



NOV 09 2015

Stephen Gross  
Rio Bravo Jasmin  
19100 Von Karman, Suite 450  
Irvine, CA 92612

**Re: Notice of Preliminary Decision – Emission Reduction Credits**  
**Facility Number: S-1751**  
**Project Number: S-1153637**

Dear Mr. Gross:

Enclosed for your review and comment is the District's analysis of Rio Bravo Jasmin's application for Emission Reduction Credits (ERCs) resulting from the shutdown of a solid fuel-fired cogeneration unit, at 11258 Porterville Highway, Bakersfield. The quantity of ERCs proposed for banking is 236,258 lb-NOx/yr, 75,204 lb-SOx/yr, 20,303 lb-PM10/yr, 173,524 lb-CO/yr, 913 lb-VOC/yr.

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 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. Richard Edgehill of Permit Services at (661) 392-5617.

Sincerely,



Arnaud Marjollet  
Director of Permit Services

AM:rue/ya

Enclosures

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

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

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# **Emission Reduction Credit Banking Application Review**

*Shutdown of Solid Fuel- Fired Electrical Generation Facility*

**Facility Name:** Rio Bravo Jasmin  
**Mailing Address:** 19100 Von Karman, Suite 450  
Irvine, CA 92612

**Contact Name:** Steven B. Gross, CEO  
and Maggie Estrada (IHI Power Services Corp)  
**Telephone:** (949) 297-0840 (SG), (949) 297-0849 (ME)

**Engineer:** Richard Edgehill, Air Quality Engineer  
**Date:** September 22, 2015

**Lead Engineer:** Rich Karrs, Supv. AQE  
**Date:**

**Project Number:** S-1751, 1153637

**ERC Certificate #s:** S-4620-1 through -5  
**Date Received:** August 31, 2015  
**Date Complete:** September 22, 2015

## **I. SUMMARY**

Rio Bravo Jasmin (RBJ) has applied for Emission Reduction Credits (ERCs) for the shutdown of a 36.0 MW solid fuel fired cogeneration unit (formerly S-1751-3). The application to bank ERC was received on August 31, 2015. The ERC Banking application requested cancellation of all PTOs at the facility with the exception of S-1751-6-6, for a fire water pump IC engine. The PTOs were cancelled on September 1, 2015.

The District accepts that the date of actual emission reductions is the date the facility was shut down, September 1, 2015. The following permit units have been cancelled:

<b>Table 1: Cancelled Permit Units</b>	
S-1751-0-3	Facility Wide PTO
S-1751-2-8	LIMESTONE RECEIVING AND STORAGE OPERATION INCLUDING ONE PNEUMATICALLY FILLED STORAGE SILO WITH FABRIC COLLECTOR - JASMIN FIELD
S-1751-3-19	36 MW SOLID FUEL FIRED, CIRCULATING BED COMBUSTOR COGENERATION UNIT INCLUDING 389 MMBTU/HR COMBUSTOR WITH LOW-TEMPERATURE STAGED COMBUSTION, AMMONIA INJECTION, AND PULVERIZED LIMESTONE INJECTION - JASMIN FIELD
S-1751-4-4	SAND RECEIVING AND STORAGE OPERATION INCLUDING ONE PNEUMATICALLY-FILLED STORAGE SILO WITH FABRIC COLLECTOR
S-1751-5-10	ASH HANDLING AND LOADOUT OPERATION INCLUDING ENCLOSED CONVEYING SYSTEM FROM COMBUSTOR AND FABRIC COLLECTION HOPPERS, ASH STORAGE SILO VENTED TO FABRIC COLLECTOR, AND WET LOADOUT BY ENCLOSED PUG MILL OR DRY LOADOUT BY COAXIAL SPOUT
S-1751-7-4	112 BHP WAUKESHA DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FEEDWATER PUMP
S-1751-8-7	3,150 GPM INDUCED DRAFT COOLING TOWER
S-1751-9-6	435 BHP CUMMINS MODEL NTA-855 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN AIR COMPRESSOR
S-1751-10-4	450 TON (15,000 FT <sup>3</sup> ) COKE AND/OR BIOMASS STORAGE SILO EQUIPPED WITH BHA MODEL SPJ-24-X4B8BV VENT FILTER BAGHOUSE, AND ENCLOSED PNEUMATIC SILO LOADING AND UNLOADING SYSTEMS
S-1751-11-1	147 BHP GENERAC MODEL V TYPE RICH-BURN NATURAL GAS-FIRED EMERGENCY STANDBY IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) POWERING AN ELECTRICAL GENERATOR

ERCs are only requested for the shutdown of S-1751-3. Cancelled PTO S-1751-3-19 is included in **Attachment I**,

Based on the historical operating data prior to the shutdown, the amounts of bankable Actual Emission Reductions (AER) for NO<sub>x</sub>, CO, VOC, PM<sub>10</sub> and SO<sub>x</sub> emissions are as shown in the table below. These values are calculated in Section V of this document.

**Table 2: Bankable Emissions Reductions Credits (ERC's)**

Pollutant	Q1 ERC (lb/qtr)	Q2 ERC (lb/qtr)	Q3 ERC (lb/qtr)	Q4 ERC (lb/qtr)	Total (lb/yr)
NO <sub>x</sub>	62,026	47,825	62,747	63,660	236,258
SO <sub>x</sub>	19,750	16,305	19,093	20,056	75,204
PM <sub>10</sub>	5,215	4,232	5,377	5,479	20,303
CO	47,458	36,122	44,987	44,957	173,524
VOC	237	187	242	247	913

## II. APPLICABLE RULES

Rule 2301 Emission Reduction Credit Banking (January 19, 2012)

## III. PROJECT LOCATION

RBJ is located at 11258 Porterville Hwy, Bakersfield.

## IV. METHOD OF GENERATING REDUCTIONS

RBJ has been a base load plant for the last 26 years (application EE). The RBJ facility has disconnected and removed the drive motors for the fuel (coal and fluid coke) feed systems, tagged out and physically padlocked the electric circuit breakers that supply power to all fuel feed systems, removed and blank off startup gas, and removed all fuel from the site, including cancelling all fuel supply agreements. RBJ will not operate without active S-1751 PTOs. All PTOs except S-1751-6-6 were cancelled on September 1, 2015.

## V. CALCULATIONS

### A. Assumptions and Emission Factors

RBJs solid-fired cogeneration unit was required to operate and maintain a continuous emissions monitoring system (CEMS) for NO<sub>x</sub>, and SO<sub>2</sub>. AER for these pollutants is determined from a review of CEMS data (representative boiler CEMS Summaries are included in **Attachment II**). For PM<sub>10</sub>, CO, and VOC, AER is calculated by using the 2010 and 2011 (baseline period) source test data included in **Attachment III**.

Emission factors used in calculating AER are summarized in Table 3, with source test results including the date the results are effective:

<b>Table 3: Emission Factors</b>		
Unit	Pollutant	Emission Factor
S-1751-3	NO <sub>x</sub>	CEMS
	SO <sub>x</sub>	CEMS
	PM <sub>10</sub> *	Source Test
	CO	Source Test
	VOC	Source Test

\*The PM10 emissions include ammonia salts PM

Notes:

- (1) CEMS data was used for NO<sub>x</sub> and SO<sub>x</sub> emissions.
- (2) Source test results data were used for CO, VOC and PM<sub>10</sub> emissions as lb (tons)/hr multiplied times the hours of operation in the quarter. The source test year, hourly emissions, and corresponding quarters used for calculation of AER is listed in the tables below.

**Source Testing Results**

Jasmin	NO <sub>x</sub> (lbs/hr)	SO <sub>x</sub> (lbs/hr)	VOC (lbs/MMBtu)	CO (lbs/MMBtu)	PM10 (lbs/MMBtu)
2010	33.50	10.80	0.0003	0.0472	0.0072
2011	35.10	10.00	0.0003	0.0612	0.0061
2012	34.7	11.5	0.0003	0.0562	0.0076

Note: PM without Ammonia Salt Corrections

Source Test Year	Quarters
2010	3rd Qtr 2010, 4th Qtr 2010, 1st Qtr 2011, 2nd Qtr 2011
2011	3rd Qtr 2011, 4th Qtr 2011, 1st Qtr 2012, 2nd Qtr 2012
2012	3rd Qtr 2012

**B. Baseline Period Determination and Data**

Pursuant to District Rule 2201, Section 3.8, the baseline period for determining actual historical emissions for banking purposes shall be a period of time equal to either:

*3.8.1 the two consecutive years of operation immediately prior to the submission date of the Complete Application; or*

*3.8.2 at least two consecutive years within the five years immediately prior to the submission date of the Complete Application if determined by the APCO as more representative of normal source operation; or*

*3.8.3 a shorter period of at least one year if the emissions unit has not been in operation for two years and this represents the full operational history of the emissions unit, including any replacement units; or*

*3.8.4 zero years if an emissions unit has been in operation for less than one year (only for use when calculating AER).*

Justification of Baseline Period

The facility was a baseload plant for most of the operating life. RBJ has supplied historic base load operating hour's data from 1994 through 2015. The data are summarized below.

Year	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06
Base Load Operating Hours	8301	8406	8417	7986	8357	8119	8288	7512	8347	8456	7804	8373	7831

Year	'07	'08	'09	'10	'11	'12	'13	'14	'15
Base Load Operating Hours	8076	8380	8437	7788	8087	7943	2643	2746	1482
		8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15	8/14 thru 7/15)

The overall average of the operating times for the years '94 thru '15 is 7,354 hr/yr. The table below indicates that the average operating hours for the 2-year proposed baseline period (July 1, 2010 through June 30, 2012), 8,015 hours, was closer to this average (7,354 hr/yr) than the other possible baseline periods in the last 5 years.

Years	Op Hours
<b>2010 – 2012*</b>	<b>8,015</b>
2011 - 2013	5,293
2012 - 2014	2,695
2013 - 2015	2,114

\*chosen baseline period

Therefore, the period of July 1, 2010 to June 30, 2012 was selected as most representative period within the last 5 years for the baseline emissions used in the ERC calculations.

The emissions for each month in the baseline period were determined. Note that, because the District issues ERCs on a calendar quarter basis and the proposed baseline period did not begin at the start of a calendar quarter, emissions from July 2011 and July 2012 (underlined below) are included in the previous year's 3<sup>rd</sup> quarter for convenience. The months included in each quarter are listed below.

- 3<sup>rd</sup> quarter, 1<sup>st</sup> year: July 2011, August 2010, September 2010
- 4<sup>th</sup> quarter, 1<sup>st</sup> year: October 2010, November 2010, December 2010
- 1<sup>st</sup> quarter 1<sup>st</sup> year: January 2011, February 2011, March 2011
- 2<sup>nd</sup> quarter 1<sup>st</sup> year: April 2011, May 2011, June 2011
- 3<sup>rd</sup> quarter 2<sup>nd</sup> year: July 2012, August 2011, September 2011
- 4<sup>th</sup> quarter 2<sup>nd</sup> year: October 2011, November 2011, December 2011
- 1<sup>st</sup> quarter, 2<sup>nd</sup> year: January 2012, February 2012, March 2012
- 2<sup>nd</sup> quarter 2<sup>nd</sup> year: April 2012, May 2012, June 2012

### C. Historical Actual Emissions

Historical emissions are presented in the tables below.

Table 4  
Monthly Emissions

Month	Operating Hours	Total MMBtu	NOx lbs/Month	SO2 lbs/Month	VOC lbs/Month	CO lbs/Month	PM10 lbs/Month
<b>Jul-11</b>	<b>711.25</b>	<b>308,977</b>	<b>24,204</b>	<b>7,936</b>	<b>92.69</b>	<b>18,909.42</b>	<b>1,884.76</b>
Aug-10	744.00	320,568	25,454	7,878	96.17	15,130.81	2,308.09
Sep-10	659.90	280,171	22,115	7,095	84.05	13,224.06	2,017.23
Oct-10	728.10	318,262	23,341	8,161	95.48	15,021.99	2,291.49
Nov-10	591.10	244,772	19,855	6,668	73.43	11,553.22	1,762.36
Dec-10	744.00	326,233	24,852	7,556	97.87	15,398.18	2,348.88
Jan-11	744.00	320,552	24,644	8,245	96.17	15,130.04	2,307.97
Feb-11	420.91	185,391	14,974	6,169	55.62	8,750.44	1,334.81
Mar-11	716.20	307,732	24,486	7,836	92.32	14,524.97	2,215.67
Apr-11	635.40	262,327	21,383	6,948	78.70	12,381.84	1,888.76
May-11	671.93	281,264	22,581	7,571	84.38	13,275.67	2,025.10
Jun-11	720.00	309,915	24,416	8,073	92.97	14,627.99	2,231.39
<b>Jul-12</b>	<b>690.50</b>	<b>243,748</b>	<b>19,278</b>	<b>5,432</b>	<b>73.12</b>	<b>13,698.66</b>	<b>1,852.49</b>
Aug-11	744.00	321,896	24,574	7,017	96.57	19,700.04	1,963.57
Sep-11	720.00	315,489	23,812	7,052	94.65	19,307.94	1,924.48
Oct-11	736.50	317,771	24,534	7,539	95.33	19,447.59	1,938.40
Nov-11	702.60	298,922	23,683	7,183	89.68	18,294.06	1,823.43
Dec-11	744.00	329,867	25,201	7,461	98.96	20,187.86	2,012.19
Jan-12	744.00	322,306	25,008	7,306	96.69	19,725.11	1,966.07
Feb-12	696.00	300,013	23,605	7,030	90.00	18,360.79	1,830.08
Mar-12	744.00	316,703	25,122	7,301	95.01	19,382.20	1,931.89
Apr-12	720.00	302,758	24,281	6,590	90.83	18,528.78	1,846.82
May-12	48.30	0	311	372	0.00	0.00	0.00
Jun-12	653.00	231,332	18,306	6,679	69.40	14,157.52	1,411.13



Qtr	Operating Hrs	NOx lbs/Qtr	SO2 lbs/Qtr	VOC lbs/Qtr	CO lbs/Qtr	PM10 lbs/Qtr
3 <sup>rd</sup> 2010	2,115	71,251	24,376	445	53,584	3,382
4 <sup>th</sup> 2010	2,063	68,048	22,385	266	41,973	6,402
1 <sup>st</sup> 2011	1,881	64,104	22,250	244	38,405	5,859
2 <sup>nd</sup> 2011	2,027	68,380	22,592	256	40,286	6,145
3 <sup>rd</sup> 2011	2,155	67,664	19,521	265	52,707	5,740
4 <sup>th</sup> 2011	2,184	73,418	22,183	284	57,930	5,773
1 <sup>st</sup> 2012	2,184	73,735	21,637	282	57,468	5,728
2 <sup>nd</sup> 2012	1,421	42,898	13,641	160	32,687	3,258

**D. Actual Emission Reductions (AER)**

RBP has applied for ERC banking credits for the permanent cessation of the cogeneration system S-883-3. S-883-3 is not being replaced. Therefore, the HAE is equal to the actual emissions reductions (AER). Quarterly average HAE is calculated in the table below.

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO <sub>x</sub>	2010			71,773	68,048
	2011	64,101	63,380	67,664	73,418
	2012	73,735	42,898		
	<b>Average</b>	<b>68,918</b>	<b>53,139</b>	<b>69,719</b>	<b>70,733</b>
SO <sub>x</sub>	2010			24,376	22,385
	2011	22,250	22,592	19,521	22,183
	2012	21,637	13,641		
	<b>Average</b>	<b>21,944</b>	<b>18,117</b>	<b>21,949</b>	<b>22,284</b>
PM10	2010			6210	6,402
	2011	5,859	6,145	5740	5,773
	2012	5,728	3,258		
	<b>Average</b>	<b>5,794</b>	<b>4,702</b>	<b>5,975</b>	<b>6,088</b>
CO	2010			47264	41,973
	2011	38,405	40,286	52707	57,930
	2012	57,468	32,687		
	<b>Average</b>	<b>47,937</b>	<b>36,487</b>	<b>49,986</b>	<b>49,952</b>
VOCs	2010			273	266
	2011	244	256	265	284
	2012	282	160		
	<b>Average</b>	<b>263</b>	<b>208</b>	<b>269</b>	<b>275</b>

**Average Quarterly HAE**

Quarter	Operating Hours	NO <sub>x</sub> (lb/qtr)	SO <sub>x</sub>	PM10	CO	VOC
1 Q	2,033	68,918	21,944	5,794	47,937	263
2 Q	1,724	53,139	18,117	4,702	36,487	208
3 Q	2,135	69,719	21,215	5,975	49,986	269
4 Q	2,124	70,733	22,284	6,088	49,952	275

AER = HAE

AER (lbs/Qtr)	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
NOx	68,918	53,139	69,719	70,733
SOx	21,944	18,117	21,215	22,284
PM10	5,794	4,702	5,975	6,088
CO	47,937	36,487	49,986	49,952
VOC	263	208	269	275

**E. Air Quality Improvement Deduction (10% of AER)**

AQID (lbs/Qtr)	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
NOx	6,892	5,314	6,972	7,073
SOx	2,194	1,812	2,122	2,228
PM10	579	470	598	609
CO	479	365	4,999	4,995
VOC	26	21	27	28

**F. Increases in Permitted Emissions (IPE)**

No IPE is associated with this project.

**G. Bankable Emissions Reductions Credits (AER – AQID)**

ERC (lbs/Qtr)	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
NOx	62,026	47,825	62,747	63,660
SOx	19,750	16,305	19,093	20,056
PM10	5,215	4,232	5,377	5,479
CO	47,458	36,122	44,987	44,957
VOC	237	187	242	247

**VI. COMPLIANCE**

To be eligible for banking, emission reduction credits (ERC's) must be verified as being real, surplus, permanent, quantifiable, and enforceable pursuant to District Rules 2201 and 2301. In addition, the application must be submitted within the timelines specified in Rule 2301.

#### **A. Real**

The emission reductions proposed for banking result from the shutdown of the solid-fired cogeneration system. The emission reductions are developed from CEMS data or developed from actual operating and source test data. Therefore, the emission reductions are real.

#### **B. Enforceable**

RBJ has surrendered the operating permit for all units for which it proposes to bank ERCs. Operation without the PTO would be subject to enforcement action for a violation of District Rule 2010 (Permits Required). Therefore, the emission reductions are enforceable.

#### **C. Quantifiable**

As shown in Section V of this evaluation, emission reductions were calculated using data from a properly installed and calibrated CEMS, or were calculated using actual operating data and source test results. Therefore, the emission reductions are quantifiable.

#### **D. Permanent**

The RBJ facility S-1751 has disconnected and removed the drive motors for the fuel (coal and fluid coke) feed systems, tagged out and physically padlocked the electric circuit breakers that supply power to all fuel feed systems, removed and blanked off startup gas, and removed all fuel from the site, including cancelling all fuel supply agreements. RBJ has surrendered the operating permits for the unit for which it proposes to bank ERCs. Operation of the equipment without a valid PTO is subject to enforcement action. Construction of replacement equipment must be authorized by the District after evaluation under all applicable rules, including District Rule 2201 (New and Modified Stationary Source Review Rule), under which any increase in emissions over the applicable threshold must be offset. Therefore, the emission reductions are permanent.

#### **E. Surplus**

Until the operation was shut down, RBJ complied with all applicable emission limits contained in the permit to operate and developed from the applicable rules and regulations. Therefore, the AER calculated in Section V are surplus to all current requirements. Furthermore, the CEMS data used to calculate the ERCs for NO<sub>x</sub> and SO<sub>x</sub> are below the NO<sub>x</sub> and SO<sub>x</sub> lb/hr permit limits. Therefore, the reductions are surplus.

**F. Timeliness**

RBJ ceased operation on September 1, 2015, from which time it had 180 days to submit the ERC application. Since the ERC application was received by the District before September 1, 2015, the application is timely.

**I. Recommendation:**

The ERC banking application complies with all applicable rules and regulations. Issue ERC certificates in the amounts shown in Table 2 above.

**VII. RECOMMENDATION**

After public notice, comments and review, issue ERC Banking Certificates S-4620-1 through S-4620-5 to Rio Bravo Jasmin:

<b>ERC Certificates</b>				
<b>Pollutant</b>	<b>Q1 ERC (lb/qtr)</b>	<b>Q2 ERC (lb/qtr)</b>	<b>Q3 ERC (lb/qtr)</b>	<b>Q4 ERC (lb/qtr)</b>
S-4620-2 (NO <sub>x</sub> )	62,026	47,825	62,747	63,660
S-4620-5 (SO <sub>x</sub> )	19,750	16,305	19,093	20,056
S-4620-4 (PM <sub>10</sub> )	5,215	4,232	5,377	5,479
S-4620-3 (CO)	47,458	36,122	44,987	44,957
S-4620-1 (VOC)	237	187	242	247

The draft ERC certificates are included in **Attachment IV**.

**ATTACHMENT I**

PTOs

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1751-3-19

EXPIRATION DATE: 01/31/2015

SECTION: NE22 TOWNSHIP: 25S RANGE: 27E

## EQUIPMENT DESCRIPTION:

36 MW SOLID FUEL FIRED, CIRCULATING BED COMBUSTOR COGENERATION UNIT INCLUDING 389 MMBTU/HR COMBUSTOR WITH LOW-TEMPERATURE STAGED COMBUSTION, AMMONIA INJECTION, AND PULVERIZED LIMESTONE INJECTION - JASMIN FIELD

## PERMIT UNIT REQUIREMENTS

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1. Permittee shall comply in full with all applicable Rule 4001 requirements (New Source Performance Standards, 40 CFR, Part 60, Subpart Da). [District Rule 4001] Federally Enforceable Through Title V Permit
2. Fuel collecting conveyor, two fuel crushers, two bucket elevators, two boiler feed conveyors, fuel feed bin, fuel feeder, and limestone conveyor/feeder shall be totally enclosed and ventilated to fabric collector. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operation shall be equipped with pneumatic limestone feed system. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operation shall be equipped with primary and secondary combustion air blowers and air preheater with ash hopper. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall be equipped with fabric collector with ash hopper serving fuel/limestone handling equipment and combustor. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The main exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples using approved EPA test methods. [District Rule 1081, 3.0; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
7. Combustor shall be fired only on coal, petroleum coke, and/or biomass fuel. Propane or natural gas may be used as start-up fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Biomass introduced into the combustor shall not contain more than 2% by weight non-biomass material (plastics, metal, painted and preservative-treated wood, roofing material, fiberglass, etc.). [District Rule 4102]
9. At least once per quarter, operator shall collect a representative sample of the biomass material combusted and determine the weight percent of non-biomass material contained in that sample. Prior to collecting the first quarterly sample, operator shall submit a sampling plan to the District's compliance division for approval and shall follow the approved plan for all subsequent sampling, unless a revised plan is submitted and approved. [District Rules 1081 and 4102] Federally Enforceable Through Title V Permit

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

10. "Biomass" means any organic material originating from plants including but not limited to products, by-products, residues and wastes from agriculture, forestry, aquatic and related industries, such as agricultural, energy or feed crops, residues and wastes, orchard and vineyard prunings and removal, stone fruit pits, nut shells, cotton gin trash, corn stalks and stover, straw, seedhulls, sugarcane leavings and bagasse, aquatic plants and algae, cull logs, eucalyptus logs, poplars, willows, switchgrass, alfalfa, bark, lawn, yard and garden clippings, waste paper (unprinted), leaves, silvicultural residue, tree and brush pruning, sawdust, timber slash, mill scrap, wood and wood chips, and wood waste. Biomass does not include material containing sewage sludge or industrial, hazardous, radioactive, municipal solid waste, or any material chemically treated or derived from fossil fuels. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
11. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
12. No more than 836,520 lb (on a dry basis) of coal or coke fuel per day of no more than 4.0% by weight sulfur shall be introduced into the combustor. Two (2) pounds of biomass fuel of no more than 4.0% by weight sulfur may be substituted for one (1) pound of coal or coke fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
13. No more than 836,520 lb (on a dry basis) of solid fuel per day of no more than 4.0% by weight sulfur shall be introduced into the combustor. [PSD SJ 85-07] Federally Enforceable Through Title V Permit
14. Limestone shall be capable of being directly injected into the combustor at a minimum of 0.042 lb limestone per lb of coal or coke introduced into the combustor, or 0.021 lb limestone per lb of biomass. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Peak temperature of combustor shall not exceed 1800 degrees F. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Unit shall be operated as staged-combustion device by introducing sub-stoichiometric amount of combustion air in primary combustion zone. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ash shall be removed from combustion system only by means authorized by ash handling and loadout operation (Permit No. S-1751-5). [District Rule 2201] Federally Enforceable Through Title V Permit
18. Fuel feed and combustion air supply shall be automatically shutdown whenever fabric collector is shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Visible emissions shall not exceed 1/4 Ringelmann or equivalent 5% opacity at any time from fuel conveyors, crusher, feed bin, and feeder. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All combustor exhaust gas shall pass through fabric collector prior to emission to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Ammonia injection system shall be capable of delivering at least 2.0 moles of NH<sub>3</sub> for each mole of NO<sub>x</sub>. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Soot-blowing shall not result in visible emissions of greater than Ringelmann 1 or equivalent 20% opacity, excluding uncombined water vapor, except for aggregate periods of less than 3 minutes in any one hour period. [District Rule 4101] Federally Enforceable Through Title V Permit
23. Start-up period is defined as the period of time, not exceeding 96 hours except during refractory curing when 192 hours are allowed, during which the combustor is heated to the operating temperature and pressure from a shutdown status. [District Rule 4352] Federally Enforceable Through Title V Permit
24. Shutdown period is defined as the period of time, not exceeding 12 hours, during which a unit is taken from operational to nonoperational status by allowing it to cool down from its operating temperature and pressure to an ambient temperature. [District Rule 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.



25. "Non-operational (shutdown) status" is defined as a period when no combustion is occurring, and thus no combustion emissions are being generated or emitted, even though there is residual heat in the boiler. During "shutdown" status the unit shall be considered "boiler off-line" and no emission limits shall apply. "Shutdown" status ends with a startup. [District Rule 2201 5.7.1 and 5.7.2] Federally Enforceable Through Title V Permit
26. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. [District Rule 4352] Federally Enforceable Through Title V Permit
27. Particulate matter (PM-10) emission rate shall not exceed 4.31 lb/hr, 0.0111 lb/MMBtu and 0.007 grains/dscf. [District Rule 2201 and 40 CFR 60.42Da (a)(1), (2)] Federally Enforceable Through Title V Permit
28. Except during periods of combustor start-up and shutdown, sulfur oxide emissions (as SO<sub>2</sub>) shall not exceed 15.47 lb/hr and 0.0398 lb/MM Btu. [District Rule 2201 and 40 CFR 60.43 (a)(2)] Federally Enforceable Through Title V Permit
29. Except during periods of startup or shutdown, sulfur dioxide emissions shall not exceed 30% of the potential combustion concentration (70% reduction in potential emissions of sulfur dioxide based on sulfur analysis of "as-fired" fuel). [40 CFR 60.43(a)(2)] Federally Enforceable Through Title V Permit
30. During periods of combustor start-up and shutdown, sulfur oxide emissions (as SO<sub>2</sub>) shall not exceed 0.11 lb/MMBtu, calculated on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Sulfur oxide emissions (as SO<sub>2</sub>) shall not exceed the following quarterly amounts: 1st Qtr., 33,415 lb; 2nd Qtr., 33,786 lb; 3rd Qtr., 34,158 lb; and 4th Qtr., 34,158 lb. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Except during periods of combustor start-up and shutdown, nitrogen oxides emissions (as NO<sub>2</sub>) shall not exceed 38.90 lb/hr and 0.1000 lb/MMBtu, calculated on a daily basis. [District Rule 2201 and 40 CFR 60.44 (a)(1), (2)] Federally Enforceable Through Title V Permit
33. During periods of combustor start-up and shutdown, nitrogen oxide emissions (as NO<sub>2</sub>) shall not exceed 0.20 lb/MMBtu, calculated on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Nitrogen oxide emissions (as NO<sub>2</sub>) shall not exceed the following quarterly amounts: 1st Qtr., 84,024 lb; 2nd Qtr., 84,958 lb; 3rd Qtr., 85,891 lb; and 4th Qtr., 85,891 lb. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Volatile organic compound (VOC) emission rate shall not exceed 6.03 lb/hr and 0.0155 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Carbon monoxide (CO) emission rate shall not exceed 105.10 lb/hr (3-hour average) and 0.2701 lb/MMBtu. [District Rule 2201 and PSD SJ 85-07] Federally Enforceable Through Title V Permit
37. Performance testing shall be conducted annually for NO<sub>x</sub>, SO<sub>x</sub>, CO, VOCs, and PM(10) at steady-state steam production rate of at least ninety (90) percent of 305,000 pounds per hour using the following test methods; for NO<sub>x</sub> EPA Methods 1-4 and 7 or ARB Method 100; for SO<sub>x</sub> EPA Methods 1-4 and 8 or ARB Method 100; for CO EPA Method 1-4 and 10 or ARB Method 100; for VOCs EPA Method 25 or 18; and for PM(10) EPA Method 201A in combination with EPA Method 202 or any other test methods and procedures approved by the District. [District Rules 4352, 6.4 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Performance testing shall be conducted annually for NO<sub>x</sub>, SO<sub>x</sub>, CO, VOCs, and PM(10) at the maximum operating capacity using the following test methods; for NO<sub>x</sub> EPA Methods 1-4 and 7 or ARB Method 100; for SO<sub>x</sub> EPA Methods 1-4 and 8 or ARB Method 100; for CO EPA Method 1-4 and 10 or ARB Method 100; for VOCs EPA Method 25 or 18; and for PM(10) EPA Method 201A in combination with EPA Method 202. [PSD SJ 85-07] Federally Enforceable Through Title V Permit
39. The District and EPA must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1; and PSD SJ 85-07] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. Performance testing shall be witnessed or authorized by District personnel and EPA. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3; 40 CFR 60.51Da (a); and PSD SJ 85-07] Federally Enforceable Through Title V Permit
41. Quarterly, start-up, and shutdown NOx and SOx emissions shall be measured by maintaining CEM, fuel use and fuel Btu content records, and such records shall be made available for District inspection upon request. [District Rule 1070, 4.0] Federally Enforceable Through Title V Permit
42. Permittee shall maintain an operating log containing type and quantity of fuel used and higher heating value of such fuels on daily basis. [District Rules 2201 and 4352, 6.2; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
43. All wells producing from strata steamed by this unit shall be connected to a District approved emissions control system, have District approved closed casing vents, or be District approved uncontrolled cyclic wells. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Sulfur content of each type of fuel shall be measured and recorded on monthly basis using current ASTM Methods or shall be certified by supplier for each shipment. [District Rule 2520, 9.2.2; 40 CFR 60.49Da (e); and PSD SJ 85-07] Federally Enforceable Through Title V Permit
45. Operator shall install, operate, and maintain in calibration a system which continuously measures and records control system operating parameters; elapsed time of operation; and exhaust gas opacity, NOx, SO2, and O2 (or CO) concentrations. [District Rules 2201 and 1080, 4.0; 40 CFR 60.49Da (a), (b), (c), (d), (e); 40 CFR 64.3; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
46. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60 (60.13, Appendix B, and Appendix F); and 40 CFR 51 (51.214 and Appendix P), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5; 40 CFR 64.3; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
47. The baghouse shall be equipped with a differential pressure monitor to continuously indicate and record the pressure drop across the filter media. [40 CFR 64.3] Federally Enforceable Through Title V Permit
48. The baghouse shall operate with a minimum differential pressure of 0.5 inches water column and a maximum differential pressure of 7.5 inches water column. These parameters shall be reviewed annually and revised if necessary based on PM10 source test result data, historical operating data and manufacturer/supplier recommendations. [40 CFR 64.3] Federally Enforceable Through Title V Permit
49. Upon detecting any excursion from the acceptable range of differential pressure readings, the Permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR 64.7] Federally Enforceable Through Title V Permit
50. The permittee shall maintain daily average records of the differential pressure across the baghouse filter. [40 CFR 64.9] Federally Enforceable Through Title V Permit
51. If the daily average baghouse differential pressure is not within the acceptable established range for two consecutive days, permittee shall notify the APCO of such exceedance within 96 hours. [40 CFR 64.3] Federally Enforceable Through Title V Permit
52. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64.7] Federally Enforceable Through Title V Permit
53. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64.9] Federally Enforceable Through Title V Permit
54. 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 64.8] Federally Enforceable Through Title V Permit

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

55. Operator shall install, operate, and maintain in calibration a system which continuously measures and records stack gas volumetric flow rates meeting the performance specifications of 40 CFR Part 52, Appendix E. [40 CFR 64.3; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
56. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2; and 40 CFR 64.9] Federally Enforceable Through Title V Permit
57. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEMs that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3; 40 CFR 60.51Da (b); 40 CFR 64.9; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
58. The permittee shall maintain hourly, daily, and 30-day rolling average records of NOx and SOx emissions and of the percentage SOx reduction. [40 CFR 60.48Da (f), (g), 60.43Da (a), 60.51Da (b); and 40 CFR 64.9] Federally Enforceable Through Title V Permit
59. The permittee shall obtain emission data from the CEMS for at least 18 hours in at least 22 out of 30 successive boiler operating days for compliance determination. If this minimum data requirement can not be met with the CEMS, the permittee shall supplement the emission data with other monitoring systems approved by the APCO or with the reference methods and procedures described in 40 CFR 60.49(h). [40 CFR 60.49Da(f); and 40 CFR 64.7] Federally Enforceable Through Title V Permit
60. Permittee shall submit a CEMs written report for each calendar quarter to the District and to EPA. The report is due on the 30th day following the end of the calendar quarter. [District Rule 1080, 8.0; 40 CFR 60.51Da (a); 40 CFR 64.9; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
61. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 2520, 9.4.1; Rule 1080, 8.0; 40 CFR 64.9; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
62. Any violation of emission standards, as indicated by the CEM, shall be reported by the operator to the APCO within 96 hours. Excess emissions shall be defined as any three-hour period during which emissions of SOx or NOx as measured by CEM system exceeds the SOx and NOx maximum emission limits set forth for each the pollutants in this permit. [District Rule 1080, 9.0; and PSD SJ 85-07] Federally Enforceable Through Title V Permit
63. Operator shall notify the District no later than one hour after the detection of a breakdown of the CEM unless the owner or operator demonstrates to the APCO's satisfaction that a longer noticing period was necessary. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080 and 1100 and 40 CFR 64] Federally Enforceable Through Title V Permit
64. Permittee shall not discharge or cause the discharge into the atmosphere SO2 in excess of the more stringent of 14.0 lb/hr or 20 ppm at 3% O2 (3-hour average) from stack venting from the combustion unit except during periods of startup and shutdown. [PSD ATC SJ 85-07] Federally Enforceable Through Title V Permit
65. Permittee shall not discharge or cause the discharge into the atmosphere NOx in excess of the more stringent of 38.9 lb/hr or 78 ppm at 3% O2 (3-hour average) from stack venting from the combustion unit except during periods of startup and shutdown. [PSD ATC SJ 85-07] Federally Enforceable Through Title V Permit
66. During startup or shutdown, permittee shall not discharge or cause the discharge into the atmosphere SO2 in excess of 0.11 lb/MMBtu averaged over a 24-hour period. [PSD SJ 85-07] Federally Enforceable Through Title V Permit
67. During startup and shutdown, permittee shall not discharge or cause the discharge into the atmosphere NOx in excess of 0.20 lb/MMBtu averaged over a 24-hour period. [PSD SJ 85-07] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

68. Fabric collection system shall be completely inspected annually while in operation for evidence of particulate matter breakthrough and shall be repaired as needed. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit
69. Fabric collector filters shall be completely inspected annually while not in operation for tears, scuffs, abrasives or holes which might interfere with PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit
70. Records of fabric collector filter maintenance, inspection, and repairs shall be maintained. The records shall include identification of equipment, date of inspection, corrective action taken, and identification of individual performing inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Rio Bravo Jasmin  
S-1751, Project 1153637

# **ATTACHMENT II**

## CEMs data

Jasmin Daily Totals based on CEM Hourly - July  
2011

<b>Row Labels</b>	<b>Sum of NOX#/HR</b>	<b>Sum of SO2#/HR</b>
7/1/2011	816.89	265.74
7/2/2011	812.58	267.64
7/3/2011	817.51	279.88
7/4/2011	812.92	256.05
7/5/2011	817.61	271.24
7/6/2011	820.67	278.64
7/7/2011	814.48	274.51
7/8/2011	817.19	274.87
7/9/2011	816.98	261.7
7/10/2011	613.02	207.35
7/11/2011	424.88	189.57
7/12/2011	810.02	260.95
7/13/2011	806.36	275.59
7/14/2011	812.7	257.32
7/15/2011	810.26	268.98
7/16/2011	819.63	269.35
7/17/2011	821.12	279.6
7/18/2011	820.25	275.44
7/19/2011	821.49	277.41
7/20/2011	819.16	278.4
7/21/2011	821.46	279.94
7/22/2011	818.74	263.4
7/23/2011	818.41	275.2
7/24/2011	600.48	191.78
7/25/2011	840.68	191.51
7/26/2011	807.24	250.8
7/27/2011	814.08	257.65
7/28/2011	816.44	257.52
7/29/2011	805.14	259.1
7/30/2011	707.55	224.77
7/31/2011	627.92	214.33
<b>Grand Total</b>	<b>24203.86</b>	<b>7936.23</b>

Jasmin Daily Totals based on CEM Hourly - August  
2011

Row Labels	Sum of NOX#/HR	Sum of SO2#/HR
8/1/2011	800.79	244.74
8/2/2011	807.76	235.74
8/3/2011	811.55	238.19
8/4/2011	795.67	241.03
8/5/2011	675.39	178.83
8/6/2011	783.9	162.23
8/7/2011	778.13	196.14
8/8/2011	773.78	196.81
8/9/2011	788.25	232.69
8/10/2011	790.47	230.2
8/11/2011	808.32	222.65
8/12/2011	808.98	185.61
8/13/2011	806.3	223.74
8/14/2011	814.82	237.34
8/15/2011	807.79	235.39
8/16/2011	802.94	245.69
8/17/2011	799.71	227.7
8/18/2011	792.74	243.01
8/19/2011	788.16	232.22
8/20/2011	794.45	221.12
8/21/2011	808.31	248.93
8/22/2011	810.47	251.94
8/23/2011	810.42	255.17
8/24/2011	805.86	258.19
8/25/2011	795.32	244.61
8/26/2011	796.38	227.76
8/27/2011	784.92	234
8/28/2011	790.72	213.74
8/29/2011	779.71	206.39
8/30/2011	782	248.58
8/31/2011	780.16	196.26
<b>Grand Total</b>	<b>24574.17</b>	<b>7016.64</b>

Rio Bravo Jasmin  
S-1751, Project 1153637

**ATTACHMENT III**  
Source Test Results



**REPORT FOR THE 2010 COMPLIANCE  
TESTING AT THE RIO BRAVO JASMIN  
COGENERATION PLANT**

PREPARED FOR:

**RIO BRAVO JASMIN  
P.O. BOX 81077  
BAKERSFIELD, CALIFORNIA 93380**

FOR SUBMITTAL TO:

**SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT  
2700 M STREET, SUITE 275  
BAKERSFIELD, CALIFORNIA 93301**

PREPARED BY:

**STAFFORD PEASE**

**DELTA AIR QUALITY SERVICES, INC.  
1845 NORTH CASE STREET  
ORANGE, CALIFORNIA 92865  
(714) 279-6777**

OCTOBER 2010

REPORT NUMBER: **R018516**

**TABLE 1-1  
PM<sub>10</sub> EMISSIONS RESULTS SUMMARY**

Particulate Emissions Without Ammonia Salts Corrections		
	Result	Limit
Grain Loading, gr/dscf	0.0040	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0032	---
Mass Emissions, lb/hr	3.38	4.31
Emission Rate, lb/MMBtu	0.0072	0.0111
Particulate Emissions Including Ammonia Salts Corrections		
		Limit
Grain Loading, gr/dscf	0.0012	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0009	---
Mass Emissions, lb/hr	0.97	4.31
Emission Rate, lb/MMBtu	0.0021	0.0111

**TABLE 1-2  
GASEOUS and NH<sub>3</sub> EMISSIONS SUMMARY**

Parameter		Result	Limit
NO <sub>x</sub>	lb/hr	33.5	38.9
	lb/MMBtu	0.0737	0.1000
	ppm @ 3% O <sub>2</sub>	53.9	78
SO <sub>2</sub>	lb/hr	10.8	14.0
	lb/MMBtu	0.0239	0.0398
	ppm @ 3% O <sub>2</sub>	12.5	20
CO	lb/hr	21.4	105.1
	lb/MMBtu	0.0472	0.2701
VOC*	lb/hr	0.14	6.03
NH <sub>3</sub>	lb/MMBtu	0.0003	0.0155
	ppm @3% O <sub>2</sub>	2.5	n/a

\*Total Non-Methane, Non-Ethane Hydrocarbons as Methane

**REPORT FOR THE 2011 COMPLIANCE  
TESTING AT THE RIO BRAVO JASMIN  
COGENERATION PLANT**

PREPARED FOR:

**RIO BRAVO JASMIN**  
P.O. BOX 81077  
BAKERSFIELD, CALIFORNIA 93380

FOR SUBMITTAL TO:

**SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT**  
2700 M STREET, SUITE 275  
BAKERSFIELD, CALIFORNIA 93301

PREPARED BY:

STAFFORD PEASE

**DELTA AIR QUALITY SERVICES, INC.**  
1845 NORTH CASE STREET  
ORANGE, CALIFORNIA 92865  
(714) 279-6777

SEPTEMBER 19, 2011

REPORT NUMBER: **R019312**

**TABLE 1-1  
PM<sub>10</sub> EMISSIONS RESULTS SUMMARY**

Particulate Emissions Without Ammonia Salts Corrections		
	Result	Limit
Grain Loading, gr/dscf	0.0033	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0029	---
Mass Emissions, lb/hr	2.89	4.31
Emission Rate, lb/MMBtu	0.0061	0.0111
Particulate Emissions Including Ammonia Salts Corrections		
		Limit
Grain Loading, gr/dscf	0.0018	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0016	---
Mass Emissions, lb/hr	1.62	4.31
Emission Rate, lb/MMBtu	0.0034	0.0111

**TABLE 1-2  
GASEOUS and NH<sub>3</sub> EMISSIONS SUMMARY**

Parameter			Result	Limit
NO <sub>x</sub>	lb/hr		35.1	38.9
	lb/MMBtu		0.0802	0.1000
	ppm @ 3% O <sub>2</sub>		58	78
SO <sub>2</sub>	lb/hr		10.0	14.0
	lb/MMBtu		0.0229	0.0398
	ppm @ 3% O <sub>2</sub>		12	20
CO	lb/hr		26.8	105.1
	lb/MMBtu		0.0612	0.2701
VOC*	lb/hr		0.12	6.03
	lb/MMBtu		0.0003	0.0155
NH <sub>3</sub>	ppm @3% O <sub>2</sub>		2.7	n/a

\*Total Non-Methane, Non-Ethane Hydrocarbons as Methane

**REPORT FOR THE 2012 COMPLIANCE  
TESTING AT THE RIO BRAVO JASMIN  
COGENERATION PLANT**

PREPARED FOR:

**RIO BRAVO JASMIN**  
P.O. BOX 81077  
BAKERSFIELD, CALIFORNIA 93380

FOR SUBMITTAL TO:

**SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT**  
34946 FLYOVER COURT  
BAKERSFIELD, CALIFORNIA 93308

PREPARED BY:

**DELTA AIR QUALITY SERVICES, INC.**  
1845 NORTH CASE STREET  
ORANGE, CALIFORNIA 92865  
(714) 279-6777

STAFFORD PEASE

SEPTEMBER 12, 2012

REPORT NUMBER: **R0110186**

**TABLE 1-1  
PM<sub>10</sub> EMISSIONS RESULTS SUMMARY**

Particulate Emissions Without Ammonia Salts Corrections	Result	Limit
Grain Loading, gr/dscf	0.0042	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0033	---
Mass Emissions, lb/hr	3.45	4.31
Emission Rate, lb/MMBtu	0.0076	0.0111
Particulate Emissions Including Ammonia Salts Corrections		Limit
Grain Loading, gr/dscf	0.0022	0.0070
Grain Loading, gr/dscf @ 12% CO <sub>2</sub>	0.0017	---
Mass Emissions, lb/hr	1.81	4.31
Emission Rate, lb/MMBtu	0.0040	0.0111

**TABLE 1-2  
GASEOUS and NH<sub>3</sub> EMISSIONS SUMMARY**

Parameter	Result	Limit
NO <sub>x</sub>	lb/hr	34.7
	lb/MMBtu	0.0757
	ppm @ 3% O <sub>2</sub>	55
SO <sub>2</sub>	lb/hr	11.5
	lb/MMBtu	0.0250
	ppm @ 3% O <sub>2</sub>	13
CO	lb/hr	25.7
	lb/MMBtu	0.0562
VOC*	lb/hr	0.12
	lb/MMBtu	0.0003
NH <sub>3</sub>	ppm @3% O <sub>2</sub>	4.2

\*Total Non-Methane, Non-Ethane Hydrocarbons as Methane

Rio Bravo Jasmin  
S-1751, Project 1153637

# **ATTACHMENT IV**

## **Draft ERC Certificates**

San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**

**S-4620-1**  
**DRAFT**

ISSUED TO: RIO BRAVO JASMIN  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 11258 PORTERVILLE HWY  
BAKERSFIELD, CA 93308

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
237 lbs	187 lbs	242 lbs	247 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

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

**DRAFT**

Arnaud Marjollet, Director of Permit Services



San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**

**S-4620-2**  
**DRAFT**

ISSUED TO: RIO BRAVO JASMIN  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 11258 PORTERVILLE HWY  
BAKERSFIELD, CA 93308

**For NOx Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
62,026 lbs	47,825 lbs	62,747 lbs	63,660 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

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

**DRAFT**

Arnaud Marjollet, Director of Permit Services

San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

# Emission Reduction Credit Certificate

**S-4620-3**  
**DRAFT**

ISSUED TO: RIO BRAVO JASMIN  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 11258 PORTERVILLE HWY  
BAKERSFIELD, CA 93308

## For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
47,458 lbs	36,122 lbs	44,987 lbs	44,957 lbs

Conditions Attached

### Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

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

**DRAFT**  
Arnaud Marjollet, Director of Permit Services

San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**

**S-4620-4**  
DRAFT

ISSUED TO: RIO BRAVO JASMIN  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 11258 PORTERVILLE HWY  
BAKERSFIELD, CA 93308

**For PM10 Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
5,215 lbs	4,232 lbs	5,377 lbs	5,479 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

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

Arnaud Marjollet, Director of Permit Services

San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**

**S-4620-5**  
DRAFT

ISSUED TO: RIO BRAVO JASMIN  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 11258 PORTERVILLE HWY  
BAKERSFIELD, CA 93308

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
19,750 lbs	16,305 lbs	19,093 lbs	20,056 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

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

Arnaud Marjollet, Director of Permit Services