

# San Joaquin Valley Unified Air Pollution Control District

## Almond Hulling Permit Processing

Approved By: (signed) _____ Seyed Sadredin Director of Permit Services	Date: 8/22/02 _____
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### **I. Purpose**

The purpose of this policy is to standardize and streamline permitting requirements for almond hulling facilities. An almond hulling facility contains one or more of the following operations: receiving and precleaning; hulling; shelling; drying necessitated by unusual weather conditions; and fumigation.

### **II. Applicability**

This policy applies to all Authority to Construct (ATC) applications for new or modified operations at almond hulling facilities. This policy also applies to the revision of Permit to Operate (PTO) conditions upon permit renewal. Hull grinding, gasoline dispensing, and other ancillary operations that may be conducted at some facilities, are not covered by this policy.

### **III. Priority Processing**

Upon written request by the permittee, an application for modification to an almond hulling facility shall be granted high priority status during the months of January through June. ATCs for new or modified operations at an almond hulling facility will be issued within 30 days of the date that the application was deemed complete, unless public noticing requirements are triggered.

### **IV. Supplemental Application Form**

Attached is a Supplemental Application Form for use when an almond hulling facility is applying for an ATC to install new equipment, modify existing equipment or change existing permit conditions. Permit applicants are encouraged to contact the Small Business Assistance Engineer in their regional District office for answers to permit-related questions or to obtain assistance in preparing a permit application.

## V. Permit Units

The number of individual permits given to a facility is determined by the process flow of the almonds through the facility. In accordance with District policy GPG 9 Permit Unit Determination, the permit unit boundary for continuous material processing includes all equipment physically united by conveyors that operates as a functional unit to produce a product and that does not operate independently. In general, this includes all processing equipment, conveyors, storage containers and emission control devices up to the point where there is the ability to put material into storage prior to further processing or shipping. Most almond hulling facilities shall be issued two (2) or more individual permits based on the following:

### Receiving and Precleaning Operation

This includes the receiving pit, precleaning equipment, stone removal equipment, stick and leaf removal equipment, storage containers, trash house, and all associated augers, conveyors, elevators, cyclones and baghouses.

### Hulling Operation

This includes the hulling equipment, shear rolls, screen decks, aspirators, storage containers, and all associated augers, conveyors, elevators, cyclones and baghouses.

### Shelling Operation

This includes the cracking equipment, shear rolls, screen decks, aspirators, storage containers, and all associated augers, conveyors, elevators, cyclones and baghouses.

### Hulling and Shelling Operation

The hulling operation and the shelling operation shall be considered one permit unit when there is no storage capacity for in-shell product and the in-shell product proceeds directly from the hulling operation to the shelling operation. Small surge capacity to ensure uniform product flow into the shelling operation shall not be considered storage capacity.

Some larger almond hulling facilities have more than one independently operating precleaning, hulling and/or shelling processing line. In such cases, each independently operating process line shall have one or more individual permits.

### Almond Drying

In recognition of the extreme rarity of their use, drying tunnels and portable drying trailers that are used solely for drying the almond crop shall be exempt from permit under the following conditions:

- 1) the dryer or dryers shall only be used when necessitated by unusual weather conditions:

- 2) the dryer or dryers have a maximum rated heat input capacity of 5 MMBtu/hr or less, per dryer, and are fired exclusively on natural gas or liquefied petroleum gas,
- 3) visible emissions from the exhaust of each dryer shall not equal or exceed Ringelmann  $\frac{1}{4}$  or 5% opacity for a period or periods aggregating more than three minutes in anyone hour.

#### Phosphine Fumigation

Fumigation that occurs at the almond orchard is considered an agricultural operation and is exempt from District permit requirements. Fumigation that occurs after the almond crop has been delivered to the almond hulling facility requires a permit, if the uncontrolled emission of phosphine gas exceeds two (2) pounds in anyone day. All residual phosphine gas within a stockpile or container will be considered to be emitted on the date that the covering is removed.

## **VI. Source Testing**

Source testing is the most reliable mechanism to verify that the operation under permit is in compliance with all applicable District, state and federal requirements. Additionally, source testing provides the District and the industry with actual operational data that will be used to assess the accuracy of the emission factors used in evaluating permit applications. Since these emission factors are the basis for any operational limitations that may be imposed on ATCs and PTOs, it is imperative that the most accurate and reliable data be used.

However, source testing for particulate matter can cost \$3,000 to \$7,000 per emission point, depending upon the physical characteristics of the exhaust stack and the type of testing to be performed. The District recognizes that excessive source testing would have a significant financial impact, particularly for smaller almond hulling facilities. Therefore, to minimize such impact, the District will only require a limited amount of source testing in accordance with the following:

1. Any facility that is a "small emitter" as defined in District Policy BACT 1 shall not be required to perform source testing. As of the date of this policy, a small emitter is a facility with post-project PM-10 potential to emit of less than 30 pounds per day or 2 tons per year.
2. Any modification to an existing permit unit that does not result in an increase in permitted emissions for that unit shall not be required to perform source testing.
3. Any new permit unit or modification to an existing permit unit that is not exempt from source testing pursuant to items 1) or 2) above shall be

required to perform source testing on one of the new or modified permit units per each independently operating process line. For example:

- a. An existing almond hulling facility with one precleaning permit, one hulling permit and one shelling permit applies for a modification to add equipment that will increase production capacity through those operations:

The facility will be required to perform source testing on one of the three operations.

- b. A new almond hulling facility applies for permits to construct one large capacity precleaner that will serve both the Line 1 hulling and shelling operations and the Line 2 hulling and shelling operations. Line 1 and Line 2 are independently operating process lines:

The facility will be required to perform source testing on one of the operations from Line 1 and one of the operations from Line 2. For source testing purposes, the precleaner would be considered an operation of either line. To illustrate, the District could specify that the facility perform source testing on the Line 1 shelling operation and the Line 2 precleaning operation.

4. Any permit applicant required to perform source testing may either test for PM10 or test only for total particulate matter and assume that all particulate matter emitted is PM10.
5. The District reserves the right to specify the operation(s) to be source tested. The specific operation may be listed on the applicable ATC or will be specified by the District, in writing, within 5 working days after submittal of the facility's source test plan.
6. Any permit applicant proposing that the District calculate an operation's potential to emit based on a control efficiency that is greater than would typically be expected for the control equipment used shall be required to perform source testing to demonstrate that the equipment can comply with the proposed control efficiency. This source testing requirement supercedes any exemption from source testing specified above, and may be in addition to any source testing pursuant to item 3) above.
7. An emission point controlled by a lower efficiency cyclone may not comply with the particulate matter emission concentration limitation of 0.1 grain per dry standard cubic foot required by District Rule 4201. Any permit applicant proposing the use of a cyclone that does not conform to the Texas A & M 1D-3D configuration, and that has not been demonstrated by the applicant to provide an equivalent PM10 control efficiency, will be required to perform

source testing in accordance with the test methods specified in District Rule 4201. This source testing requirement supercedes any exemption from source testing specified above, and may be in addition to any source testing pursuant to item 3) above.

8. This policy only addresses source testing as a condition of approval of an A TC application. Only initial source testing shall be required for any permit unit, assuming the source test demonstrates compliance with applicable emission limits.

## **VII. Standardized Permits**

Attached are standardized PTO conditions that shall be used as a guide for all new almond hulling facility permits. Existing permits shall also be re-written to follow this standardized format at the time of permit renewal. It is important to note that this standardized permit is generic in nature, and therefore cannot contain all conditions that may be necessary to ensure compliance with all applicable requirements. This is particularly true with New and Modified Stationary Source Review requirements that may be imposed on ATCs. For this reason, it may be necessary to place additional site-specific conditions on some permits.

In addition, although the standard type of conditions establish emissions on a basis of field weight tons processed per day, some facilities may have their emissions based on a maximum grain loading and the corresponding airflow from the control device. This policy is not intended to eliminate the latter option, and the attendant conditions are included below. The format of conditions that regulate emissions should only be modified during an analysis of a New and Modified Stationary Source Review application - they should not be modified during permit renewal.

### **Facility-wide Permit Conditions**

No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in anyone hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

Material removed from dust collector(s) shall be handled and disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]

All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070]

## **Receiving and Precleaning Operation**

### Equipment Description

Almond Receiving and Precleaning Operation served by an Enviro-Friendly Model ABC-123 Baghouse

### Permit Conditions

The receiving and precleaning operation consists of [list make and model of major components] with associated augers, bucket elevators and conveyors [District Rule 2201]

Visible emissions from the baghouse serving the receiving and precleaning operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in anyone hour. [District Rule 2201]

The bag house shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]

Replacement bags numbering at least 10% of the total number of bags in NC the largest bag house using each type of bag shall be maintained on the premises. [District Rule 2201]

The bag house cleaning frequency and duration shall be adjusted to *NC* optimize the control efficiency. [District Rule 2201]

### Throughput Option

The quantity of almonds processed through the receiving and precleaning operation shall not exceed X,XXX field weight tons in anyone day. [District Rule 2201]

The PM10 emissions from the receiving operation shall not exceed O.YYY pounds per field weight ton. [District Rule 2201]

The PM10 emissions from the precleaning operation shall not exceed O.ZZZ pounds per field weight ton. [District Rule 2201]

The permittee shall maintain a daily log that shall include the date and quantity, in field weight tons, of almonds processed through the receiving and precleaning operation. [District Rule 2201]

### Air Flow & Grain Loading Option

The PM10 emissions from Enviro-Friendly Model ABC-123 Baghouse shall not exceed O.YYY gr/dscf. [District Rule 2201]

Maximum airflow from Enviro-Friendly Model ABC-123 Baghouse shall not exceed ZZZZ scfm. [District Rule 2201]

### **Hulling Operation**

#### Equipment Description

Almond Hulling Operation served by an Enviro-Friendly Model ABC-123 Baghouse

#### Permit Conditions

The hulling operation consists of [list make and model of major components] with associated augers, bucket elevators and conveyors [District Rule 2201]

Visible emissions from the baghouse serving the receiving and precleaning operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in anyone hour. [District Rule 2201]

The bag house shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained *NL* in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]

Replacement bags numbering at least 10% of the total number of bags in *NC* the largest bag house using each type of bag shall be maintained on the premises. [District Rule 2201]

The bag house cleaning frequency and duration shall be adjusted to *NC* optimize the control efficiency. [District Rule 2201]

#### Throughput Option

The quantity of almonds processed through the receiving and precleaning operation shall not exceed X,XXX field weight tons in anyone day. [District Rule 2201]

The PM10 emissions from the receiving operation shall not exceed O.YYY pounds per field weight ton. [District Rule 2201]

The PM10 emissions from the precleaning operation shall not exceed O.ZZZ pounds per field weight ton. [District Rule 2201]

The permittee shall maintain a daily log that shall include the date and quantity, in field weight tons, of almonds processed through the receiving and precleaning operation. [District Rule 2201]

### Air Flow & Grain Loading Option

The PM10 emissions from Enviro-Friendly Model ABC-123 Baghouse shall not exceed O.YYY gr/dscf. [District Rule 2201]

Maximum air flow from Enviro-Friendly Model ABC-123 Baghouse shall not exceed ZZ,ZZZ scfm. [District Rule 2201]

### **(Hulling and Shelling) of (Shelling) Operation**

#### Equipment Description

(Almond Hulling and Shelling) of (Shelling) Operation served by an Enviro-Friendly Model ABC-123 Baghouse

#### Permit Conditions

The (Almond Hulling and Shelling) of (Shelling) operation consists of [list make and model of major components] with associated augers, bucket elevators and conveyors [District Rule 2201]

Visible emissions from the baghouse serving the receiving and precleaning operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in anyone hour. [District Rule 2201]

The bag house shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained *NL* in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]

Replacement bags numbering at least 10% of the total number of bags in *NC* the largest bag house using each type of bag shall be maintained on the premises. [District Rule 2201]

The bag house cleaning frequency and duration shall be adjusted to *NC* optimize the control efficiency. [District Rule 2201]

#### Throughput Option

The quantity of almonds processed through the receiving and precleaning operation shall not exceed X,XXX field weight tons in anyone day. [District Rule 2201]

The PM10 emissions from the receiving operation shall not exceed O.YYY pounds per field weight ton. [District Rule 2201]

The PM10 emissions from the precleaning operation shall not exceed O.ZZZ pounds per field weight ton. [District Rule 2201]

The permittee shall maintain a daily log that shall include the date and quantity, in field weight tons, of almonds processed through the receiving and precleaning operation. [District Rule 2201]

Air Flow & Grain Loading Option

The PM10 emissions from Enviro-Friendly Model ABC-123 Baghouse shall not exceed O.YYY gr/dscf. [District Rule 2201]

Maximum air flow from Enviro-Friendly Model ABC-123 Baghouse shall not exceed ZZ,ZZZ scfm. [District Rule 2201]

**Almond Drying or Fumigation Operations**

Due to the relatively few non-exempt almond drying or fumigation operations, and because of the special considerations involved in the emission of a hazardous air contaminant, these permits will have site-specific conditions.

However, permit conditions limiting emissions of pollutants from any fumigant will use the following format:

Emissions of (pollutant) shall not exceed X pounds per day (or year), equivalent to the use of Y pounds of (fumigant) per day (or year).