

February 17, 2021

Jeremy Blair  
BASF Agricultural Solutions Seed US, LLC  
2 TW Alexander Dr.  
Durham, NC, 27709

**Re: Notice of Preliminary Decision – Emission Reduction Credits**  
**Facility Number: S-1392**  
**Project Number: S-1202740**

Dear Mr. Blair:

Enclosed for your review and comment is the District's analysis of BASF Agricultural Solutions Seed US, LLC's application for Emission Reduction Credits (ERCs) resulting from the shutdown of a cottonseed delinting operation, at 561 N American Street in Shafter. The quantity of ERCs proposed for banking is 138 lb-NOx/yr, 3 lb-SOx/yr, 1,422 lb-PM10/yr, 461 lb-CO/yr and 10 lb-VOC/yr.

The notice of preliminary decision for this project has been posted on the District's website ([www.valleyair.org](http://www.valleyair.org)). 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. David Torii of Permit Services at (661) 392-5620.

Sincerely,



Brian Clements  
Director of Permit Services

AM:DBT

Enclosures

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

**Samir Sheikh**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: (661) 392-5500 FAX: (661) 392-5585

# San Joaquin Valley Air Pollution Control District

## ERC Banking Application Review

### Shutdown of Cottonseed Delinting Operation

Processing Engineer: David Torii  
Lead Engineer: Rich Karrs  
Date: 2/3/21

Facility Name: BASF Agricultural Solutions Seed US, LLC  
Mailing Address: 2 TW Alexander Dr.  
Visalia, CA 93291  
Durham, NC, 27709

Contact Person: Jeremy Blair  
Telephone: 806-730-4423  
Email: jeremy.blair@basf.com  
Deemed Complete: 7/6/20

Project Number: 1202740  
Facility ID: S-1392

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#### I. Proposal

BASF Agricultural Solutions Seed US, LLC (BASF) has submitted an application for Emission Reduction Credits (ERCs) banking for the shutdown of cottonseed delinting operation (S-1392)

The quantity of bankable emission reductions for the shutdown of the cottonseed delinting operation is summarized in the table below:

Pollutant	1 <sup>st</sup> Quarter (lb)	2 <sup>nd</sup> Quarter (lb)	3 <sup>rd</sup> Quarter (lb)	4 <sup>th</sup> Quarter (lb)	Total (lb)
NO <sub>x</sub>	41	11	25	61	138
SO <sub>x</sub>	1	0	1	1	3
PM <sub>10</sub>	883	28	2	509	1422
CO	151	41	94	175	461
VOC	3	1	2	5	10

#### II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (08/15/19)  
Rule 2301 Emission Reduction Credit Banking (08/15/19)

#### III. Location of Reduction:

The equipment was located at 561 N American Street in Shafter.

#### **IV. Method of Generating Reductions:**

The plant ceased operation on 1/16/20 (per application) and all permits were cancelled on 5/5/20.

##### **Equipment Description:**

See copies of the permits in Appendix A.

S-1392-1: 390 HP SEED STORAGE & CONVEYING OPERATION WITH ONE TWO STACKING CONVEYORS, ONE TRANSPORTABLE LOW-USE DIESEL POWERED IC ENGINE, 4 FANS, ONE ELECTRIC DEHUMIDIFIER, ONE ELECTRIC TRANSFER CONVEYOR, AND 3 SEED STORAGE BUILDINGS

S-1392-2: COTTONSEED DELINTING, TREATING AND BAGGING OPERATION WITH A 4.8 MMBTU/HR ROTARY DRYER VENTED TO ONE 68" CYCLONE AND ONE 60" CYCLONE SHARED WITH POLISHER, FOLLOWED IN SERIES BY FOUR 40" CYCLONES IN PARALLEL; 2 MMBTU/HR ROTARY POLISHER/BUFFER VENTED TO ONE 72" CYCLONE AND ONE 60" CYCLONE SHARED WITH THE DRYER, FOLLOWED IN SERIES BY FOUR 44" CYCLONES IN PARALLEL; ONE SCREEN CLEANER SERVED BY TWO 38" CYCLONES IN PARALLEL AND TWO 72" CYCLONES IN PARALLEL; ELEVATOR(S), CONVEYOR(S), HOPPER(S) AND FAN(S), AND VARIOUS PERMIT-EXEMPT LEAN PROCESSING EQUIPMENT

#### **V. Calculations**

##### **A. Assumption:**

The applicant has proposed to bank the actual emission reduction for the following equipment:

##### **S-1392-1:**

80 bhp transportable low-use diesel IC engine.

##### **S-1392-2:**

4.8 MMBtu/hr rotary dryer

2.0 MMBtu/hr buffer dryer

Dryer and Buffer cyclones

##### **B. Emission factors:**

Note that none of the equipment has been source tested.

Emission Factors Diesel-fired IC Engine		
	g/hp hr	Source
NOx	4.04	Engine Manufacturer*
SOX	0.0051	Mass Balance Evaluation Below
PM10	0.192	Engine Manufacturer*
CO	1.92	Engine Manufacturer*
VOC	0.48	Engine Manufacturer*

\*From S1063776 (see Appendix B)

$$\frac{0.000015 \text{ lb} - S}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb} - \text{fuel}}{\text{gallon}} \times \frac{2 \text{ lb} - SO_2}{1 \text{ lb} - S} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g} - SO_x}{\text{bhp} - \text{hr}}$$

Emission Factors Rotary Dryer and Rotary Polisher/Buffer*		
Pollutant	lb/MMBtu	Source
NO <sub>x</sub>	0.100	PTO
SO <sub>x</sub>	0.00285	PTO (PUC Natural Gas)
PM <sub>10</sub>	0.0076	PTO
CO	0.3695	PTO
VOC	0.0055	PTO

\*Note that the dryers were replaced in 2013. See Manufacture’s expected emissions in Appendix C.

**Dryer and Buffer Cyclones:**

The dryer and buffer cyclones’ PM10 exhaust Daily Emission Limits (DELs) are 20.2 lb/day (i.e., 0.84 lb/hr x 24 hr/day) and 51 .1 b/day (i.e., 2.13 lb/hr x 24 hr/day), respectively (see PTO S-1392-2 in Appendix A). The emission factor for the cyclones’ PM10 exhaust for the cottonseed processing is the sum of the DELs divided by 192 ton/day (maximum white seed production allowed per the permit).

$$[(20.2 + 51.1) \text{ lb/day}]/(192 \text{ ton/day}) = 0.37 \text{ lb PM10 per ton of white seed processed}$$

**C. Baseline Period Determination:**

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).

The applicant states that the baseline period is the two years of operation immediately prior to the shutdown of the facility on January 16, 2020, which is representative of normal operation.

This two-year period is immediately prior to the shutdown of the facility; therefore, there is no need to determine an alternate baseline period.

**D. Historical Actual Emissions (HAE)**

Historical Actual Emissions (HAEs) are emissions that actually occurred during the baseline period, after discounting for:

- Any emission reductions required or encumbered by any laws, rules, regulations, agreements, orders, or permits; and
- Any emissions reductions attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, and
- Any emission reductions proposed in the District air quality plan for attaining the annual reductions required by the California Clean Air Act, and
- Any Actual Emissions in excess of those required or encumbered by any laws, rules, regulations, orders, or permits.

The historical actual emissions were established using daily production records, natural gas fuel consumption; diesel fuel consumption and operating logs of the seed storage and conveying system (S-1392-1), as well as the cottonseed delinting and treating operation (S-1392-2).

**S-1392-1:**

**Diesel IC Engine**

Please see the engine's fuel use and operating hour data in Appendix D.

Assumptions:

Diesel fuel density = 7.1 lb/gal

The engine operated during the 4<sup>th</sup> quarter only.

To calculate the engine's fuel consumption rate, the periods from 10/13/18 through 11/26/18 and from 10/4/19 through 12/27/19 were used.

The total operating time is based on the period from 10/13/18 through 11/28/18 and from 10/4/19 through 12/29/19.

2018 4<sup>th</sup> quarter operation:

fuel consumed  $15 + 10 + 12 = 37$  gal

operating hours  $836.7 - 808.5 = 28.2$  hrs

fuel use rate:  $37 \text{ gal}/28.2 \text{ hrs} = 1.31 \text{ gal/hr} = 9.3 \text{ lb/hr}$

2019 4<sup>th</sup> quarter operation

fuel consumed 20 + 22 +16 = 58 gal  
 operating hours 805.7 – 840.0 = 65.7 hrs  
 fuel use rate: 58 gal/65.7 hrs = 0.883 gal/hr =6.3 lb/hr

Average number of operating hours:  $[(840.0 - 808.50) + (908.0 - 840)]/2 = 49.8$  hr

According to the engine’s performance curve (see Appendix E) the engine consumes 14.4 lb/hr of fuel at the curve’s minimum hp output of 40 hp (40 hp x 0.36 lb/hp-hr = 14.4 lb/hr). Since the actual fuel consumption rate was less than 14.4 lb/hr it is assumed that the engine operated at less than 40 hp. Therefore, the HAE will be calculated assuming the engine operated at 40 hp

IC Engine HAE				
Pollutant	Emissions Factor (g/bhp-hr)	Operating hp	Annual Hours of Operation (hrs/year)	HAE (4 <sup>th</sup> Quarter) lb.
NO <sub>x</sub>	4.04	40	49.8	18
SO <sub>x</sub>	0.0051	40	49.8	0
PM <sub>10</sub>	0.192	40	49.8	1
CO	1.92	40	49.8	8
VOC	0.48	40	49.8	2

**S-1392-2:**

**Rotary Dryer (4.8 MMBtu/hr) and Rotary Polisher/Buffer (2.0 MMBtu/hr)**

Please see the rotary dryer and rotary polisher/buffers’ natural gas use data in Appendix F.

Assumptions:

The natural gas consumption from January 2018 to December 2019 was used to calculate the HAE.

Baseline Natural Gas Consumption (MMBtu)				
	Quarter (lb.)			
	1st	2nd	3rd	4th
2018	192.92	53.83	161.24	127.2
	84.12	11	43.06	236.67
	95.4	4.27	17.98	241.67
2019	194.95	134.1	40.74	179.71
	150.06	33.02	112.95	86.88
	191.1	8.77	186.47	135.69
Total:	908.55	244.99	562.44	1007.82
Average:	454.28	122.50	281.22	503.91

<b>Rotary Dryer and Rotary Polisher/Buffer NOx HAE</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/MMBtu)</b>	<b>Natural Gas Consumption (MMBtu)</b>	<b>HAE (lb-NOx)</b>
1 <sup>st</sup>	0.100	454.28	45
2 <sup>nd</sup>		122.50	12
3 <sup>rd</sup>		281.22	28
4 <sup>th</sup>		503.91	50

<b>Rotary Dryer and Rotary Polisher/Buffer SOx HAE</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/MMBtu)</b>	<b>Natural Gas Consumption MMBtu</b>	<b>HAE (lb-SOx)</b>
1 <sup>st</sup>	0.00285	454.28	1
2 <sup>nd</sup>		122.50	0
3 <sup>rd</sup>		281.22	1
4 <sup>th</sup>		503.91	1

<b>Rotary Dryer and Rotary Polisher/Buffer PM10 HAE</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/MMBtu)</b>	<b>Natural Gas Consumption MMBtu</b>	<b>HAE (lb-PM10)</b>
1 <sup>st</sup>	0.0076	454.28	3
2 <sup>nd</sup>		122.50	1
3 <sup>rd</sup>		281.22	2
4 <sup>th</sup>		503.91	4

<b>Rotary Dryer and Rotary Polisher/Buffer CO HAE</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/MMBtu)</b>	<b>Natural Gas Consumption MMBtu</b>	<b>HAE (lb-CO)</b>
1 <sup>st</sup>	0.3695	454.28	168
2 <sup>nd</sup>		122.50	45
3 <sup>rd</sup>		281.22	104
4 <sup>th</sup>		503.91	186

<b>Rotary Dryer and Rotary Polisher/Buffer VOC HAE</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/MMBtu)</b>	<b>Natural Gas Consumption MMBtu</b>	<b>HAE (lb-VOC)</b>
1 <sup>st</sup>	0.0055	454.28	3
2 <sup>nd</sup>		122.50	1
3 <sup>rd</sup>		281.22	2
4 <sup>th</sup>		503.91	3

**S-1392-2:**

**Dryer and Buffer Cyclones**

White Seed Processed/Throughput (see detailed throughput records in Appendix G)

	<b>2018</b>	<b>2019</b>	<b>Average</b>
Jan	911.75	1052.95	982.35
Feb	1001.40	865.51	933.46
Mar	583.32	870.53	726.93
<b>Total Q1</b>	<b>2496.47</b>	<b>2788.99</b>	<b>2642.73</b>
Apr	11.38	153.44	82.41
May	0	0	0
Jun	0	0	0
<b>Total Q2</b>	<b>11.38</b>	<b>153.44</b>	<b>82.41</b>
Jul	0	0	0
Aug	0	0	0
Sep	0	0	0
<b>Total Q3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Oct	162.12	0	162.12
Nov	892.34	224.44	558.39
Dec	1125.93	623.50	874.72
<b>Total Q4</b>	<b>2180.39</b>	<b>847.94</b>	<b>1514.17</b>
<b>Annual Total</b>	<b>4688.24</b>	<b>3790.37</b>	<b>4239.305</b>

<b>HAE Dryer and Buffer Cyclones</b>			
<b>Quarter</b>	<b>Emissions Factor (lb/ton)</b>	<b>Throughput (tons)</b>	<b>HAE (lb-PM10)</b>
1 <sup>st</sup>	0.37	2642.73	978
2 <sup>nd</sup>		82.41	30
3 <sup>rd</sup>		0.00	0
4 <sup>th</sup>		1514.17	560



## 1. Historical Actual Emissions

Pursuant to Section 3.23 of Rule 2201, Historical Actual Emissions must be discounted for any emissions reduction, which is:

- 3.23.1 Any emissions reductions required or encumbered by any laws, rules, regulations, agreements, orders, or permits; and
- 3.23.2 Any emissions reductions attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, and
- 3.23.3 Any emissions reductions proposed in the District air quality plan for attaining the annual reductions required by the California Clean Air Act, and
- 3.23.4 Any Actual Emissions in excess of those required or encumbered by any laws, rules, regulations, orders, or permits. For units covered by a Specific Limiting Condition (SLC), the total overall HAE for all units covered by SLC must be discounted for any emissions in excess of that allowed by the SLC.

The subject equipment was found to be in compliance with all applicable prohibitory rules, no further adjustments to the HAE are required. See the discussion of potentially applicable rules and regulations below in section VI.E.

## 2. Actual Emissions Reductions (AER)

Per Rule 2201, Section 4.12, the Actual Emissions Reductions due to shutdown of emissions units shall be calculated, on a pollutant-by-pollutant basis, as follows:

$$\text{AER} = \text{HAE} - \text{PE2}$$

Where:

HAE = Historic Actual Emissions

PE2 = Post-project Potential to Emit

Because the subject equipment is permanently shut down, PE2 = 0. Therefore, AER = HAE – 0, or AER = HAE.

## 3. Excess Emissions

Pursuant to District Rule 2201, 3.23, the HAE must be discounted for any Actual Emissions in excess of those required or encumbered by any laws, rules, regulations, orders, or permits.

There are no emissions in excess of those required or encumbered by any laws, rules, regulations, orders, or permits.

## 4. HAE Summary

The HAE is summarized in the following table:

<b>Sum Total of HAE for All Units</b>				
<b>Pollutant</b>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
NOx	45	12	28	68
SOx	1	0	1	1
PM10	981	31	2	565
CO	168	45	104	194
VOC	3	1	2	5

**5. Air Quality Improvement Deduction**

The Air Quality Improvement Deduction (AQID) is 10% of the AER per Rule 2201, Sections 3.6 and 4.12.1, and is summarized as follows:

<b>AQID</b>				
<b>Pollutant</b>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
NOx	4.5	1.2	2.8	6.8
SOx	0.1	0	0.1	0.1
PM10	98.1	3.1	0.2	56.5
CO	16.8	4.5	10.4	19.4
VOC	0.3	0.1	0.2	0.5

**6. Bankable Emissions Reductions**

The bankable emissions reductions are determined by subtraction of the air quality improvement deduction from the Actual Emissions Reductions. The bankable ERC of this unit is summarized in the table below:

<b>Bankable Emission Reduction Credits (lbs/Qtr)</b>				
<b>Pollutant</b>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
NOx	41	11	25	61
SOx	1	0	1	1
PM10	883	28	2	509
CO	151	41	94	175
VOC	3	1	2	5

**VI. Compliance**

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

**A. Real**

The emission reductions were generated by the shutdown of the cotton seed processing plant. The real emissions were calculated from actual historic production and fuel use data as well as recognized emission factors. The facility has been shut down and all equipment has been removed from service and the permits subsequently surrendered to the District.

Therefore, the emissions reductions are real.

**B. Enforceable**

The emissions reductions are enforceable since the permits for the subject operation have been surrendered to the District. Operating the equipment without permits would result in enforcement action being taken.

**C. Quantifiable**

Emission reduction amounts were calculated from historic process data, fuel use and emission factors that consider any discounting requirements for banking emissions from the subject equipment. Therefore, the emission reductions are quantifiable.

**D. Permanent**

The cotton seed processing plant has been shut down and the permits have been surrendered. Operation of the equipment without a valid permit is subject to enforcement action. Construction of equipment that would replace the equipment removed at this facility, regardless if constructed at the same or different location, 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 as described under Section VI.A above.

Additionally, the permitting database was queried to verify that the production is not being shifted elsewhere in the District and no permit applications were found to increase production of cotton seeds at other stationary sources.

Therefore, the emissions reductions are permanent.

**E. Surplus**

To be considered a surplus actual emission reduction (pursuant to Rule 2201 section 3.2.2), the emission reduction must be in excess of any emissions reduction which is:

- 1) required or encumbered by any laws, rules, regulations, agreements, orders,
- 2) attributed to a control measure noticed for workshop, or proposed or contained in a State implementation Plan, or
- 3) proposed in the APCO's adopted air quality plan pursuant to the California Clean Air Act

Note that District Rule 4702's (Internal Combustion Engines) only requirement for the subject low-use IC engine is that it be operated with an operating nonresettable elapsed time meter.

Note that District Rule 4204 (Cotton Gins) does not apply to the subject cottonseed delinting operation.

Note that District Rule 4309 (Dryers, Dehydrators, and Ovens) does not apply to the subject dryers because their heat input rating is less than 5.0 MMBtu/hr.

Note that the District’s 2018 PM2.5 Attainment Plan addresses cotton gins but not cottonseed delinting operations.

Note that the District’s 2018 PM2.5 Attainment Plan evaluated emissions from IC engines but did not list the subject engine’s category for further evaluation.

Furthermore, shutdown of the facility was not required by any law, rule, agreement, or regulation. As of the date this application was deemed complete, there are no known future rules or regulations that would have required any portion of these reductions. Therefore, the emissions reductions are surplus.

**F. Not used for the approval of an Authority to Construct or as Offsets**

The emission reduction resulting from the shutdown of the facility were not used in the approval an Authority to Construct or as “offsets” or mitigation for any projects at the facility.

**G. Timely Submittal**

Pursuant to District Rule 2301, Section 4.2, in order to deem emissions reductions eligible for banking, an application for ERC has been filed no later than 180 days after the emissions reductions occurred.

Criteria pollutant emissions from the surrendered permits permanently ceased on 1/16/20 as this is the date the permits were surrendered. The emissions reduction banking application was received on 7/1/20. Therefore, the application was received within 180 days of the date the reductions occurred. The ERC application was filed in a timely manner.

**VII. Recommendation**

Pending a successful public noticing period, issue Emission Reduction Credit Certificates for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO and VOC in the following amounts:

<b>Pollutant</b>	<b>1<sup>st</sup> Quarter (lb)</b>	<b>2<sup>nd</sup> Quarter (lb)</b>	<b>3<sup>rd</sup> Quarter (lb)</b>	<b>4<sup>th</sup> Quarter (lb)</b>	<b>Total (lb)</b>
NO <sub>x</sub>	41	11	25	61	138
SO <sub>x</sub>	1	0	1	1	3
PM <sub>10</sub>	883	28	2	509	1422
CO	151	41	94	175	461
VOC	3	1	2	5	10

**Appendices**

- Appendix A Surrendered Permits to Operate
- Appendix B Engine Manufacturer’s Emission Factors
- Appendix C Dryer Manufacturer’s Emission Factors
- Appendix D Engine’s Fuel Use and Operating Hour Data
- Appendix E Engine Performance Curve
- Appendix F Rotary Dryer and Rotary Polisher/Buffers’ Natural Gas Use
- Appendix G White Seed Processed/Throughput Records

Appendix H  
Appendix I

PM10/PM2.5 Percentage Determination  
Draft Emissions Reduction Credit Certificates

## **Appendix A**

### **Surrendered Permits to Operate**

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1392-1-5

**EXPIRATION DATE:** 04/30/2022

**SECTION:** 09 **TOWNSHIP:** 28S **RANGE:** 26E

## **EQUIPMENT DESCRIPTION:**

390 HP SEED STORAGE & CONVEYING OPERATION WITH ONE TWO STACKING CONVEYORS, ONE TRANSPORTABLE LOW-USE DIESEL POWERED IC ENGINE, 4 FANS, ONE ELECTRIC DEHUMIDIFIER, ONE ELECTRIC TRANSFER CONVEYOR, AND 3 SEED STORAGE BUILDINGS

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions from any single source operation shall be no more than 0.1 gr/dscf and visible emissions from any single emission point shall be less than 20% opacity. [District Rules 4101 and 4201]
3. All equipment or systems installed or used to achieve compliance with the terms and conditions of this Permit to Operate shall be maintained in good working order and be operated as efficiently as possible to minimize air pollution emissions. [District Rule 2201]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Permittee shall properly operate and maintain the engine as recommended by the engine manufacturer. [District Rule 4702]
6. Permittee shall monitor the operational characteristics of the engine as recommended by the engine manufacturer. [District Rule 4702]
7. This transportable engine shall be operated at one location for no more than 12 consecutive months and shall meet all the requirements of a transportable engine, per Rule 4701. [District Rule 4701 and 40 CFR 89]
8. Only CARB-certified diesel fuel containing not more than 0.0015% sulfur by weight shall be used. [District Rules 2201, 4102, and 4801]
9. Emission rates from this unit shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 4.04 g/hp-hr; VOC - 0.48 g/hp-hr; CO - 1.92 g/hp-hr; or SO<sub>x</sub> (as SO<sub>2</sub>) - 0.00565 g/hp-hr. [District Rule 2201 and 40 CFR 89]
10. The PM<sub>10</sub> emissions rate shall not exceed 0.192 g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201 and 4102]]
11. Operation of the engine shall not exceed 14.5 hours per day nor 200 hours per year. [District Rules 2201, 4102 and 4702]
12. The permittee shall maintain annual records of the engine's total hours of operation, location of operation, amount of diesel fuel used, sulfur content of the diesel fuel used, any maintenance or modifications performed, and operational characteristics of the engine as recommended by the engine manufacturer. These records shall be submitted to the APCO upon request and at the end of each calendar year. [District Rules 2201, 4701 and 4702]
13. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4701 and 4702]

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

Facility Name: BASF AGRICULTURAL SOLUTIONS SEED US LLC  
Location: 561 N AMERICAN ST, SHAFTER, CA  
S-1392-1-5 : Aug 28 2018 10:24AM - THAO5

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1392-2-22

EXPIRATION DATE: 04/30/2022

SECTION: 09 TOWNSHIP: 28S RANGE: 26E

## EQUIPMENT DESCRIPTION:

COTTONSEED DELINTING, TREATING AND BAGGING OPERATION WITH A 4.8 MMBTU/HR ROTARY DRYER VENTED TO ONE 68" CYCLONE AND ONE 60" CYCLONE SHARED WITH POLISHER, FOLLOWED IN SERIES BY FOUR 40" CYCLONES IN PARALLEL; 2 MMBTU/HR ROTARY POLISHER/BUFFER VENTED TO ONE 72" CYCLONE AND ONE 60" CYCLONE SHARED WITH THE DRYER, FOLLOWED IN SERIES BY FOUR 44" CYCLONES IN PARALLEL; ONE SCREEN CLEANER SERVED BY TWO 38" CYCLONES IN PARALLEL AND TWO 72" CYCLONES IN PARALLEL; ELEVATOR(S), CONVEYOR(S), HOPPER(S) AND FAN(S), AND VARIOUS PERMIT-EXEMPT LEAN PROCESSING EQUIPMENT

## PERMIT UNIT REQUIREMENTS

---

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. Rotary dryer shall be equipped with an electrical throttle limiting the fuel flow to no greater than 4.8 MMBtu/hr. [District Rule 2201]
5. The unit shall only be fired on PUC quality natural gas. [District Rule 2201]
6. Dryer shall vent to one 68" cyclone and one 60" cyclone shared with polisher, followed in series by four 40" cyclones in parallel. [District Rule 2201]
7. Polisher shall vent to one 72" cyclone and one 60" cyclone shared with the dryer, followed in series by four 44" cyclones in parallel. [District Rule 2201]
8. Screen cleaner shall vent to two 72" cyclones in parallel. Screen cleaner and gravity separators shall vent to two 38" cyclones in parallel followed in series by four 40" permit exempt cattle feed loadout cyclones in parallel. [District Rule 2201]
9. Facility shall not process more than 192 tons/day of white seed. [District Rule 2201]
10. Facility shall not process more than 23,680 tons/year of white seed. [District Rule 2201]
11. Facility shall not operate more than 250 days per year without prior District approval. [District Rule 2201]
12. Material removed from dust collectors shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
13. Maximum emission rate of particulate matter (PM10) from dryer cyclones exhaust (total) shall not exceed 0.84 lb/hr. [District Rule 2201]
14. Maximum emission rate of particulate matter (PM10) from buffer cyclones exhaust (total) shall not exceed 2.13 lb/hr. [District Rule 2201]
15. Maximum emission rate of particulate matter (PM10) from bulk seed line loading shall not exceed 0.00 lb/hr. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: BASF AGRICULTURAL SOLUTIONS SEED US LLC  
Location: 561 N AMERICAN ST, SHAFTER, CA



16. Maximum emission rate of particulate matter (PM10) from seed treating operation shall not exceed 0.00 lb/hr. [District Rule 2201]
17. Emissions from the natural gas-fired units shall not exceed any of the following limits: 0.100 lb-NOX/MMBtu, 0.00285 lb-SOX/MMBtu, 0.0076 lb-PM10/MMBtu, 0.3695 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201]
18. Permit holder shall maintain accurate records of process weight rate, dates and hours of operation for previous 3 seasons and such records shall be made readily available for District inspection upon request. [District Rules 2201, 1070]

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

# **Appendix B**

## **Engine Manufacturer's Emission Factors**

Tom Smith

OCT 05 2006

From: Daniel Eaton [deaton@westernpowerproducts.net]  
Sent: Wednesday, October 04, 2006 1:46 PM  
To: Tom Smith  
Subject: FW: 4045D Emissions

Attached is the request information. Use the top row of data. Let me know if you have any questions.  
Daniel

From: Schmid Karl J [mailto:SchmidKarlJ@JohnDeere.com]  
Sent: Wednesday, October 04, 2006 1:10 PM  
To: deaton@westernpowerproducts.net  
Subject: RE: 4045D Emissions

**Data Results**

**Rating Data**

Data for: 4045DF270B

Power: 60KW @ 2500

Vehicle: OEM

History: Added June 2004

**Certificate Data**

Year: 2006

EPA Family: 6JDXL04,5076

EPA Certificate:  
JDX-NRUI-06-06

Carb Certificate:  
U-R-004-0239

View Certificate #'s from these Y:

2004

2006


**Emissions Data\***

	CO	PM	NOx	HC	NOx+HC	Units
4045DF270B (Selected Rating)	2.57	0.258	5.42	0.64	6.06	g/kW-hr
	1.92	0.192	4.04	0.48	4.52	g/hp-hr
4045DF270B (Parent)	2.57	0.258	5.42	0.64	6.06	g/kW-hr
	1.92	0.192	4.04	0.48	4.52	g/hp-hr

\* This is the latest available emissions test data for this rating, as measured on the applicable test cycle.

New Search    Next Family/Rating

**\*\* Note:** In some cases, the engine prior to when the engine was built, blank. This can occur when a "new" database between October and De (Refer to "History")



# **Appendix C**

## **Dryer Manufacturer's Emission Factors**

Maxon Western Region Office  
22 Centerpointe Drive, Suite 100  
LaPalma, CA 90623 USA  
Tel: (800) 287-8378 Fax: (866) 874-9149  
www.maxoncorp.com

June 25, 2013

Tommy Smith  
Bayer Crop Science  
Shafter, CA

SUBJECT: MAXON CROSSFIRE BURNER

Dear Tommy:

Expected emissions for the Maxon Crossfire Burner are as follows:

NOx: < 0.090 lbs/MMBtu

CO: < 0.3696 lbs/MMBtu

VOC: < 0.0055 lbs/MMBtu

SOx: < 0.00285 lbs/MMbtu

PM10: < 0.0076 lbs/MMbtu

Note that this is not a guarantee as emissions performance depends on burner setup, application and other parameters.

Please let us know if you have any questions.

Sincerely,

Joe Furlan  
Field Sales Engineer – Western Regional Office  
Maxon Corporation – A Honeywell Company

Phone: 714-562-3224

Cell: 949-769-0755

Email: [jfurlan@maxoncorp.com](mailto:jfurlan@maxoncorp.com)

## **Appendix D**

### **Engine's Fuel Use and Operating Hour Data**

# Diesel Powered Belt Conveyor Operating Log 2018

Date	Hour Meter: Start Reading	Hour Meter: End Reading	Total Hours Operated	Gallons Fuel Used	Operator Initials
10-13-18	808.5	809.1	.6		AS
10-15-18	809.1	810.5	.6		AS
10-16-18	810.5	810.9	.4		
10-17-18	810.9	811.9	1		
10-18-18	811.9	813.7	1.8		
10-19-18	813.72	816.5	2.8		
10-22-18	816.5	819.6	3.1		
10-25-18	819.6	823.7	4.1	15	AS
10-29-18	823.7	824.6	.9		AS
					AS
10-30-18	824	825	1		AS
10-31-18	825	825.8	.8		AS
11-5-18	825.8	827	1.2		AS
11-6-18	827	828.3	1.3	10	AS
11-8-18	828.3	829.7	.4		AS
11-14-18	829.7	830.1	.4		AS
11-22-18	830.1	832	1.9		AS
11-23-18	832	833.2	1.2		AS
11-24-18	833.2	835.2	2		AS
11-26-18	835.2	836.7	1.5	12	AS
11-27-18	836.7	838.1	1.4		AS
11-28-18	838.1	840	1.9		AS

# Diesel Powered Belt Conveyor Operating Log

2019

Date	Start	End	Total	Gallons Fuel	Operator
10-4	840	840.2	.2		Am
10-7	840.2	842.6	2.4		Bm
10-8-2019	842.6	845.9	3.3		Bm
10-11-19	845.9	847.2	1.3		Bm
10-14-19	847.2	849.3	2.1		Bm
10-15-19	849.3	852.6	3.3		Bm
10-16-19	852.6	856.1	3.5		EL
10-18-19	856.1	859.3	3.2		EL
10-21-19	859.3	860.1	.8	20	EL
10-22-19	860.1	862.6	2.5		Bm
10-23-19	862.6	863.9	1.3		Bm
10-24-19	863.9	865.7	1.8		EL
10-25-19	865.7	866.1	.4		EL
11-7-19	866.1	868.7	2.6		Bm
11-8-19	868.7	870.2	1.5		Bm
11-12-19	870.2	871.9	1.7		Bm
11-13-19	871.9	873.4	1.5		EL
11-14-19	873.4	875.4	2		EL
11-25-19	875.4	876.1	.7		EL
11-26-19	876.1	878.6	2.5		Bm
11-27-19	878.6	880.9	2.3		Bm
12-2-19	880.9	884.2	3.3		Bm
12-3-19	884.2	888.6	4.4	22	Bm
12-4-19	888.6	890.3	1.7		EL
12-5-19	890.3	892.1	1.8		EL
12-6-19	892.1	895.2	3.1		EL
12-10-19	895.2	897.1	1.9		EL
12-17-19	897.1	900.3	3.2		Bm
12-19-19	900.3	902.1	1.8		Bm
12-20-19	902.1	903.6	1.5		Bm
12-21-19	903.6	904.2	.6		Bm
12-26-19	904.2	905.1	.9		EL
12-27-19	905.1	905.7	.6	16	EL
12-28-19	905.7	906.8	1.1		Bm
12-29-19	906.8	908.0	1.2		Bm



## **Appendix E**

### **Engine Performance Curve**

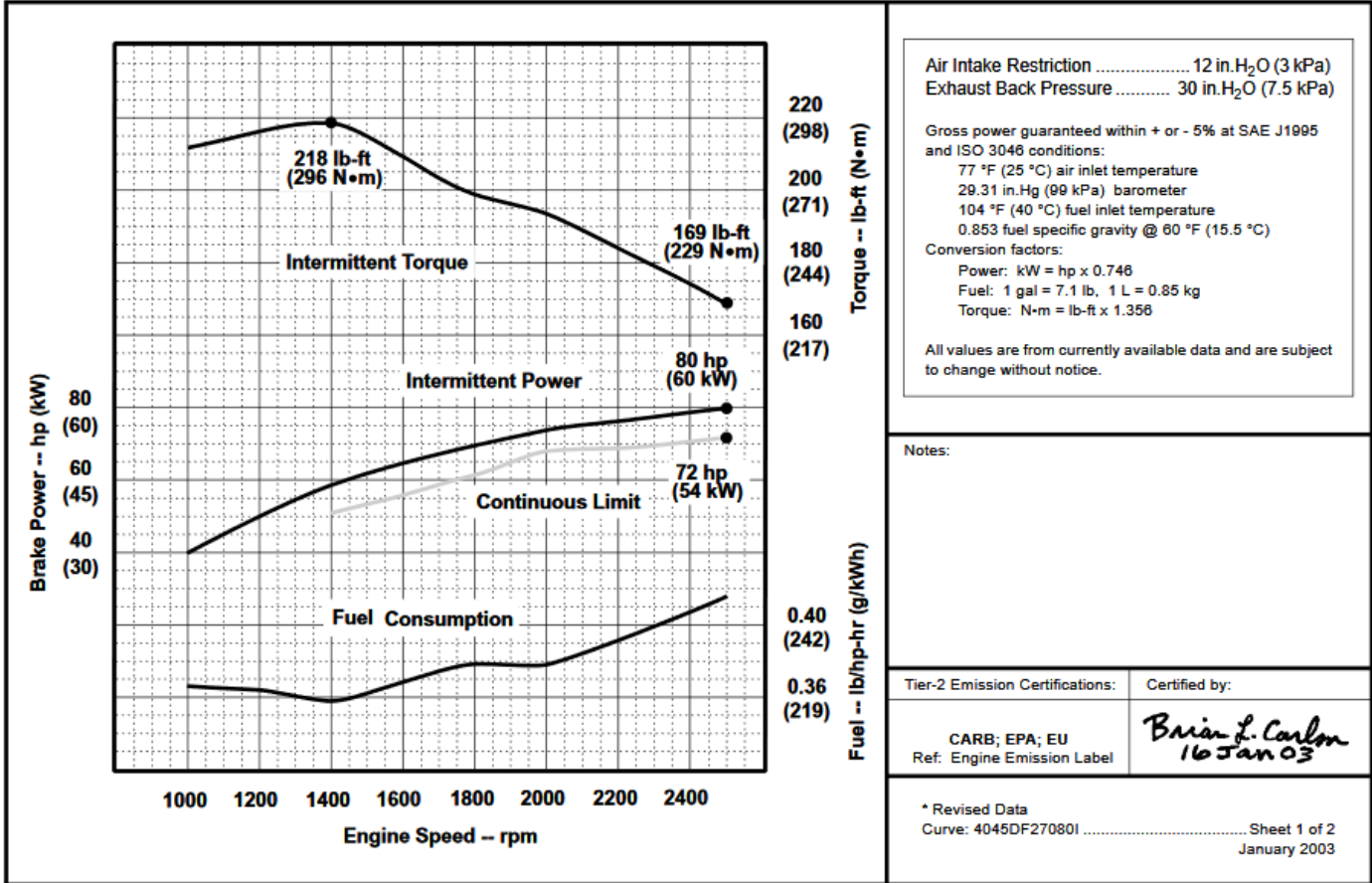


**ENGINE PERFORMANCE CURVE**

**PowerTech 4.5 L Engine**  
**Model: 4045DF270**

Rating: Gross Power  
 Application: Industrial  
 Intermittent / Continuous

**80 hp @ 2500 rpm**  
**60 kW @ 2500 rpm**



## **Appendix F**

### **Rotary Dryer and Rotary Polisher/Buffers' Natural Gas Use**

Detailed Consumption

**Organization** BASF **Start date** 1/1/17 12:00 AM  
**Node** 03831613090 [Billing Meter] **End date** 4/7/20 12:00 AM  
**Path** BASF > BCS Shafter CA > Suppliers and Utilities > SO CAL GAS CO > 03831613090 **Resolution** Monthly

Date	Natural Gas MMBTU	Natural Gas Cost \$
Jan-17	234.98	1875.15
Feb-17	105.04	842.92
Mar-17	68.19	560.69
Apr-17	22.59	206.40
May-17	4.50	57.92
Jun-17	2.76	41.37
Jul-17	1.92	33.40
Aug-17	10.54	113.50
Sep-17	85.95	651.30
Oct-17	181.35	1273.10
Nov-17	275.50	1908.18
Dec-17	271.27	1920.03
Jan-18	192.92	1386.76
Feb-18	84.12	647.37
Mar-18	95.40	694.81
Apr-18	53.83	409.46
May-18	11.00	103.70
Jun-18	4.27	53.84
Jul-18	161.24	1243.27
Aug-18	43.06	454.66
Sep-18	17.98	194.80
Oct-18	127.20	916.34
Nov-18	236.67	1857.66
Dec-18	241.67	2099.90
Jan-19	194.95	1768.84
Feb-19	150.06	1336.41
Mar-19	191.10	1691.53
Apr-19	134.10	1167.44
May-19	33.02	297.47
Jun-19	8.77	103.40
Jul-19	40.74	386.79
Aug-19	112.95	943.56
Sep-19	186.47	1507.96
Oct-19	179.71	1490.66
Nov-19	86.88	766.14
Dec-19	135.69	1247.51
Jan-20	138.00	1272.15
Feb-20	52.91	522.50
Mar-20	10.91	116.33
Apr-20		
<b>Sum</b>	<b>4,190.21</b>	<b>34,165.21</b>
<b>Average</b>	<b>107.44</b>	<b>876.03</b>
<b>Min</b>	<b>1.92</b>	<b>33.40</b>
<b>Max</b>	<b>275.50</b>	<b>2,099.90</b>

## **Appendix G**

### **White Seed Processed/Throughput Records**

**Delinter Operations                      2018**  
**Daily Production**

<b>Date:</b>	<b>Pounds of Fuzzy Delinted</b>	<b>Variety</b>	<b>Tons of Fuzzy Delinted</b>
1/2/2018	81180	FM 2334GLT	40.59
1/3/2018	97360	FM 2334GLT	48.68
1/4/2018	124000	FM 2334GLT	62
1/5/2018	98860	FM 2334GLT	49.43
1/8/2018	71540	FM 2334GLT	35.77
1/9/2018	79780	FM 2334GLT	39.89
1/10/2018	52000	FM 2334GLT	26
1/11/2018	96920	FM 2334GLT	48.46
1/12/2018	114460	FM 2334GLT	57.23
1/16/2018	115200	ST 4848GLT	57.6
1/17/2018	76580	ST 4848GLT	38.29
1/18/2018	51880	ST 4848GLT	25.94
1/19/2018	119740	ST 4848GLT	59.87
1/22/2018	24820	ST 4848GLT	12.41
1/23/2018	138380	ST 5020GLT	69.19
1/24/2018	53000	ST 5020GLT	26.5
1/25/2018	94900	FM 1888GL	47.45
1/26/2018	132980	FM 1888GL	66.49
1/29/2018	102980	FM 1888GL	51.49
1/30/2018	16500	FM 1888GL	8.25
1/31/2018	80440	ST 5517GLTP	40.22
2/1/2018	103580	ST 5517GLTP	51.79
2/2/2018	135300	ST 5517GLTP	67.65
2/3/2018	84580	ST 5517GLTP	42.29
2/5/2018	30560	ST 5517GLTP	15.28
2/7/2018	130200	FM 1830GLT	65.1
2/8/2018	118840	FM 1830GLT	59.42
2/9/2018	119380	FM 1830GLT	59.69
2/12/2018	100700	FM 1830GLT	50.35
2/13/2018	100360	FM 1830GLT	50.18
2/14/2018	134060	FM 1830GLT	67.03
2/15/2018	105640	FM 1830GLT	52.82
2/16/2018	95340	FM 1830GLT	47.67
2/17/2018	74780	FM 1830GLT	37.39
2/19/2018	96180	FM 1830GLT	48.09
2/20/2018	123420	FM 1830GLT	61.71
2/21/2018	81920	FM 1830GLT	40.96
2/22/2018	119600	FM 1830GLT	59.8
2/23/2018	98640	FM 1830GLT	49.32
2/26/2018	27920	FM 1830GLT	13.96
2/28/2018	121800	ST 5115GLT	60.9
3/2/2018	58720	ST 6448GLB2	29.36
3/6/2018	105000	FM 2334GLT	52.5
3/7/2018	103260	FM 2334GLT	51.63
3/8/2018	100420	FM 2334GLT	50.21
3/9/2018	92160	FM 2334GLT	46.08
3/12/2018	73220	FM 2334GLT	36.61
3/15/2018	97240	FM 1911GLT	48.62
3/16/2018	135020	FM 1911GLT	67.51

**Delinter Operations                      2018**  
**Daily Production**

<b>Date:</b>	<b>Pounds of Fuzzy Delinted</b>	<b>Variety</b>	<b>Tons of Fuzzy Delinted</b>
3/20/2018	111900	FM 1911GLT	55.95
3/28/2018	162200	FM 1911GLT	81.1
3/29/2018	127500	FM 1911GLT	63.75
4/3/2018	22760	FM 1911GLT	11.38
10/23/2018	19500	FM 1830GLT	9.75
10/25/2018	49320	FM 1830GLT	24.66
10/26/2018	58000	FM 1830GLT	29
10/27/2018	75100	FM 1830GLT	37.55
10/31/2018	122320	FM 1830GLT	61.16
11/2/2018	110040	FM 1830GLT	55.02
11/5/2018	118400	FM 1830GLT	59.2
11/6/2018	98040	FM 1830GLT	49.02
11/8/2018	118480	FM 1830GLT	59.24
11/13/2018	127500	FM 1830GLT	63.75
11/14/2018	120260	FM 1830GLT	60.13
11/16/2018	97160	FM 1830GLT	48.58
11/19/2018	85300	FM 2498GLT	42.65
11/20/2018	61920	FM 2334GLT	30.96
11/21/2018	83520	FM 2334GLT	41.76
11/23/2018	98000	FM 2334GLT	49
11/24/2018	98760	FM 2334GLT	49.38
11/26/2018	115300	FM 2334GLT	57.65
11/27/2018	130000	FM 2334GLT	65
11/28/2018	102000	FM 2334GLT	51
11/29/2018	110000	FM 2334GLT	55
11/30/2018	110000	FM 2334GLT	55
12/1/2018	96000	FM 2334GLT	48
12/3/2018	98580	FM 2334GLT	49.29
12/4/2018	118520	FM 2334GLT	59.26
12/5/2018	107500	FM 2334GLT	53.75
12/6/2018	110320	FM 2334GLT	55.16
12/7/2018	49700	FM 2334GLT	24.85
12/10/2018	77040	FM 2334GLT	38.52
12/11/2018	104340	FM 2334GLT	52.17
12/12/2018	121040	FM 2334GLT	60.52
12/13/2018	118900	FM 2334GLT	59.45
12/14/2018	120480	FM 2334GLT	60.24
12/15/2018	79880	FM 2334GLT	39.94
12/17/2018	54820	FM 1830GLT	27.41
12/18/2018	123440	FM 1830GLT	61.72
12/19/2018	116460	FM 1830GLT	58.23
12/20/2018	118180	FM 1830GLT	59.09
12/21/2018	100920	FM 1830GLT	50.46
12/26/2018	103300	FM 1830GLT	51.65
12/27/2018	130440	FM 1830GLT	65.22
12/28/2018	102920	FM 1830GLT	51.46
12/29/2018	100860	FM 1830GLT	50.43
12/30/2018	26040	FM 1830GLT	13.02
12/31/2018	72180	FM 1830GLT	36.09

Total                      4688.24



Delinter Operations		2019	
Daily Production Hours			
Date:	Pounds of Fuzzy Delinted	Variety	Tons of Fuzzy Delinted
1/2/2019	82920	FM 1830GLT	41.46
1/3/2019	112020	FM 1830GLT	56.01
1/4/2019	83000	FM 1830GLT	41.5
1/7/2019	87820	FM 1830GLT	43.91
1/8/2019	97200	FM 1830GLT	48.6
1/9/2019	69760	FM 1830GLT	34.88
1/10/2019	86880	FM 1830GLT	43.44
1/11/2019	111800	FM 1830GLT	55.9
1/12/2019	91200	FM 1830GLT	45.6
1/14/2019	105980	FM 1830GLT	52.99
1/15/2019	116700	FM 1830GLT	58.35
1/16/2019	112520	FM 1830GLT	56.26
17-Jan-19	110500	FM 1830GLT	55.25
18-Jan-19	106500	FM 1830GLT	53.25
19-Jan-19	104720	FM 1830GLT	52.36
21-Jan-19	50400	FM 1830GLT	25.2
23-Jan-19	90400	FM 1953GLTP	45.2
24-Jan-19	97200	FM 1953GLTP	48.6
25-Jan-19	102440	FM 1953GLTP	51.22
28-Jan-19	36660	FM 1953GLTP	18.33
29-Jan-19	25700	ST 5471GLTP	12.85
30-Jan-19	110480	ST 5471GLTP	55.24
31-Jan-19	113100	ST 5471GLTP	56.55
1-Feb-19	116520	ST 5471GLTP	58.26
2-Feb-19	110680	ST 5471GLTP	55.34
3-Feb-19	109320	ST 5471GLTP	54.66
4-Feb-19	111960	ST 5471GLTP	55.98
5-Feb-19	108640	ST 5471GLTP	54.32
6-Feb-19	44720	ST 5471GLTP	22.36
8-Feb-19	49000	Acala DaytonaRF	24.5
11-Feb-19	25320	FM 2498GLT	12.66
12-Feb-19	91320	FM 2498GLT	45.66
13-Feb-19	99100	FM 2498GLT	49.55
14-Feb-19	102660	FM 2498GLT	51.33
15-Feb-19	103760	FM 2498GLT	51.88
19-Feb-19	106440	FM 2498GLT	53.22
20-Feb-19	108220	FM 2498GLT	54.11
23-Feb-19	107760	FM 2498GLT	53.88
25-Feb-19	108720	FM 2498GLT	54.36
26-Feb-19	114440	FM 2498GLT	57.22
28-Feb-19	112440	FM 2498GLT	56.22
1-Mar-19	36500	FM 2498GLT	18.25
2-Mar-19	25760	FM 1320GL	12.88
4-Mar-19	84660	FM 1320GL	42.33
5-Mar-19	83960	FM 1320GL	41.98
7-Mar-19	89260	FM 1320GL	44.63
9-Mar-19	97980	FM 1320GL	48.99
11-Mar-19	98440	FM 1320GL	49.22
13-Mar-19	18500	FM 1888GL	9.25



Delinter Operations		2019	
Daily Production Hours			
Date:	Pounds of Fuzzy Delinted	Variety	Tons of Fuzzy Delinted
14-Mar-19	64660	FM 1888GL	32.33
15-Mar-19	82500	FM 1888GL	41.25
16-Mar-19	85980	FM 1888GL	42.99
17-Mar-19	88660	FM 1888GL	44.33
18-Mar-19	83780	FM 1888GL	41.89
19-Mar-19	84660	FM 1888GL	42.33
20-Mar-19	94500	FM 1888GL	47.25
21-Mar-19	93700	FM 1888GL	46.85
23-Mar-19	92500	FM 1888GL	46.25
25-Mar-19	89900	FM 1888GL	44.95
26-Mar-19	91380	FM 1888GL	45.69
27-Mar-19	42720	FM 1888GL	21.36
28-Mar-19	17300	FM 2574GLT	8.65
29-Mar-19	91320	FM 2574GLT	45.66
30-Mar-19	102440	FM 2574GLT	51.22
2-Apr-19	105320	FM 2574GLT	52.66
3-Apr-19	103960	FM 2574GLT	51.98
4-Apr-19	25100	FM 2574GLT	12.55
5-Apr-19	72500	ST 5020GLT	36.25
18-Nov-19	37700	FM 2398GLTP	18.85
20-Nov-19	80500	FM 2398GLTP	40.25
22-Nov-19	77120	FM 2398GLTP	38.56
25-Nov-19	83760	FM 2398GLTP	41.88
26-Nov-19	87300	FM 2398GLTP	43.65
27-Nov-19	82500	FM 2398GLTP	41.25
2-Dec-19	77120	FM 2398GLTP	38.56
3-Dec-19	35120	FM 2398GLTP	17.56
6-Dec-19	40440	ST 6182GLT	20.22
9-Dec-19	46240	ST 6182GLT	23.12
11-Dec-19	57000	FM 2484B2F	28.5
12-Dec-19	84720	FM 2484B2F	42.36
13-Dec-19	89980	FM 2484B2F	44.99
16-Dec-19	98720	FM 2484B2F	49.36
16-Dec-19	96500	FM 2484B2F	48.25
17-Dec-19	50640	FM 2484B2F	25.32
18-Dec-19	84720	FM 1953GLTP	42.36
19-Dec-19	80500	FM 1953GLTP	40.25
20-Dec-19	82720	FM 1953GLTP	41.36
23-Dec-19	80500	FM 1953GLTP	40.25
23-Dec-19	79120	FM 1953GLTP	39.56
30-Dec-19	84460	FM 1953GLTP	42.23
31-Dec-19	78500	FM 1953GLTP	39.25

Total

3790.37

## **Appendix H**

### **PM10/PM2.5 Percentage Determination**

- For natural gas combustion: 100% of PM10 is PM2.5 for natural gas combustion (CARB Database P10/PM2.5)
- For diesel IC engines: 97% of PM10 is PM2.5 (Table 3.4-2 of AP-42 3.4)
- For cotton gins: 16% of PM10 is PM2.5 for cotton gins (p. C-64 of SJVAPCD 2018 PM 2.5 Attainment Plan)

The PM2.5 percentage of PM10 is calculated below:

<b>PM2.5 percentage of PM10 (lbs/Qtr)</b>				
<b>Pollutant</b>	<b>1<sup>st</sup> Qtr</b>	<b>2<sup>nd</sup> Qtr</b>	<b>3<sup>rd</sup> Qtr</b>	<b>4<sup>th</sup> Qtr</b>
Diesel IC Engine	0	0	0	1 x 0.97 = 1
Rotary Dryer and Rotary Polisher/Buffer	3 x 1.00 = 3	1 x 1.00 = 1	2 x 1.00 = 2	4 x 1.00 = 4
Dryer and Buffer Cyclones	978 x 0.16 = 156	30 x 0.16 = 5	0 x 0.16 = 0	560 x 0.16 = 90
<b>Total PM2.5</b>	<b>159</b>	<b>6</b>	<b>2</b>	<b>95</b>
<b>Bankable PM10</b>	<b>883</b>	<b>28</b>	<b>2</b>	<b>509</b>
<b>Total PM2.5 percentage of PM10 (total PM2.5/bankable PM10)</b>	<b>18.0</b>	<b>21.4</b>	<b>100</b>	<b>18.7</b>

# **Appendix I**

## **Draft Emissions Reduction Credit Certificates**

*San Joaquin Valley  
Air Pollution Control District*

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

**Emission Reduction Credit Certificate**

**S1202740-364-1**

ISSUED TO: BASF CORPORATION

ISSUED DATE: <DRAFT>

LOCATION OF REDUCTION: 561 N AMERICAN ST  
SHAFTER, CA

For VOC Reductions In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3 lbs	1 lbs	2 lbs	5 lbs

**Method Of Reduction**

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

**Shutdown of Facility**

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.

Samir Sheikh, 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**

**S1202740-364-2**

ISSUED TO: BASF CORPORATION

ISSUED DATE: <DRAFT>

LOCATION OF REDUCTION: 561 N AMERICAN ST  
SHAFTER, CA

For NOx Reductions In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
41 lbs	11 lbs	25 lbs	61 lbs

**Method Of Reduction**

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

**Shutdown of Facility**

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.

Samir Sheikh, 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**

**S1202740-364-3**

DRAFT

ISSUED TO: BASF CORPORATION  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 561 N AMERICAN ST  
SHAFTER, CA

For CO Reductions In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
151 lbs	41 lbs	94 lbs	175 lbs

**Method Of Reduction**

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

**Shutdown of Facility**

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.

Samir Sheikh, Executive Director / AP/CO

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**

**S1202740-364-4**

DRAFT

ISSUED TO:           BASF CORPORATION  
ISSUED DATE:        <DRAFT>  
LOCATION OF  
REDUCTION:         561 N AMERICAN ST  
                          SHAFTER, CA

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

Quarter 1	Quarter 2	Quarter 3	Quarter 4
883 lbs	28 lbs	2 lbs	509 lbs

**Portion of above PM10 Reductions that is PM2.5:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
18.0%	21.4%	100.0%	18.7%
159 lbs	6 lbs	2 lbs	95 lbs

**Method Of Reduction**

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

**Shutdown of Facility**

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.

Samir Sheikh, Executive Director / APCO

DRAFT

\_\_\_\_\_  
Arnaud Marjollet, Director of Permit Services



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Air Pollution Control District*

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**Emission Reduction Credit Certificate**

**S1202740-364-5**

ISSUED TO: BASF CORPORATION

ISSUED DATE: <DRAFT>

LOCATION OF REDUCTION: 561 N AMERICAN ST  
SHAFTER, CA

For SO<sub>x</sub> Reductions In The Amount Of:

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

**Method Of Reduction**

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

Shutdown of Facility

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.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services