	Bales	2 yr. Averages	Comp. w/ 10 yr.	_
1997	22519			
1998	8067			
1999	17363			
2000	19635			
2001	23520			
2002	23558			
2003	31090	27324.0	7040	Most Closely Matches 5 yr. average
2004	34254	32672.0	12388	
2005	22834	28544.0	8260	
2006	0	11417.0	8867	_
Averege =	20284.0			

Average = 20284.0



#### Proposal for Emission Reduction Credits (ERCs) for the Shutdown of Eagle Valley Ginning LLC located at 39936 W. North Avenue, Mendota, CA 93640

#### Historical Production Data (Bales Ginned and therms of Natural Gas Consumed) -

PRODUCTION DATA				
Year	Bales Ginned	Therms Natural Gas Consumed		
2006	0	60		
2005	22834	72403		
2004	34254	90708		
2003	31090	47799		
2002	23558	38390		

#### Baseline Period -

Two consecutive years = 2002 and 2003

[Note: This two year average most closely reflects the 10 year average bale production for this gin - see attached]

Bales = (23,558 + 31,090)/2

Bales = 27,324.0

Therms Natural Gas consumed = (38390 + 47799)/2

Therms Natural Gas consumed = 43,094.5

#### Historical Actual Emissions (HAE) -

#### Cotton Gin Emission Factor -

As listed in permit condition No. 8 (PTO#: C-213-1-5), emissions from this gin are equal to 1.67 lbs. PM10/bale. However, this reflects the use of "2D-2D" cyclones as control equipment. With the passage of Rule 4204 – Cotton Gins, the emission factor must be revised to reflect the use of "1D-3D" cyclones as the required control technology. Therefore, the revised emission factor, based upon the latest version of the California Cotton Ginners Association's Cotton Gin Emission Factor Handbook, is proposed to be 0.78 lbs. PM10 per bale.

#### Cotton Gin Emissions -

HAE = Emission Factor (lb PM10/Bale) x Baseline Period Production History (bales/yr)

HAE = 0.78 lb PM10/bale x 27,324 bales/yr

HAE = 21,312.7 lb PM10/yr

#### Natural Gas Combustion Emission Factors -

Natural Gas Emission Factors		
Pollutant	Emission Factor (lb/1000 therms)	
NOx	10	
SOx	0.3	
CO	2	
VOC	0.6	

#### Natural Gas Combustion Emissions -

### $HAE = Emission Factor (lb/1000 therms) \times 1000 therms burned$

	Natural Gas Emissio	n Calculations (HAE)		
Pollutant	Emission Factor (lb/1000 therms)	Natural Gas Usage (therms)	Emissions (lb/yr)	
NOx	(14)7	43094.5	603.3	Jucom
SOx	0.35	43094.5	15.1	
CO	1.9	43094.5	81.9	
VOC	0.5	43094.5	21.5	

#### Actual Emission Reductions (AER) -

For shutdowns, AER = HAE

<b>Actual Emission Reduction Calculations</b>	
Pollutant	AER (lb/yr)
PM10	21,312.7
NOx	603.3

SOx	15.1
CO	81.9
VOC	21.5

#### Air Quality Improvement Deduction (AQID) -

AQID = 10% AER

Air Quality Improvement Deduction Calculations			
Pollutant	Pollutant AER (lb/yr)		
PM10	21,312.7	2,131.3	
NOx	603.3	60.3	
SOx	15.1	1.5	
CO	81.9	8.2	
VOC	21.5	2.2	

#### Emission Reduction Credits (ERCs) -

Emission Reduction Credits (ERCs) =

Emission Reduction Credits (ERCs) = AER - AQID ERCs = AER - AQID

Emission Reduction Credit Calculations				
Pollutant	AER (lb/yr)	AQID (lb/yr)	ERCs (lb/yr)	
PM10	21,312.7	2,131.3	19,181.4	
NOx	603.3	60.3	542.9	
SOx	15.1	1.5	13.6	
CO	81.9	8.2	73.7	
VOC	21.5	2.2	19.4	

# San Joaquin Valley Air Pollution Control District CE/VED

**Application for** 

DEC 1 8 2006

	EMISSION REDUCTION CREDIT (ER			NSOLIDATIC	N OF ERC CERTIF	SJVAPOD -		
1.	ERC ТО ВЕ ISSUED ТО: Eagle Valley				-	Facility ID:  (if known)		
2.	MAILING ADDRESS: Street/P.O. Box: 27480	S. Bennett Ro	ad					
	City: Firebau				State: CA Zip Cod	93622 		
3.	LOCATION OF REDUCTION: 39936 W. North Avenue		and the second s		4. DATE OF REDU			
	City: Mendota, California				12/10/00			
		RAN	NGE	-				
5.	PERMIT NO(S): C-213-1-5	EXISTING E	ERC NO(S):					
6.	METHOD RESULTING IN EMISSION REDU	CTION:						
	■ SHUTDOWN	FIT [	PROCESS CHA	NGE	OTHER			
	DESCRIPTION: Shutdown of existing	g cotton gin.						
_	DECOMPOSITION NO. (1. II. ) N. (1. IV. )	0 4 )			<del></del>	(Use additional sheets if necessary		
7.	REQUESTED ERCs (In Pounds Per Calendar	Quarter):		1				
	VOC	NOx	CO	PM10	) SOx	OTHER		
	1ST QUARTER							
	2ND QUARTER							
	3RD QUARTER							
	4TH QUARTER 19.4	542.9	73.7	19,181.4	4 13.6			
8.	SIGNATUREOF APPLICANT:	Mgc	TYPE OR Manag		E OF APPLICANT:			
9.	9. TYPE OR PRINT NAME OF APPLICANT: Bob Lange DATE: TELEPHONE NO: 12/15/06 209-364-616							
FOR	APCD USE ONLY:							
	RECEWED	FILING FEE RECEIVED: \$_	650.00 1 C	CK# 400	, ک			
	DEC 1 & 2006	DATE PAID;	12/16	106 K	7p			
	FINANCE	DDATECT NO .	C-10/2	クフス	штуть. С-	2/3		

#### For Eagle Valley Ginning LLC (YOS / 8010243)

reific Gas a			∞, count Se	ervices		For	- Eagle \	Valley Gir	nning LL	C (YOS	/ 80102	43)			d Charges E By Service	nergy f	Report	FROM :PG8
A Id:571	631700	5	Open: N	Bus Act	Desc:			Svc Desc	criptor:					From	m Jan 1, 20	01 to Dec	11, 2006	m
	EAGLE V 571631714		GINNING LLC		,	Meter#:	40574380		27480 S BENNET MORTH & NEWC				шота, са	77 <b>5 E</b> D				I∋ne
48184 e	Days	Rate		Gas Charges (Dollars)	Therms	Electric Charges (Dollars)	On-Peak Usage (kwh)	Part-Peak Usage (kwh)	Off-Peak Usage (kwh)	Total Usage (kwh)	Hoyrs	Billing Demand (KW)	Created Demand (kW)	On-Peak Demand (kW)	Part-Peak Demand (kW)	Demand	Taxes	ESS C
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Total	l for 2001	:		14,544,52	30,023	0.00	0	0 -	0	0	Û						0.00	JU
otal for SA.	id: 57163	17005:	:	255,954.47	279,383	0.00	o	0	.0	Đ	0						2,012.34	
eport Tota	et:		;	255,964.47	279,383	0.00	0	0	n	0	0						2,012,34	

# Sales and Charges #3 - System Level Energy Report [By Service Agreement, Date]

#### For Eagle Valley Ginning LLC (YOS / 8010243)

o. SA Id: 5716317005							J	Svc Des		From Jan 1, 2001 to Dec 11, 2006							
Per Name: FAGLE VALLEY GINNING LLC  92 Acct Id: 5716317146							40574380	Billion Addr	27480 S BERNETT MORTH & NEW CO	MDOTA, CA	25043						
78 B B Date	Days			Gas Charges 'Dollars')	Therms	Electric Charges (Dollars)	On-Peak Usage (kwh)	Part-Peak Usage (kwh)	Off-Peak Usage (kwh)	Total Usage (kwh)	Hours	Billing Demand (kW)	Created Demand (kW)	On-Peak Demand (kW)	Part-Peek Demand (kW)	Off-Peek Demand (kW)	Taxe
o 09/23/2003	31	GNRI		10.65	Ç		0	0	θ		0	0	Œ	0	0	0	0.0
D 08/23/2003	31	GNRI		10.65	D.		0	0	0		. 0	0	0	0	0	0	0.0
07/23/2003	30	GNRI		10.31	0		0	0	0		0	0	0	6	0	0	0.0
06/23/2003	32	GNRI		10.99	Q.		0	0	0		0	D	0	Ø	ð	0	0.0
05/22/2003	30	<b>GNR1</b>		13. <b>9</b> 5	5		0	0	0		0	0	0	0	0	0	0.0
B4/22/2003	28	<b>GNR1</b>		32.23	27		0	0	0		0	0	0	0	0	0.	0.0
33/25/2003	29	<b>GNRI</b>		53.82	46		1}	. 0	0		0	0	Û	. 0	0	0	0.0
<b>J2-24/2003</b>	33	GNRI		63.44	59		Û	0	0		0	0	0	0	0	0	9.0
21/22/2003	32	GNR1		60.68	56		0	0	0		0	0	0	0	0	0	0.1
Tot	al for 2003:		4	1,837.34	47,799	9.00	0	0	0	0	0			-			0.0
12/21/2002	30	GNR.I	13	2,064.25	16,747		0	0	. 0		O	0	0	0	0	0	0.5
11/21/2002	29	GNRI	i	0,315.59	15,819		Ü	0	0		0	6	0	0	0	. 0	0.
10/23/2002	30	GNR1	:	3,426.15	5,709		0	0	D		Ç	0	0	0	0	0	. 0,
29/23/2002	31	GNR1		10.50	0		0	0	Û		٥	0	0	1)	Ú	. 0	0.
)8/23/2002	30	GNR1		10.50	0		Ü	9	. 0		0	0	O	0	Ű	Ø	0.
37/24/2002	30	GNR!		10.50	0		0	0	Û		0	0	0	0	0	0	. <b>C</b> .
<b>)6/24/290</b> 2	32	GNRI		10.50	0		0	Ð	ฏ		Q.	0	0	Ü	Û	0	0.
35/23/2002	29	GNR1		10.50	0		0	ð	Û		0	0	0	0	0	Ō	0.
14/24/2002	29	GNRI		10.50	0		0	0	0		0	0	0	0	O	0	0.
13/26/2002	32	GNR1		21.41	19		(t	9	0		0	Ð	0	0	U	ō	0.
# 12/22/2002	31	GVR1		51.36	64		0	0	Ú		0	0	Û	0	0	=	0.
21/22/2002	31	GNRI		33.61	32		0	U	Ü	· · · · · · · · · · · · · · · · · · ·	Ú	0	0	0	0	0	0.
Tot	af for 2002;		2:	5,975.37	38,390	0.00	9	0	O	0	0					•	0.0
12/22/2001	32	GNR1		8,155.94	14,823		B	Û	0		Ú	O.	0	0	0	O	0.
11/20/2001	29	GNRI		4,501,43	11,518		0	0	0		0	0	0	0	Û	0	0.
10/22/2001	31	GNR1		1,492.91	3.492		0	0	Q		U	Ŋ	0	0	Ð		0.
19/21/2001	30	GNR1		10.50	D		Ü	Û	Q		Û	Ç	U	Ü	0		0
38/22/2001	29	GNRI		10.50	ð		0	0	O		υ	G	Ü	O	Ú	0	0.
P 17/24/2001	32	GNR1		10.51	Ù		0	0	a		1)	0	Ų	·U	4)	()	0
g 16/23/2001	361	GNR1		535 Str	9		G	ð	1.		-	I <del>I</del>	1.		:-	*4	**
35,23,200;	36	GNR		13/30	\$		g.	Ú	9			9	i.	. ::		6	t.
i ()4/23/2001 9	31	GNRI		14.16	3		0	0	0		0	0	0		0	-	0.
33/23/2001	29	GNR1		80.73	47		0	0	0		Ü	0	4)	0	()	0	0.6

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Sales and Charges #3 - System Level Energy Report 3 By Service Agreement, Datel

#### For Eagle Valley Ginning LLC (YOS / 8010243)

03/03 SA 1d: 5716317005 Open: N Bus Act Desc: Svc Descriptor: From Jan 1, 2001 to Dec 11, 2006 띮 Per Name: EAGLE VALLEY GINNING LLC Billing Addr. 27480 S DENNETT RD, FIREBAUGH, CA 93622 Meter #: 40574380 Service Addr., NORTH & NEWCOMB AVE SW. SW 24-14-13 MENDOTA MENDOTA, CA 93640 Acct Id: 5716317146 SSUNI 846 Gas Electric On-Peak Part-Peak Off-Peak Total Created On-Peak Part-Peak Off-Peak Charges Charges Usage Usage Usage Usage Demand Demand Demand Demand Demand **Jate** Days Rate (Dollars) Therms (Dollars) (kwh) (kwh) (kwh) (kW)(kwh) Hours (kW) (KW) (kW) (KW) Ø 12/03/2006 Taxes CENTER 13 GNR2 64.42 0 Û Û Ü 0 0 0 0 0 Ū 0.00 32 の )1/21/2006 GNR2 247.75 60 0 () 9 Ø 0 0 Ū 0 2.91 Total for 2006: 312.17 60 0.00 0 0 0 Û 2.91 .2/20/2005 31 GNR2 27,973.34 21,991 0 0 0 0 0 0 Û 933.51 1/19/2005 30 GNR2 31,077,17 22,842 0 0 0 O. Ü Û 0 0 Ð 969.63 0/20/2005 29 GNR2 3.308.48 2,438 0 Ð Ð, 0 0 0 103.50 9/21/2005 30 GNR2 148.65 0 0 0 0 0 0.00 8/22/2005 32 GNR2 158.56 O Ð 0 0 ž 0.00 7 21 2005 30 GNR2 148.66 σ Ð В 0 0 0.00 6,21,2005 32 GNR2 158.57 0 0 Ú 3 a O 0 0.00 5/20/2005 31 GNR2 155.44 2 0 0 Û 0 0,08 4/19/2005 28 **GNRI** 61.16 54 3 0 Û 0 1.94 209932 3/22/2005 32 **GNRI** 41.48 31 Ũ ø 0 () U 0 0 0.77 2/18/2005 28 **GNR1** 39.73 27 0 0 Û. Ú 0 0 Ð 0 0.001/21/2005 31 GNR1 25,118,59 25 018 D Ü 0 Ð Ð Ú Ü 0 0 0.00 Total for 2005; 88.389.83 72,403 0.00 Đ. 0 0 0 2,009,43 2/21/2004 32 GNR I 35,631,76 36,169 0 Û 0 0 0 0 0 0.001/19/2004 30 GNR I 24,954.87 28,043 0 0 0 0 O 0 0 0.00 ω 3/20/2004 28 GNRI 4,686.41 5,679 Ü 0 0 0 0 0.007/22/2004 30 **GNRJ** 12.06 2 n Û O 0 0 0.00₩ 1/23/2004 32 **GNR**J 10.99 9 43 0 0 0.004 1/22/2004 30 GNR1 10:31 Ü 13 6 0.001/22/2004 33 GNR! 1E.34 0 0.007/20/2004 29 GNR1 9.96 0 0 O 'n 0 Û Ω 0.00J21/2004 29 ONR I 9.99 Q Ö Ü 0 9002 Ð 0.00-723/2004 32 GNR1 35.93 32 n 0 0 0 O 0.00720/2004 30 GNRI 29.34 20 0 Ü 0 0 Û 0 n Ú 1} 0.00<u>ආ /21/2004</u> 33 **GNR!** 19,502.28 20,772 Ð 0 3 Ü () o 0 Ü 0.00 Total for 2004; 84,905.24 90,708 0.00 Ü 90 (} 13 0 0 0.00 739/2003 30 CART 14 185 59 27.185 2 41 14 ١ŀ 151 8 /19/2007 X GVR! 15,760.83 18,528 9 : 1  $\alpha$ 4 4 4,0 0· 0.0029 /22/2003 GNRI 1.624.20 1,893 ŲŁ. 0 0 () 0 0 0 0 0.00

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