San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Woodworking Operation

Facility Name:	Date: June 1, 2016
Mailing Address:	Engineer:
	Lead Engineer:
Contact Person:	
Telephone:	
Fax:	
E-Mail:	
Application # (#'s):	
Project #:	
Deemed Complete:	

{This GEAR is intended to be a template evaluation for a typical woodworking operation served by a baghouse at a non-TV facility. You are encouraged to deviate from GEAR conventions (modify the evaluation as appropriate) if project requirements for your specific project aren't adequately addressed by this template (E.G., add TV language for TV sources)}

Prior to proceeding with this evaluation, it is recommended for the engineer to perform calculations to confirm the uncontrolled emissions exceed the exemption threshold of 2 lb/day.

I. Proposal

[Facility Name] is applying for an Authority to Construct permit to install/modify an existing woodworking operation served [by a dust collector/dust collectors]. [If this is a modification of an existing permit, briefly describe the modification here]

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410 Prevention of Significant Deterioration (11/26/12)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4202 Particulate Matter-Emission Rate (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

This equipment is located at [Address] in [City], CA. The District has verified that this equipment [is/is not] located within 1,000 feet of the outer boundary of a K-12 school. There [is/is not] an increase in hazardous air contaminants. Therefore, the noticing requirements of California Health and Safety Code Section 42301.6 [do/do not] apply to this operation.

IV. Process Description

[Facility Name] operates various woodworking equipment. Common woodworking operations include sawing, chipping, shaping, moulding, hogging, lathing, and sanding.

This facility typically operates [24] hours/day, [7] days/week, [365] days/year.

V. Equipment Listing

{If this is a new unit, the pre-project and modification descriptions can be deleted}
Pre-Project Equipment Description:

PTO [X-XXXX-X-X]: [Cut the current equipment description from PAS and insert it here]

Proposed Modification:

ATC [X-XXXX-X-X]: Modification of [Cut the current equipment description from PAS and insert it here]: [Describe the proposed modification here]

Post-Project Equipment Description:

PTO [X-XXXX-X-X]: WOODWORKING OPERATION INCLUDING: [# OF] SAWS, [# OF] SANDERS, [# OF] SHAPERS, [# OF] ETC. ALL SERVED BY A [#] CFM [MANUFACTURER] [MODEL] DUST COLLECTOR

{Include the following table for each dust collector:}

Dust Collector	
Manufacturer	
Model Number	
Filter Cleaning Method	
Bag Type	
Total Filter Area	
Air Flow Rate	

{List the HP rating for all woodworking equipment in the following table. Expand the table as necessary.}

Woodworking Equipment			
Equipment Description	**Manufacturer**	**Model No.**	**HP Rating**
Beam Saw	Murphy Rodgers	MRZ	10
Dust Collector Fan Motor	LMC	LT	20
Total HP			**30**

VI. Emission Control Technology Evaluation

{for existing units where a control technology evaluation has already been conducted, use the following language}
This woodworking operation is served by an existing dust collector capable of achieving 99% control of PM10 emissions. Since a control technology evaluation has already been conducted in Project C-XXXXXX, further analysis is not required.

{For new dust collectors, except sock filter dust collectors, perform the following analysis. Note, the typical filtering velocities recommended by the Air Pollution Engineering Manual for sawdust (wood) are 3.5 ft/min for Shaken/Woven or Reverse-Air/Woven dust collectors and 12 ft/min for Pulse-Jet/Felt or Reverse-Air/Felt dust collectors.}

PM_{10} emissions from the proposed woodworking operation will be controlled by the proposed dust collector. The expected control efficiency of the dust collector for removal of PM (including PM_{10}) is 99%.

Filter Area: [ ] ft^2
Max Air Flow: [ ] cfm
Filtering Velocity: [ ] cfm ÷ [ ] ft^2 = [ ] ft/min

{If the filter velocity is equal to or below the typical values found in the Air Pollution Engineering Manual, use the following}
The air/cloth ratio is below the typical values found in the Air Pollution Engineering Manual (Reference from Air Pollution Engineering Manual, Air & Waste Management Association – 1992 Table 5, page 128). Therefore, the dust collector is operating within the recommended parameters.

{If the filter velocity is above the typical values found in the Air Pollution Engineering Manual, obtain a manufacturer's guarantee of the expected PM10 control efficiency and use the following}
While the filtering velocity does not fall within the typical range listed in the Air Pollution Engineering Manual, the manufacturer guarantees a PM10 control efficiency of 99% for this dust collector.

{For new dust collectors with sock filter(s), use the following:}
The filtering velocities listed in the Air Pollution Engineering Manual (Air & Waste Management Association –1992 Table 5, Page 128) are not applicable to sock filter type dust collectors. The sock filter is capable of achieving a PM10 control efficiency of 90%.

{note, if you can obtain a manufacturer's guarantee for the control efficiency, use the manufacturer's guaranteed control efficiency}

VII. General Calculations

A. Assumptions

1. 40% of the total particulate matter generated by the woodworking operations is PM10 (CARB speciation manual).
2. PM_{10} will be the only pollutant emission associated with this project.
3. The dust collector will control 99% of the PM_{10} emissions.
4. Operating Schedule: 24 hr/day, 365 day/yr (worst case)

B. Emission Factors

Pre-Project:

{There are several methods for calculating PM10 emissions from woodworking operations. Include the following, if no emissions limit is listed on the existing permit. Adjust the table as necessary, to only show emission factors actually used in the evaluation.}

Woodworking Emissions Factors		
Control	**PM10 Emissions (gr/dscf)**	**Source**
Uncontrolled	0.05	South Coast AQMD source test
Cyclone	0.005	South Coast AQMD source test
Portable dust collector with a filter bag rated to collect particles 2.5 microns and larger	0.003[1]	Calculated emissions factor based on South Coast AQMD source test
Centralized collection system venting to a baghouse (at least 99% control efficiency)	0.0004	South Coast AQMD source test

or

According to the current permit [x-xxxx-x-x] a total of [X] lbs/day and [X] lb/year of sawdust will be collected by the dust collector. Controlled PM_{10} emissions from the proposed woodworking operation will be calculated based on the quantity of waste collected and the dust collector control efficiency.

Post-Project

{There are several methods for calculating PM10 emissions from woodworking operations. The recommended method is to assume a maximum PM10 concentration

[1]Calculated emission factor for a 2.5 micron filter consists of the sum of two terms: (1) 1% of particles between 2.5 microns and 10 microns will be emitted (i.e. assuming the 2.5 micron filter controls at least 99% of particles 2.5 microns and larger) and (2) 100% of particles smaller than 2.5 microns will be emitted. See attached table (footnote 1 link) for detailed calculations.

from the dust collector. Include the following, if using this method. Adjust the table as necessary, to only show emission factors actually used in the evaluation.}

Woodworking Emissions Factors		
Control	**PM10 Emissions (gr/dscf)**	**Source**
Uncontrolled	0.05	South Coast AQMD source test
Portable dust collector with a filter bag rated to collect particles 2.5 microns and larger	0.003[2]	Calculated emissions factor based on South Coast AQMD source test
Centralized collection system venting to a baghouse (at least 99% control efficiency)	0.0004	South Coast AQMD source test

{An alternative method is to base the PE calculations on the amount of sawdust collected in the dust collector. If using this method, then include the following language. This methodology should only be used with the full knowledge of the source and their concurrence that they will have to measure daily sawdust collected, and only if it's necessary to avoid a requirement (offsets, source testing, etc.)}
According to the applicant a total of [X] lbs/day and [X] lb/year of sawdust will be collected by the dust collector. Controlled PM_{10} emissions from the proposed woodworking operation will be calculated based on the quantity of waste collected and the dust collector control efficiency.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

{If this is a new unit, use the following:}
Since this is a new emissions unit, PE_1=0.

{If pre-project PE calculations are based on a maximum PM10 concentration, then include the following. Adjust the PM10 concentration as necessary.}
Daily PE1 = PM10 Concentration x minutes operated per day x exhaust flowrate
= [0.0004 gr/dscf] x 1440 min/day x [A] dscf/min x lb/7000 gr
= [B] lb PM10/day

{If pre-project PE calculations are based on the amount of sawdust collected, then include the following:}
Max. Quantity of Sawdust Collected: [A] lb/day
Baghouse Control Efficiency: 99%
PM_{10} Fraction: 0.4 lb PM_{10}/lb PM
PM Entering the Baghouse = [A] lb ÷ 0.99

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[2]Calculated emission factor for a 2.5 micron filter consists of the sum of two terms: (1) 1% of particles between 2.5 microns and 10 microns will be emitted (i.e. assuming the 2.5 micron filter controls at least 99% of particles 2.5 microns and larger) and (2) 100% of particles smaller than 2.5 microns will be emitted. See attached table (footnote 1 link) for detailed calculations.

= [B] lb PM/day

PM_{10} Emissions = [B] lb of PM/day × (1 - 0.99) × 0.4 lb PM_{10}/lb PM
= [C] lb PM_{10}/day

{If annual pre-project emissions are based on the daily emissions rate and a 365 day/year operating schedule, use the following:}
Annual PM10 emissions are calculated below, assuming a 365 day operating schedule for the equipment.

Annual PE1 = Daily PE2 x 365 days/year
Annual PE1 = [C] lb PM10/day x 365 days/year
Annual PE1 = [D] lb PM10/year

{Sometimes the applicant will request an annual limit on the amount of sawdust collected to avoid offset requirements. If annual pre-project PE calculations are based on an annual amount of sawdust collected, then include the following:}
Max. Quantity of Sawdust Collected: [A] lb/year
Baghouse Control Efficiency: 99%
PM_{10} Fraction: 0.4 lb PM_{10}/lb PM
PM Entering the Baghouse = [A] lb ÷ 0.99
= [B] lb PM/year

PM_{10} Emissions = [B] lb of PM/year × (1 - 0.99) × 0.4 lb PM_{10}/lb PM
= [C] lb PM_{10}/year

2. Post Project Potential to Emit (PE2)

{If post-project PE calculations are based on a maximum PM10 concentration, then include the following. Adjust the PM10 concentration as necessary}
Daily PE2 = PM10 Concentration x minutes operated per day x exhaust flowrate
= [0.0004] gr/dscf x 1440 min/day x [A] dscf/min x lb/7000 gr
= [B] lb PM10/day

{If post-project PE calculations are based on the amount of sawdust collected, then include the following:}
Max. Quantity of Sawdust Collected: [A] lb/day
Baghouse Control Efficiency: 99%
PM_{10} Fraction: 0.4 lb PM_{10}/lb PM
PM Entering the Baghouse = [A] lb ÷ 0.99
= [B] lb PM/day
PM_{10} Emissions = [B] lb of PM/day × (1 - 0.99) × 0.4 lb PM_{10}/lb PM
= [C] lb PM_{10}/day

{If post-project annual emissions are based on the daily emissions rate and a 365 day/year operating schedule, use the following:}

Annual PM10 emissions are calculated below, assuming a 365 day operating schedule for the equipment.

Annual PE2 = Daily PE2 x 365 days/year
Annual PE2 = [C] lb PM10/day x 365 days/year
Annual PE2 = [D] lb PM10/year

{Sometimes the applicant will request an annual limit on the amount of sawdust collected to avoid offset requirements. If annual post-project PE calculations are based on an annual amount of sawdust collected, then include the following:}

Max. Quantity of Sawdust Collected: [A] lb/year
Baghouse Control Efficiency: 99%
PM_{10} Fraction: 0.4 lb PM_{10}/lb PM
PM Entering the Baghouse = [A] lb ÷ 0.99
= [B] lb PM/year

PM_{10} Emissions = [B] lb of PM/year × (1 - 0.99) × 0.4 lb PM_{10}/lb PM
= [C] lb PM_{10}/year

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

{For a new facility use the following:}
Since this is a new facility, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 is equal to zero.

{If this is an existing facility with no banked ERCs use the following:}
Since this is an existing facility, SSPE1 is equal to the sum of the pre-project emissions from all units at the facility. SSPE1 calculations are shown in Appendix C.

SSPE1					
Permit Unit	NO_x (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	CO (lb/yr)	VOC (lb/yr)
-1-0, gas dispensing operation	0	0	0	0	5,000
-2-0, emergency IC engine	125	5	58	250	6
-3-0, 10.0	2,258	50	452	5,689	753

MMBtu/hr boiler					
SSPE1 Total	**2,383**	**55**	**510**	**5,939**	**5,759**

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2					
Permit Unit	NO_x (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	CO (lb/yr)	VOC (lb/yr)
-1-0, gas dispensing operation	0	0	0	0	5,000
-2-0, emergency IC engine	125	5	58	250	6
-3-0, 10.0 MMBtu/hr boiler	2,258	50	452	5,689	753
-X-X, woodworking operation	0	0	452	0	0
SSPE2 Total	**2,383**	**55**	**962**	**5,939**	**5,759**

5. Major Source Determination

Rule 2201 Major Source Determination:

Identify if the source will be a Major Source for Rule 2201 (post project).

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
SSPE1	XXX	XXX	XXX	XXX	XXX	XXX
SSPE2	XXX	XXX	XXX	XXX	XXX	XXX
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	No	No	No	No	No	No

Note: $PM_{2.5}$ assumed to be equal to PM10

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

In determining if a stationary source is an existing (pre-project) PSD major source, only the emission thresholds below are considered. To make this determination, compare the facilities emissions before the project with the applicable thresholds. This determination is made for all regulated NSR pollutants (attainment and non-attainment pollutants). Whether or not the facility has a PSD permit is not relevant.

A source is a PSD major source if it has the potential to emit above the thresholds listed below for at least one pollutant. Please note for purposes of Rule 2410, major source determinations do not apply on a pollutant by pollutant basis.

If the facility's emissions before the project are above the thresholds for ANY pollutant the facility is a PSD major source. Once that determination has been made for any one pollutant, it is not necessary to determine the facility emissions for any other pollutant.

In determining if a stationary source is a PSD major source, the following sources of emissions shall be excluded in determining if a source is a PSD major source:

- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 52.21 (b)(1)(iii), see below

All emission calculations are performed in US short tons/year, not metric tons.

Please note that in the calculations below, PM emissions may be assumed to be equal to PM10 (particulate matter less than 10 microns in diameter) emissions depending on the emission units at the facility. For combustion sources, all PM is equal to PM10. This assumption will need to be stated in the evaluation.

If this assumption is not accurate for a given emission stationary source type, then separate calculations are required for PM and PM10.

Units: Please note that all numbers in the PSD related sections below are in short tons.

Source Type Categories as specified in 40 CFR 52.21 (b)(1)(iii)

Common Source types in the District are in **bold**:

a. Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input,
b. coal cleaning plants (with thermal dryers),
c. kraft pulp mills,
d. portland cement plants,
e. primary zinc smelters,
f. iron and steel mill plants,
g. primary aluminum ore reduction plants (with thermal dryers),
h. primary copper smelters,
i. municipal incinerators capable of charging more than 250 tons of refuse per day,
j. hydrofluoric, sulfuric, and nitric acid plants,
k. petroleum refineries,
l. lime plants,
m. phosphate rock processing plants,
n. coke oven batteries,
o. sulfur recovery plants,
p. carbon black plants (furnace process),
q. primary lead smelters,
r. fuel conversion plants,
s. sintering plants,
t. secondary metal production plants,
u. chemical process plants (which does not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140),
v. **fossil-fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input**,
w. petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels,
x. taconite ore processing plants,
y. glass fiber processing plants, and
z. charcoal production plants;

Please note that if the main function of a stationary source type is not listed above, but the stationary source includes process or equipment that are included above (e.g. fossil fuel fired boilers totaling more than 250 MMBtu/hr), the major source threshold for that process or equipment is 100 ton/year. If the emissions from a listed source category are less than 100 ton/year, then the 250 tpy threshould applies for all operations at the stationary source.

Facility or equipment evaluated under this project listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii)

Please use the following section: otherwise delete.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	XX	XX	XX	XX	XXX	XX
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

Please note once it is determined that a facility is a PSD major source for one pollutant, it is not necessary to determine if the facility is a PSD major source for any other pollutants.

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

OR

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

Example (a): (For a Non-Major Source for all pollutants – Where the project includes a new emissions unit and a modified emissions unit.)
As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE=PE1.

C-XXXX-2-1:
As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

BE (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
C-XXXX-2-1	31,536	2,628	6,658	6,658	33,726	4,818

C-XXXX-3-0:
Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

As discussed in Section VII.C.5 above, this facility is not a major source for any of the pollutants addressed in this project; therefore, the project does not constitute a SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.18 states that Federal Major Modifications are the same as “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- PM
- PM10

Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix E.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. BACT

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following:

- Any new emissions unit with a potential to emit exceeding two pounds per day*,

- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day*,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day*, and/or
- The pollutants for which a Title I Modification has been triggered (regardless of Daily PE increase).
  *Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

For processing simplicity, it will be assumed that all new and modified woodworking units trigger Best Available Control Technology requirements. The District's BACT Clearinghouse Guideline 8.1.1 (see Appendix D) applies to woodworking operations. As shown in Appendix D, the applicant's use of a dust collector meets the District's BACT requirements for PM10 emissions. Since the applicant is proposing the use of [a dust collector/dust collectors], BACT requirements for PM10 emissions have been satisfied.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant-by-pollutant basis. Unless exempted pursuant to District Rule 2201, Section 4.6, offsets requirements will be triggered if the post-project SSPE2 equals or exceeds the following offset threshold levels.

This project only involves PM10 emissions units. The following table compares the Post-Project Stationary Source Potential to Emit (SSPE2) to the offset thresholds in order to determine whether offset requirements are triggered as the result of this project.

Pollutant	SSPE2	Offset Thresholds	Offsets triggered ?
PM_{10}	[x] lb-PM_{10}/year	29,200 lb-PM_{10}/year	Yes / No

2. Quantity of Offsets Required (QOR)

{if offset requirements are not triggered}
As seen above, the SSPE2 is not greater than the offset thresholds for all the pollutants; therefore offset calculations are not necessary and offsets will not be required for this project.

{if offsets requirements are triggered, see your lead for further guidance}

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

{For a new facility – non-Major Source, use the following:}
New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

{For an existing facility that is not becoming a Major Source, use the following:}
New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

Example (a): (For a project not triggering an SB 288 or Federal Major Modification.)
As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

Example (b): (For a project triggering an SB 288 or Federal Major Modification.)
As demonstrated in Sections VII.C.7 and VII.C.8, this project is an SB 288 or Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant.

Example (a): (For a project not including a new emissions unit.)

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

Example (b): (For a project including a new emissions unit – PE ≤ 100 lb/day.)
Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

Example (c): (For a project including a new emissions unit – PE > 100 lb/day.)
The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	100.5	100 lb/day	Yes
SO_X	21.2	100 lb/day	No
PM_{10}	25.6	100 lb/day	No
CO	124.7	100 lb/day	Yes
VOC	48.9	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

Public notification is required if the SSPE1) is increased from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant.

Example (a): (For a project not surpassing the offset threshold.)
The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	0	0	20,000 lb/year	No
SO_X	0	0	54,750 lb/year	No
PM_{10}	17,471	24,399	29,200 lb/year	No
CO	0	0	200,000 lb/year	No
VOC	0	0	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

Example (b): (For a project surpassing the offset threshold.)
The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	18,361	21,698	20,000 lb/year	Yes
SO_X	3,274	3,963	54,750 lb/year	No
PM_{10}	5,450	6,785	29,200 lb/year	No
CO	25,680	27,318	200,000 lb/year	No
VOC	17,552	19,035	20,000 lb/year	No

As detailed above, offset thresholds were surpassed for NO_X with this project; therefore public noticing is required for offset purposes.

(Note: Public notification is independent of whether or not Offsets are required. For example, if this project involves the installation of emergency (offset-exempt) equipment and the offset threshold is surpassed, then public notification would still be triggered. And conversely, if this project involves the installation of new equipment which required offsets; however, the SSPE1 was already greater than the offset threshold, public notification would not be triggered.)

d. SSIPE > 20,000 lb/year

An SSIPE exceeding 20,000 pounds per year for any one pollutant triggers public notice.

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

Example (a): *(For a project where the SSIPE ≤ 20,000 lb/year.)*

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	876	0	876	20,000 lb/year	No
SO_x	37	0	37	20,000 lb/year	No
PM_{10}	8,438	3,776	4,662	20,000 lb/year	No
CO	730	0	730	20,000 lb/year	No
VOC	19,966	0	19,966	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

Example (b): *(For a project where the SSIPE > 20,000 lb/year.)*

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	35,453	11,267	24,186	20,000 lb/year	Yes
SO_x	6,482	4,533	1,949	20,000 lb/year	No
PM_{10}	8,438	5,971	2,467	20,000 lb/year	No
CO	42,080	21,956	20,124	20,000 lb/year	Yes
VOC	29,008	25,942	3,066	20,000 lb/year	No

As demonstrated above, the SSIPEs for NO_X and CO were greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V significant modification, and therefore public noticing is not required.

2. Public Notice Action

Example (a): *(For a project not requiring public notification.)*
As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

Example (b): *(For a project requiring public notification – PE > 100 lb/day.)*
As discussed above, public noticing is required for this project for NO_X emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

{If PE calculations are based on the maximum PM10 concentration at the dust collector exhaust, use the following. Adjust the PM10 concentration as necessary.}
For this operation, the CFM rating in the permit equipment description and the following condition will enforce the DEL:

- PM10 emissions from the dust collector shall not exceed 0.0004 gr/dscf. [District Rule 2201] N

{If PE calculations are based on the amount of sawdust collected, then include the following:}
For this operation, the DEL will be listed on the permit as follows:

- The amount of material collected by the dust collector shall not exceed [ ] pounds in any one day.

- PM10 emissions from any dust collector shall not exceed 0.004 pounds per pound of material collected. [District Rule 2201]

E. Compliance Assurance

{List all requirements necessary to ensure compliance with DEL's, BACT and Offsets, such as the following:}

1. Source Testing

{For units with dust collectors with PM10 emissions less than or equal to 30 lb/day}
District Policy 1705 (10/9/97) section II step 4 requires initial source testing for non-combustion equipment served by a baghouse with expected PM10 emissions of 30 pounds per day or greater. Pursuant to section VII.C.1 of this document, the PM10 emissions from this permit unit will not exceed 30 pounds per day; therefore, initial source testing will not be required.

{For units with PM10 emissions greater than 30 lb/day but not exceeding 70 lb/day}
District Policy 1705 (10/9/97) section II step 4 requires initial source testing for non-combustion equipment served by a baghouse with expected PM10 emissions of 30 pounds per day or greater. Pursuant to section VII.C.1 of this document, the PM10 emissions from this permit unit will exceed 30 pounds per day; therefore, initial source testing will be required.

The following conditions will be placed on the permit:

- Source testing to demonstrate compliance with the PM10 emission concentration from the dust collector shall be conducted within 60 days of initial startup. [District Rule 2201]

- Source testing to measure concentrations of PM10 shall be conducted using EPA methods 201 and 202, or EPA methods 201A and 202, or CARB methods 501 and 5. [District Rule 2201]

- In lieu of performing a source test for PM10, the results of the total particulate test may be used for compliance with the PM10 emissions limit. If this option is used, then all of the particulate emissions will be considered to be PM10. [District Rule 2201]
- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

{For units with PM10 emissions exceeding 70 lb/day}
District Policy 1705 (10/9/97) section II step 4 requires initial source testing for non-combustion equipment served by a baghouse with expected PM10 emissions of 30 pounds per day or greater and annually thereafter if the PM10 emissions exceed 70 pounds per day. Pursuant to section VII.C.1 of this document, the PM10 emissions from this permit unit will exceed 70 pounds per day, therefore, initial source testing will be required and annually thereafter.

The following conditions will be placed on the permit:

- Source testing to demonstrate compliance with the PM10 emission concentration from the dust collector shall be conducted within 60 days of initial startup and annually thereafter. [District Rule 2201]

- Source testing to measure concentrations of PM10 shall be conducted using EPA methods 201 and 202, or EPA methods 201A and 202, or CARB methods 501 and 5. [District Rule 2201]

- In lieu of performing a source test for PM10, the results of the total particulate test may be used for compliance with the PM10 emissions limit. If this option is used, then all of the particulate emissions will be considered to be PM10. [District Rule 2201]

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior

to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

2. Monitoring

{if the dust collector is equipped with a pressure differential gauge, include the following:}
The following monitoring requirements will be placed on the Authority to Construct permit:

- {10} The baghouse 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]

{If manufacturer's information on pressure range is available at the time of this evaluation, use the following:}

- The baghouse shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{If manufacturer information on pressure range is not available at the time of the evaluation, use the following:}

- The differential pressure gauge reading shall be established per manufacturer's recommendation at the time of the startup inspection. [District Rule 2201]

{if the dust collector is not equipped with a pressure differential gauge, use the following:}
No monitoring is required to demonstrate compliance with Rule 2201.

3. Record Keeping

{If PE calculations are based on the maximum PM10 concentration at the dust collector exhaust, use the following:}
The following conditions will be placed on the Authority to Construct Permit.

- Records of all maintenance of the dust collector, including all change outs of filter media, shall be maintained. [District Rule 2201]

- {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

{If PE calculations are based on the amount of sawdust collected, then include the following:}

The following conditions will be placed on the permit:

- Records of all maintenance of the dust collector, including all change outs of filter media, shall be maintained. [District Rule 2201]

- The permittee shall maintain a daily record of the quantity of material collected, in pounds. [District Rule 2201]

- {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

{If the dust collector is equipped with a pressure differential gauge, add the following condition to the above discussions}

- Differential operating pressure shall be monitored and recorded on each day that the dust collector operates. [District Rule 2201]

- Records of the daily differential operating pressure readings shall be retained on-site. [District Rule 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

(Note: Applicable only when public notice is triggered, otherwise delete this section.)
(Note: If there is an exceedance of the Ambient Air Quality Standards, this project no longer qualifies as a GEAR. Talk to a supervisor.)

An AAQA is conducted by the Technical Services group for any project with an increase in emissions and triggers public notice. Discuss the AAQA results as follows:

For example:
An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix X** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

(Note: Special permit conditions may be required as a result of the AAQA.)

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 4101 Visible Emissions

As long as the equipment is properly maintained and operated, the emission units shall not discharge, into the atmosphere, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is as dark, or darker, in shade as that designated as No. 1 on the Ringelmann Chart or equivalent to 20% opacity.

- {15} 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]

Per District Policy SSP 1005, the visible emissions from processes served by a baghouse or fabric filter shall not equal or exceed 5% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. If the equipment is properly maintained this condition should not be exceeded. The following condition will be placed on the permit:

- Visible emissions from the exhaust of the dust collector(s) serving the woodworking operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]

Rule 4102 Nuisance

As long as the equipment is properly maintained and operated the emission units will not discharge any air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or public or which cause or have a natural tendency to cause injury or damage to business or property. Since sawdust generated from the non-treated wood is not a toxic air contaminant, this project is not subject to a health risk evaluation and a Health Risk Analysis is not necessary. The following condition will be placed on the permit:

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

Rule 4201 Particulate Matter Concentration

Rule 4201 requires that particulate matter emissions shall not exceed 0.1 grain per cubic foot of gas at dry standard condition.

{If PE calculations are based on the maximum PM10 concentration at the dust collector exhaust, use the following:}
The PM10 concentration from the dust [collector/collectors] is limited 0.004 grains/dscf; therefore, the particulate matter concentration from the dust [collector/collectors] should be less than the maximum allowable 0.1 grains/dscf.

{If PE calculations are based on the amount of sawdust collected, then include the following for each dust collector:}

PM_{10} Emissions:	[ ] lb/day
Fraction PM_{10}:	0.4 lb PM_{10}/lb PM
Operating Hours:	[ ] hr/day
Air Flow Rate:	[ ] scfm

PM Emissions (lb/day) = PM_{10} Emissions (lb/day) / Fraction PM_{10}
= [ ] lb/day /0.4
= [ ] lb/day

PM Concentration (gr/ft^3) = [[ ] lb/day x 7,000 gr/lb] /[[ ] scfm x 60 min/hr x [ ] hr/day]

= [ ] gr/dscf

Therefore, the particulate matter concentration from this dust collector will be less than the maximum allowable 0.1 grains/dscf.

Rule 4202 Particulate Matter - Emission Rate

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates.

Per section 4.1, particulate matter emissions from any source operation shall not exceed the allowable hourly emission rate as calculated using the following applicable formulas:

$E = 3.59 \times P^{0.62}$ if $P \leq 30$ tons/hr
$E = 17.31 \times P^{0.16}$ if $P > 30$ tons/hr
Where,

E = emissions in lb/hr
P = process weight rate in tons/hr

{If the applicant has provided the process rate, use the following for each unit:}
Assumptions:

- The maximum process weight is [ ] lb/day (per applicant)
- The maximum daily operating schedule will not exceed [ ] hr/day (per applicant)

Calculations:

Process Weight = (([ ] lbs/day) ÷ ([ ] hr/day)) × (1 ton/2,000 lb)
= [P] ton/hr

E = $3.59\ P^{0.62}$ or $17.31 \times P^{0.16}$
= [ ] lb/hr

The applicant has proposed an emission rate of [ ] lb PM/hr ([ ] lb PM_{10}/day ÷ 40% ÷ 24 hr). Therefore, compliance with this rule is expected under regular operating conditions.

E_{max} = [ ] lb/hr
E_{actual} = [ ] lb/hr

Since the proposed PM emission rate of [ ] lb/hr is less than the allowable maximum emission rate of [ ] lb/hr, this unit is expected to operate in compliance with this rule.

{If PE calculations are based on the amount of sawdust collected, then include the following for each unit:}
$E = 3.59\ P^{0.62}$

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour

The applicant has proposed that a maximum of [ ] pounds of sawdust will be collected per day by the dust collector. Given the 99% control efficiency of the dust collector, [ ] total pounds of sawdust is produced per day.

Assuming, as a worst case, that 10% of total wood processed is sawdust, then the total process weight is [ ] lb/day or [ ] tons/day.
$E_{max} = 3.59 * ([\ ] \text{ ton/day}/[\ ] \text{ hr/day})^{0.62} = [\ ]$ lb/hr

Total emissions from this permit unit are equal to:
[ ] lb/day ÷ [ ] hr/day = [ ] lb/hr

E_{max} = [ ] lb/hr
E_{actual} = [ ] lb/hr

Since $E_{actual} < E_{max}$, this unit is expected to comply with this rule.

California Health & Safety Code 42301.6 (School Notice)

Reference project location and its proximity to a school and state whether or not school notice is required for this project.

Example (a): (For a Non-School Notice project - > 1,000 feet.)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Example (b): (For a Non-School Notice project – no increase in emissions)
The District has verified that this site is located within 1,000 feet of a school. However, pursuant to California Health and Safety Code 42301.6, since this project will not result in an increase in emissions, a school notice is not required.

Example (c): (For a School Notice project.)
The District has verified that this site is located within 1,000 feet of the following school:

School Name: [Name]
Address: [Address]

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is required.
Prior to the issuance of the ATC for this equipment, notices will be provided to the parents/guardians of all students of the affected school, and will be sent to all residents within 1,000 ft of the site.

[If there is no school w/in ¼ mile of the emissions increase, include the following discussion, otherwise delete]:
The District has verified that there are no additional schools within ¼ mile of the emission source.

[If there is a school w/in ¼ mile of the emissions increase, include the following discussion, otherwise delete]:
Since a school notice has been triggered (due to the above-listed school within 1,000 of the emission source), notices will also be provided to the parents/guardians of all students from all school sites within ¼ mile of the emission source. The following schools(s) are within ¼ mile of the emission source:

School Name: [Name]
Address: [Address]
(add additional schools if necessary)

(Note: Refer to FYI - 71 for guidance on how to process a School Notice project.)

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit are based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

As described above, the project requires only ministerial approval, and is exempt from the provisions of CEQA. As such, an Indemnification Agreement or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Issue Authority to Construct [permit/permits] subject to the conditions on the attached draft Authority to Construct [permit/permits] attached in Appendix A.

X. Billing Information

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
[X-XXXX-X-X]	3020-01-[ ]	[ ] hp	

Appendixes

A: Draft ATC(s)
B: Existing PTO(s)
C: SSPE1 Calculations
D: BACT Guideline/BACT Analysis
E: QNEC Calculations

Appendix A

Draft ATC(s)

Appendix B

Existing PTO(s)

Appendix C

SSPE1 Calculations

Appendix D

BACT GUIDELINE AND BACT ANALYSIS

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 8.1.1*
Last Update: May 16, 1995

Emissions Unit: Wood Working Equipment - ≥ 30 electric hp of woodworking equipment or ≥ 100 board feet processed/day

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Wood working equipment vented to a baghouse		

Top-down BACT Analysis

PM10 Emissions:

Step 1 - Identify All Possible Control Technologies

1. Fabric filter baghouse

Step 2 - Eliminate Technologically Infeasible Options

The option in Step 1 is achieved in practice.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The only control that is listed is the use of a baghouse, therefore ranking is not required.

Step 4 - Cost Effective Analysis

Pursuant to District BACT Policy APR 1305 IX.D. (11/99), a cost effectiveness analysis is not required for control alternatives which are deemed achieved-in-practice.

Step 5 - Select BACT

The applicant's proposal to use a baghouse meets the District's BACT requirements, therefore no further analysis is required.

Appendix E

QNEC Calculations

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

{For each permit unit, include the following:}
Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, $PE2_{quarterly}$ and $BE_{quarterly}$ can be calculated as follows:

$PE2_{Quarterly}$						
PM_{10}	[x]	(lb/year) ÷	4	(qtr/year) =	[x]	(lb/qtr)

$BE_{quarterly}$ = BE_{annual} ÷ 4 quarters/year
= [ ] lb/year ÷ 4 qtr/year
= [ ] lb/qtr (for all criteria pollutants)

QNEC					
Pollutant	PE2		BE	QNEC	
PM_{10}	[x]	(lb/qtr) -	[x] (lb/qtr) =	[x]	(lb/qtr)

Authority to Construct
Standard Conditions

Standard Conditions for Woodworking ATC's

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

2. {15} 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] N

3. Visible emissions from the exhaust of the dust collector serving the woodworking operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] N

4. Dust collector exhaust fan(s) shall be switched on prior to the start-up of any woodworking equipment. [District Rule 2201] N

5. All ducting and control equipment shall be in good working order to prevent fugitive particulate emissions. [District Rule 2201] N

6. All filters shall be properly maintained and must be in place during the woodworking operation(s). [District Rule 2201] N

7. Each dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] N

8. Replacement filters numbering at least 10% of the total number of filters in the largest dust collector using each type of filter shall be maintained on the premises. [District Rule 2201] N

9. {12} Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] N

10. Records of all maintenance of the dust collector, including all change outs of filter media, shall be maintained. [District Rule 2201]

11. {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] N

If the PE is based on the flow rate of the dust collector blower, add the following condition to the permit. Adjust the PM10 concentration as necessary:

12. PM10 emissions from the dust collector shall not exceed 0.0004 gr/dscf. [District Rule 2201] N

If the PE is based on the amount of material collected by the dust collector, add the following conditions to the permit:

13. The amount of material collected by the dust collector shall not exceed xxx pounds in any one day. [District Rule 2201] N
14. PM10 emissions from the dust collector shall not exceed 0.004 pounds per pound of material collected. [District Rule 2201] N

15. The permittee shall maintain a daily record of the quantity of material collected, in pounds. [District Rule 2201] N

If PE is greater than 30 lb/day, add the following conditions to the permit:

16. Source testing to demonstrate compliance with the PM10 emission concentration from the dust collector shall be conducted within 60 days of initial startup. [District Rule 2201] N

17. Source testing to measure concentrations of PM10 shall be conducted using EPA methods 201 and 202, or EPA methods 201A and 202, or CARB methods 501 and 5. [District Rule 2201] N

18. In lieu of performing a source test for PM10, the results of the total particulate test may be used for compliance with the PM10 emissions limit. If this option is used, then all of the particulate emissions will be considered to be PM10. [District Rule 2201] N

19. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] N

20. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] N

If PE is greater than 70 lb/day, add the following condition to the permit instead of condition #16 above:

21. Source testing to demonstrate compliance with the PM10 emission concentration from the dust collector shall be conducted within 60 days of initial startup and annually thereafter. [District Rule 2201] N

IF the dust collector is equipped with a pressure differential gauge, use the appropriate conditions of the following:

22. {10} The baghouse 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]

23. The baghouse shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

24. The differential pressure gauge reading shall be established per manufacturer's recommendation at the time of the startup inspection. [District Rule 2201]

25. Differential operating pressure shall be monitored and recorded on each day that the dust collector operates. [District Rule 2201]

26. Records of the daily differential operating pressure readings shall be retained on-site. [District Rule 2201]