San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

DEC 1 2 2013

John Dean
Spreckels Sugar Company
P O Box 68
Mendota, CA 93640

Re: Notice of Preliminary Decision – Emission Reduction Credits
Facility Number: C-1179
Project Number: C-1122340

Dear Mr. Dean:

Enclosed for your review and comment is the District's analysis of Spreckels Sugar Company's application for Emission Reduction Credits (ERCs) resulting from the shutdown of one 40 MMBtu/hr lime kiln and one 311 MMBtu/hr natural gas fired boiler, at 39400 Whitesbridge Road in Mendota, CA. The quantity of ERCs proposed for banking is 69,861 metric tons CO2e/year.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice comment period, the District intends to the issue the ERCs. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Dustin Brown of Permit Services at (559) 230- 5932.

Sincerely,

David Warner
Director of Permit Services

DW:ddb

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Greenhouse Gas Emission Reduction Credit Banking Application Review

Shutdown of Beet Sugar Manufacturing Operations

Processing Engineer: Dustin Brown
Lead Engineer: Joven Refuerzo
Date: December 1, 2013

Facility Name:	Spreckels Sugar Company
Mailing Address:	P O Box 68 Mendota, CA 93640
Primary Contact:	John Dean – Regional Manager
Phone:	(559) 655-4961 Ext. 273
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Alternate Contact:	Anne Ogrey
Phone:	(209) 834-7679
E-mail:	Anne_Ogrey@spreckelssugar.com
Facility Location:	29400 Whitesbridge Road Fresno, CA 93640
Deemed Complete Date:	October 23, 2013
Project Number:	C-1122340

I. Summary:

Spreckels Sugar Company operated a sugar beet processing facility in Fresno, CA. The facility ceased production operations in August of 2008 and began disassembling and removing components of the equipment associated with the beet sugar manufacturing process (PTO C-1179-1), one 40 MMBtu/hr natural gas or fuel oil fired lime kiln (PTO C-1179-2) and one 311 MMBtu/hr natural gas fired boiler (PTO C-1179-6) from the site in May of 2009. The removal of the components associated with this equipment resulted in these processes becoming inoperable and the facility no longer having the ability to process sugar beets and produce sugar. The facility previously applied for, and received, criteria pollutant emission reduction credits (ERC's) for the actual emission reductions (AER's) of NO_X, CO, VOC, PM_{10} and SO_X emissions resulting from the shutdown of these pieces of equipment on August 24, 2011 (reference project C-1090909).

Subsequently, on July 19, 2012, Spreckels Sugar Company submitted a second application to bank the Greenhouse Gas (GHG) AER's that also resulted from the shutdown of these pieces of equipment. Of the three permitted pieces of equipment referenced above, GHG emissions were potentially only generated by the 40 MMBtu/hr natural gas or fuel oil fired lime kiln and the 311 MMBtu/hr natural gas fired boiler. Therefore, this project will only address the GHG reductions associated from the shutdown of these two permit units.

Spreckels Sugar Company previously surrendered Permits to Operate (PTO's) C-1179-2-3 and '-6-8. A copy of the surrendered PTO's is included in Attachment A of this document.

Selection of Geographical Boundary for Determining Permanence of the GHG Emission Reduction

Rule 2301 contains several eligibility criteria for emission reduction credit banking, including that the emission reduction must be permanent. When determining the geographical boundary in which the emission reduction is determined to be permanent, the applicant may consider how the GHG ERC may likely be used.

Please note that the while Rule 2301 allows facilities to receive ERCs for GHG emission reductions, the District does not have any requirements on the use of GHG ERCs. However, it is anticipated that the likely uses of such GHG ERCs would be their future retirement as GHG mitigation in the California Environmental Quality Act (CEQA) process.

Pursuant to CEQA, lead agencies must consider the environmental impact of GHG emissions from a project and may require that such GHG emissions be mitigated. In evaluating various mitigation techniques, including the retirement of GHG ERCs, the lead agency must determine if the proposed mitigation technique adequately mitigates the projects GHG emission increase.

When a lead agency determines if the retirement of a particular GHG ERC provides adequate GHG mitigation for a project, the lead agency may choose to consider the location where the GHG ERC was generated and the geographical boundary used to determine the permanence of the emission reduction. In making this determination, the lead agency may conclude that the retirement of a particular GHG ERC would provide adequate mitigation for projects within that same geographical boundary. Again, that determination will be made by the lead agency for any particular project.

For this application, the facility has selected the air basin covered within the San Joaquin Valley Air Pollution Control District as the geographical boundary for which the emission reductions are permanent. Information has been provided to validate this geographical boundary selection. Using this geographical boundary, it was determined that the GHG emission reduction is permanent within the San Joaquin Valley.

The District has proposed to issue the GHG ERCs for Carbon Dioxide equivalent (CO2e). The amount of bankable CO2e emissions is shown in the table below.

Bankable GHG Emissions	
Pollutant	Metric Tons/Year
CO2e	69,861

II. Applicable Rules:

Rule 2301 - Emission Reduction Credit Banking (last amended 1/19/12)

III. Location of Reductions:

Physical Location of Equipment: 29400 W. Whitesbridge Road in Mendota, CA.

IV. Method of Generating Reductions:

The AER's were generated by shutting down one 40.0 MMBtu/hr natural gas or oil fired lime kiln and one 311.0 MMBtu/hr natural gas fired boiler. The equipment description for each unit is as follows:

C-1179-2-3:

40 MMBTU/HR ROTARY DRUM LIME KILN DIRECT-FIRED COEN OIL BURNER USING #6 FUEL OIL OR NATURAL GAS, EXHAUSTING TO WATER SPRAY SCRUBBER, PEABODY TRAY SCRUBBER, AND TO CARBONATION

C-1179-6-8:

311 MMBTU/HR COMBUSTION ENGINEERING BOILER, MODEL VU60 NO.0516, EQUIPPED WITH FOUR COEN 4-DAF-30 LOW NOX GAS/OIL BURNERS AND A FLUE GAS RECIRCULATION SYSTEM

V. Calculations:

A. Assumptions

- The CO2e emission factor from the combustion of fuel oil #6 and natural gas includes GHG emissions of CO_2, CH_4 and N_2O, where the total emission factor includes the summation of each of the compounds multiplied by their Global Warming Potential (GWP)
- Carbon dioxide equivalents (CO2e) are found by multiplying the mass emissions of a GHG by its global warming potential (GWP). For combustion sources, GHG's include the following three "well-mixed" compounds: carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). The District has adopted the following GWPs per District Rule 2301 (*Emission Reduction Credit Banking*):

  CO_2 = 1
  CH_4 = 21
  N_20 = 310

- Conversion: 1,000 kg = 1 metric ton
- Conversion: 10 therms = 1 MMBtu of heat output (conversion factor received from Pacific Gas and Electric Company)

C-1179-2 (40 MMBtu/hr lime kiln):

- During the baseline period, the lime kiln was only fired on fuel oil #6 (fuel usage records provided by the applicant under project C-1090909 and included in Attachment C)
- Fuel oil #6 higher heating value is 150,000 Btu/gallon (typical District value)

C-1179-6 (311 MMBtu/hr boiler):

- During the baseline period, the boiler was only fired on PUC-regulated natural gas (fuel usage records provided by the applicant under project C-1090909 and included in Attachment C)
- Natural gas higher heating value is 1,000 Btu/scf (typical District value)

B. Emission Factors (EF's)

The EFs used to calculate the AERs are as follows:

C-1179-2 (40 MMBtu/hr lime kiln):

Fuel Oil #6 Combustion:

The following fuel oil #6 EFs were taken from EPA 40 CFR Part 98, Subpart C, Tables C-1 and C-2:

75.10 kg-CO2/MMBtu
0.003 kg-CH4/MMBtu
0.0006 kg-N20MMBtu

The GWPs of CO_2, CH_4, and N_20 will be combined with the combustion emission factors into a single CO2e emission factor.

CO2e EF = [(75.10 kg-CO_2/MMBtu x 1 lb-CO2e/lb-CO_2) + (0.003 kg-CH_4/MMBtu × 21 lb-CO2e/lb-CH_4) + (0.0006 kg-N_20/MMBtu × 310 lb-CO2e/lb-N_2O)]

CO2e EF = 75.35 kg/MMBtu (equivalent to 0.07535 metric ton/MMBtu)

C-1179-6 (311 MMBtu/hr boiler):

Natural Gas Fuel Combustion:

The following natural gas EFs were taken from EPA 40 CFR Part 98, Subpart C, Tables C-1 and C-2:

53.02 kg-CO2/MMBtu
0.001 kg-CH4/MMBtu
0.0001 kg-N20MMBtu

The GWPs of CO_2, CH_4, and N_20 will be combined with the combustion emission factors into a single CO2e emission factor.

CO2e EF = [(53.02 kg-CO_2/MMBtu x 1 lb-CO2e/lb-CO_2) + (0.001 kg-CH_4/MMBtu × 21 lb-CO2e/lb-CH_4) + (0.0001 kg-N_20/MMBtu × 310 lb-CO2e/lb-N_2O)]

CO2e EF = 53.07 kg/MMBtu (equivalent to 0.05307 metric ton/MMBtu)

C. Baseline Period Determination and Data

Baseline Period Determination:

In accordance with District Rule 2301, Section 4.5.4, GHG emission reductions are calculated using the consecutive 24 month period immediately prior to the date the emission reduction occurred, or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred if determined by the APCO as being more representative of normal operations.

The original ERC Banking Project (reference project C-1090909) established the baseline period as the two year (24 month) period of operation dating from the start of the 3rd quarter in 2005 to the end of the 2nd quarter in 2007. Since the District has already established this 24 month time frame as the correct baseline period for the criteria pollutant emission reductions that have already been evaluated and issued, the same baseline period will be used for this evaluation.

Baseline Period Data:

C-1179-2 (40 MMBtu/hr Lime Kiln – fuel oil usage):

Year	Therms/Year
1 (3rd qtr 2005 to 2nd qtr 2006)	1,647,400
2 (3rd qtr 2006 to 2nd qtr 2007)	1,179,112

C-1179-6 (311 MMBtu/hr Boiler – natural gas usage):

Year	Therms/Year
1 (3rd qtr 2005 to 2nd qtr 2006)	12,713,305
2 (3rd qtr 2006 to 2nd qtr 2007)	9,601,269

D. Historical Actual Emissions (HAE's)

C-1179-2 (40 MMBtu/hr lime kiln):

As shown above, a CO2e emission factor of 0.07535 metric ton/MMBtu will be used to calculate the HAE's from the shutdown of this lime kiln. Therefore, the historical actual CO2e emissions can be estimated using this emission factor, the fuel usage rates listed above and the conversion of therms to MMBtu of heat output.

CO2e HAE = 0.07535 metric ton/MMBtu x Fuel Oil Usage (therms/year) x 1 MMBtu / 10 therms

CO2e HAE				
Year	**Emission Factor** (metric ton/MMBtu)	**Fuel Oil Usage** (therms/year)	**Conversion** (MMBtu/therms)	**HAE** (metric tons/year)
1	0.07535	1,647,400	0.10	12,413
2	0.07535	1,179,112	0.10	8,885
			Average:	10,649

C-1179-6 (311 MMBtu/hr boiler):

As shown above, a CO2e emission factor of 0.05307 metric ton/MMBtu will be used to calculate the HAE's from the shutdown of this lime kiln. Therefore, the historical actual CO2e emissions can be estimated using this emission factor, the fuel usage rates listed above and the conversion of therms to MMBtu of heat output.

CO2e HAE = 0.05307 metric ton/MMBtu x Natural Gas Usage (therms/year) x 1 MMBtu / 10 therms

CO2e HAE				
Year	**Emission Factor** (metric ton/MMBtu)	**NG Usage** (therms/year)	**Conversion** (MMBtu/therms)	**HAE** (metric tons/year)
1	0.05307	12,713,305	0.10	67,470
2	0.05307	9,601,269	0.10	50,954
			Average:	59,212

The combined total AER's from these two units combined are shown in the table below:

Total Historical Actual Emissions (HAE)	
Pollutant	Metric Tons/Year
CO2e	69,861

E. Post Project Potential to Emit (PE2)

As discussed above, the subject equipment has been permanently shut down and the PTO's were surrendered to the District. Therefore the PE2 is 0.

F. Emission Reductions Eligible for Banking

The emission reductions eligible for banking are the difference between the historical actual emissions and the potential to emit after the project.

ERCs eligible for banking	= 69,861 metric ton/year – 0 ton/year
	= 69,861 metric ton/year

VI. Compliance:

Rule 2301 - Emission Reduction Credit Banking

Section 4.0 - Eligibility of Emission Reductions

Per Section 4.5, the following criteria shall be met in order to deem GHG emission reductions eligible for banking:

Section 4.5.1 requires that the emission reductions must have occurred after January 1, 2005.

The emission reductions occurred when the sugar beet processing equipment was permanently shutdown on August 31, 2008. As these emission reductions occurred after January 1, 2005, this criteria has been satisfied.

Section 4.5.2 requires that the emissions must have occurred in the District.

The emissions occurred at 39400 Whitesbridge Road in Mendota, CA. Since this location is in Fresno County, which is located within the San Joaquin Valley Air Pollution Control District boundaries, this criteria has been satisfied.

Section 4.5.3 requires that the emission reductions must be real, surplus, permanent, quantifiable, and enforceable.

Real:

The GHG emission reductions were generated by the shutdown of one 40 MMBtu/hr lime kiln and one 311 MMBtu/hr boiler. The real emissions were calculated from actual historic fuel-use data and recognized emission factors. These pieces of equipment have been removed from service and their permits subsequently were surrendered to the District. Therefore, the emission reductions are real.

Surplus:

The GHG emission reduction occurred when the facility ceased operation in August 2008. In 2013 CARB established a list of entities covered by the cap and trade regulation (based on 2012 actual emissions). Because the facility ceased their sugar production operations prior to 2012 it is not a covered entity subject to the cap and trade regulation, see a list of covered entities at http://www.arb.ca.gov/cc/capandtrade/covered_entities_110413.xlsx.

Please note that if the facility was still in operation as of 2012 it most likely would have been a covered entity as the actual emissions would have likely exceeded the 25,000 metric ton/year threshold for "large industrial facilities".

It is important to note that even for facilities that are listed as covered entities as part of the cap and trade regulations, GHG emission reductions that occurred prior to Jan 1, 2012 are surplus of the requirements of Rule 2301.

Notwithstanding the above, the emission reduction occurred in August 2008, and not at a facility subject to the cap and trade regulation. Therefore the emission reduction satisfies the requirements of section 4.5.3.1.

There are no laws, rules, regulations, agreements, orders, or permits requiring any GHG emission reductions from sugar beet processing operations. Therefore, the emission reductions satisfy the surplus requirement in Section 4.5.3.2.

The emission reductions are not the result of an action taken by the permittee to comply with any requirement. The emission reductions are surplus and additional of all requirements. Therefore, the emission reductions satisfy the surplus requirement in section 4.5.3.4.

The ERC Certificate will be identified according to Section 6.15.3 below.

Permanent:

The 40 MMBtu/hr lime kiln and the 311 MMBtu/hr boiler have been shut down, removed from the facility, and the PTO's have been surrendered to the District.

When determining the geographical boundary in which the emission reduction is determined to be permanent the applicant may consider how the GHG ERC may likely be used.

Please note that the while Rule 2301 allows facilities to receive ERCs for GHG emission reductions, the District does not have any requirements on the use of GHG ERCs. However, it is anticipated that the likely uses of such GHG ERCs would be their future retirement as GHG mitigation in the CEQA process.

Pursuant to CEQA, lead agencies must consider the environmental impact of GHG emissions from a project and may require that such GHG emissions be mitigated. In evaluating various mitigation techniques, including the retirement of GHG ERCs, the lead agency must determine if the proposed mitigation technique adequately mitigates the projects GHG emission increase.

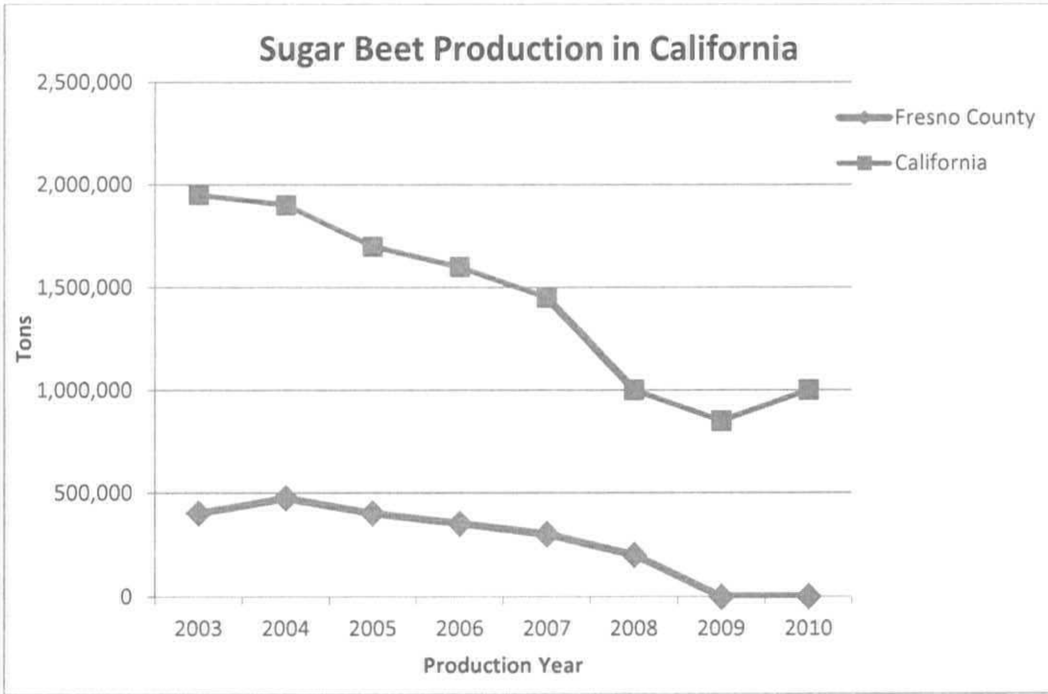
When a lead agency determines if the retirement of a particular GHG ERC provides adequate GHG mitigation for a project, the lead agency may choose to consider the location where the GHG ERC was generated and the geographical boundary used to determine the permanence of the emission reduction. In making this determination, the lead agency may conclude that the retirement of a particular GHG ERC would provide adequate mitigation for projects within that same geographical boundary. Again, that determination will be made by the lead agency for a particular project.

This facility has selected the boundaries of the San Joaquin Valley Air Pollution Control District jurisdiction as the geographical boundary for which these emission reductions are permanent. Information has been provided below to validate this geographical boundary selection.

Due to the high transportation costs, it is not cost effective to ship surgar beets to other locations for processing. As such, the sugar beets processed at the Mendota facility were produced in the surrounding area specifically for processing by Spreckels Sugar Company. Once the facility shut down, sugar beet production for the Mendota facility ceased. This is reflected in the Annual Agricultural Crop and Livestock Report prepared annually by the Fresno Department of Agriculture. As shown in in the following table, sugar beet production dropped significantly in 2008, during the time the Spreckels Sugar facility in Mendota shutdown. As of 2009, sugar beet harvested acreage within Fresno County has essentially dropped to zero.

Sugar Beet Acreage in Fresno County			
Year	**Harvested Acreage**	**Tons Per Acre**	**Total (tons)**
2012	N/A	-	-
2011	N/A	-	-
2010	-	-	-
2009	3	-	-
2008	5,800	33	192,000
2007	10,700	34	359,000
2006	11,100	31	342,000
2005	10,700	34	362,000
2004	11,200	39	440,000

In addition, as shown in the following chart, the total sugar beet production in the entire state of California has been on a decline since January of 2003. Sugar beet production has declined from nearly 2,000,000 tons in 2003 to 1,000,000 tons in 2010. In addition, the sugar beet production in Fresno County has declined from nearly 500,000 tons in 2004 to zero tons in 2010. The decline in sugar beet production forced the closure of several sugar beet processing facilities in California.



A search was also conducted of the District's permit database, and no other facilities were found permitted within the District that process sugar beets. Because there are no longer sugar beets being grown within Fresno County, there has been a decrease in the amount of sugar beets processed in the state of California, and there are no other facilities within the District's boundaries that could have potentially picked up the processing of sugar beets that the Spreckels Sugar Mendota facility previous processed, it has been determined that the proposed GHG emission reductions are permanent within the District.

The ERC will include the following identifier:

"Shutdown of 40 MMBtu/hr oil fired lime kiln and 311 MMBtu/hr natural gas fired boiler, verified as permanent within the boundaries of the San Joaquin Valley Air Pollution Control District"

Quantifiable:

The actual emissions were calculated from historic fuel-use records and accepted emission factors. Therefore, the emission reductions are quantifiable and have been quantified.

Enforceable:

The 40 MMBtu/hr lime kiln and the 311 MMBtu/hr boiler have been shut down and the PTO's have been surrendered to the District. Operation of the equipment without a valid permit would subject the permittee to enforcement action. Therefore, the emission reductions are enforceable.

Section 4.5.4 requires that GHG emission reductions be calculated as the difference between the historic annual average GHG emissions (as CO_2e) and the PE2 after the reduction is complete. The historical GHG emissions must be calculated using the consecutive 24 month period immediately prior to the date the emission reductions occurred (the shutdown of the sugar beet processing operations), or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred if determined by the APCO as being more representative of normal operations.

The GHG emission reductions were calculated according to the baseline period identified above. Since this is a permanent shutdown of the sugar beet processing operations and its associated equipment, with none of the load being shifted to any other sugar beet processing facility within the boundaries of the San Joaquin Valley Air Pollution Control District jurisdiction, there is no post-project potential to emit GHG.

Section 4.5.5.5 requires that GHG emission reductions proposed to be quantified using CARB-approved emission reduction project protocols shall be calculated in accordance with the applicable protocol.

Since the GHG emission reductions are not subject to an applicable CARB-approved emission reduction project protocol, this section is not applicable.

Section 4.5.6 requires that ERCs shall be made enforceable through permit conditions or legally binding contract.

The 40 MMBtu/hr lime kiln and 311 MMBtu/hr boiler used for these sugar beet processing operations held legal District operating permits. Those permits have been surrendered to the District. Since the operation of the equipment would require new Authorities to Construct, as discussed above, the emission reduction is enforceable.

Section 5.0 - ERC Application Procedures

Section 5.5.2 requires, for emission reductions occurring prior to January 1, 2012, applications for ERCs must be submitted by July 19, 2012.

The ERC application was submitted on July 19 2012, therefore the application is timely.

Section 6.0 - Registration of ERC Certificates

The APCO may only grant an ERC Certificate after the emission reductions have actually occurred upon satisfaction of the following applicable provisions:

6.14 Greenhouse gas emission reductions shall be banked as metric tons of CO2E per year, rounded to the nearest metric ton.

The draft ERCs are identified as metric tons of CO2e per year, rounded to the nearest metric ton.
Section 6.15 specifies the registration requirements for GHG ERCs.

This emission reductions are surplus and additional of all requirements pursuant to Section 4.5.3.4. Therefore the ERC certificate shall include the following notation:

"This emission reduction is surplus and additional to all applicable regulatory requirements."

Compliance with Rule 2301 has been demonstrated and no adjustments are required under this Rule.

VII. Recommendation:

Pending a successful Public Noticing period, issue Emission Reduction Credit certificate and C-1247-24 (CO2e) to Spreckels Sugar Company in accordance with the amounts specified on the draft ERC certificates in Attachment E.

Attachments:

Attachment A,	Surrendered PTO's C-1179-2-3 and '-6-8
Attachment B,	ERC Application
Attachment C,	Spreckels Sugar Company Sugar Production, 40 MMBtu/hr Lime Kiln Fuel Oil Usage and 311 MMBtu/hr Boiler Natural Gas Usage Records
Attachment D,	40 CFR Part 98 GHG Emission Factors and Global Warming Potentials (GWP): Tables A-1, C-1 and C-2
Attachment E,	Draft ERC Certificate C-1247-24

Attachment A

Surrendered PTO's C-1179-2-3 and '-6-8

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-1179-2-3 **EXPIRATION DATE:** 08/31/2008

SECTION: 3 **TOWNSHIP:** 14S **RANGE:** 15E

EQUIPMENT DESCRIPTION:
40 MMBTU/HR ROTARY DRUM LIME KILN DIRECT-FIRED COEN OIL BURNER USING #6 FUEL OIL OR NATURAL GAS, EXHAUSTING TO WATER SPRAY SCRUBBER, PEABODY TRAY SCRUBBER, AND TO CARBONATION TANK.

PERMIT UNIT REQUIREMENTS

1. When firing on natural gas, emissions shall not exceed any of the following: 0.100 lb NOx/MMBtu, 0.0006 lb SOx/MMBtu, 0.031 lb PM10/MMBtu, 0.035 lb CO/MMBtu, or 0.003 lb VOC/MMBtu. All emissions are 15 minute averages. [District Rules 4313, 4.1 and 5.3; and District NSR Rule] Federally Enforceable Through Title V Permit
2. #6 fuel oil consumption shall not exceed 1.57 million gallons per year. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Sulfur content of #6 fuel oil shall not exceed 1.5% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
4. When firing on #6 fuel oil, emissions shall not exceed any of the following: 0.200 lb NOx/MMBtu, 1.57 lb SOx/MMBtu, 0.031 lb PM10/MMBtu, 0.033 lb CO/MMBtu, or 0.002 lb VOC/MMBtu. All emissions are 15 minute averages. [District Rules 4313, 4.1 and 5.3; and District NSR Rule] Federally Enforceable Through Title V Permit
5. All emissions from this unit shall be vented to C-1179-1. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NOx (as NO2) and O2 at least once every month using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the unit or switching fuel source unless monitoring has been performed within the last month. [District Rule 4313, 4.2.2 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. If the NOx concentration corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4313, 4.2.2 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. This unit shall be tested for compliance with the NOx limit using the primary fuel source (#6 fuel oil) at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. If a 36 month NOx source test fails to show compliance, 12 month testing shall resume. Source shall test the unit for compliance with NOx limit for natural gas combustion within 60 days of switchover if the unit's fuel source is changed to natural gas (secondary fuel). [District Rule 4313, 5.3 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx and O2 measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4313, 4.2.2 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. The permittee shall keep monthly records of total hours of operation, the amount of natural gas and #6 fuel oil combusted, and of NOx emissions/emissions rates, for a period of five years, and shall make records available for inspection upon request. [District Rule 4313, 5.1 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. The operator shall maintain daily records of fuel oil consumption and percent of sulfur in each batch of fuel oil. Records shall be retained on site for at least five years and made available for District inspection upon request. [District Rule 2520, 9.3.2 & 9.4.2] Federally Enforceable Through Title V Permit

13. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3A or ARB Method 100. Fuel higher heating value (hhv) shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels, ASTM D240 or D4809 for liquid hydrocarbon fuels. [District Rules 1081 and 4313, 5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-1179-6-8 **EXPIRATION DATE:** 08/31/2008

EQUIPMENT DESCRIPTION:
311 MMBTU/HR COMBUSTION ENGINEERING BOILER, MODEL VU60 NO.0516, EQUIPPED WITH FOUR COEN 4-DAF-30 LOW NOX GAS/OIL BURNERS AND A FLUE GAS RECIRCULATION SYSTEM.

PERMIT UNIT REQUIREMENTS

1. Sulfur content of fuel oil shall not exceed 1.5% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Fuel oil usage shall not exceed 336 cumulative hours per calendar year nor 48 hours per calendar year for equipment testing. [District NSR Rule and District Rule 4351, 4.2] Federally Enforceable Through Title V Permit
3. Owner/operator shall record cumulative annual hours of operation on fuel oil. Records shall be retained for at least 5 years and shall be made available to the District upon request. [District Rules 2520, 9.4.2; 4306, 6.1; 4351, 6.1] Federally Enforceable Through Title V Permit
4. Flue gas recirculation system shall be operated in accordance with the manufacturer's specifications whenever the boiler is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Continuous Emissions Monitoring (CEM) equipment shall be in place and operating whenever the boiler is operating, except for CEM systems breakdowns, repairs, and required calibration checks and zero and span adjustments, in accordance with 40 CFR 60.13(e). NOx (as NO2) and O2 must be recorded continuously when the CEM equipment is operating. [District Rule 1080 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
6. Operation, calibration and data reduction for the CEM equipment shall be in accordance with the requirements of 40 CFR, Appendix P of Part 51 and Appendix B of Part 60. [District Rule 1080 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
7. CEM equipment must be linked to a data logger which is compatible with the District's data acquisition system. [District NSR Rule] Federally Enforceable Through Title V Permit
8. CEM records shall be retained for at least 5 years. Records shall include occurrence and duration of start-up, shutdown or malfunction; performance testing, calibrations, checks, and maintenance of CEM; and emission measurements. [District Rule 1080] Federally Enforceable Through Title V Permit
9. Daily summaries of CEM records for each calendar quarter shall be submitted to the District within 30 days of the end of the calendar quarter. Hourly fuel stack gas flow rates and/or hourly fuel flow rates shall be measured during operation and included in quarterly reports. [District Rule 1080] Federally Enforceable Through Title V Permit
10. A report shall be submitted to the District within 30 days of the end of each calendar quarter identifying the time and date of each exceedance of emission limits, the excess emissions generated, and any conversion factor used to calculate emissions. [District Rule 1080] Federally Enforceable Through Title V Permit
11. The quarterly report shall identify each period of excess emissions that occurs during startups, shutdowns, or malfunctions. The nature and cause of each malfunction, corrective action taken, and preventative measures adopted shall also be reported. [District Rule 1080 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. When firing on natural gas, CO emissions shall not exceed 400 ppmv @ 3% O2, 0.036 lb NOx/MMBtu (or 30 ppmv @ 3% O2), 0.005 lb PM10/MMBtu, 0.001 lb SOx/MMBtu, nor 0.002 lb VOC/MMBtu. [District Rules 4305, 5.1; 4351, 5.0 and District NSR Rule] Federally Enforceable Through Title V Permit
13. When firing on fuel oil, emissions shall not exceed 0.009 lb CO/MMBtu, 0.535 lb NOx/MMBtu, 0.04 lb PM10/MMBtu, 1.273 lb SOx/MMBtu, nor 0.002 lb VOC/MMBtu. [District Rules 4305, 5.1; 4351, 5.0 and District NSR Rule] Federally Enforceable Through Title V Permit
14. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
15. This unit shall be source tested while firing on natural gas to measure NOx and CO emissions at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. [District Rule 2520, 9.3.2; District Rule 4305, 6.3; District Rule 4351, 5.0] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be measured using EPA Method 10 or ARB Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
19. NOx emissions for source test purposes shall be measured using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 1081; District Rule 4305; District Rule 4351] Federally Enforceable Through Title V Permit
20. Stack gas oxygen for source test purposes shall be measured using EPA Method 3 or 3A or ARB Method 100. [District Rules 1081; District Rule 4305; District Rule 4351] Federally Enforceable Through Title V Permit
21. Stack gas velocities for source test purposes shall be measured using EPA Method 2. [District Rules 1081; District Rule 4305; District Rule 4351] Federally Enforceable Through Title V Permit
22. Stack gas moisture content for source test purposes shall be measured using EPA Method 4. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Fuel hhv for source test purposes shall be certified by a third party fuel supplier or measured using ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels, or ASTM D 240 or D 2382 for liquid hydrocarbon fuels. [District Rule 1081; District Rule 4351] Federally Enforceable Through Title V Permit
24. Emissions measurements from CEMS for compliance determination shall be averaged in accordance with the requirements of 40 CFR Part 60.13. [District Rule 1081] Federally Enforceable Through Title V Permit
25. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results used to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2 and District Rule 4351] Federally Enforceable Through Title V Permit

29. If the unit is fired on noncertified liquid fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of each batch delivered of the liquid fuel being fired in the unit shall be determined using ASTM D2880. If the unit is fired on certified liquid fuel, certification for each batch delivered shall be obtained and maintained. [District Rule 2520, 9.3.2; District Rule 4351] Federally Enforceable Through Title V Permit

30. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 4801 and Fresno County Rule 406] Federally Enforceable Through Title V Permit

31. If the unit is fired on fuel oil for more than 336 hours in any one calendar year, source testing shall be performed while firing on fuel oil to determine PM emissions. If source testing is required, it shall be performed within 60 days of firing on oil. [District Rule 2520, 9.3.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

32. Source testing for PM shall be performed using EPA Method 5 modified to include the back-half catch. [District Rule 1081] Federally Enforceable Through Title V Permit

33. A violation of emission standards indicated by the CEMS shall be reported by the operator to the APCO within 96 hours. [District Rule 1080] Federally Enforceable Through Title V Permit

34. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080] Federally Enforceable Through Title V Permit

35. The operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 1.2% by weight for No. 6 fuel oil; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. The operator shall either fire the unit on PUC regulated natural gas or shall test the sulfur content of each fuel source and determine the maximum sulfur content of each fuel in units of lb/MMBtu and then calculating the resultant emissions in units of lb SOx/MMBtu. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. When firing on fuel oil, daily visible emissions tests using EPA method 9 shall be required. If compliance is demonstrated for 10 consecutive days, the test frequency shall be weekly. If the unit fails any weekly visible emissions test, test frequency shall return to daily. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. Emissions for this unit shall be calculated by using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of 3 one-hour test runs for PM10; and the arithmetic mean of 3 forty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2; District Rule 4305, 5.0, 8.1; District Rule 4351] Federally Enforceable Through Title V Permit

39. Owner/operator shall comply with the requirements of Rule 4306 (adopted September 18, 2003) by the dates as specified in Table 2 of the Rule. [District Rule 4306, 7.0] Federally Enforceable Through Title V Permit

40. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit

42. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit

Attachment B

ERC Application

San Joaquin Valley Air Pollution Control District
Application for

[X] EMISSION REDUCTION CREDIT (ERC)   [ ] CONSOLIDATION OF ERC CERTIFICATES

1. ERC TO BE ISSUED TO: Spreckels Sugar Company   Facility ID: C-1179 (if known)

2. MAILING ADDRESS: Street/P.O. Box: P.O. Box 68
City: Mendota   State: CA   Zip Code: 93640

3. LOCATION OF REDUCTION:
Street: 39400Whitesbridge Road
City: Mendota, CA 93640
___/4 SECTION ___ TOWNSHIP ___ RANGE ___

4. DATE OF REDUCTION:
August 31, 2008

5. PERMIT NO(S): C-1179-1   EXISTING ERC NO(S): C-1090909

6. METHOD RESULTING IN EMISSION REDUCTION:

[X] SHUTDOWN   [ ] RETROFIT   [ ] PROCESS CHANGE   [ ] OTHER

DESCRIPTION:

(Use additional sheets if necessary)

7. REQUESTED ERCs: (In pounds per calendar quarter except CO_2e)

	VOC	NOx	CO	PM_{10}	SOx	Other
1st Qtr						
2nd Qtr						
3rd Qtr						
4th Qtr						

CO_2e 69,856 metric ton/yr

8. SIGNATURE OF APPLICANT: John Dean

TYPE OR PRINT TITLE OF APPLICANT:
John Dean, Vice President

9. TYPE OR PRINT NAME OF APPLICANT:
John Dean

DATE: 7/18/12

TELEPHONE NO: 559-655-4961 X273

FOR APCD USE ONLY:

RECEIVED
DATE STAMP
JUL 19 2012 OTC
SJVAPCD
NORTHERN REGION

FILING FEE RECEIVED: $758.00, ck# 4092
DATE PAID: 7/19/12
PROJECT NO.: C1122340   FACILITY ID.: C-1179

SPRECKELS SUGAR COMPANY, INC.
P. O. Box 68 / 29400 W. Whitesbridge Road • Mendota, CA 93640 • Phone 559-655-4961

July 18, 2012

RECEIVED
JUL 19 2012 OTC
SJVAPCD
NORTHERN REGION

Mr. Dustin Brown
Air Permitting Engineer
San Joaquin Valley Air Pollution Control District
Central Regional Office
1990 E. Gettysburg Avenue
Fresno, CA 93726

RE: Application for Greenhouse Gas Emission Reduction Credits from the Spreckels Sugar Mendota Facility Shutdown

Dear Mr. Brown:

Enclosed please find an application requesting the creation of Greenhouse Gas Emission Reduction Credits associated with shutdown of the Spreckels Mendota facility in the end of 2008. This project is covered under the terms of Section 4.5.1 of Rule 2301; as such, Spreckels is submitting this application by July 19, 2012 in accordance with the requirements of Section 5.5.2 of Rule 2301. The application package includes the following documents:

- Application Support Document describing proposed ERC project;
- Attachment A – Fuel Use Records;
- Attachment B – Detailed Emission Calculations;
- Attachment C – APCD ERC Application Form and filing fee

Further, Spreckels notes that the APCD has recently reviewed and approved the creation of NOx, SOx, VOC, and PM10 emission reduction credits from the Mendota facility shutdown (C-1090909). The fuel use records provided in Attachment B of this application are the same records as incorporated by the APCD in C-1090909.

If you should have any questions regarding the attached materials, please call Anne Ogrey at (209) 834-7679.

Sincerely,

John Dean
Ao Ar

John Dean
Vice President

Encs.

Background

Spreckels Sugar Company operated a sugar beet processing facility in Mendota, CA. The facility ceased sugar production in 2008 and began disassembling and removing the equipment associated with the beet sugar manufacturing process from the site in May of 2009. In accordance with the requirements of Rule 2301 for Emission Reduction Credit Banking, Spreckels Sugar Company applied for and received Emission Reduction Credit C-1090909 for reductions of NOx, CO, VOC, PM10, and SOx emissions associated with the shutdown of the 40 MMBtu/hr lime kiln and the 311 MMBtu/hr boiler.

In January of 2012, the San Joaquin Air Pollution Control District (APCD) revised Rule 2301 to allow for the generation of ERCs associated with the reduction of Greenhouse Gases occurring before January 1, 2012. In accordance with the requirements of Rule 2301, this application is being submitted to request the creation of GHG ERCs for the shutdown of the Mendota facility as previously described in ERC Project C-1090909.

The actual emission reductions (AERs) for which the GHG ERCs are being sought were generated from products of combustion from the use of natural gas to fire the boiler and fuel oil #6 to fire the lime kiln. In addition, actual emission reductions of GHGs occurred due to the production of lime used in the sugar refining process in the lime kiln; however Spreckels is not requesting GHG ERCs due to the lack of source specific data to quantify emissions from lime production. The following discussion outlines the assumptions used to estimate the AER of GHGs for this project.

Greenhouse Gas Emission Reduction Criteria

In accordance with Rule 2301, Section 4.5, certain criteria must be met in order for an emission reduction project to be eligible for GHG ERCs. This project meets these criteria as described below:

- **4.5.1:** The shutdown of the Mendota facility occurred in August 2008, after the January 1, 2005 date defined in Rule 2301.
- **4.5.2:** The Mendota facility is located at 29400 W. Whitesbridge Road in Mendota, CA, which is within the jurisdiction of the San Joaquin Valley Unified Air Pollution Control District.
- **4.5.3:** As demonstrated further in this document the greenhouse gas emission reductions are real, surplus, permanent, quantifiable, and enforceable. The reductions occurred prior to January 1, 2012, and were not the result of a law, rule or regulation requiring the reduction.

Evaluation of Emission Reduction Credit Criteria

Real

The Actual Emission Reductions were generated by shutting down and dismantling from the facility the following permitted equipment associated with the beet sugar manufacturing process:

- (1) 40 MMBtu/hr rotary drum lime kiln (Permit C-1179-2-3)
- (1) 311 MMBtu/hr boiler (Permit C-1179-6-B)

Surplus

The proposed GHG emission reductions are surplus as there is no law, rule, or regulation requiring the shutdown of the kiln or boiler. Separately, there is no RACT rule or BACT determinations requiring reductions of GHG emissions from the boiler or lime kiln that would require additional reductions from the proposed emission reduction project.

Quantifiable

Actual operation of the boiler and lime kiln are based on records of fuel consumption for each unit as originally presented in ERC Project C-1090909 (See Attachment A for the monthly fuel record). CO_2, CH_4, and N_2O emissions associated with the combustion of fuel oil #6 in the lime kiln were calculated according to EPA Tier 1 methodology described in 40 CFR Part 98.33 (a) (1)(i). Emissions associated with the combustion of natural gas in the boiler were calculated according to EPA Tier 1 methodology described in 40 CFR Part 98.33 (a) (1)(ii) specifically for units with natural gas data reported in units of therms.

CO_2 emissions associated with the production of lime and the resulting lime byproduct/waste generated in the beet sugar production were not quantified. The Federal reporting requirements for Lime Production (40 CFR Part 98 Subpart S) were not finalized until 2009, after the Mendota facility was shutdown. Requirements for Lime Production reporting under the California Mandatory Reporting Regulation were not incorporated until December 2011. As such, Mendota was not required to collect and maintain the calcium oxide and magnesium oxide content of each lime product manufactured and lime byproduct/waste generated prior to the facility shutdown. Without such data CO_2 emissions associated with lime production cannot be properly quantified.

Permanence (Shift in Load)

In order to insure that a shift-in-load does not occur, Spreckels must demonstrate that the shutdown of the Mendota facility does not directly result in an increase in sugar beet processing elsewhere in the State of California.

Due to the high transportation costs, it is not cost effective to ship them to other locations for processing. As such, the sugar beets processed at the Mendota facility were produced in the surrounding area specifically for processing by Spreckels at this plant. Once the facility shut down, sugar beet production for the Mendota facility ceased.. This is reflected in the Annual Agricultural Crop and Livestock Report prepared annually by the Fresno Department of Agriculture. As shown in Table 1, sugar beet production dropped significantly in 2008 during the time the Spreckels Mendota facility shutdown. As of 2009 sugar beet production in Fresno County is essentially zero.

Table 1 Sugar Beet Production – Fresno County[1]

Year	Harvested Acreage	Per Acre	Total	Unit
2012	NA			
2011	NA			
2010	-	-	-	-
2009	3	-	-	-
2008	5,800	33	192,000	ton
2007	10,700	34	359,000	ton
2006	11,100	31	342,000	ton
2005	10,700	34	362,000	ton
2004	11,200	39	440,000	ton

Similarly, sugar beet production for the entire state of California decreased with the shutdown of the Mendota facility (See Figure 1) per the California Department of Food and Agricultures' Annual Agricultural Statistics Review Reports (http://www.cdfa.ca.gov/statistics/). The shutdown of the Mendota facility did not result in an increase in production at other locations throughout the state. The only other sugar beet production facility in the State of California is located in Brawley, which is inImperial County, and is operated by the Spreckels Sugar Company. As shown in Figure 1, sugar beet production in Imperial County increased slightly between 2009 and 2010. The decline in sugar beet production recorded in2009 and in prior years was due primarily from pressure from other crops.. The relative increase in production levels recorded in 2010 – which is below that recorded in the 24-consecutive month period used in the ERC application – was unrelated to the shutdown of the Mendota facility, and would have occurred even if the Mendota facility had remained open.

[1] As provided in the Fresno Agriculture Crop Report History (See pg xi of 2009 Report): http://www.co.fresno.ca.us/DepartmentPage.aspx?id=33743

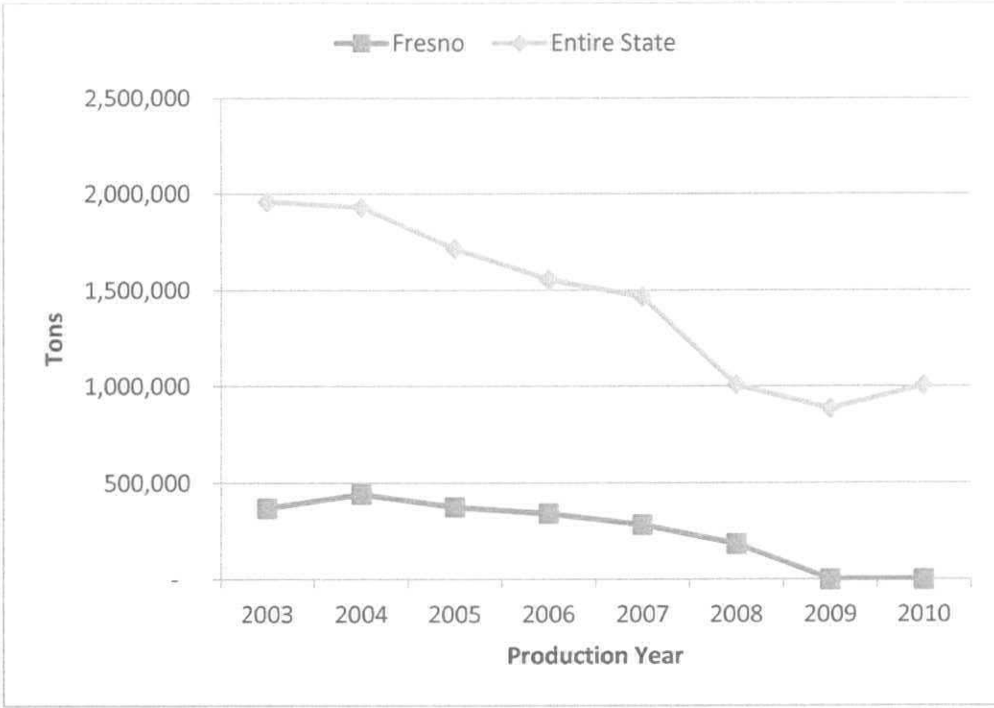


Figure 1 Sugar Beet Production in California

Enforceable

The lime kiln and boiler ceased operating in 2008, at the end of the final operating season for the Spreckels, Mendota facility. The APCD permits associated with the operation of the boiler and the lime kiln have been cancelled as required under emission reduction project C-1090909 for the creation of NOx, SOx, VOC, and PM_{10} credits.

Emission Reduction Credit Calculation

Baseline Period

As defined in Rule 2201, the baseline period is equal to one of the following options:

- The two consecutive years of operation immediately prior to the submission of the date of the complete application; or
- A least two consecutive years within the five years immediately prior to the submission date of the complete application if determined by the APCD as more representative of normal source operations;

However, since the facility has been shutdown since 2008, the production and emission records for the past four years are zero. Consistent with the determination made in ERC C-1090909, Normal Source Operations have been defined as the 24-month period beginning at the start of the 3rd quarter of 2005 through the end of the 2nd quarter of 2007.

Operational Data

During the 24-month baseline period fuel oil #6 was burned in the lime kiln and natural gas in the boiler. As part of ERC C-1090909 issued for the criteria pollutants, the APCD has previously reviewed and approved the following fuel use data for the boiler and lime kiln (See Attachment A for the monthly subtotals). The quarterly fuel consumption for each unit is presented in Tables 2 and 3 below:

Table 2 Lime Kiln Fuel Use – Fuel Oil #6 (Gal/Qtr)

Year	Qtr 1	Qtr 2	Qtr 3	Qtr 4
2005	NA	NA	480,270	267,246
2006	-	349,986	398,580	111,510
2007	-	275,520	NA	NA

Table 3 Boiler Fuel Use – Natural Gas (Therms/Qtr)

Year	Qtr 1	Qtr 2	Qtr 3	Qtr 4
2005	NA	NA	5,511,829	3,031,524
2006	-	4,169,952	4,694,896	1,462,673
2007	-	3,443,700	NA	NA

Equations

Emission reductions of carbon dioxide (CO_2) have been calculated using EPA's Tier 1 method described in 40 CFR Part 98.33 (a)(1)(i) and (a)(1)(ii). Emission reductions of methane (CH_4) and nitrous oxide (N_2O) are also calculated using a similar equations as described in 40 CFR Part 98.33 (c)(1). Method (a)(1)(i) is used specifically for combustion units with fuel records provided in units of gallons such as for the lime kiln. Method (a)(1)(ii) is used specifically for combustion units with fuel records provided in units of therms such as for the boiler.

Lime Kiln: ER = $1*10^{-3}$ * Fuel * HHV * EF

Where:

	Description	Units
ER	CO_2, CH_4, or N_2O mass emission rate	Metric Ton/Qtr
Fuel	Mass or volume combusted	Gal/qtr
HHV	High heating value or fuel	MMBtu/gal
EF	Default Emission Factor	kg/MMBtu
10^{-3}	Kg to MT conversion	

Boiler: ER = $1*10^{-3}$ * [0.1*Gas*EF]

Where:

	Description	Units
ER	CO_2, CH_4, or N_2O mass emission rate	Metric Ton/Qtr
Fuel	Mass or volume combusted	Therms/Qtr
EF	Default Emission Factor	kg/MMBtu
0.1	MMBtu to Therm Conversion	
10^{-3}	Kg to MT conversion	

Emission Factors

The equations used to estimate GHG emission reductions from the lime kiln and boiler both require the use of default emission factors and higher heating values. The default values come from 40 CFR Part 98 Subpart C, Tables C-1 and C-2 and are presented below.

Table 4 Greenhouse Gas Emission Factors

Fuel Type	Default Heat Content	Heat Content Units	kg CO2 / MMBTU	kg CH4 / MMBTU	kg N2O / MMBTU
Fuel Oil #6	0.150	MMBtu/gal	75.10	0.003	0.001
Natural Gas	0.001028	MMBtu/scf	53.02	0.001	0.0001

In addition, GHG emission reductions must be presented in terms of carbon dioxide equivalent s (CO_2e). CO_2e represents the mass of CO_2 that would have the same global warming potential (GWP) as a given mass of another greenhouse gas. The applicable global warming potentials are described in Rule 2301, 40 CFR Part 98 Subpart A, Table A-1, and summarized in Table 5 below.

Table 5 Global Warming Potentials

Greenhouse Gas	CO_2e (Metric Ton)
Carbon Dioxide	1
Methane	21
Nitrous Oxide	310

Proposed Actual Emission Reductions

Spreckels requests the creation of GHG emission reduction credits based on actual operations occurring between 3rd Quarter 2005 through 2nd Quarter 2007. Emissions of CO_2, CH_4, and N_2O have been calculated on an annual basis using the equations and emission factors previously described. CO_2, CH_4, and N_2O emissions have been converted to CO_2e on a quarterly basis. Since CO_2e credits are issued on an annual basis, the annual average for the boiler and kiln were determined by calculating the total CO_2e for each "Year" and then averaging the CO_2e for the two years evaluated. "Year 1" was defined as 3rd Quarter 2005 through 2nd Quarter 2006. "Year 2" was defined as 3rd Quarter 2006 through 2nd Quarter 2007. The detailed emission summary is provided in Attachment B. Table 6 identifies the proposed AER for the lime kiln and boiler in terms of CO_2e.

Table 6 Proposed Actual Emission Reductions in CO_2e (MT/Qtr)

Unit	Year 1	Year 2	Annual Average
Lime Kiln	12,404	8,879	**10,642**
Boiler	67,472	50,956	**59,214**

Total CO_2e	**69,856**

Attachment C

40 MMBtu/hr Lime Kiln Fuel Oil Usage and 311 MMBtu/hr Boiler Natural Gas Usage Records

SPRECKELS SUGAR COMPANY

Monthly Factory Throughput from 2004 - 2008

ERC Banking Applications Project Number C-1090909

	Lime Kiln Fuel Oil, bbls	Lime Kiln Fuel Oil, therms	Gas Purchased, Mcf	Boiler Gas, therms	Boiler Gas, MMBtu	Carbon Kiln Gas, therms	Carbon Kiln Gas, MMBtu	Sugar Produced, Cwt
Jan-04								
Feb-04								
Mar-04								
Apr-04	3925	247470	181475	1848368	184837	0	0	319614
May-04	3734	235416	184717	1886568	188657	1684	168	383592
Jun-04	3556	224194	179449	1837553	183755	5	1	371036
Jul-04	3884	244839	190153	1920576	192058	26591	2659	371287
Aug-04	3487	219804	181953	1859494	185949	0	0	315228
Sep-04	3576	225459	172145	1754964	175496	0	0	274790
Oct-04	3487	219843	171618	1748787	174879	0	0	216407
Nov-04	1001	63094	37051	377550	37755	0	0	40963
Dec-04								
Jan-05								
Feb-05								
Mar-05								
Apr-05	3019	190341	150637	1508971	150897	0	0	203431
May-05	3513	221435	185276	1887962	188796	0	0	362719
Jun-05	3116	196440	175076	1782909	178291	0	0	335790
Jul-05	3561	224548	182366	1857389	185739	0	0	333189
Aug-05	3862	243497	179825	1832417	183242	0	0	314514
Sep-05	4012	252920	178805	1822023	182202	0	0	257465
Oct-05	4279	269751	191180	1947868	194787	0	0	294004
Nov-05	2084	131381	106345	1083656	108366	0	0	131091
Dec-05								
Jan-06								
Feb-06								
Mar-06								
Apr-06	1085	68372	51777	527608	52761	0	0	56750
May-06	3719	234466	175459	1787927	178793	0	0	348495
Jun-06	3529	222465	181984	1854417	185442	0	0	352156
Jul-06	2032	128075	105064	1070602	107060	0	0	146714
Aug-06	3696	232993	176231	1795794	179579	0	0	237554
Sep-06	3762	237134	180422	1828500	162850	0	0	277831
Oct-06	2655	167371	143540	1462673	146267	0	0	181791
Nov-06								
Dec-06								

SPRECKELS SUGAR COMPANY
Monthly Factory Throughput from 2004 - 2008
ERC Banking Applications Project Number C-1090909

	Lime Kiln Fuel Oil, bbls	Lime Kiln Fuel Oil, therms	Gas Purchased, Mcf	Boiler Gas, therms	Boiler Gas, MMBtu	Carbon Kiln Gas, therms	Carbon Kiln Gas, MMBtu	Sugar Produced, Cwt
Jan-07								
Feb-07								
Mar-07								
Apr-07	3664	230989	174339	1776514	177651	0	0	280591
May-07	2319	146196	135114	1376812	137681	0	0	278379
Jun-07	577	36354	28496	290374	29037	0	0	26111
Jul-07	3702	233355	179318	1827250	182725	0	0	321189
Aug-07	3559	224364	191874	1901460	190146	0	0	309022
Sep-07	3011	189815	171632	1600636	160064	0	0	282073
Oct-07								
Nov-07								
Dec-07								
Jan-08								
Feb-08								
Mar-08								
Apr-08	2422	152705	130806	1222173	122217	0	0	177825
May-08	3289	207333	191438	1783398	178340	0	0	309913
Jun-08	896	56475	51996	498644	49864	0	0	57390
Jul-08	3617	228054	190339	1778137	177814	0	0	294929
Aug-08	3426	215993	191177	1801266	180127	0	0	293401
Sep-08								
Oct-08								
Nov-08								
Dec-08								

Attachment D

40 CFR Part 98 GHG Emission Factors and Global Warming Potentials (GWP): Tables A-1, C-1 and C-2

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR Data is current as of October 11, 2013

Title 40: Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
Subpart A—General Provision

TABLE A-1 TO SUBPART A OF PART 98—GLOBAL WARMING POTENTIALS

GLOBAL WARMING POTENTIALS

[100-Year Time Horizon]

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Carbon dioxide	124-38-9	CO_2	1
Methane	74-82-8	CH_4	21
Nitrous oxide	10024-97-2	N_2O	310
HFC-23	75-46-7	CHF_3	11,700
HFC-32	75-10-5	CH_2F_2	650
HFC-41	593-53-3	CH_3F	150
HFC-125	354-33-6	C_2HF_5	2,800
HFC-134	359-35-3	$C_2H_2F_4$	1,000
HFC-134a	811-97-2	CH_2FCF_3	1,300
HFC-143	430-66-0	$C_2H_3F_3$	300
HFC-143a	420-46-2	$C_2H_3F_3$	3,800
HFC-152	624-72-6	CH_2FCH_2F	53
HFC-152a	75-37-6	CH_3CHF_2	140
HFC-161	353-36-6	CH_3CH_2F	12
HFC-227ea	431-89-0	C_3HF_7	2,900
HFC-236cb	677-56-5	$CH_2FCF_2CF_3$	1,340
HFC-236ea	431-63-0	CHF_2CHFCF_3	1,370
HFC-236fa	690-39-1	$C_3H_2F_6$	6,300
HFC-245ca	679-86-7	$C_3H_3F_5$	560
HFC-245fa	460-73-1	$CHF_2CH_2CF_3$	1,030
HFC-365mfc	406-58-6	$CH_3CF_2CH_2CF_3$	794
HFC-43-10mee	138495-42-8	$CF_3CFHCFHCF_2CF_3$	1,300
Sulfur hexafluoride	2551-62-4	SF_6	23,900
Trifluoromethyl sulphur pentafluoride	373-80-8	SF_5CF_3	17,700
Nitrogen trifluoride	7783-54-2	NF_3	17,200
PFC-14 (Perfluoromethane)	75-73-0	CF_4	6,500
PFC-116 (Perfluoroethane)	76-16-4		9,200

		C_2F_6	
PFC-218 (Perfluoropropane)	76-19-7	C_3F_8	7,000
Perfluorocyclopropane	931-91-9	$C\text{-}C_3F_6$	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C_4F_{10}	7,000
Perfluorocyclobutane	115-25-3	$C\text{-}C_4F_8$	8,700
PFC-4-1-12 (Perfluoropentane)	678-26-2	C_5F_{12}	7,500
PFC-5-1-14 (Perfluorohexane)	355-42-0	C_6F_{14}	7,400
PFC-9-1-18	306-94-5	$C_{10}F_{18}$	7,500
HCFE-235da2 (Isoflurane)	26675-46-7	$CHF_2OCHClCF_3$	350
HFE-43-10pccc (H-Galden 1040x)	E1730133	$CHF_2OCF_2OC_2F_4OCHF_2$	1,870
HFE-125	3822-68-2	CHF_2OCF_3	14,900
HFE-134	1691-17-4	CHF_2OCHF_2	6,320
HFE-143a	421-14-7	CH_3OCF_3	756
HFE-227ea	2356-62-9	$CF_3CHFOCF_3$	1,540
HFE-236ca12 (HG-10)	78522-47-1	$CHF_2OCF_2OCHF_2$	2,800
HFE-236ea2 (Desflurane)	57041-67-5	$CHF_2OCHFCF_3$	989
HFE-236fa	20193-67-3	$CF_3CH_2OCF_3$	487
HFE-245cb2	22410-44-2	$CH_3OCF_2CF_3$	708
HFE-245fa1	84011-15-4	$CHF_2CH_2OCF_3$	286
HFE-245fa2	1885-48-9	$CHF_2OCH_2CF_3$	659
HFE-254cb2	425-88-7	$CH_3OCF_2CHF_2$	359
HFE-263fb2	460-43-5	$CF_3CH_2OCH_3$	11
HFE-329mcc2	67490-36-2	$CF_3CF_2OCF_2CHF_2$	919
HFE-338mcf2	156053-88-2	$CF_3CF_2OCH_2CF_3$	552
HFE-338pcc13 (HG-01)	188690-78-0	$CHF_2OCF_2CF_2OCHF_2$	1,500
HFE-347mcc3	28523-86-6	$CH_3OCF_2CF_2CF_3$	575
HFE-347mcf2	E1730135	$CF_3CF_2OCH_2CHF_2$	374
HFE-347pcf2	406-78-0	$CHF_2CF_2OCH_2CF_3$	580
HFE-356mec3	382-34-3	$CH_3OCF_2CHFCF_3$	101
HFE-356pcc3	160620-20-2	$CH_3OCF_2CF_2CHF_2$	110
HFE-356pcf2	E1730137	$CHF_2CH_2OCF_2CHF_2$	265
HFE-356pcf3	35042-99-0	$CHF_2OCH_2CF_2CHF_2$	502
HFE-365mcf3	378-16-5	$CF_3CF_2CH_2OCH_3$	11
HFE-374pc2	512-51-6	$CH_3CH_2OCF_2CHF_2$	557
HFE-449sl (HFE-7100) Chemical blend	163702-07-6 163702-08-7	$C_4F_9OCH_3$ $(CF_3)_2CFCF_2OCH_3$	297
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4 163702-06-5	$C_4F_9OC_2H_5$ $(CF_3)_2CFCF_2OC_2H_5$	59
Sevoflurane	28523-86-6	$CH_2FOCH(CF_3)_2$	345
HFE-356mm1	13171-18-1	$(CF_3)_2CHOCH_3$	27
HFE-338mmz1	26103-08-2	$CHF_2OCH(CF_3)_2$	380

(Octafluorotetramethy-lene) hydroxymethyl group	NA	X-$(CF_2)_4CH(OH)$-X	73
HFE-347mmy1	22052-84-2	$CH_3OCF(CF_3)_2$	343
Bis(trifluoromethyl)-methanol	920-66-1	$(CF_3)_2CHOH$	195
2,2,3,3,3-pentafluoropropanol	422-05-9	$CF_3CF_2CH_2OH$	42
PFPMIE	NA	$CF_3OCF(CF_3)$ $CF_2OCF_2OCF_3$	10,300

NA = not available.

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Title 40: Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
Subpart C—General Stationary Fuel Combustion Sources

TABLE C-1 TO SUBPART C OF PART 98—DEFAULT CO_2 EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

DEFAULT CO_2 EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

Fuel type	Default high heat value	Default CO_2 emission factor
Coal and coke	mmBtu/short ton	kg CO_2/mmBtu
Anthracite	25.09	103.54
Bituminous	24.93	93.40
Subbituminous	17.25	97.02
Lignite	14.21	96.36
Coke	24.80	102.04
Mixed (Commercial sector)	21.39	95.26
Mixed (Industrial coking)	26.28	93.65
Mixed (Industrial sector)	22.35	93.91
Mixed (Electric Power sector)	19.73	94.38
Natural gas	mmBtu/scf	kg CO_2/mmBtu
(Weighted U.S. Average)	1.028×10^{-3}	53.02
Petroleum products	mmBtu/gallon	kg CO_2/mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10
Used Oil	0.135	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG)	0.092	62.98
Propane	0.091	61.46
Propylene	0.091	65.95
Ethane	0.069	62.64
Ethanol	0.084	68.44
Ethylene	0.100	67.43
Isobutane	0.097	64.91
Isobutylene	0.103	67.74
Butane	0.101	65.15

Butylene	0.103	67.73
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.83
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.129	70.97
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.49
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.49
Other fuels-solid	mmBtu/short ton	kg CO_2/mmBtu
Municipal Solid Waste	9.95[1]	90.7
Tires	26.87	85.97
Plastics	38.00	75.00
Petroleum Coke	30.00	102.41
Other fuels—gaseous	mmBtu/scf	kg CO_2/mmBtu
Blast Fumace Gas	0.092×10^{-3}	274.32
Coke Oven Gas	0.599×10^{-3}	46.85
Propane Gas	2.516×10^{-3}	61.46
Fuel Gas[2]	1.388×10^{-3}	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO_2/mmBtu
Wood and Wood Residuals	15.38	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	25.83	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO_2/mmBtu
Biogas (Captured methane)	0.841×10^{-3}	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO_2/mmBtu
Ethanol	0.084	68.44
Biodiesel	0.128	73.84
Biodiesel (100%)	0.128	73.84
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

[1]Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

[2]Reporters subject to subpart X of this part that are complying with §98.243(d) or subpart Y of this part may only use the default HHV and the default CO_2 emission factor for fuel gas combustion under the conditions prescribed in §98.243(d)(2)(i) and (d)(2)(ii) and §98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

ELECTRONIC CODE OF FEDERAL REGULATIONS

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Title 40: Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
Subpart C—General Stationary Fuel Combustion Sources

TABLE C-2 TO SUBPART C OF PART 98—DEFAULT CH_4 AND N_2O EMISSION FACTORS FOR VARIOUS TYPES OF FUEL

Fuel type	Default CH_4 emission factor (kg CH_4/mmBtu)	Default N_2O emission factor (kg N_2O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1×10^{-02}	1.6×10^{-03}
Natural Gas	1.0×10^{-03}	1.0×10^{-04}
Petroleum (All fuel types in Table C-1)	3.0×10^{-03}	6.0×10^{-04}
Municipal Solid Waste	3.2×10^{-02}	4.2×10^{-03}
Tires	3.2×10^{-02}	4.2×10^{-03}
Blast Furnace Gas	2.2×10^{-05}	1.0×10^{-04}
Coke Oven Gas	4.8×10^{-04}	1.0×10^{-04}
Biomass Fuels—Solid (All fuel types in Table C-1)	3.2×10^{-02}	4.2×10^{-03}
Biogas	3.2×10^{-03}	6.3×10^{-04}
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1×10^{-03}	1.1×10^{-04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the "Energy Industry" or "Manufacturing Industries and Construction". In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC "Energy Industry" category may employ a value of 1g of CH_4/mmBtu.

[75 FR 79154, Dec. 17, 2010]

Attachment E

Draft ERC Certificate C-1247-24

San Joaquin Valley
Air Pollution Control District

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

Emission Reduction Credit Certificate
C-1247-24

DRAFT

ISSUED TO: **SPRECKELS SUGAR COMPANY**

ISSUED DATE: **<DRAFT>**

LOCATION OF REDUCTION: **29400 W WHITESBRIDGE RD
MENDOTA, CA 93640**

For CO2e Reduction In The Amount Of:

69861 metric tons / year

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[X] Shutdown of Emissions Units
[ ] Other

Shutdown of 40 MMBtu/hr oil fired lime kiln and 311 MMBtu/hr natural gas fired boiler verified as permanent within the boundaries of the San Joaquin Valley Air Pollution Control District.

Emission Reduction Qualification Criteria

This emission reduction is surplus and additional to all applicable regulatory requirements.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

Nov 27 2013 7:29AM – BROWND