



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

APR 25 2013

Kristi Friis
Foppiano Ranch
P.O. Box 659
Linden, CA 95236

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: N-4752
Project Number: N-1123003

Dear Ms. Friis:

Enclosed for your review and comment is the District's analysis of Foppiano Ranch's application for an Authority to Construct for the installation of a new fumigation operation that utilizes Methyl Bromide and Profume as fumigants, at 500 North Jack Tone Road, Stockton.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Wai-Man So of Permit Services at (209) 557- 6449.

Sincerely,

David Warner
Director of Permit Services

DW:WMS/st

Enclosures

cc: Mike Tollstrup, CARB (w/ enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

Newspaper notice for publication in Stockton Record and for posting on
valleyair.org

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Foppiano Ranch for the installation of a new fumigation operation that utilizes Methyl Bromide and Profume as fumigants, at 500 North Jack Tone Road, Stockton.

The analysis of the regulatory basis for this proposed action, Project #N-1123003, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. For additional information, please contact the District at (209) 557-6400. Written comments on this project must be submitted by May 30, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.**

San Joaquin Valley Air Pollution Control District Authority to Construct

Profume & Methyl Bromide Fumigation Operation

Facility Name:	Foppiano Ranch	Date:	April 11, 2013
Mailing Address:	PO Box 659 Linden, CA 95236	Engineer:	Wai-Man So
Contact Person:	Kristi Friis (Coordinator)	Lead Engineer:	Rupi Gill
Telephone:	(209) 546 – 0426		Roger Isom (Consultant)
Cell:	(209) 323 – 3868		(559) 455 – 9272
Fax:	(209) 546 – 0427		(559) 269 – 7730
Email:	Kristi@moradaproduce.com		risom@ix.netcom.com
Application #(s):	N-4752-6-0		
Project #:	N-1123003		
Deemed Complete:	November 7, 2012		

I. Proposal

Foppiano Ranch is requesting Authority to Construct (ATC) for the installation of a new fumigation operation that utilizes Methyl Bromide (MeBr) and Profume (Sulfuryl Fluoride based fumigant) as fumigants.

II. Applicable Rules

District Rule 2201 New and Modified Stationary Source Review Rule (04/21/11)
District Rule 2410 Prevention of Significant Deterioration (11/26/12)
District Rule 2520 Federally Mandated Operating Permits (06/21/01)
District Rule 4101 Visible Emissions (02/17/05)
District Rule 4102 Nuisance (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

The facility is located at 500 North Jack Tone Road in Stockton, California. The District has verified that the facility is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, school notification requirement of CH&SC 42301.6 is not required.

IV. Process Description

Bins of walnuts or cherries are placed inside the fumigation chamber then methyl bromide or Profume is injected into the chamber for the purpose of killing various bacteria. After a fumigation cycle is complete, the chamber is evacuated to the atmosphere until the fumigant concentration inside the chamber is less than 5 ppmv, and then bins are unloaded to the storage.

V. Equipment Listing

METHYL BROMIDE AND PROFUME FUMIGATION OPERATION CONSISTING OF ONE 56,051 CUBIC FEET (59'3" L X 43' W X 22' H) FUMIGATION CHAMBER (#5)

VI. Emission Control Technology Evaluation

Fumigation chamber is vented directly to the atmosphere. No emission control technology is used.

VII. Calculations

A. Assumptions

- Profume contains no VOC (per MSDS).
- MeBr in gaseous form is 100% VOC.
- All of the MeBr and Profume injected into the chamber is emitted to the atmosphere.
- Other assumptions will be stated as each is made.

B. Emission Factors

Pre-Project Emissions Factor (EF1)

This is a new emission unit. Therefore, EF1 is equal to zero.

Post-Project Emissions Factor (EF2)

Profume

It is a sulfuryl fluoride (SF) based fumigant. SF is not identified as a Hazardous Air Pollutant (HAP), as Office of Environmental Health Hazard Assessment (OEHHA) has not adopted a Reference Exposure Level (REL) for SF, at the time of this evaluation was conducted. Therefore, emission factor and potential emissions with the use of Profume will not be listed on the permit.

MeBr

Since it is considered 100% VOC, therefore, EF2 is 1 lb-VOC/lb-fumigant.

C. Potential to Emit (PE)

1. Daily and Annual Emissions

Pre-Project Potential to Emit (PE1)

This is a new emission unit. Therefore, PE1 is equal to zero.

Post-Project Potential to Emit (PE2)

The applicant is proposing the following daily and annual usages for this new chamber:

Profume

As discussed in emission factor section above, no daily and annual usages will be listed on the permit.

MeBr

Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/year)
VOC	225.0	5,175

In addition, the applicant is not proposing any change to the specific-limiting condition (SLC) of 19,600 lb-VOC per year for fumigation operations with the installation of this new fumigation operation.

2. Quarterly Emissions Changes

The Quarterly Emissions Changes (QEC) is calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly baseline emissions (BE). The annual emissions are evenly distributed throughout each quarter using the following equation:

$$\text{Quarterly Emissions Change} = [\text{Annual PE2} - \text{Annual PE1}] (\text{lb/yr}) / 4 (\text{quarter/year})$$

No changes to the SLC of VOC for fumigation operations are proposed. Therefore, QEC is equal to zero for each quarter for the proposed new unit.

3. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified.

This is a new emission unit. Therefore, AIPE calculations are not required.

D. Facility Emissions

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

Pursuant to District Rule 2201, section 4.9, the Pre-Project Stationary Source Potential to Emit (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 that have occurred at the source, and which have not been used on-site.

SSPE1 values are taken from engineering evaluation N-1112266.

Permit Number	Pollutants (lb/yr)
	VOC
N-4752-1-3	19,600 ¹
N-4752-3-3	
N-4752-4-1	
N-4752-5-1	
SSPE1	19,600
Major Source Threshold Level	20,000
Existing Major Source?	No

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

Pursuant to District Rule 2201, Section 4.10 the Post-Project Stationary Source Potential to Emit (SSPE2) 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 that have occurred at the source, and which have not been used on-site.

Permit Number	Pollutants (lb/yr)
	VOC
N-4752-1-3	19,600
N-4752-3-3	
N-4752-4-1	
N-4752-5-1	
ATC N-4752-6-0	
SSPE2	19,600
Major Source Threshold Level	20,000
New Major Source?	No
Offset Threshold Level	20,000
Offsets Triggered?	No

¹ The facility has a SLC of 19,600 lb-VOC/year for all fumigation operations.

3. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201, Section 5.4.5. If SSIPE results greater than 20,000 lb/yr for any one pollutant then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 and SSPE1, and calculated by the following equation:

$$\text{SSIPE (lb/yr)} = \text{SSPE2 (lb/yr)} - \text{SSPE1 (lb/yr)}$$

	Pollutants (lb/yr)
	VOC
SSPE2	19,600
SSPE1	19,600
SSIPE	0

As shown in the above table, SSIPE is equal to zero for VOC. Therefore, public notification and publication requirement is not required for this purpose.

4. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, Section 3.24, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purpose 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 this facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

As shown in Section VII.D.2 of this document, the facility is not an existing Major Source and also is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

The facility evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21(b)(1)(i). Therefore, the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	0	9.8	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

As shown above, the facility is not an existing major source for PSD for any pollutant. Therefore, the facility is not an existing major source for PSD.

5. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. Pursuant to section 3.8, baseline emissions shall be equal to the sum of:

BE = Pre-project Potential to Emit 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 section 3.23.

As shown in Section VII.D.2 of this document, the facility is not a major source for any pollutant. Therefore, the baseline emissions are equal to the pre-project potential to emit for each unit. BE = PE1.

6. SB 288 Major Modification

SB 288 Major Modification calculation is to determine the following:

- a. Pursuant to District Rule 2201, section 4.1.3, if Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification; and
- b. Pursuant to District Rule 2201, section 5.4.1, if a public notification is triggered.

As shown in Section VII.D.2 of this document, this facility is not a major source for any pollutant. Therefore, the proposed project cannot trigger a SB 288 Major Modification.

7. Federal Major Modification

Federal Major Modification is to determine the following:

- a. Pursuant to Rule 2201, section 4.2.3.5, if a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions;
- b. Pursuant to Rule 2201, section 4.15.1, if an Alternate Siting analysis must be performed; and if the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- c. Pursuant to Rule 2201, section 5.4.1, if a public notification is triggered.

This facility is not a major source for any pollutant. Therefore, it cannot trigger a Federal Major Modification.

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouses gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

As determined in Section VII.D.4 of this document, this facility is not an existing PSD Major Source. Therefore, the project potential to emit from the new units is compared to the PSD major source thresholds to determine if the project is subject to the requirements of Rule 2410.

As discussed above, the facility evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21(b)(1)(i). Therefore, the following PSD Major Source thresholds are applicable.

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New Units	0	2.6	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
New PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

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

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

Pursuant to District Rule 2201, Section 4.1.1, BACT requirements are triggered in a pollutant-by-pollutant basis for any new emissions unit with a Potential to Emit (PE) exceeds 2.0 lb/day, unless the unit is otherwise exempt per section 4.2. Section 4.2.1 provides an exemption from BACT requirements for CO emissions if the facility is located in

a CO attainment area and the SSPE2_{CO} is less than 200,000 lb/yr. As well, BACT may be triggered if the modification is an SB 288 Major Modification or a Federal Major Modification per section 4.1.3.

For MeBr:

As shown in Section VII.C.1, PE of VOC is greater than 2.0 lb/day for the fumigation operation. Therefore, BACT analysis is required.

BACT Guideline 5.4.12 lists VOC emissions control requirements for commodity MeBr fumigation chamber. The requirement is listed in the following table:

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible
VOC	Minimize use of fumigant (i.e. use no more than product specifications recommend), and airtight fumigation	<ol style="list-style-type: none"> 1. 99% control (chemical scrubbing) 2. 98% control (thermal or catalytic reduction) 3. 95% control (carbon adsorption) 4. 81% control (carbon adsorption with onsite re-activation using chemical scrubber) 5. 80% control (condensation refrigeration system)

The “Top-Down BACT Analysis” for VOC emissions is performed in Appendix II of this document.

According to this analysis, the applicant’s proposal, use no more than product specification recommend amount of fumigant and air-tight fumigation chamber, meets District BACT requirements.

2. Offsets

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the values listed in § 4.5.3, table 4-1.

As shown in Section VII.D.2 of this document, SSPE2 is not greater than the offset thresholds for any pollutant. Therefore, offset calculations are not required.

3. Public Notification

District Rule 2201, § 5.4, requires a public notification for the affected pollutants from the following types of projects:

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

This facility is not an existing major source and is not becoming a major source as a result of this project, so it cannot trigger either Federal Major Modification or SB 288 Major Modification. Therefore, public noticing for these purposes is not required.

b. New emission unit with PE > 100 lb/day for any one pollutant

The proposed new emission unit has PE > 100 lb-VOC/day. Therefore public noticing for this purpose is required.

c. Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis

The propose project does not result in SSPE from below offset threshold level to above offset threshold level for any pollutant. Therefore, public noticing for this purpose is not required.

d. New stationary sources with SSPE2 exceeding Offset thresholds

There is no new stationary source with SSPE2 exceeding offset thresholds as a result of this project. Therefore public noticing for this purpose is not required.

e. Any permitting action with an SSIPE exceeding 20,000 lb/yr for any one pollutant

As shown in Section VII.D.3 of this document, SSIPE is equal to zero for any one pollutant. Therefore public noticing for this purpose is not required.

As discussed above, public notification is required for this project for VOC emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resource Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this new fumigation operation.

4. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions. Therefore, the following conditions will be listed on the permit to ensure compliance:

- *VOC emissions from this fumigation operation shall not exceed 225.0 pounds in any one day, equivalent to the use of 225.0 pounds of Methyl Bromide in any one day. [District Rules 2201 and 4102]*
- *Facility-wide VOC emissions shall be less than 19,600 pounds in any one calendar year, equivalent to the use of 19,600 pounds of Methyl Bromide in any one calendar year. [District Rule 2201]*
- *Methyl Bromide and Profume shall be the only fumigants used in this fumigation operation. [District Rules 2201 and 4102]*

5. Compliance Assurance

Source Testing

No source testing is required for this permit unit, since it is assumed that all methyl bromide will be released to the atmosphere.

Monitoring

No monitoring is required for this permit unit.

Recordkeeping

The permittee is required to keep daily and annual usage records for Methyl Bromide. These records are required to be kept for a period of at least five years and made available to the District upon request. Therefore, the following permit conditions will be listed on the permit to ensure compliance:

- *Records of the daily usages of Methyl Bromide, in pounds, shall be maintained. [District Rules 2201 and 4102]*
- *Records of the cumulative annual usage of Methyl Bromide shall be maintained. The records shall be updated at least once during each week that the Methyl Bromide is used. [District Rules 2201 and 4102]*

Reporting

No reporting is required for this permit unit.

6. Ambient Air Quality Analysis

Per Section 4.14 of Rule 2201, ambient air quality analysis (AAQA) shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse the violation of an Ambient Air Quality Standard (AAQS).

This project involves only VOCs for which AAQS does not exist; therefore, AAQA is not performed for this project.

Compliance with the requirements of this Rule is expected.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity. The following condition will be listed on the permit to ensure compliance:

- {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]

District Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Therefore, the following condition will be listed on the permit to ensure compliance:

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905-1 (March 2, 2001) - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite. The Risk Management Review Summary results are as follow:

RMR Summary			
Categories	Methyl Bromide & Profume Fumigation Operation (Unit 6-0)	Project Totals	Facility Totals
Prioritization Score	3.14 (14.12) ²	>1	>1
Acute Hazard Index	0.56 (0.19)	0.56	1.00 ³
Chronic Hazard Index	0.08 (0.16)	0.08	0.39
Maximum Individual Cancer Risk (10 ⁻⁶)	N/A ⁴	0.00	0.00
T-BACT Required?	No		
Special Permit Conditions?	Yes		

The Acute and Chronic Indices are below 1.0 and there are no Cancer Risk REL values associated with any of the pollutants under analysis. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT). The detail analysis of this assessment is performed in Appendix III of this document.

This assessment proposed the following permit conditions:

² Potential Sulfuryl Fluoride Risk Values based on DPR's RfCs.

³ The Acute Hazard Index has reached its facility wide limit of 1.0. Any future projects for this facility are not allowed without first revising this and all other previous projects for this facility.

⁴ There are no Cancer REL values for any of the pollutants under analysis for this unit.

- *{1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]*
- *Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once Office of Environmental Health Hazard Assessment (OEHHA) adopts a Reference Exposure Level (REL) Value for Sulfuryl Fluoride. [District Rule 4102]*
- *Methyl Bromide (MeBr) emission shall not exceed 204.1 pounds in any one hour. {Hourly Methyl Bromide emissions shall be calculated as follow: MeBr Usage (lb/cycle) x0.907}. [District Rule 4102]*
- *The height of the fumigation chamber's exhaust stack from the ground must be at least 70 feet. [District Rule 4102]*
- *The inside diameter of the fumigation chamber's exhaust stack at the point of release must not exceed 2 feet. [District Rule 4102]*
- *The airflow rate of the fumigation chamber's exhaust sack must be at least 20,000 cfm. [District Rule 4102]*

Compliance with the requirements of this Rule is expected.

California Health & Safety Code 42301.6 (School Notice)

As discussed in Section III of this document, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

California Environmental Quality Act (CEQA)

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 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; and
- 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.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus, the District is the Lead Agency for this project. The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct (ATC) N-4752-6-0 subject to the permits conditions listed on the attached draft ATC in Appendix I.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-4752-6-0	3020-01-B Greater Than 25 but Less Than 50 hp	30 hp	\$ 117

APPENDICES

- Appendix I: Draft Authority to Construct (ATC)*
Appendix II: BACT Guideline & Top-Down BACT Analysis
Appendix III: Risk Management Review (RMR)

APPENDIX I

Draft Authority to Construct (ATC)

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-4752-6-0

LEGAL OWNER OR OPERATOR: FOPPIANO RANCH
MAILING ADDRESS: P O BOX 659
LINDEN, CA 95236

LOCATION: 500 N JACK TONE ROAD
STOCKTON, CA 95215

EQUIPMENT DESCRIPTION:

METHYL BROMIDE AND PROFUME FUMIGATION OPERATION CONSISTING OF ONE 56,051 CUBIC FEET (59'3" L X 43' W X 22' H) FUMIGATION CHAMBER (#5)

CONDITIONS

1. {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]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Methyl Bromide and Profume (Sulfuryl Fluoride) shall be the only fumigants used in this fumigation operation. [District Rules 2201 and 4102]
4. All fumigation operations must be conducted inside the fumigation chamber, and the fumigation chamber must be maintained in a sealed and air-tight condition when in operation. [District Rule 4102]
5. The height of the fumigation chamber's exhaust stack from the ground must be at least 70 feet. [District Rule 4102]
6. The inside diameter of the fumigation chamber's exhaust stack at the point of release must not exceed 2 feet. [District Rule 4102]
7. The airflow rate of the fumigation chamber's exhaust stack must be at least 20,000 cfm. [District Rule 4102]
8. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
9. Methyl Bromide (MeBr) emissions from this fumigation operation shall not exceed 204.1 pounds in any one hour. {Hourly Methyl Bromide emissions shall be calculated as follow: MeBr emissions (lb/hour) = MeBr Usage (lb/cycle) x 0.907}. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

N-4752-6-0 : Apr 11 2013 11:29AM - SOV : Joint Inspection NOT Required

10. VOC emissions from this fumigation operation shall not exceed 225.0 pounds in any one day, equivalent to the use of 225.0 pounds of Methyl Bromide in any one day. [District Rules 2201 and 4102]
11. Facility-wide VOC emissions shall be less than 19,600 pounds in any one calendar year, equivalent to the use of 19,600 pounds of methyl bromide in any one calendar year. [District Rule 2201]
12. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once Office of Environmental Health Hazard Assessment (OEHHA) adopts a Reference Exposure Level (REL) Value for Sulfuryl Fluoride. [District Rule 4102]
13. Records of the daily usage of Methyl Bromide, in pounds, shall be maintained. [District Rule 2201]
14. Records of the cumulative annual usage of Methyl Bromide shall be maintained. The records shall be updated at least once during each week that Methyl Bromide is used. [District Rule 2201]
15. All records shall be retained on-site for a period of at least five years and be made available for District inspection upon request. [District Rule 1070]

DRAFT

APPENDIX II

BACT Guideline & Top-Down BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.12*

Last Update 6/25/2008

Commodity Methyl Bromide Fumigation Chamber

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Minimize use of fumigant (i.e. use no more than product specifications recommend), and airtight fumigation	<ol style="list-style-type: none"> 1. 99% control (chemical scrubbing) 2. 98% control (thermal or catalytic reduction) 3. 95% control (carbon adsorption) 4. 81% control (carbon adsorption with onsite re-activation using chemical scrubber) 5. 80% control (condensation refrigeration system) 	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

Top-Down BACT Analysis for VOC Emissions

The following VOC emission control technologies are listed in BACT guideline 5.4.12, 4th quarter, 2012, Commodity Methyl Bromide Fumigation Chamber.

Step 1: Identify All Possible Control Technologies

Achieved in Practice or contained in SIP:

Minimize use of fumigant (i.e. use no more than product specifications recommend), and airtight fumigation

Technologically Feasible:

- 99% control (chemical scrubbing)
- 98% control (thermal or catalytic reduction)
- 95% control (carbon adsorption)
- 81% control (carbon adsorption with onsite re-activation using chemical scrubber)
- 80% control (condensation refrigeration system)

Alternate Basic Equipment:

There is no alternate basic equipment listed in this guideline.

Step 2: Eliminate Technologically Infeasible Options

Thermal and catalytic reduction uses heat and a catalyst to chemically breakdown a VOC into a less reactive compound such as water and elemental nitrogen. When methyl bromide is reduced, however, the process results in the generation of hydrogen bromide. Hydrogen bromide is listed as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), requiring the use of additional control system(s) to prevent these secondary emissions.

Thus, thermal and catalytic reduction is considered to be technologically infeasible for this operation and is eliminated from further consideration.

All other options identified above are considered to be technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

- 1) 99% control – Chemical scrubbing system (Technologically Feasible)
- 2) 95% control – Carbon adsorption (Technologically Feasible)
- 3) 81% control – Carbon adsorption with onsite re-activation using chemical scrubber (Technologically Feasible)
- 4) 80% control – Condensation using a refrigeration system (Technologically Feasible)

- 5) Use of air-tight fumigation chambers and minimized use of fumigant (i.e. use no more than product specification recommend). (Achieved in Practice)

Step 4: Cost Effectiveness Analysis

A cost-effective analysis will now be performed for the control technologies specified above. As shown in section VII.C.1 of this document, the uncontrolled VOC emissions from the fumigation operation is calculated to 5,175 lb/yr.

Option 1: Chemical Scrubber with 99% control

No facility in the District has been permitted and implemented a chemical scrubber system to control methyl bromide emissions from fumigation operation. In addition, there is no recent cost information available for chemical scrubber system. Therefore, an actual cost quote for a chemical scrubber system that capable to achieve 99% control efficiency provided under engineering evaluation N-1062096, for a similar MeBr fumigation operation, is used.

Per project N-1062096, the proposed fumigation operation will be conducted inside an airtight atmospheric, non-vacuum type, chamber with minimize use of fumigant. Most methyl bromide fumigation operations permitted in the District are conducted inside of this type of chamber and utilize no more than product specifications recommend amount of fumigant. US Department of Agriculture also requires fumigations be conducted inside airtight chambers. Therefore, using airtight atmospheric chamber with minimize use of fumigant is determined to be "industry standard".

The annual methyl bromide usage for the fumigation operation under project N-1062096 is 19,999 pounds. Based on economics of scales, it is obvious that any control found to not be cost-effective at this level of throughput would be even less cost-effective at lower capacities, such as the annual methyl bromide usage of 5,175 pounds in this application.

This cost quote provided in project N-1062096 includes two elements:

- 1) Two scrubbers should be connected in series for every 100 acfm to obtain 99% control.
- 2) Scrubber cost is \$45,000/unit.

The exhaust airflow rate of the proposed fumigation operation is 5,645 acfm. Therefore, the control system would need 114 scrubbers with a total cost of \$5,130,000 (\$45,000/unit x 114 units).

Adjusting from 2006 dollars to 2012 dollars; (multiply by 1.21, 2.75% inflation/yr)⁵.

The cost of the scrubbers system = \$5,130,000 x 1.21 = \$6,207,300

⁵ Inflation multiplier (IM) = $(1 + i)^n$, where i is the inflation rate of 2.75%, and n is the number of year of 7. $IM = (1 + 0.0275)^7 = 1.241$

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

$$\text{Amortization Factor} = \left[\frac{0.1(1.1)^{10}}{(1.1)^{10} - 1} \right] = 0.163 \text{ per District policy, amortizing over 10 years at 10\%}$$

Therefore,

$$\text{Annualized Capital Investment} = \$6,207,300 \times 0.163 = \$1,011,790$$

$$\begin{aligned} \text{Controlled VOC emissions} &= 5,175 \text{ lb-VOC/yr} \times 1 \text{ tons-VOC}/2,000 \text{ lb-VOC} \times 0.99 \\ &= 2.56 \text{ ton-VOC/yr} \end{aligned}$$

Cost of VOC reduction is calculated as follows:

$$\begin{aligned} \text{Cost of VOC reduction} &= \text{cost of system} \div \text{controlled VOC emissions} \\ &= \$1,011,790/\text{yr} \div 2.56 \text{ ton-VOC/yr} \\ &= \$395,230/\text{ton-VOC} \end{aligned}$$

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton. Therefore, this control technology of utilize a chemical scrubber system is deemed not cost effective and will be removed from consideration at this time.

Option 2: Carbon Adsorption with 95% control

Carbon adsorption occurs when air containing VOC mixture is blown through a carbon canister and the VOC mixture is adsorbed onto the surface of the cracks in the activated carbon particles.

A representative from United States Filter Corporation stated that carbon adsorption systems are able to control about 20% of their weight in VOCs. As shown in the section above, the total uncontrolled VOC emission rate is 5,175 lb-VOC/year. Assuming the carbon would be able to capture 20% of its weight in VOC, the annual carbon requirement would be 25,875 pounds (5,175/0.2).

Per cost estimate provided by Siemens Industry, Inc. on 11/01/12, the cost is \$2.5/lb-carbon. The cost of carbon is calculated to:

$$\begin{aligned} \text{The cost of carbon} &= 25,875 \text{ lb-carbon/yr} \times \$2.5/\text{lb-carbon} \\ &= \$64,688/\text{yr} \end{aligned}$$

$$\begin{aligned} \text{Controlled VOC emissions} &= 5,175 \text{ lb-VOC/yr} \times 1 \text{ tons-VOC}/2,000 \text{ lb-VOC} \times 0.95 \\ &= 2.46 \text{ ton-VOC/yr} \end{aligned}$$

Cost of VOC reduction is calculated as follow:

$$\begin{aligned} \text{Cost of VOC reduction} &= \text{cost of carbon} \div \text{controlled VOC emissions} \\ &= \$64,688/\text{yr} \div 2.46 \text{ ton-VOC/yr} \\ &= \$26,296/\text{ton-VOC} \end{aligned}$$

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton. Therefore, this control technology of utilize a carbon adsorption system is deemed not cost effective and will be removed from consideration at this time.

Option 3: Carbon Bed with Scrubber System 81% control

The applicant contacted Value Recovery last year for a cost quote of a carbon bed with scrubber system to control VOC emissions from the exiting fumigation operations in this facility. Per applicant, the capital cost of the control system alone is \$225,000 and the annual operation cost is \$40,000.

Adjusting from 2011 dollars to 2012 dollars; (multiply by 1.0275, 2.75% inflation/yr)

The cost of the control system = \$225,000 x 1.0275 = \$231,188

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = $\left[\frac{0.1(1.1)^{10}}{(1.1)^{10} - 1} \right]$ = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,

Annualized Capital Investment = \$231,188 x 0.163 = \$37,684

Total Control Cost = Annual Cost + Operating Cost
= \$37,684/yr + \$40,000/yr
= \$77,684/yr

Controlled VOC emissions = 5,175 lb-VOC/yr x 1 tons-VOC/2,000 lb-VOC x 0.81
= 2.10 ton-VOC/yr

Cost of VOC reduction is calculated as follow:

Cost of VOC reduction = cost of carbon ÷ controlled VOC emissions
= \$77,684/yr ÷ 2.10 ton-VOC/yr
= \$36,992/ton-VOC

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton. Therefore, this control technology of utilize a carbon bed with scrubber system is deemed not cost effective and will be removed from consideration at this time.

Option 4: Condensation Refrigeration System with 80% control

The cost of the electricity required to operate a refrigerated vapor condenser system alone will be sufficiently to cause this control technology to be not cost effective per District BACT policy. This partial cost estimate does not include the capital equipment costs, or any associated operational and maintenance costs.

This process requires the methyl bromide and exhaust air to be cooled from the typical chamber exhaust temperature of 70°F to the methyl bromide dew point of 35°F and then cooled to a final temperature of 32°F.

An SDUPA study estimated the cost for electricity to run a compressor at \$44,000/cycle, assuming \$0.10/kW-hr and 234,000 cubic foot of air chilled from 70°F to 35°F.

The capacity of the chamber is 56,051 ft³, and the cost to chill the air from 70°F to 35°F for the entire chamber is calculated to:

$$\text{Cost} = \$44,000/\text{cycle} \times (56,051 \text{ ft}^3 \div 234,000 \text{ ft}^3) = \$10,540/\text{cycle}$$

Per PG&E Electric Schedule AG-1, Rate B with summer season, the electric rate is \$0.1864/kW-hr⁶.

Adjusting the cost calculated in the SDUPA study to reflect \$0.1864/kWh-hr results in an electrical compressor cost as follows:

$$\text{Cost} = \$10,540/\text{cycle} \times (\$0.1864/\text{kW-hr} + \$0.10/\text{kW-hr}) = \$19,647/\text{cycle}$$

Based on the annual MeBr usage of 5,175 pounds per year and 112.5 lb-MeBr per cycle, the maximum fumigation cycle is calculated to 46 cycles per year. Therefore, the annual electricity cost is calculated to:

$$\text{Cost} = \$19,647/\text{cycle} \times 46 = \$903,762/\text{yr}$$

$$\begin{aligned} \text{Controlled VOC emissions} &= 5,175 \text{ lb-VOC/yr} \times 1 \text{ tons-VOC}/2,000 \text{ lb-VOC} \times 0.80 \\ &= 2.07 \text{ ton-VOC/yr} \end{aligned}$$

Cost of VOC reduction is calculated as follow:

$$\begin{aligned} \text{Cost of VOC reduction} &= \text{cost of system} \div \text{controlled VOC emissions} \\ &= \$903,762/\text{yr} \div 2.07 \text{ ton-VOC/yr} \\ &= \$436,600/\text{ton-VOC} \end{aligned}$$

Since the calculated cost of VOC reduction exceeds the VOC cost effective threshold of \$17,500/ton. Therefore, this control technology of utilize a carbon adsorption system is deemed not cost effective and will be removed from consideration at this time.

⁶ Per PG&E Electric Schedule AG-1, http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHS_AG-1.pdf
This facility has more than one single-motor installed and the total horsepower rating of the equipment is more than 15 hp, so Rate B is used. In addition, walnut fumigation operation is a seasonal operation which normally operates from August to November. Therefore, summer season rate is used.

Step 5: Select BACT

None of the technologically feasible control technologies are cost effective. Therefore, no emissions control equipment is required, and use no more than product specifications recommend and airtight fumigation shall be considered BACT for this operation.

APPENDIX III

Risk Management Review (RMR)

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Wai-Man So - Permit Services
 From: Cheryl Lawler - Technical Services
 Date: April 3, 2013
 Facility Name: Foppiano Ranch
 Location: 500 N. Jack Tone Road, Stockton
 Application #(s): N-4752-6-0
 Project #: N-1123003

A. RMR SUMMARY

Categories	Methyl Bromide & Profume (Sulfuryl Fluoride) Fumigation Operation (Unit 6-0)	Project Totals	Facility Totals
Prioritization Score	3.14 (14.12) ¹	>1	>1
Acute Hazard Index	0.56 (0.19) ¹	0.56	1.00 ³
Chronic Hazard Index	0.08 (0.16) ¹	0.08	0.39
Maximum Individual Cancer Risk	N/A ²	0.00	0.00
T-BACT Required?	No		
Special Permit Conditions?	Yes		

¹Potential Sulfuryl Fluoride Risk Values based on DPR's RfCs.

²There are no Cancer REL values for any of the pollutants under analysis for this unit.

³The Acute Hazard Index has reached its facilitywide limit of 1.0. Any future projects for this facility are not allowed without first revisiting this and all other previous projects for this facility.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels, the following permit conditions must be included for:

Unit 6-0

1. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride.
2. Methyl Bromide emissions shall not exceed 204.1 pounds per hour.
3. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102] N
4. The exhaust stack must be at least 70 feet tall.
5. The exhaust stack diameter must be 2 feet.
6. The exhaust flow rate must be 20,000 cfm.

B. RMR REPORT

I. Project Description

Technical Services received a request on November 6, 2012, to perform a Risk Management Review for a new fumigation chamber that will utilize both Methyl Bromide and Profume (Sulfuryl Fluoride). The project also triggers public notice which requires an Ambient Air Quality Analysis (AAQA). This project only emits VOCs, however, there are no State or Federal Ambient Air Quality Standards for VOCs. Therefore, no AAQA was required or performed for this project.

Regarding the use of Sulfuryl Fluoride, OEHHA is still in the process of developing a risk factor for Sulfuryl Fluoride which could be significant; therefore, the District will require an additional condition be placed on the permit that will require the facility to comply with AB 2588 once the new REL values for Sulfuryl Fluoride have been developed.

II. Analysis

For Methyl Bromide usage, Technical Services performed a prioritization using the District's HEARTs database, along with emission rates supplied by the processing engineer and applicant. Since the prioritization score was greater than one, a refined health risk assessment was required and performed for the project. AERMOD was used, with the parameters outlined below and five-year concatenated meteorological data for Stockton to determine the maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model and the chronic and acute hazard indices and the carcinogenic risk for the project were calculated.

For Sulfuryl Fluoride usage, the acute ($510\text{ug}/\text{m}^3$) and chronic ($10\text{ug}/\text{m}^3$) Reference Concentrations (RfCs) for Sulfuryl Fluoride developed by the Department of Pesticide Regulations (DPR) were used in the following equations to calculate the prioritization portion attributed to Sulfuryl Fluoride: Acute (14.12) = $[(120\text{ lb/hr SF}) \div (510\text{ RfC SF})] \times (1500) \times (0.04\text{ distance adjustment factor})$; Chronic (0.75) = $[(11,000\text{ lb/yr SF} \div \text{hrs/yr}) \div (10\text{ RfC SF})] \times (150) \times (0.04\text{ distance adjustment factor})$. The following equations were then used to calculate Sulfuryl Fluoride's hazardous indices: Acute HI (0.19) = Concentration + Acute REL; Chronic HI (0.16) = Concentration + Chronic REL.

The following parameters were used for the review:

Analysis Parameters			
Source Type	Point	Location Type	Rural
Stack Height (m)	21.34	Closest Receptor (m)	376
Stack Diameter (m)	0.61	Type of Receptor	Residence
Stack Exit Velocity (m/s)	32.34	Methyl Bromide Usage Rates	204.1 lbs/hr 19,600 lbs/yr
Stack Exit Temp. (°K)	294	Sulfuryl Fluoride Usage Rates	120 lbs/hr 11,000 lbs/yr

III. Conclusions

The Acute and Chronic Indices are below 1.0 and there are no Cancer Risk REL values associated with any of the pollutants under analysis. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on Page 1 of this report must be included for the unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

Note:

Based on the DPR's acute and chronic RfCs developed for Sulfuryl Fluoride, the Acute HI would be 0.19 and the Chronic HI would be 0.16, which combined with all the total project values would be greater than the District's threshold of 1. However, REL values are not yet established by OEEHA. It may be necessary to revisit the use of Sulfuryl Fluoride once its RELs are published. It should also be noted that the use of Sulfuryl Fluoride as a fumigant does not contribute additional VOC into the ambient air. Also note that OEEHA's guidance for determining potential health risk from Sulfuryl Fluoride is to use the Chronic REL for fluoride (13 ug/m^3), as fluoride is a metabolite of Sulfuryl Fluoride. This REL is greater than DPR's RfC for Sulfuryl Fluoride (10 ug/m^3), which would result in a lesser chronic value for the project, indicating that the DPR's RfC for Sulfuryl Fluoride is more conservative and protective of health than OEEHA's REL for fluoride.

Attachments

RMR Request Form & Related Project Emails
Stack Parameter Conversions
Prioritization
Risk Results
Facility Summary