San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

January 6, 2026

Garrett Howser
Howser Almond Shelling Inc.
5130 Shoemake Ave
Modesto, CA 95358

Re: Notice of Preliminary Decision – Emission Reduction Credits
Facility Number: N-1972
Project Number: N-1210213

Dear Mr. Howser:

Enclosed for your review and comment is the District's revised analysis of Howser Almond Shelling Inc.'s application for Emission Reduction Credits (ERCs) resulting from replacing two exisitng cyclones with baghouses for their existing almond hulling and shelling operation, at 5130 Shoemake Ave in Modesto, California. The revised quantity of ERCs proposed for banking is 612 lb-PM10/yr.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice comment period, the District intends to the issue the ERCs. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jag Kahlon of Permit Services at (209) 557-6452.

Sincerely,

Brian Clements
Director of Permit Services

BC:JK

Enclosures

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

Samir Sheikh
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

ERC Banking Application Review
(Revised)

Facility Name:	Howser Almond Shelling Inc.	Revised Date:	January 6, 2025
Mailing Address:	5130 Shoemake Ave	Engineer:	Jagmeet Kahlon
	Modesto, CA 95358	Lead Engineer:	James Harader
Contact Person:	Garrett Howser		
Telephone:	(209) 988-1388		
Fax:	N/A		
Facility ID:	N-1972		
Project #:	N-1210213		
Deemed Complete:	February 13, 2023		

I. PROPOSAL

Howser Almond Shelling Inc. has proposed to bank Emission Reduction Credits (ERCs) from replacing two existing cyclones with two baghouses for their existing almond hulling and shelling operation. The following table provides the summary of revised bankable emission reductions on a quarterly basis.

Bankable Emission Reductions in lb/quarter				
Pollutant	**1st Quarter**	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
PM_{10}	0	0	491	121
$PM_{2.5}$ in PM_{10}	0	0	324	80

Refer to **Appendix I** for draft ERC Certificates.

This evaluation has been revised since it was originally noticed. After posting the public notice on 12/22/25, the District discovered an error in the emission factor used in the ATC engineering evaluation that was referenced in the Districts ERC banking calculations. The ATC project in question used a post-project emission factor of 0.013 lb-PM10/field weight ton (FWT) of almonds hulled/shelled; however, that factor is the AP-42 generally accepted emission factor for an almond hulling operation served by a baghouse where the almonds are not shelled. The AP-42 emission for an almond hulling/shelling operation, such as this operation, served by a baghouse is in fact 0.065 lb-PM/FWT, and the District typically assumes all of that is PM10. Thus, permit N-1972-2-1 has been corrected to reference the appropriate emission factor for a hulling/shelling operation, and the ERC calculations have been corrected. Refer to section V.E of this document for revised detailed calculations.

II. APPLICABLE RULES

Rule 2201 New and Modified Stationary Source Review Rule (4/20/23)
Rule 2301 Emission Reduction Credit Banking (4/20/23)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4202 Particulate Matter – Emissions Rate (12/17/92)

III. LOCATION OF REDUCTIONS

The emission reduction occurred at 5130 Shoemake Ave, in Modesto, California.

IV. METHOD OF GENERATING REDUCTIONS

The facility generated emission reductions by modifying an existing almond hulling and shelling operation (N-1972-2-1) by replacing their existing cyclones with baghouses.

V. EMISSIONS CALCULATIONS

A. Assumptions

1. Particulate matter is the only pollutant emitted from hulling and shelling operation.
2. Other assumptions will be stated as they are made.

B. Emission Factors (EF)

A pre-modification emission factor is needed in order to determine the quantity of emission reductions that occurred. The emission reductions may then be determined by subtracting the post-project potential to emit for the almond hulling and shelling operation from the pre-modification baseline actual emissions. The following analysis compares potential pre-modification emission factors for the hulling and shelling operation when controlled by cyclones. The lowest emission factor will be conservatively chosen, as that will result in the lowest quantity of emission reductions that may be banked.

Pre-Modification Emission Factor based on Source Testing:
No source testing was conducted at this specific facility for almond hulling & shelling operation.

Stewart and Jasper (N-2199), operates a similar almond processing facility that includes an almond hulling and shelling operation under permit N-2199-7-2. That operation includes hulling cylinders, crackers, shear rolls, deck screens, gravity table and associated aspirating/conveying equipment all discharged through a baghouse. The baghouse exhaust was source tested on October 14, 1998. The

average total (filterable + condensable) particulate matter emissions were 0.246 pounds per meat weight tons (MWT). It is assumed that all particulate matter release from the baghouse is 10 microns or less in diameter (PM10).

The equipment at Stewart and Jasper performs a function similar to the equipment under permit N-1972-2-1 at Howser Almond Shelling. Therefore, this source test is used here to estimate actual emissions from the cyclones.

Note, Howser Almond Shelling Inc. keeps track of throughput for their huller/sheller in terms of field weight tons (FWT) rather than meat weight tons (MWT). The District typically assumes that 5 FWT will yield 1 MWT of almonds. Thus, this ratio will be used to convert the source tested emission factor into terms of FWT. Furthermore, the source testing at Stewart and Jasper was conducted on a hulling/shelling operation that is served by baghouses. The factor may be adjusted using the standard control efficiencies for a baghouse and 1D-3D cyclone, shown below.

EF (Source Test):	0.246 lb-PM10/MWT
Control Efficiency (Baghouse):	99% (typical for baghouses)
Control Efficiency (1D-3D cyclone):	80% (AP-42, appendix B-2)

The following calculation converts the source test results into FWT and adjusts the factor to be appropriate for a huller/sheller served by cyclones using the above standard control efficiencies.

(0.246 lb-PM_{10}/MWT) × (1 MWT/FWT) × [(1-0.80)/(1-0.99)]
= 0.984 lb-PM_{10}/FWT

Thus, a pre-modification emission factor of 0.984 lb-PM10/FWT is estimated using the source test data and standard District assumptions.

Pre-Modification Emission Factor based on EPA's AP-42

AP-42 Table 9.10.2.1-1 (1/95) lists an EF of 0.065 lb-PM/FWT (0.051 lb-PM/FWT filterable + 0.014 lb-PM/FWT condensable) for hulling/shelling operation served by a baghouse. It is assumed that all particulate matter release from the baghouse is 10 microns or less in diameter (PM10). Note, the above factor must be adjusted to be appropriate for a huller/sheller served by a cyclone. The standard control efficiencies, shown below, will be used to adjust the factor.

EF (AP-42):	0.065 lb-PM10/FWT
Control Efficiency (Baghouse):	99% (typical for baghouses)
Control Efficiency (1D-3D cyclone):	80% (AP-42, appendix B-2)

The following calculation adjusts the factor to be appropriate for a huller/sheller served by cyclones using the above standard control efficiencies.

= (0.065 lb-PM_{10}/FWT) × [(1-0.80)/(1-0.99)]
= 1.3 lb-PM_{10}/FWT

Comparison of Pre-Modification Emission Factors

Prior to the modification of the huller sheller permit, the permit only contained an emission limit of 0.1 gr/dscf, which is the Rule 4201 limit for the unit.

Operations	Permit Limit	Source Testing/ other sources	AP-42
Almond hulling/shelling operation	0.1 gr/dscf estimated to be equivalent to 1.029 lb-PM_{10}/FWT*	0.984 lb-PM_{10}/FWT	1.3 lb-PM_{10}/FWT

*0.1 gr-PM/dscf x 8,000 dscf/min x 60 min/hr x lb/7,000 gr x 0.9 lb-PM_{10}/lb-PM x hr/6 FWT = 1.029 lb-PM_{10}/FWT; exhaust flow rate (8,000 cfm) and process rate (6 FWT/hr) are taken from application review prepared under permit number 1-059-02 (July 7, 1992).

Note, the AP-42 emission factors for almond processes have an E rating, which means the data is not highly reliable. The source test results from a similar source is expected to be more accurate of actual emissions. Furthermore, use of the source test data from a similar operation provides the most conservative estimate of actual emissions since the EF from that source is the lowest of the potential factors that may be used to calculate HAE.

C. Baseline Period

Section 3.8 of District Rule 2201 defines the baseline period as a period of time equal to either the two consecutive years of operation immediately prior to the submission date of the complete application; or at least two consecutive years within the five years immediately prior to the submission of the complete application if it is more representative of normal source operations.

The baseline period is Q4, 2017 to Q3, 2019. Refer to **Appendix II** for more details on baseline period calculation.

D. Historical Actual Emissions

Historical Actual Emissions (HAEs) are emissions that actually occurred, and are calculated from actual production records and established emission factors per Rule 2201, Section 3.2.1.

The quarterly baseline production data in field weight tons (FWT) is given in the following table.

Quarterly FWT Data (FWT/qtr)				
Year	**Q1**	**Q2**	**Q3**	**Q4**
2017	N/A	N/A	N/A	2,172
2018	0	0	8,148	2,716
2019	0	0	7,581	N/A
Average	**0**	**0**	**7,865**	**2,444**

The HAEs will be calculated by multiplying the average quarterly throughput with the lowest emission factor noted in Section V.B of this evaluation.

HAE = EF_{PM10} (lb/FWT) × Average Process throughput (FWT/qtr)

Quarterly HAEs (lb)			
Quarter	**Average Process Throughput (FWT/qtr)**	**EF_{PM10} (lb/FWT)**	**HAEs (lb/qtr)**
1	0	0.984	0
2	0		0
3	7,865		7,739
4	2,444		2,405

E. Actual Emissions Reductions

Per Rule 2201, Section 4.13:

AERs = HAE – Post Project Potential to Emit (PE2)

Per project N-1204537, PE2 from the almond hulling and shelling operation is 1,893 lb-PM10/yr. These emissions were determined using EPA's AP-42 emission factor of 0.013 lb-PM10/FWT from Table 9.10.2.1-1 (1/95) for hulling operation served by a baghouse, and annual throughput of 145,600 FWT/yr.

The application filed under project N-1204537 indicates that the facility has both hulling and shelling operations. As such, an emission factor of hulling and shelling operation served by baghouse should be used in estimating the potential emissions.

Per EPA's AP-42 Table 9.10.2.1-1 (1/95), emission factor for hulling and shelling operation served by baghouse is 0.065 lb-PM/FWT (0.051 lb-PM/FWT filterable +

0.014 lb-PM/FWT condensable). It is assumed that all particulate matter release from the baghouse is PM10. The processing rate is limited to 145,600 FWT/yr. Thus,

PE2 = 0.065 lb-PM10/FWT x 145,600 FWT/yr
= 9,464 lb-PM10/yr

Emissions inventory records during the baseline (Q4, 2017-Q3, 2019) indicate that 76% of almonds were processed in the 3rd quarter and the remaining 24% are processed in the 4th quarter. These percentages are applied to distribute the annual potential emissions to the 3rd and 4th quarters.

Quarterly AERs (lb)			
Quarter	**HAEs (lb/qtr)**	**PE2 (lb/qtr)**	**AERs (lb/qtr)**
1	0	0	0
2	0	0	0
3	7,739	7,193*	546
4	2,405	2,271**	134

*0.76 x 9,464 = 7,193 lb-PM_{10}; **9,464 – 7,193 = 2,271 lb-PM_{10}

F. Air Quality Improvement Reduction

The air quality improvement deduction, per Rule 2201, Section 4.13.1, is 10% of the AERs.

Air Quality Improvement Deduction (lb)		
Quarter	**AERs (lb/qtr)**	**10% Deduction**
1	0	0
2	0	0
3	546	55
4	134	13

G. Increases in Permitted Emissions

There is no increase in permitted emissions due to this project.

H. Bankable Emission Reductions

The bankable ERCs presented below are determined by subtraction of the Air Quality Improvement Deductions from the AERs.

Bankable Emission Reductions (lb)	
Quarter	**PM_{10}**
1	0
2	0
3	491*
4	121**
Total	**612**

*546-55 =491 lb-PM10; **134-13 = 121 lb-PM10

VI. COMPLIANCE

To comply with the definition of Actual Emissions Reductions (Rule 2201, Section 3.2.1 and Rule 2301, Sections 3.8 and 4.2.1), the reductions must be:

A. Real

The emissions reductions are real since they were generated by replacing the cyclones with baghouses for almond hulling and shelling operation at the facility.

B. Enforceable

The reductions are enforceable since the cyclones are permanently replaced by the baghouses; any modification or changes to operation would require an Authority to Construct permit. The permit has been corrected to include the 0.065 lb/FWT limit.

The following condition will be added to the hulling/shelling permit as part of the ERC issuance:

- PM10 emissions shall not exceed any of the following limits: 1st quarter: 0 pounds, 2nd quarter: 0 pounds, 3rd quarter: 7,193 pounds and 4th quarter: 2,271 pounds. This condition enforces emission reduction credits banked under project N-1210213. [District Rules 2201 and 2301]

C. Quantifiable

The reductions are quantifiable since they were calculated from historic throughput data, and established EFs, and methods according to District Rule 2201.

D. Permanent

The reductions are permanent since the facility has permanently replaced the cyclones with baghouses to achieve the proposed emission rates. Therefore, the reductions are considered to be permanent.

E. Surplus

This section will contain an explanation of what actions were taken to ensure that all emission reductions were surplus of the existing and newly proposed rules and plans. The following rules and plans were analyzed:

District Rules

Rule 2201 New and Modified Stationary Source Review
This facility was in operation prior to the District unification in 1992.

Permit to Operate N-1972-2-0 that listed the cyclones only includes PM emission limit of 0.1 gr/dscf at the exhaust of each cyclone. The engineering evaluation for permit number 1-059-02 (July 1992) indicate each huller/sheller cyclone was rated at 8,000 scfm.

The following tables summarizes and compares Maximum allowed and HAE:

E_{Max} = 0.1 (gr-PM/dscf) x 8,000 ft^3/min x 60 min/hr x 24 hr/day x lb/7,000 gr x *Number of days in a quarter days/qtr
*Q1 = 90 days; Q2 = 91 days; Q3 = 92 days; and Q4 = 92 days

Permit Limit	E_{Max} (lb)				HAE (lb)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
0.1 gr-PM/scf	14,811	14,976	15,141	15,141	0	0	7,739	2,405

A
As seen in the above table, HAE for each quarter is below the PE during that quarter. Therefore, no emission adjustment is needed, and reductions are surplus of the permitted limits.

Rule 4201 Particulate Matter Concentration
Section 3.0 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

As noted in the table above under Rule 2201, since the reductions are surplus of the quarterly emissions, they are presumed to be surplus of the maximum 0.1 gr/dscf limit in the rule.

Rule 4202 Particulate Matter – Emissions Rate

Section 4.0 of this rule, a person shall not discharge into the atmosphere PM emissions in excess of the maximum allowable limit (E_{Max}), in lb/hr, determined by the following specified in this Rule:

$E_{Max} = 3.59\ P^{0.62}$, Process weight (P) ≤ 30 tons/hr
$E_{Max} = 17.31\ P^{0.16}$, P > 30 tons/hr

The maximum emissions occur in the Q3 during which an average of 7,865 tons of material was processed during the baseline period. The average process rate is estimated to be 3.56 tons per hour[1].

$E_{Allowable}$ = (3.59)(3.56)$^{0.62}$(24 hr/day)(92 days/qtr)(0.9 lb-PM_{10}/lb-PM)
= 15,676 lb-PM_{10}/qtr

Since the HAE is less than the allowable emissions for each quarter, the reductions are surplus of District Rule 4202 requirements.

Air Quality Plans

Pursuant to Section 3.2.2 of Rule 2201, to be considered surplus, the actual emissions reductions shall be in excess of adopted air quality plan pursuant to the California Clean Air Act. The adopted air quality plans by the District are discussed as follows:

None of the District's Air Quality plans proposed a specific control measure to reduce particulate matter emissions from almond processing operations. Nor has any such proposal been workshopped by the District.

Rules and Regulations in State Implementation Plan

Pursuant to Section 3.2.1 of District Rule 2201, to be considered surplus, actual emission reductions shall be in excess of a control measure noticed for workshop, or proposed or contained in a State Implementation Plan (SIP).

The following SIP approved rules and regulations[2] in the other air Districts were reviewed to determine any requirements for almond hulling/shelling operations

[1]The process rate is calculated as follows: (7,865 tons in Q3) ÷ (24 hr/day x 92 days in Q3) = 3.56 tons/hr
[2]https://www.epa.gov/sips-ca

Sacramento Metropolitan Air District Regulations in the California SIP

Rule 404 – Particulate Matter (11/20/1984)[3]
This rule requires that a person shall not discharge into the atmosphere from any source of particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

The requirements of this rule are identical to SJVAPCD Rule 4201. Since the emission reductions are surplus of Rule 4201, they are considered to be surplus of this rule.

South Coast Air District Regulations in the California SIP[4]

Rule 404 – Particulate Matter - Concentration (2/7/1986)[5]
This rule requires that a person shall not discharge into the atmosphere from any source of particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

The requirements of this rule are identical to SJVAPCD Rule 4201. Since the emission reductions are surplus of Rule 4201, they are considered to be surplus of this rule.

Note that Regulation XI – Source Specific Standards does not contain any rule that is applicable to the almond hulling/shelling operations.

BAAQMD Air District Regulations in the California SIP[6]

BAAQMD rules[7] does not contain any rule that is applicable to the almond hulling/shelling operations. As such, the HAEs calculated above does not need to be discounted and all bankable emission reductions are considered surplus at this time.

Conclusion:

The emission reductions are surplus.

[3] https://www.airquality.org/ProgramCoordination/Documents/rule404.pdf
[4] https://www.epa.gov/sips-ca/epa-approved-south-coast-air-district-regulations-california-sip#xi
[5] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-404.pdf?sfvrsn=4
[6] https://www.epa.gov/sips-ca/epa-approved-bay-area-air-quality-management-district-baaqmd-regulations-california-sip
[7] https://www.baaqmd.gov/rules-and-compliance/current-rules

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

The ERCs generated were not used for the approval of any Authority to Construct or as offsets.

G. Timely Submittal

Section 5.5 of Rule 2301 states that ERC certificate applications for reductions shall be submitted within 180 days after shutdown (date of permanent cession of emissions). The ERC application was submitted prior to the replacement of the cyclones with the baghouse; therefore, the ERC application meets the timeliness requirement of District Rule 2301.

VII. RECOMMENDATION

The District recommends that ERC Certificate be issued to Howser Almond Shelling Inc. for the amount indicated in the following table. Also, the applicant should be required to revise an emission factor to 0.065 lb-PM10/FWT and establish quarterly PM10 limits of Q1: 0 lb, Q2: 0 lb, Q3: 7,193 lb, and Q4: 2,271 lb in permit N-1972-2 to enforce the actual emission reductions, noted in section V.E above. PM2.5 in PM10 calculations are in Appendix III of this document.

Bankable Emission Reductions in lb/quarter				
Pollutant	**1st Quarter**	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
PM_{10}	0	0	491	121
$PM_{2.5}$ in PM_{10}	0	0	324	80

APPENDICES

Appendix I: Draft ERC Certificate
Appendix II: Baseline Period Calculations
Appendix III: $PM_{2.5}/PM_{10}$ Calculations
Appendix IV: Source Test Summary
Appendix V: Permit to Operate N-1972-2-1

Appendix I

Draft ERC Certificate

San Joaquin Valley
Air Pollution Control District

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718

Emission Reduction Credit Certificate

N-1655-4

ISSUED TO: HOWSER ALMOND SHELLING INC

ISSUED DATE: <DRAFT>

LOCATION OF REDUCTION: 5130 SHOEMAKE AVE
MODESTO, CA 95358

For PM10 Reductions In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
None	None	491 lbs	121 lbs

Portion of above PM10 Reductions that is PM2.5:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
0.0%	0.0%	65.9%	65.9%
None	None	324 lbs	80 lbs

Method Of Reduction

[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Units
[X] Other

Modification to almond hulling/shelling operation to replace cyclones with two baghouses

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

_____

Brian Clements, Director of Permit Services

Appendix II
Baseline Period Calculation

Baseline Period Determination

Howser Almond Shelling has provided operational data and processing rate in Emissions Inventory statements from 2016 through 2020. This data is used to estimate the monthly processing rates, which are then used estimate the quarterly production data. The following table summarizes annual process rate, operating data and estimated monthly process rates.

Year	Actual Process rate FWT/yr	Operating Data					Estimated Monthly Process Rate (FWT)				
		Aug	Sep	Oct	Nov	Dec	Aug	Sep	Oct	Nov	Dec
2020	19,468	20%	25%	25%	25%	5%	3,894	4,867	4,867	4,867	973
2019	10,108	25%	50%	25%	ND	ND	2,527	5,054	2,527	0	0
2018	10,864	25%	50%	25%	ND	ND	2,716	5,432	2,716	0	0
2017	8,686	25%	50%	25%	ND	ND	2,172	4,343	2,172	0	0
2016	6,915	25%	50%	25%	ND	ND	1,729	3,458	1,729	0	0

*ND = No data

The following table summarizes the quarterly production data using monthly production records in the above table:

Calendar Quarter	Processing Rate (FWT)	8 Quarter Difference
Q3 2016	5,186	
Q4 2016	1,729	
Q1 2017	0	
Q2 2017	0	
Q3 2017	6,515	
Q4 2017	2,172	
Q1 2018	0	
Q2 2018	0	577
Q3 2018	8,148	207
Q4 2018	2,716	83
Q1 2019	0	83
Q2 2019	0	83
Q3 2019	7,581	50
Q4 2019	2,527	95
Q1 2020	0	95
Q2 2020	0	95
Q3 2020	8,761	171
Q4 2020	10,707	1,170
Q1 2021	0	1,170
Q2 2021	0	1,170
Average:	2,802	

The values in this column represent the absolute value of the difference between the facility's quarterly processing rate averaged over the last 5 years since the date the application was complete (2,802 tons - considered to be "normal" source operation) and the quarterly processing rate averaged over the previous 8 consecutive calendar quarters starting with Q3 2016. The smallest "difference" is assumed to be the 8 consecutive calendar quarter period whose averaged processing rate most closely represents "normal" source operation. For example:

50 = ABS(2,802 - (SUM(Q4 2017 through

Since this value is the smallest "difference", the 8 consecutive calendar quarter period associated with it (Q4 2017 - Q4 2019) is assumed to most closely represent "normal" source operation. Therefore, the baseline period is from **Q4 2017 - Q3 2019.**

Appendix III

$PM_{2.5}/PM_{10}$ Calculations

PM2.5/PM10 Calculations

- Assumptions
    - The back-half of the particulate matter sampling train is assumed to capture condensable particulate matter of 2.5 microns or lesser in size.
    - All emissions at the baghouse exit are assumed to be 10 microns or less.

- $PM_{2.5}/PM_{10}$ Fraction

  Source testing conducted at Stewart and Jasper on 10/14/98 indicates a total average of 0.388 lb/hr (0.102 + 0.286) of back-half organic and inorganic particulate matter captured in a total particulate matter emissions of 0.589 lb/hr. Thus, PM2.5/PM10 fraction would be 65.9% (0.388/0.589).

- $PM_{2.5}$ Emissions

  Q1: 0 lb
  Q2: 0 lb
  Q3: 491 lb-PM10 x 0.659 lb-PM2.5/lb-PM10 = 324 lb-PM2.5
  Q4: 121 lb-PM10 x 0.659 lb-PM2.5/lb-PM10 = 80 lb-PM2.5

Appendix IV
Source Test Summary

STEWART & JASPER

Newman, CA

Source Test Report

Particulate Compliance Emissions Tests

Hulling & Shelling Stack

Test Date: October 14, 1998

TABLE #1
Stewart & Jasper
Baghouse Outlet
PARTICULATE EMISSIONS TEST RESULTS

RUN #	1	2	3	AVERAGE
TEST DATE	10/14/98	10/14/98	10/14/98	
TEST TIME	1038-1149	1302-1412	1437-1617	
SAMPLE VOLUME (DSCF)	48.246	48.436	47.817	
ISOKINETIC (%)	208.4	100.6	101.1	
DUCT TEMP., (°F)	77.4	80.9	81.4	79.9
VELOCITY (ft/sec)	68.00	68.96	67.49	68.15
FLOW RATE (ACFM)	80,113	81,247	79,512	80,290
FLOW RATE (DSCFM)	74,728	75,013	73,686	74,476
H_2O (volume %)	0.76	1.14	0.67	0.86
Production Rate, TPH	2.96	2.96	1.98	
F.H. Particulate Conc. (gr/DSCF)	0.0003	0.0002	0.0004	0.0003
F.H. Particulate Emissions (Lbs/hr)	0.18	0.13	0.27	0.20
Organic Particulate Conc. (gr/DSCF)	<0.0002	<0.0002	<0.0002	<0.0002
Organic Particulate Emissions (Lbs/hr)	<0.102	<0.102	<0.102	<0.102
Inorganic Particulate Conc. (gr/DSCF)	0.0006	0.0006	0.0003	0.0004
Inorganic Particulate Emissions (Lbs/hr)	0.389	0.389	0.183	0.286
Tot. Particulate Conc. (gr/DSCF)	**0.0011**	**0.0010**	**0.0009**	**0.0009**
Tot. Particulate Emissions (lbs/hr)	**0.674**	**0.621**	**0.558**	**0.589**
Particulate Emission Factor (lbs/ton)	**0.228**	**0.210**	**0.282**	**0.246**

Note: Run 1 test results not used in average.

WHERE

DSCF = Sample Volume in Dry Standard Cubic Feet
ACFM = Actual Cubic Feet per Minute
DSCFM = Dry Standard Cubic Feet per Minute
H_2O, volume % = Stack gas percent water vapor
gr/DSCF = Particulate concentration in grains per DSCF
lbs/hr = Particulate emission rate
lbs/ton = Particulate emission factor

CALCULATIONS

gr/DSCF = 0.01543 * Sample Wt. / Sample Volume
lbs/hr Emission Rate = 0.00857 * gr/DSCF * DSCFM
lbs/ton Emission Factor = lbs/hr/tons per hour

Appendix V
Permit to Operate N-1972-2-1

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1972-2-1 **EXPIRATION DATE:** 06/30/2026

EQUIPMENT DESCRIPTION:
ALMOND HULLING AND SHELLING OPERATION CONSISTING OF 11 STAGES OF SHEAR ROLLING AND HARDSHELL CRACKING EQUIPMENT INCLUDING 16 SHEAR ROLLS, 14 HARD ROLL CRACKERS, 2 BEATERS, 15 SHAKER DECKS, ASSOCIATED AUGERS, CONVEYORS, 3 GRAVITY SEPARATORS, AND 25 HULLING/SHELL ASPIRATORS SERVED BY TWO AB FAB, INC. MODEL ABR-210-12 BAGHOUSES

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. The drop from hull augers and dirt elevators shall be kept to a minimum to prevent excessive dust emissions. [District Rule 2201]
6. Visible emissions from each baghouse serving the almond hulling and shelling operations shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 4101]
7. The maximum throughput for the hulling and shelling operation shall not exceed either of the following limits: 800 tons of field weight almonds per day or 145,600 tons of field weight almonds per year. [District Rule 2201]
8. Emissions from each baghouse serving the hulling and shelling operation shall not exceed 0.065 lb-PM10 per ton of field weight almonds processed. [District Rule 2201]
9. Each baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. Each gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]
10. Each baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
11. Replacement bags numbering at least 10% of the total number of bags in each baghouse shall be maintained on the premises. [District Rule 2201]
12. Each baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
13. Material removed from each baghouse shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
14. When in operation, the differential pressure of each baghouse shall not be less than 1.0 inches water column nor greater than 7.0 inches water column. [District Rule 2201]
15. Differential operating pressure shall be monitored and recorded on each day that each baghouse operates. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

16. Records of all maintenance of each baghouse, including all change outs of filter media, shall be maintained. [District Rule 2201]

17. Daily and annual records of field weight almonds processed shall be maintained, retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070 and 2201]