

# SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

Approved by: SIGNED  
David Warner  
Director of Permit Services

Date: 09/09/09

## I. Purpose:

This policy is to provide guidance regarding the permitting of existing organic waste processing operations within the District. Organic waste processing operations includes green waste composting, food waste composting, co-composting, processing of organic waste materials at landfills, and land application of organic waste materials.

## II. Applicability:

This policy applies to the processing of In-House Permit(s) to Operate (PTOs) applications for existing organic waste processing operations. Organic waste material screening and grinding operations that may be conducted at these facilities are not covered by this policy.

## III. Background:

Organic waste materials are generally managed by disposal in landfills, applied to land to enrich the soil, or composted. These operations are significant sources of volatile organic compounds (VOC), ammonia (NH<sub>3</sub>), and odor emissions due to the decomposition of the organic materials. In addition, fugitive particulate matter emissions may also be emitted due to the handling and processing of the organic materials. Organic waste processing consists of the following types of operations:

### Green Waste Composting:

Green waste composting is the controlled biological decomposition of green waste material by microorganisms under controlled conditions to convert the material into a soil-like substance called compost. Green waste is defined as any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains. The manufactured compost is utilized as a soil amendment for landscaping and agriculture purposes.

### Food Waste Composting:

Food waste composting is the controlled biological decomposition of food waste material by microorganisms under controlled conditions to convert the material into compost. Food waste is defined as any food scraps from the food service industry, grocery stores, or residential food scrap collection. Food waste material is generally mixed with green waste to produce compost, which is used as a soil amendment for landscaping and agriculture purposes.

### Co-Composting:

Co-composting is where biosolids, animal manure, and/or poultry litter are mixed with other materials (typically green waste) to produce compost. Per District Rule 4565, composting is defined as the controlled biological decomposition of organic material, such as sewage sludge, animal manures, or crop residues, under aerobic (with air) or anaerobic (without air) conditions to form a humus-like material. Biosolids is defined as organic material resulting from the treatment of sewage sludge or wastewater. Animal manure is defined as non-human animal excretions and waste, including, but not limited to, dried solids and urine from cows, cattle, or swine. Poultry litter is defined as poultry excretions and waste, including, but not limited to, dried solids and urine from chickens, turkeys, geese, or ducks. The manufactured compost is utilized as a soil amendment for landscaping and agriculture purposes.

### Processing of Organic Waste Materials at Landfills:

Green waste, biosolids, animal manure, and poultry litter received at landfills are for final disposal where the material is spread and compacted and a daily cover is applied. Landfill operators are currently allowed to accept organic waste as a recycled material for use as an alternative daily cover (ADC). Therefore, at some landfills the green waste, biosolids, animal manure, and poultry litter are composted or co-composted to use as an ADC. This policy will only address the permitting of an existing composting or co-composting operation at a landfill. The emissions from the disposal of organic waste materials at a landfill is beyond the scope of this policy and will be addressed under the facility's permit for their landfill gas collection and control system.

### Land Application of Organic Waste Materials:

Another method to manage and utilize green waste, biosolids, animal manure, and/or poultry litter is direct application of these materials onto open land to enrich the soil. The received or site-produced organic waste materials are land incorporated by tilling, injecting, or plowing the organic waste materials into the soil. This is a common method used for the disposal of biosolids at sewage treatment plants and to provide the needed organic matter in low quality soils for the growing of feed crops on farmland.

**IV. Permit Requirement:**

Based on past and recent source testing at existing organic waste processing operations, these facilities can be significant sources of volatile organic compounds (VOC), ammonia (NH<sub>3</sub>), and particulate matter (PM) emissions. Based on these recent findings, emissions from these types of operations may exceed the permit exemption limits of District Rule 2020, Sections 3.7 and 6.19. for low emitting units.

**V. District Organic Waste Processing Operations Prohibitory Rules:**

The following are District prohibitory rules which may apply to existing organic waste processing operations:

Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations):

This rule was adopted on March 15, 2007 and applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and to operators who landfill, land apply, compost, or co-compost these materials. This rule does not apply to facilities that only process green waste or food waste.

Per Section 4.0 of Rule 4565 (except for the applicable recordkeeping requirements of Section 6.6.1) the following Table 1 lists the exemptions of this rule.

<b>Table 1 – Summary of Rule 4565 Exemptions</b>	
<b>Rule Section</b>	<b>Exemptions</b>
4.1	Facilities subject to Rule 4570 (Confined Animal Facilities) or specifically exempt under Section 4.0 of Rule 4570.
4.2	Composting/Co-Composting facilities with throughput of biosolids, animal manure, and poultry litter of < 100 wet tons/year.
4.3	Operators who land apply any combination of biosolids, animal manure or poultry litter and that meet all of the following criteria:  4.3.1 - Receive a total of < 10,000 wet tons/year of any combination of biosolids, animal manure, or poultry litter; and  4.3.2 - Are not intentionally conducting pathogen reduction on any biosolids, animal manure, or poultry litter; and  4.3.3 - Are not subject to the regulations of the California Integrated Waste Management Board pertaining to solid waste transfer/processing or disposal; and  4.3.4 - Do not receive or collect tipping fees.

<b>Table 1 – Summary of Rule 4565 Exemptions (Continued)</b>	
<b>Rule Section</b>	<b>Exemptions</b>
4.4	Facilities that place all material containing un-composted biosolids, animal manure, or poultry litter in air tight bags or packages for sale or sell materials containing biosolids, animal manure, or poultry litter as a soil amendment or fertilizer. Within 15 days of receipt, the biosolids, animal manure, or poultry litter must be placed in airtight bags or removed from the facility.

If the existing facility is subject to the requirements of this rule and is not exempt per Table 1 above, then the facility will need to identify and implement method(s) to comply with the applicable requirements of Section 5.0 based on the compliance schedule as indicated in Section 7.0 of the rule. For the source category requirements please refer to Section 5.0 of this rule. Table 2 below lists the compliance schedule based on the source categories.

<b>Table 2 – Summary of Rule 4565 Compliance Schedule</b>		
<b>Source Category</b>	<b>ATC Application Submission Date</b>	<b>Full Compliance Date</b>
Landfills	---	March 15, 2008
Land Application ≤100,000 wet tons/year	---	March 15, 2008
Land Application >100,000 wet tons/year	---	September 15, 2008
Composting/Co-composting <100,000 wet tons/year	---	September 15, 2008
Composting/Co-composting ≥100,000 wet tons/year	---	March 15, 2010
Composting/Co-Composting ≥100,000 wet tons/year and converting to energy generation	March 15, 2008	Implement four (4) Class One mitigation measures by September 15, 2008
		Implement three (3) Class One mitigation measures and operate in-vessel composting by September 15, 2012

Rule 4566 (Organic Waste Operations):

This rule is currently under development and is proposed for adoption during the Forth Quarter of 2010. This rule will apply to all facilities whose throughput consists primarily of organic waste, as defined in the rule, and the operators who compost, chip or grind, landfill, land apply, store or stockpile these materials, including operators who processes these materials for direct feed or dehydration. Organic waste, for the purposes of this rule, is any organic waste material that includes food processing by-products, food waste, green waste, and wood waste, or a mixture thereof, and does not include biosolids, animal manure, and poultry litter material. This rule will not apply to facilities which are subject to or exempt from Rule 4565.

**VI. Organic Waste Processing Operations Permit Exemption Dates:**

The following dates in Table 3 are to be used to determine if an existing organic waste processing operation qualifies for an In-House PTO(s) through loss of exemption under District Rule 2020. The notification date is the date the District sent mailers to existing facilities, which may be subject to District permit requirements. The In-House PTO cut-off date is the date utilized to determine if an In-House PTO will be issued for the existing operation. Any organic waste processing operation installed after the In-House PTO cut-off date will require an application for an Authority to Construct (ATC) permit and will be subject to the requirements of District Rule 2201.

<b>Table 3 – Permit Exemption Dates</b>		
<b>Process Type</b>	<b>Notification Date</b>	<b>In-House PTO Cut-off Date</b>
Composting or Co-Composting with Biosolids	August 1, 2002	August 1, 2002
Composting or Co-Composting with Animal Manure and Poultry Litter	November 16, 2007	November 16, 2007
Processing of Biosolids, Animal Manure, Poultry Litter, Green Waste, Food Waste, and Wood Waste by Land Application	November 16, 2007	November 16, 2007
Green Waste Composting	November 16, 2007	November 16, 2007
Food Waste Composting	November 16, 2007	November 16, 2007

## **VII. Land Use Authorizations/Permits for Existing Organic Waste Processing Operations:**

This policy only applies to an existing organic waste processing operation, which qualifies for an In-House PTO as determined in Section VI. of this document. Since these are existing facilities, it will be assumed that all required land use authorities/permits have been obtained. In addition, the District does not have the authority to enforce other local, state, or federal agency requirements. The issuance of a District permit does not authorize the existing facility to operate in violation of any established requirements from any local, state, or federal agency. The following condition will be included in their District permit to address this issue.

- - This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

## **VIII. Fugitive Emissions:**

Pursuant to District Rule 2201 (New and Modified Stationary Source Review Rule), Section 3.18, Fugitive Emissions is defined as, *“emissions that could not reasonably pass through a vent, chimney, stack, or other functionally equivalent opening. Emissions that are not vented through a stack but can reasonably be captured and vented through a stack are not considered fugitive.”* Because these existing organic waste processing operations utilize large open windrow piles and/or open fields for processing, the emissions from these operations do not reasonably lend themselves to capture and venting through an exhaust stack. Since these are existing operations, which are currently not subject to the requirements of District Rule 2201, then these emissions will be considered to be fugitive until such time that the operation is modified and become subject to the requirements of Rule 2201.

## **IX. Organic Waste Processing Operations Emission Factors:**

The District is currently in the process of establishing emissions factors for organic waste processing operations. The following emission factors will only be used for the processing of these In-House PTO(s) to establish a baseline emissions level and will be revised once more appropriate emission factors are determined through on-going research and testing. These emission factors are based on the current available emission factors and will be updated when appropriate pursuant to District Policy APR 1110 (Use of Revised Generally Accepted Emission Factors).

Green Waste Emission Factors:

Based on the District's preliminary Green Waste Compost Report, the following emission factors will be utilized for green waste composting as presented below in Table 4.

<b>Table 4 – Emission Factors for Green Waste Composting</b>		
<b>Activity</b>	<b>Emission Factors (lb/wet ton)</b>	
	<b>VOC</b>	<b>NH<sub>3</sub></b>
Stockpiles	5.36	0.06
Windrows	4.27	1.44
Facility Total	9.63	1.50

Food Waste Emission Factors:

The District has not been able to identify an emission factor for uncontrolled food waste composting. Source tests from controlled composting operations have yielded emission factors ranging from 3.4 lb VOC per ton food waste composted (micropore cover) to 37.1 lb VOC per ton food waste composted (Ag Bag). In addition to the wide range of values observed, it is also unlikely that emissions from a covered system would accurately represent emissions from the open windrow commonly used by facilities in the District. This is because covered systems offer many process control advantages including weather protection and water retention. For these reasons, the District will use the green waste composting emission factor to represent this feed stock until a more representative emission factor can be identified.

Pomace Emission Factors:

The District has not been able to identify an emission factor for pomace composting. The District will use the green waste composting emission factor to represent this feed stock until a more representative emission factor can be identified.

Biosolids and Animal Manure Emission Factors:

Biosolids and animal manure composting emission factors were taken from source tests conducted by the South Coast Air Quality Management District (SCAQMD) in support of their Rule 1133 (Emission Reductions from Composting and Related Operations). These emission factors were calculated as an average of emissions from three co-composting facilities (SCAQMD, 2002) as presented in the Table 5 below.

Location	Emission Factors (lb/wet ton)	
	VOC	NH <sub>3</sub>
RECYC Inc	0.53	2.70
EKO Systems	1.70	3.28
San Joaquin Composting	3.12	2.81
Average	1.78	2.93

Poultry Litter Emission Factors:

The District has not been able to identify an emission factor for poultry litter composting. The District will use the biosolids composting emission factor to represent this feed stock until a more representative emission factor can be identified.

Summary of Emission Factors:

Table 6 below summarizes the emission factors to be utilized for these In-House PTO applications until more representative emission factors are determined.

Process Type	Emission Factor	Source of Emission Factors
Composting or Co-Composting with Biosolids (Windrows)	1.78 lb-VOC/wet ton 2.93 lb-NH <sub>3</sub> /wet ton	SCAQMD Staff Report for Rule 1133
Composting or Co-Composting with Animal Manure and Poultry Litter (Windrows)	1.78 lb-VOC/wet ton 2.93 lb-NH <sub>3</sub> /wet ton	SCAQMD Staff Report for Rule 1133
Processing of Biosolids, Animal Manure, Poultry Litter by Land Application	1.78 lb-VOC/wet ton 2.93 lb-NH <sub>3</sub> /wet ton	SCAQMD Staff Report for Rule 1133
Green Waste Composting (VOC Emissions)	5.36 lb-VOC/wet ton (Stockpiles) 4.27 lb-VOC/wet ton (Windrows)	District Green Waste Composting Emission Factor Report
Green Waste Composting (NH <sub>3</sub> Emissions)	0.06 lb-NH <sub>3</sub> /wet ton (Stockpiles) 1.44 lb-NH <sub>3</sub> /wet ton (Windrows)	District Green Waste Composting Emission Factor Report
Food Waste Composting (VOC Emissions)	5.36 lb-VOC/wet ton (Stockpiles) 4.27 lb-VOC/wet ton (Windrows)	District Green Waste Composting Emission Factor Report
Food Waste Composting (NH <sub>3</sub> Emissions)	0.06 lb-NH <sub>3</sub> /wet ton (Stockpiles) 1.44 lb-NH <sub>3</sub> /wet ton (Windrows)	District Green Waste Composting Emission Factor Report



Process Type	Emission Factor	Source of Emission Factors
Processing of Green Waste, Food Waste, and Wood Waste by Land Application (VOC Emissions)	5.36 lb-VOC/wet ton (Stockpiles) 4.27 lb-VOC/wet ton (Windrows)	District Green Waste Composting Emission Factor Report
Processing of Green Waste, Food Waste, and Wood Waste by Land Application (NH <sub>3</sub> Emissions)	0.06 lb-NH <sub>3</sub> /wet ton (Stockpiles) 1.44 lb-NH <sub>3</sub> /wet ton (Windrows)	District Green Waste Composting Emission Factor Report

**X. Permit Application Processing Procedures:**

Step 1: Determine if the existing organic waste processing operation will be exempt from District permitting requirements as a low emitting unit per District Rule 2020, Section 6.19.

- (a). Utilizing the appropriate emission factors from Table 6 above for the process type, determine if the uncontrolled emissions from each pollutant are less than 2 lb/day.
- (b). Submit a Risk Management Review (RMR) request to determine if the operation will trigger Toxic Best Available Control Technology (T-BACT).

Based on the above results, if the operation is exempt from District permits, notify the facility of their exemption and cancel the application. If the operation is not exempt from District permits continue on to Step 2.

Step 2: Determine if the existing organic waste processing operation qualifies for an In-House PTO(s).

- (a). Determine whether the operation was installed prior to the cut-off date as indicated in Table 3 above for the process type.
- (b). Except for land application operations, determine whether the facility was issued a solid waste transfer, processing, or disposal permit from the California Integrated Waste Management District (CIWMB) prior to the cut-off date indicated in Table 3 above for the process type.

If the operation was installed prior to the applicable cut-off date with a CIWMB permit, then the operation will be issued an In-House PTO utilizing the appropriate In-House PTO application review. Otherwise, notify the facility that their operation does not qualify for an In-House PTO and their application will be processed under District Rule 2201 (New and Modified Stationary Source Review) for issuance of Authority to Construct (ATC) permits.

For land application operations, determine whether the facility was issued a local Environmental Health Services Department permit to land apply biosolids, animal manure, and/or poultry litter prior to the cut-off date indicated in Table 3 above for the process type.

If the land application operation was installed prior to the applicable cut-off date with a local Environmental Health Services Department permit, then the operation will be issued an In-House PTO utilizing the appropriate In-House PTO application review. Otherwise, notify the facility that their operation does not qualify for an In-House PTO and their application will be processed under District Rule 2201 (New and Modified Stationary Source Review) for issuance of Authority to Construct (ATC) permits.

#### **XI. Standard In-House PTO Application Review:**

In order to standardize and expedite the processing of these applications, the following application review documents will be used for the respective source categories:

See Attachment A of this document for the In-House PTO application review for Green Waste Composting.

See Attachment B of this document for the In-House PTO application review for Food Waste Composting.

See Attachment C of this document for the In-House PTO application review for Co-Composting.

See Attachment D of this document for the In-House PTO application review for land application of organic waste materials.

#### **XII. Standard Permit Conditions for In-House PTO for Organic Waste Processing Operations:**

To ensure uniformity, a standard set of permit conditions will be used for each organic waste processing operation. Additional permit conditions may be required on a site-specific basis. See the attached application reviews for the standard conditions for each process type.

**Attachment A**  
**In-House PTO Application Review for**  
**Green Waste Composting**

**San Joaquin Valley Air Pollution Control District  
Permit to Operate  
Application Review  
for Green Waste Composting**

Facility Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Engineer: \_\_\_\_\_  
Lead Engineer: \_\_\_\_\_  
  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Application #(s): \_\_\_\_\_  
Project #: \_\_\_\_\_  
Deemed Complete: \_\_\_\_\_

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**I. PROPOSAL:**

**[Facility Name]** is requesting that Permits to Operate (PTOs) be issued for their existing green waste composting operations. Prior to November 16, 2007, the District did not require permits for green waste composting operations. Based on the information provided by the applicant, the District has determined that the composting operations were installed prior to this date and District permits were not required at the time of installation. Pursuant to District Rule 2020, Section 9.0, this permit action is due to a loss of exemption and will not be subject to the requirements of District Rule 2201 (New and Modified Stationary Source Review Rule), until such time the emission units are modified. Therefore, PTOs will now be issued for the existing composting operations.

Based on the facility's current California Integrated Waste Management Board (CIWMB) permitted limits, this facility is allowed to process green waste material at a maximum of **[Permitted Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year).

**II. APPLICABLE RULES:**

Rule 2010: Permits Required (12/17/92)  
Rule 2020: Exemptions (12/20/07)  
Rule 2201: New and Modified Stationary Source Review Rule (9/21/06)  
Rule 2520: Federally Mandated Operating Permits (6/21/01)  
Rule 4101: Visible Emissions (2/17/05)  
Rule 4102: Nuisance (12/17/92)  
Rule 4202: Particulate Matter - Emission Rate (12/17/92)  
Rule 4565: Biosolids, Animal Manure, and Poultry Litter Operations (3/15/07)

Rule 4566: Green Waste Composting and Operations (Pending Adoption)  
Rule 8011: General Requirements (8/19/04)  
Rule 8031: Bulk Materials (8/19/04)  
Rule 8041: Carryout and Trackout ((8/19/04)  
Rule 8061: Paved and Unpaved Roads (8/19/04)  
Rule 8071: Unpaved Vehicle/Equipment Traffic Areas (9/16/04)  
California Health & Safety Code Section 41700 (Public Nuisance)  
California Health & Safety Code Section 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 **[Site Address]** in **[Site City]**, California. This facility and associated equipment are not located within 1,000 feet of a kindergarten through 12th grade school site boundary. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 do not apply to this project.

**OR**

The facility is located at **[Site Address]** in **[Site City]**, California. This facility and associated equipment are located within 1,000 feet of a kindergarten through 12th grade school site boundary ([Name of School]). However, this an existing operation and the proposed project does not result in an increase in toxic air contaminant emissions. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 is not required for this project.

### IV. PROCESS DESCRIPTION:

#### Feedstock Organic Waste Material Receiving, Storage, and Mixing:

Agricultural and/or municipal green waste feedstock materials used for composting are delivered via trucks and unloaded directly onto the receiving section of the staging area. The staging area is utilized to remove non-organic contaminants and to sort the different received organic materials into storage piles. A mechanical screen may also be used in the staging area to remove oversized material for size reduction with a grinder. The different types of stored organic materials are mixed together in the staging area in the proper proportions to product the compost material. The mixed organic materials are then transferred to the open windrow composting area.

Particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>) is generated from the green waste feedstock materials stockpiling and transfers due to the material drops and disturbance. Volatile Organic Compounds (VOC) and ammonia (NH<sub>3</sub>) emissions are also generated from the decomposition of the stored green waste feedstock materials.

### Open Windrow Composting:

Composting is the aerobic decomposition of organic materials by microorganisms under controlled conditions into a soil-like substance called compost. Windrow composting involves placing mixed organic materials in long, narrow triangular cross section piles and turning or aerating them regularly. The mixed organic materials to be composted are transferred to the windrow composting area, where the mixed materials are formed into windrow piles. The windrow piles are built and shaped using a front-end loader with typical dimensions of 3 to 12 feet high, 8 to 20 feet wide, and 50 to 500 feet long.

The active phase of the composting process begins once the mixed organic materials are formed into windrow piles. During this active stage, microorganisms start to break down the material and consume the most easily degradable organic matter giving off a significant amount of heat. The formed windrows are turned or aerated using a front-end loader or windrow turning machine weekly or more often depending on the middle temperature of the windrows. The windrows are turned after pathogen and weed seed destruction temperature have been reached (typically between 120°F to 150°F), but before reaching temperatures that impede composting (typically above 160°F). The active composting stage will typically last three to nine weeks, depending on the type of materials and frequency of turning.

At the end of the active composting stage, most of the easily degradable organic material has been decomposed. The remaining organic material decomposes much more slowly and is the beginning of the curing phase of the composting process. The compost may be left in the windrows or moved to a larger pile where it is allowed to further decompose very slowly over a period of weeks or months, depending on the desired final quality of the product. During this phase little additional heat is generated and minimal turning is needed. The compost becomes biologically stable and the pile will gradually cool to near air temperature. Once the maturing process is complete, the compost material is ready to be screened if required by the customer and sold for use.

PM<sub>10</sub> is generated due to the forming of the composting piles and from the periodic turning or aeration of the formed composting piles. VOC and NH<sub>3</sub> emissions are also generated from the decomposition of the organic material in the composting piles.

### Finished Compost Loadout Operation

The finished compost product is loaded onto trucks with front-end loaders.

PM<sub>10</sub> is generated due to the loading of the finished compost. No VOC and NH<sub>3</sub> are expected from the finished compost product since all decomposition of the organic material is completed by the end of the curing phase of the composting process.

Operating Schedule & Process Rate:

The equipment may operate up to 24 hours per day and 365 days/year at the following proposed processing rates:

<b>PTO Number</b>	<b>Maximum Processing Rates</b>
X-XXXX-1-0	Daily Quantity of Green Waste Material Received: XXX wet tons/day Annual Quantity of Green Waste Material Received: XXX wet tons/year Quantity of Green Waste Storage Piles: XXX Dimensions of the Green Waste Storage Piles: LxWxH (all in feet)
X-XXXX-2-0	Daily Quantity of Active Phase Composting Piles: XXX wet tons/day Annual Quantity of Active Phase Composting Piles: XXX wet tons/year Daily Quantity of Curing Phase Composting Piles: XXX wet tons/year Annual Quantity of Curing Phase Composting Piles: XXX wet tons/year Quantity of Active Phase Composting Piles: XXX Quantity of Curing Phase Composting Piles: XXX Dimensions of each Active Phase Composting Piles: LxWxH (all in feet) Dimensions of each Curing Phase Composting Piles: LxWxH (all in feet)
X-XXXX-3-0	Daily Quantity of Finished Compost Loaded: XXX wet tons/day Annual Quantity of Finished Compost Loaded: XXX wet tons/year Quantity of Finished Compost Storage Piles: XXX Dimensions of each Finished Compost Pile: LxWxH (all in feet)

**V. EQUIPMENT LISTING:**

X-XXXX-1-0:

GREEN WASTE ORGANIC MATERIAL RECEIVING, STORAGE, AND MIXING OPERATION

X-XXXX-2-0:

OPEN WINDROW ACTIVE AND CURING PHASE GREEN WASTE COMPOSTING OPERATION

X-XXXX-3-0:

FINISHED COMPOST STORAGE AND LOADOUT OPERATION

**VI. EMISSION CONTROL TECHNOLOGY EVALUATION:**

The existing composting facility will produce VOC, NH<sub>3</sub> and PM<sub>10</sub> emissions. Also, there is the potential for other odorous emissions.

To minimize VOC, NH<sub>3</sub>, and odor emissions, the facility will utilize good management practices to maintain the active phase composting windrows at the desired aerobic conditions.

This will involve the following: (a). Mixing different types of organic material in quantities to achieve a carbon to nitrogen ratio at a range between 20:1 to 40:1; (b). Turning or aerating the windrow at a frequency to maintain a center pile temperature between 110°F to 140°F or a oxygen content greater than 5% or a pH between 5.5 to 9.0; (c). Add water to the windrow as needed to maintain a moisture content between 40% to 65%.

A water sprinkler system will be used, as needed, to control the fugitive dust (PM<sub>10</sub>) emissions during the receiving, handling, loading, mixing, turning, grinding, and screening of the green waste feedstock and composted materials. Fugitive dust (PM<sub>10</sub>) emissions from the windrows will be controlled by the high moisture content of the composting material (typically 40% to 65%) and by facility water trucks when required. On site haul roads will be kept adequately moist to reduce fugitive dust emissions with the use of a water truck.

## VII. CALCULATIONS:

Since the operations are exempt from District Rule 2201 (see Section VIII of this document), calculations needed to demonstrate compliance with various sections of the Rule (e.g. BACT, offset, and public notification) are not required. Daily and annual potential to emit (PE) along with the stationary source potential to emit (SSPE) calculations will be performed for reference purposes and in order to complete the emission profile for this particular facility.

### A. Assumptions:

#### X-XXXX-1-0:

1. PM<sub>10</sub> will be emitted from the receiving, handling, and mixing of the green waste feedstock organic materials.
2. VOC and NH<sub>3</sub> will be emitted from the storage of the green waste feedstock organic materials.
3. PM<sub>10</sub> control efficiency of at least 70%<sup>(1)</sup> for handling of high moisture content material (25%) with wet spray dust suppression.
4. For feedstock organic materials receiving and transfer to storage there will be a total of 3 drop points consisting of the following: (a). 1-drop point from the receiving of the material; (b). 2-drop points from the transfer of the material from the receiving area to the storage pile.
5. For feedstock organic materials mixing there will be a total of 2 drop points consisting of the repeated lifting and dropping of the materials with a front-end loader.

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<sup>1</sup> Per AP-42, Table B.2-3 (AIRS Code 061), the average control efficiency for dust suppression with water spray is 70% for particulate matter with an aerodynamic diameter smaller than or equal to 10 microns (PM<sub>10</sub>).



X-XXXX-2-0:

1. VOC and NH<sub>3</sub> will be emitted from the active phase and curing phase windrows.
2. PM<sub>10</sub> will only be emitted during the forming of the active phase windrow piles. PM<sub>10</sub> emissions during the turning of the active phase windrows and forming of the curing phase windrows are assumed to be negligible due to high moisture content of materials handled (moisture content is typically 40% to 65%).
3. For the forming of the windrow composting piles there will be a total of 2 drop points consisting of the transfer of the mixed compost materials from the mixing pile to the windrow pile.

X-XXXX-3-0:

1. PM<sub>10</sub> will be emitted from the loading of the finished compost into trucks.
2. No VOC and NH<sub>3</sub> will be emitted from the finished compost since all decomposition of the organic material will be completed at the end of the curing phase.
3. For the loading of the finished compost into trucks there will be a total of 2 drop points consisting of the transfer of the finished compost materials from the storage piles to the truck.

**B. Emission Factors (EF):**

X-XXXX-1-0, X-XXXX-2-0, & X-XXXX-3-0:

1. Currently the EPA has suspended the AP-42 emission factors for wood product lumber processing operations. The District is not aware of any generally accepted wood waste or green waste receiving and transfer point emission factors. Therefore, the District will assume the AP-42 crushed stone emission factors as a conservative estimate as utilized under District project #C-1073961 for outdoor feedstock organic waste material receiving and conveyor transfer points with water spray PM<sub>10</sub> control efficiency of 70%. Therefore:

$$EF_{PM10/Controlled/Receiving \& Transfer Points} = 0.00033 \text{ lb-PM}_{10}/\text{ton}$$

2. For the feedstock organic waste material stockpiles and green waste composting in windrows, the VOC and NH<sub>3</sub> emission factors will be based on the District's preliminary green waste compost report. Therefore:

$$EF_{VOC/Stockpiles} = 5.36 \text{ lb-VOC/wet ton}$$

$$EF_{NH3/Stockpiles} = 0.06 \text{ lb-NH}_3/\text{wet ton}$$

$$EF_{VOC/Windrows} = 4.27 \text{ lb-VOC/wet ton}$$

$$EF_{NH3/Windrows} = 1.44 \text{ lb-NH}_3/\text{wet ton}$$

**C. Potential to Emit (PE) Calculations:**

X-XXXX-1-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	5.36 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	5.36 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-2-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Windrow Composting Piles:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Windrows}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Windrows}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	4.27 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	1.44 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Windrow Composting Piles:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	4.27 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	1.44 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-3-0:

Daily PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The daily PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

<b>Daily PE for Permit Unit X-XXXX-3-0</b>				
<b>Process Description</b>	<b># of Drop Points</b>	<b>Processing Rate (ton/day)</b>	<b>EF (lb-PM<sub>10</sub>/ton)</b>	<b>Daily PE (lb-PM<sub>10</sub>/day)</b>
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0.0</b>

Annual PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The annual PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Transfer Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

<b>Annual PE for Permit Unit X-XXXX-3-0</b>				
<b>Process Description</b>	<b># of Drop Points</b>	<b>Processing Rate (ton/year)</b>	<b>EF (lb-PM<sub>10</sub>/ton)</b>	<b>Annual PE<sub>PM<sub>10</sub></sub> (lb-PM<sub>10</sub>/day)</b>
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0</b>

Stationary Source Potential Emissions (SSPE):

The total stationary source potential emissions will be based on the combined emissions from all permit units at the facility. Therefore:

<b>Stationary Source Potential Emissions (SSPE)</b>			
<b>Permit Number</b>	<b>PM<sub>10</sub> (lb/year)</b>	<b>VOC (lb/year)</b>	<b>NH<sub>3</sub> (lb/year)</b>
X-XXXX-1-0	0	0	0
X-XXXX-2-0	0	0	0
X-XXXX-3-0	0	---	---
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

## VIII. COMPLIANCE

### Rule 2010 – Permits Required

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0 constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

As determined above in Section VII. (Calculations), this facility is a source of PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions, therefore, permits are required. In order to establish a baseline processing rate for this existing facility the following conditions will be listed on the permits:

#### X-XXXX-1-X:

- The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
- The quantity of green waste materials mixed for composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

#### X-XXXX-2-0:

- The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
- The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

#### X-XXXX-3-0:

- The quantity of finished compost loaded out shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

## **Rule 2020 - Exemptions**

Prior to November 16, 2007, the District did not require permits for green waste composting operations and is now being permitted due to a loss of exemption. Pursuant to District Rule 2020 (Exemptions), Section 9, the owner operator of an emissions unit that was exempt from written permits at the time of installation, which becomes subject to the provisions of District Rule 2010 (Permits Required), through loss of exemption, shall submit an application for a Permit to Operate and shall not be subject to District Rule 2201 (New and Modified Stationary Source Review Rule), until such time that emissions unit is modified.

## **Rule 2201 - New and Modified Stationary Source Review Rule**

An emissions unit that was installed at a time when permits were not required is exempt from District Rule 2201 for the initial permitting action, per District Rule 2020, Section 9.0. Therefore, as shown above, this facility is not subject to the requirements of this rule until they modify their operation.

## **Rule 2520 - Federally Mandated Operating Permits**

The emissions from these operations are fugitive as defined in Section 3.14 of this rule and are not listed as a non-exempt fugitive source in 40 CFR 70.2 (Definitions). Therefore, the emissions from these operations are not included in the determination of a major source as defined in District Rule 2201, Section 3.24, and the provisions of this rule do not apply.

## **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 Ringelmann 1 or equivalent to 20% opacity. Opacity is expected to be less than 20% provided that these operations are properly performed. The following conditions will be listed on each permit:

- {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]
- All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

**Rule 4102 - Nuisance**

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected provided that these operations are properly performed. The following condition will be placed on each permit:

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

Compliance is expected with this Rule.

**California Health & Safety Code 41700 (Health Risk Assessment)**

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a risk management review be performed for all projects that result in any increases in emissions of hazardous air pollutants. This project is to issue permits for existing organic waste processing operations with no increase in hazardous air pollutants. Therefore, a risk management review is not required.

**Rule 4202 - Particulate Matter – Emission Rate**

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The maximum allowable emissions rate is calculated using the following formulas:

$$E_{Max.} = 3.59 P^{0.62}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P \leq 30$  tons/hr)

or

$$E_{Max.} = 17.31 P^{0.16}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P > 30$  tons/hr)

Permit Number	P (ton/hr)	E <sub>Proposed</sub> (lb-PM/hr)	E <sub>Max.</sub> (lb/hr)
X-XXXX-1-0 <sup>(2)</sup>	XX.X	XX.X	XX.X
X-XXXX-2-0 <sup>(3)</sup>	XX.X	XX.X	XX.X
X-XXXX-3-0 <sup>(4)</sup>	XX.X	XX.X	XX.X

<sup>2</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hr/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day.

<sup>3</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day

Since the proposed PM Emission rates are less than the allowable maximum emission rates, these permit units are expected to operate in compliance with this rule.

### **Rule 4565 - Biosolids, Animal Manure, and Poultry Litter Operations**

The purpose of this rule is to limit the emissions volatile organic compounds (VOC) from operations involving the management of biosolids, animal manure, or poultry litter. Per Section 2.0, this rule applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and the operator who landfills, land applies, composts, or co-composts these materials.

The existing facility will only process and compost green waste organic materials. Therefore this rule is not applicable to this facility's operations.

### **Rule 8011 - General Requirements**

The definitions, exemptions, requirements, administrative requirements, record keeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

### **Rule 8031 - Bulk Materials**

Pursuant to Section 2.0, this Rule is applicable to the outdoor handling and storage of any bulk material, which emits visible dust when stored or handled. The following condition will be included on the In-House PTO to ensure compliance with the requirements of this rule.

- All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

### **Rule 8041 - Carryout and Trackout**

Pursuant to Section 2.0, this Rule is applicable to all sites that are subject to Rule 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), Rule 8031 (Bulk Materials), and Rule 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

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<sup>4</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day



- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

### **Rule 8051 - Open Areas**

Pursuant to Section 2.0, this Rule is applicable to any open area having 3.0 acres or more of disturbed surface area, which has remained undeveloped, unoccupied, unused or vacant for more than seven days. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]

### **Rule 8061 - Paved and Unpaved Roads**

Pursuant to Section 2.0, this Rule applies to any paved, or unpaved public or private road, street, highway, freeway, alley, way, access drive, access easement, or driveway constructed or modified after December 10, 1993. The following condition will be included on each ATC and PTO to ensure compliance with the requirements of this Rule.

- Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]

### **Rule 8071 - Unpaved Vehicle/Equipment Traffic Areas**

Pursuant to Section 2.0, this Rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger. The following conditions will be included on each In-House PTO to ensure compliance with the requirements of the Rule.

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]

- On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]

### California Environmental Quality Act (CEQA)

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval for an existing operation, which did not require District permits at the time of installation. 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.

### IX. RECOMMENDATION

Issue permits X-XXXX-1-0, X-XXXX-2-0 and X-XXXX-3-0 subject to the permit conditions on the attached draft In-House Permits to Operate.

### X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
X-XXXX-1-0	3020-06	Miscellaneous	None
X-XXXX-2-0	3020-06	Miscellaneous	None
X-XXXX-3-0	3020-06	Miscellaneous	None

### XI. APPENDICES

- Appendix I: Draft In-House Permits to Operate
- Appendix II: Emissions Profile

**APPENDIX I**  
**Draft In-House Permits to Operate**

## **APPENDIX II**

### **Emission Profiles**

## Standard Permit Conditions for Green Waste Composting

### X-XXXX-1-X:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of green waste materials mixed for composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
6. A daily log shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). [District Rules 1070]
7. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
8. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
9. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
10. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
11. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]

12. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
13. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
14. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
15. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
16. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-2-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

6. A daily log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). [District Rules 1070]
7. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
8. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
9. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
10. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
11. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
12. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
13. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
14. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]

15. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
16. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-3-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of finished compost loaded out shall not exceed XXXX wet tons in any one day and XXXX wet tons in any one calendar year. [District Rule 2010]
5. A daily log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). [District Rules 1070]
6. A cumulative annual log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
7. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
8. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
9. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]



10. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
11. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
12. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
13. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
14. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
15. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

**Attachment B**  
**In-House PTO Application Review for**  
**Food Waste Composting**

**San Joaquin Valley Air Pollution Control District  
Permit to Operate  
Application Review  
for Food Waste Composting**

Facility Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Engineer: \_\_\_\_\_  
Lead Engineer: \_\_\_\_\_  
  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Application #(s): \_\_\_\_\_  
Project #: \_\_\_\_\_  
Deemed Complete: \_\_\_\_\_

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**I. PROPOSAL:**

**[Facility Name]** is requesting that Permits to Operate (PTOs) be issued for their existing food waste composting operations. Prior to November 16, 2007, the District did not require permits for food waste composting operations. Based on the information provided by the applicant, the District has determined that the composting operations were installed prior to this date and District permits were not required at the time of installation. Pursuant to District Rule 2020, Section 9.0, this permit action is due to a loss of exemption and will not be subject to the requirements of District Rule 2201 (New and Modified Stationary Source Review Rule), until such time the emission units are modified. Therefore, PTOs will now be issued for the existing composting operations.

Based on the facility's current California Integrated Waste Management Board (CIWMB) permitted limits, this facility is allowed to compost organic waste material with food waste at a maximum of **[Permitted Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year) along with green waste materials at a maximum of **[Permitted Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year).

**II. APPLICABLE RULES:**

Rule 2010: Permits Required (12/17/92)  
Rule 2020: Exemptions (12/20/07)  
Rule 2201: New and Modified Stationary Source Review Rule (9/21/06)  
Rule 2520: Federally Mandated Operating Permits (6/21/01)  
Rule 4101: Visible Emissions (2/17/05)  
Rule 4102: Nuisance (12/17/92)

Rule 4202: Particulate Matter - Emission Rate (12/17/92)  
Rule 4565: Biosolids, Animal Manure, and Poultry Litter Operations (3/15/07)  
Rule 4566: Green Waste Composting and Operations (Pending Adoption)  
Rule 8011: General Requirements (8/19/04)  
Rule 8031: Bulk Materials (8/19/04)  
Rule 8041: Carryout and Trackout ((8/19/04)  
Rule 8061: Paved and Unpaved Roads (8/19/04)  
Rule 8071: Unpaved Vehicle/Equipment Traffic Areas (9/16/04)  
California Health & Safety Code Section 41700 (Public Nuisance)  
California Health & Safety Code Section 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 **[Site Address]** in **[Site City]**, California. This facility and associated equipment are not located within 1,000 feet of a kindergarten through 12th grade school site boundary. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 do not apply to this project.

**OR**

The facility is located at **[Site Address]** in **[Site City]**, California. This facility and associated equipment are located within 1,000 feet of a kindergarten through 12th grade school site boundary ([Name of School]). However, this an existing operation and the proposed project does not result in an increase in toxic air contaminant emissions. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 is not required for this project.

### IV. PROCESS DESCRIPTION:

#### Feedstock Organic Waste Material Receiving, Storage, and Mixing:

Agricultural and/or municipal green waste and food waste feedstock materials used for composting are delivered via trucks and unloaded directly onto the receiving section of the staging area. The staging area is utilized to remove non-organic contaminants and to sort the different received organic materials into storage piles. A mechanical screen may also be used in the staging area to remove oversized material for size reduction with a grinder. The different types of stored organic materials are mixed together in the staging area in the proper proportions to produce the compost material. The mixed organic materials are then transferred to the open windrow composting area.

Particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>) is generated from the organic waste feedstock materials stockpiling and transfers due to the material drops and disturbance. Volatile Organic Compounds (VOC) and ammonia (NH<sub>3</sub>) emissions are also generated from the decomposition of the stored organic waste feedstock materials.

#### Open Windrow Co-Composting:

Composting is the aerobic decomposition of organic materials by microorganisms under controlled conditions into a soil-like substance called compost. Windrow composting involves placing mixed organic materials consisting of green waste and food waste in long, narrow triangular cross section piles and turning or aerating them regularly. The mixed organic materials to be composted are transferred to the windrow composting area, where the mixed materials are formed into windrow piles. The windrow piles are built and shaped using a front-end loader with typical dimensions of 3 to 12 feet high, 8 to 20 feet wide, and 50 to 500 feet long.

The active phase of the composting process begins once the mixed organic materials are formed into windrow piles. During this active stage, microorganisms start to break down the material and consume the most easily degradable organic matter giving off a significant amount of heat. The formed windrows are turned or aerated using a front-end loader or windrow turning machine weekly or more often depending on the middle temperature of the windrows. The windrows are turned after pathogen and weed seed destruction temperature have been reached (typically between 120°F to 150°F), but before reaching temperatures that impede composting (typically above 160°F). The active composting stage will typically last three to nine weeks, depending on the type of materials and frequency of turning.

At the end of the active composting stage, most of the easily degradable organic material has been decomposed. The remaining organic material decomposes much more slowly and is the beginning of the curing phase of the composting process. The compost may be left in the windrows or moved to a larger pile where it is allowed to further decompose very slowly over a period of weeks or months, depending on the desired final quality of the product. During this phase little additional heat is generated and minimal turning is needed. The compost becomes biologically stable and the pile will gradually cool to near air temperature. Once the maturing process is complete, the compost material is ready to be screened if required by the customer and sold for use.

PM<sub>10</sub> is generated due to the forming of the composting piles and from the periodic turning or aeration of the formed composting piles. VOC and NH<sub>3</sub> emissions are also generated from the decomposition of the organic material in the composting piles.

#### Finished Compost Loadout Operation

The finished compost product is loaded onto trucks with front-end loaders.

PM<sub>10</sub> is generated due to the loading of the finished compost. No VOC and NH<sub>3</sub> are expected from the finished compost product since all decomposition of the organic material is completed by the end of the curing phase of the composting process.

Operating Schedule & Process Rate:

The equipment may operate up to 24 hours per day and 365 days/year at the following proposed processing rates:

PTO Number	Maximum Processing Rates
X-XXXX-1-0	Daily Quantity of Green Waste Material Received: XXX wet tons/day Annual Quantity of Green Waste Material Received: XXX wet tons/year Quantity of Green Waste Storage Piles: XXX Dimensions of the Green Waste Storage Piles: LxWxH (all in feet) Daily Quantity of Food Waste Received: XXX wet tons/day Annual Quantity of Food Waste Received: XXXX wet tons/year Dimensions of the Food Waste Storage Piles: LxWxH (all in feet)
X-XXXX-2-0	Daily Quantity of Active Phase Composting Piles: XXX wet tons/day Annual Quantity of Active Phase Composting Piles: XXX wet tons/year Daily Quantity of Curing Phase Composting Piles: XXX wet tons/year Annual Quantity of Curing Phase Composting Piles: XXX wet tons/year Quantity of Active Phase Composting Piles: XXX Quantity of Curing Phase Composting Piles: XXX Dimensions of each Active Phase Composting Piles: LxWxH (all in feet) Dimensions of each Curing Phase Composting Piles: LxWxH (all in feet)
X-XXXX-3-0	Daily Quantity of Finished Compost Loaded: XXX wet tons/day Annual Quantity of Finished Compost Loaded: XXX wet tons/year Quantity of Finished Compost Storage Piles: XXX Dimensions of each Finished Compost Pile: LxWxH (all in feet)

**V. EQUIPMENT LISTING:**

X-XXXX-1-0:

GREEN WASTE AND FOOD WASTE ORGANIC WASTE MATERIAL RECEIVING, STORAGE, AND MIXING OPERATION

X-XXXX-2-0:

OPEN WINDROW ACTIVE AND CURING PHASE FOOD WASTE COMPOSTING OPERATION

X-XXXX-3-0:

FINISHED COMPOST STORAGE AND LOADOUT OPERATION

## VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

The existing composting facility will produce VOC, NH<sub>3</sub> and PM<sub>10</sub> emissions. Also, there is the potential for other odorous emissions.

To minimize VOC, NH<sub>3</sub>, and odor emissions, the facility will utilize good management practices to maintain the active phase composting windrows at the desired aerobic conditions.

This will involve the following: (a). Mixing different types of organic material in quantities to achieve a carbon to nitrogen ratio at a range between 20:1 to 40:1; (b). Turning or aerating the windrow at a frequency to maintain a center pile temperature between 110°F to 140°F or a oxygen content greater than 5% or a pH between 5.5 to 9.0; (c). Add water to the windrow as needed to maintain a moisture content between 40% to 65%.

A water sprinkler system will be used, as needed, to control the fugitive dust (PM<sub>10</sub>) emissions during the receiving, handling, loading, mixing, turning, grinding, and screening of the green waste feedstock and composted materials. Fugitive dust (PM<sub>10</sub>) emissions from the windrows will be controlled by the high moisture content of the composting material (typically 40% to 65%) and by facility water trucks when required. On site haul roads will be kept adequately moist to reduce fugitive dust emissions with the use of a water truck.

## VII. CALCULATIONS:

Since the operations are exempt from District Rule 2201 (see Section VIII of this document), calculations needed to demonstrate compliance with various sections of the Rule (e.g. BACT, offset, and public notification) are not required. Daily and annual potential to emit (PE) along with the stationary source potential to emit (SSPE) calculations will be performed for reference purposes and in order to complete the emission profile for this particular facility.

### A. Assumptions:

#### X-XXXX-1-0:

1. PM<sub>10</sub> will be emitted from the receiving, handling, and mixing of the green waste feedstock organic materials.
2. VOC and NH<sub>3</sub> will be emitted from the storage of the green waste feedstock organic materials.
3. PM<sub>10</sub> control efficiency of at least 70%<sup>(5)</sup> for handling of high moisture content material (25%) with wet spray dust suppression.
4. For feedstock organic materials receiving and transfer to storage there will be a total of 3 drop points consisting of the following: (a). 1-drop point from the receiving of the material; (b). 2-drop points from the transfer of the material from the receiving area to the storage pile.

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<sup>5</sup> Per AP-42, Table B.2-3 (AIRS Code 061), the average control efficiency for dust suppression with water spray is 70% for particulate matter with an aerodynamic diameter smaller than or equal to 10 microns (PM<sub>10</sub>).

5. For feedstock organic materials mixing there will be a total of 2 drop points consisting of the repeated lifting and dropping of the materials with a front-end loader.

X-XXXX-2-0:

1. VOC and NH<sub>3</sub> will be emitted from the active phase and curing phase windrows.
2. PM<sub>10</sub> will only be emitted during the forming of the active phase windrow piles. PM<sub>10</sub> emissions during the turning of the active phase windrows and forming of the curing phase windrows are assumed to be negligible due to high moisture content of materials handled (moisture content is typically 40% to 65%).
3. For the forming of the windrow composting piles there will be a total of 2 drop points consisting of the transfer of the mixed compost materials from the mixing pile to the windrow pile.

X-XXXX-3-0:

1. PM<sub>10</sub> will be emitted from the loading of the finished compost into trucks.
2. No VOC and NH<sub>3</sub> will be emitted from the finished compost since all decomposition of the organic material will be completed at the end of the curing phase.
3. For the loading of the finished compost into trucks there will be a total of 2 drop points consisting of the transfer of the finished compost materials from the storage piles to the truck.

**B. Emission Factors (EF):**

X-XXXX-1-0, X-XXXX-2-0, & X-XXXX-3-0:

1. Currently the EPA has suspended the AP-42 emission factors for wood product lumber processing operations. The District is not aware of any generally accepted wood waste or green waste receiving and transfer point emission factors. Therefore, the District will assume the AP-42 crushed stone emission factors as a conservative estimate as utilized under District project #C-1073961 for outdoor feedstock organic waste material receiving and conveyor transfer points with water spray PM<sub>10</sub> control efficiency of 70%. Therefore:

$$EF_{PM10/Controlled/Receiving \& Transfer Points} = 0.00033 \text{ lb-PM}_{10}/\text{ton}$$

2. For the feedstock organic waste material stockpiles and green waste composting in windrows, the VOC and NH<sub>3</sub> emission factors will be based on the District's preliminary green waste compost report. Therefore:

$$\begin{aligned} EF_{VOC/Stockpiles} &= 5.36 \text{ lb-VOC/wet ton} \\ EF_{NH3/Stockpiles} &= 0.06 \text{ lb-NH}_3/\text{wet ton} \\ EF_{VOC/Windrows} &= 4.27 \text{ lb-VOC/wet ton} \\ EF_{NH3/Windrows} &= 1.44 \text{ lb-NH}_3/\text{wet ton} \end{aligned}$$



**C. Potential to Emit (PE) Calculations:**

X-XXXX-1-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	5.36 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	5.36 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-2-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Windrow Composting Piles:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Windrows}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Windrows}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	4.27 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	1.44 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Windrow Composting Piles:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC}/\text{Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	4.27 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	1.44 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-3-0:

Daily PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The daily PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

<b>Daily PE for Permit Unit X-XXXX-3-0</b>				
<b>Process Description</b>	<b># of Drop Points</b>	<b>Processing Rate (ton/day)</b>	<b>EF (lb-PM<sub>10</sub>/ton)</b>	<b>Daily PE (lb-PM<sub>10</sub>/day)</b>
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0.0</b>

Annual PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The Annual PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

<b>Annual PE for Permit Unit X-XXXX-3-0</b>				
<b>Process Description</b>	<b># of Drop Points</b>	<b>Processing Rate (ton/year)</b>	<b>EF (lb-PM<sub>10</sub>/ton)</b>	<b>Annual PE (lb-PM<sub>10</sub>/day)</b>
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0</b>

Stationary Source Potential Emissions (SSPE):

The total stationary source potential emissions will be based on the combined emissions from all permit units at the facility. Therefore:

<b>Stationary Source Potential Emissions (SSPE)</b>			
<b>Permit Number</b>	<b>PM<sub>10</sub> (lb/year)</b>	<b>VOC (lb/year)</b>	<b>NH<sub>3</sub> (lb/year)</b>
X-XXXX-1-0	0	0	0
X-XXXX-2-0	0	0	0
X-XXXX-3-0	0	---	---
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

## VIII. COMPLIANCE

### Rule 2010 – Permits Required

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0 constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

As determined above in Section VII. (Calculations), this facility is a source of PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions, therefore, permits are required. In order to establish a baseline processing rate for this existing facility the following conditions will be listed on the permits:

#### X-XXXX-1-X:

- The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
- The quantity of food waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
- The total quantity of green and food waste materials mixed for composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

#### X-XXXX-2-0:

- The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
- The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

#### X-XXXX-3-0:

- The quantity of finished compost loaded out shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]

## **Rule 2020 - Exemptions**

Prior to November 16, 2007, the District did not require permits for green waste composting operations and is now being permitted due to a loss of exemption. Pursuant to District Rule 2020 (Exemptions), Section 9, the owner operator of an emissions unit that was exempt from written permits at the time of installation, which becomes subject to the provisions of District Rule 2010 (Permits Required), through loss of exemption, shall submit an application for a Permit to Operate and shall not be subject to District Rule 2201 (New and Modified Stationary Source Review Rule), until such time that emissions unit is modified.

## **Rule 2201 - New and Modified Stationary Source Review Rule**

An emissions unit that was installed at a time when permits were not required is exempt from District Rule 2201 for the initial permitting action, per District Rule 2020, Section 9.0. Therefore, as shown above, this facility is not subject to the requirements of this rule until they modify their operation.

## **Rule 2520 - Federally Mandated Operating Permits**

The emissions from these operations are fugitive as defined in Section 3.14 of this rule and are not listed as a non-exempt fugitive source in 40 CFR 70.2 (Definitions). Therefore, the emissions from these operations are not included in the determination of a major source as defined in District Rule 2201, Section 3.24, and the provisions of this rule do not apply.

## **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 Ringelmann 1 or equivalent to 20% opacity. Opacity is expected to be less than 20% provided that these operations are properly performed. The following conditions will be listed on each permit:

- {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]
- All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

**Rule 4102 - Nuisance**

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected provided that these operations are properly performed. The following condition will be placed on each permit:

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

Compliance is expected with this Rule.

**California Health & Safety Code 41700 (Health Risk Assessment)**

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a risk management review be performed for all projects that result in any increases in emissions of hazardous air pollutants. This project is to issue permits for existing organic waste processing operations with no increase in hazardous air pollutants. Therefore, a risk management review is not required.

**Rule 4202 - Particulate Matter – Emission Rate**

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The maximum allowable emissions rate is calculated using the following formulas:

$$E_{Max.} = 3.59 P^{0.62}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P \leq 30$  tons/hr)

or

$$E_{Max.} = 17.31 P^{0.16}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P > 30$  tons/hr)

Permit Number	P (ton/hr)	E <sub>Proposed</sub> (lb-PM/hr)	E <sub>Max.</sub> (lb/hr)
X-XXXX-1-0 <sup>(6)</sup>	XX.X	XX.X	XX.X
X-XXXX-2-0 <sup>(7)</sup>	XX.X	XX.X	XX.X
X-XXXX-3-0 <sup>(8)</sup>	XX.X	XX.X	XX.X

<sup>6</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hr/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day.

<sup>7</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day

Since the proposed PM Emission rates are less than the allowable maximum emission rates, these permit units are expected to operate in compliance with this rule.

### **Rule 4565 - Biosolids, Animal Manure, and Poultry Litter Operations**

The purpose of this rule is to limit the emissions volatile organic compounds (VOC) from operations involving the management of biosolids, animal manure, or poultry litter. Per Section 2.0, this rule applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and the operator who landfills, land applies, composts, or co-composts these materials.

The existing facility will only process and compost green waste organic materials. Therefore this rule is not applicable to this facility's operations.

### **Rule 8011 - General Requirements**

The definitions, exemptions, requirements, administrative requirements, record keeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

### **Rule 8031 - Bulk Materials**

Pursuant to Section 2.0, this Rule is applicable to the outdoor handling and storage of any bulk material, which emits visible dust when stored or handled. The following condition will be included on the In-House PTO to ensure compliance with the requirements of this rule.

- All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

### **Rule 8041 - Carryout and Trackout**

Pursuant to Section 2.0, this Rule is applicable to all sites that are subject to Rule 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), Rule 8031 (Bulk Materials), and Rule 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

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<sup>8</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

### **Rule 8051 - Open Areas**

Pursuant to Section 2.0, this Rule is applicable to any open area having 3.0 acres or more of disturbed surface area, which has remained undeveloped, unoccupied, unused or vacant for more than seven days. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]

### **Rule 8061 - Paved and Unpaved Roads**

Pursuant to Section 2.0, this Rule applies to any paved, or unpaved public or private road, street, highway, freeway, alley, way, access drive, access easement, or driveway constructed or modified after December 10, 1993. The following condition will be included on each ATC and PTO to ensure compliance with the requirements of this Rule.

- Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]

### **Rule 8071 - Unpaved Vehicle/Equipment Traffic Areas**

Pursuant to Section 2.0, this Rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger. The following conditions will be included on each In-House PTO to ensure compliance with the requirements of the Rule.

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]



- On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]

### California Environmental Quality Act (CEQA)

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval for an existing operation, which did not require District permits at the time of installation. 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.

### IX. RECOMMENDATION

Issue permits X-XXXX-1-0, X-XXXX-2-0 and X-XXXX-3-0 subject to the permit conditions on the attached draft In-House Permits to Operate.

### X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
X-XXXX-1-0	3020-06	Miscellaneous	None
X-XXXX-2-0	3020-06	Miscellaneous	None
X-XXXX-3-0	3020-06	Miscellaneous	None

### XI. APPENDICES

- Appendix I: Draft In-House Permits to Operate
- Appendix II: Emissions Profile

**APPENDIX I**  
**Draft In-House Permits to Operate**

## **APPENDIX II**

### **Emission Profiles**

## Standard Permit Conditions for Food Waste Composting

### X-XXXX-1-X:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of food waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
6. The total quantity of green and food waste materials mixed for composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
7. A daily log shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). [District Rules 1070]
8. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
9. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
10. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
11. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

12. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
13. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
14. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
15. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
16. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
17. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-2-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]

4. The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
6. A daily log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). [District Rules 1070]
7. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
8. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
9. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
10. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
11. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
12. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
13. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]

14. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
15. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
16. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-3-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of finished compost loaded out shall not exceed XXXX wet tons in any one day and XXXX wet tons in any one calendar year. [District Rule 2010]
5. A daily log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). [District Rules 1070]
6. A cumulative annual log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
7. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
8. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

9. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
10. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
11. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
12. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
13. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
14. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
15. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]



**Attachment C**  
**In-House PTO Application Review for**  
**Co-Composting**

**San Joaquin Valley Air Pollution Control District  
Permit to Operate  
Application Review  
for Co-Composting**

Facility Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Engineer: \_\_\_\_\_  
Lead Engineer: \_\_\_\_\_  
  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Application #(s): \_\_\_\_\_  
Project #: \_\_\_\_\_  
Deemed Complete: \_\_\_\_\_

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**I. PROPOSAL:**

**[Facility Name]** is requesting that Permits to Operate (PTOs) be issued for their existing co-composting operations **[with biosolids OR with animal manure/poultry litter]**. Prior to **[August 1, 2002 (use for biosolids co-composting) OR November 16, 2007 (use for animal manure/poultry litter co-composting)]**, the District did not require permits for co-composting operations **[with biosolids OR with animal manure/poultry litter]**. Based on the information provided by the applicant, the District has determined that the co-composting operations were installed prior to this date and District permits were not required at the time of installation. Pursuant to District Rule 2020, Section 9.0, this permit action is due to a loss of exemption and will not be subject to the requirements of District Rule 2201 (New and Modified Stationary Source Review Rule), until such time the emission units are modified. Therefore, PTOs will now be issued for the existing composting operations.

Based on the facility's current California Integrated Waste Management Board (CIWMB) permitted limits, this facility is allowed to co-compost organic waste material with **[biosolids OR animal manure/poultry litter]** at a maximum of **[Permitted Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year) along with green waste materials at a maximum of **[Permitted Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year).

**II. APPLICABLE RULES:**

Rule 2010: Permits Required (12/17/92)  
Rule 2020: Exemptions (12/20/07)  
Rule 2201: New and Modified Stationary Source Review Rule (9/21/06)

Rule 2520: Federally Mandated Operating Permits (6/21/01)  
Rule 4101: Visible Emissions (2/17/05)  
Rule 4102: Nuisance (12/17/92)  
Rule 4202: Particulate Matter - Emission Rate (12/17/92)  
Rule 4565: Biosolids, Animal Manure, and Poultry Litter Operations (3/15/07)  
Rule 4566: Green Waste Composting and Operations (Pending Adoption)  
Rule 8011: General Requirements (8/19/04)  
Rule 8031: Bulk Materials (8/19/04)  
Rule 8041: Carryout and Trackout ((8/19/04)  
Rule 8061: Paved and Unpaved Roads (8/19/04)  
Rule 8071: Unpaved Vehicle/Equipment Traffic Areas (9/16/04)  
California Health & Safety Code Section 41700 (Public Nuisance)  
California Health & Safety Code Section 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 **[Site Address]** in **[Site City]**, California. This facility and associated equipment are not located within 1,000 feet of a kindergarten through 12th grade school site boundary. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 do not apply to this project.

**OR**

The facility is located at **[Site Address]** in **[Site City]**, California. This facility and associated equipment are located within 1,000 feet of a kindergarten through 12th grade school site boundary ([Name of School]). However, this an existing operation and the proposed project does not result in an increase in toxic air contaminant emissions. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 is not required for this project.

### IV. PROCESS DESCRIPTION:

Feedstock Organic Waste Material Receiving, Storage, and Mixing:

**[Agricultural and/or municipal green waste, biosolids, animal manure, and/or poultry litter]** feedstock materials used for co-composting are delivered via trucks and unloaded directly onto the receiving section of the staging area. The staging area is utilized to remove non-organic contaminants and to sort the different received organic materials into storage piles. A mechanical screen may also be used in the staging area to remove oversized material for size reduction with a grinder. The different types of stored organic materials are mixed together in the staging area in the proper proportions to produce the compost material. The mixed organic materials are then transferred to the open windrow composting area.

Particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>) is generated from the organic waste feedstock materials stockpiling and transfers due to the material drops and disturbance. Volatile Organic Compounds (VOC) and ammonia (NH<sub>3</sub>) emissions are also generated from the decomposition of the stored organic waste feedstock materials.

#### Open Windrow Co-Composting:

Composting is the aerobic decomposition of organic materials by microorganisms under controlled conditions into a soil-like substance called compost. Windrow co-composting involves placing mixed organic materials (**consisting of green waste and biosolids, animal manure, and/or poultry litter**) in long, narrow triangular cross section piles and turning or aerating them regularly. The mixed organic materials to be composted are transferred to the windrow composting area, where the mixed materials are formed into windrow piles. The windrow piles are built and shaped using a front-end loader with typical dimensions of 3 to 12 feet high, 8 to 20 feet wide, and 50 to 500 feet long.

The active phase of the composting process begins once the mixed organic materials are formed into windrow piles. During this active stage, microorganisms start to break down the material and consume the most easily degradable organic matter giving off a significant amount of heat. The formed windrows are turned or aerated using a front-end loader or windrow turning machine weekly or more often depending on the middle temperature of the windrows. The windrows are turned after pathogen and weed seed destruction temperature have been reached (typically between 120°F to 150°F), but before reaching temperatures that impede composting (typically above 160°F). The active composting stage will typically last three to nine weeks, depending on the type of materials and frequency of turning.

At the end of the active composting stage, most of the easily degradable organic material has been decomposed. The remaining organic material decomposes much more slowly and is the beginning of the curing phase of the composting process. The compost may be left in the windrows or moved to a larger pile where it is allowed to further decompose very slowly over a period of weeks or months, depending on the desired final quality of the product. During this phase little additional heat is generated and minimal turning is needed. The compost becomes biologically stable and the pile will gradually cool to near air temperature. Once the maturing process is complete, the compost material is ready to be screened if required by the customer and sold for use.

PM<sub>10</sub> is generated due to the forming of the composting piles and from the periodic turning or aeration of the formed composting piles. VOC and NH<sub>3</sub> emissions are also generated from the decomposition of the organic material in the composting piles.

#### Finished Compost Loadout Operation

The finished compost product is loaded onto trucks with front-end loaders.

PM<sub>10</sub> is generated due to the loading of the finished compost. No VOC and NH<sub>3</sub> are expected from the finished compost product since all decomposition of the organic material is completed by the end of the curing phase of the composting process.

Operating Schedule & Process Rate:

The equipment may operate up to 24 hours per day and 365 days/year at the following proposed processing rates:

PTO Number	Maximum Processing Rates
X-XXXX-1-0	Daily Quantity of Green Waste Material Received: XXX wet tons/day Annual Quantity of Green Waste Material Received: XXX wet tons/year Quantity of Green Waste Storage Piles: XXX Dimensions of the Green Waste Storage Piles: LxWxH (all in feet) Daily Quantity of Biosolids Received or Generated: XXX wet tons/day Annual Quantity of Biosolids Received or Generated: XXXX wet tons/year Daily Quantity of Animal Manure Received or Generated: XXX wet tons/day Annual Quantity of Animal Manure Received or Generated: XXXX wet tons/year Dimensions of the Animal Manure Storage Piles: LxWxH (all in feet) Daily Quantity of Poultry Litter Received or Generated: XXX wet tons/day Annual Quantity of Poultry Litter Received or Generated: XXXX wet tons/year Dimensions of the Poultry Litter Storage Piles: LxWxH (all in feet)
X-XXXX-2-0	Daily Quantity of Active Phase Composting Piles: XXX wet tons/day Annual Quantity of Active Phase Composting Piles: XXX wet tons/year Daily Quantity of Curing Phase Composting Piles: XXX wet tons/year Annual Quantity of Curing Phase Composting Piles: XXX wet tons/year Quantity of Active Phase Composting Piles: XXX Quantity of Curing Phase Composting Piles: XXX Dimensions of each Active Phase Composting Piles: LxWxH (all in feet) Dimensions of each Curing Phase Composting Piles: LxWxH (all in feet)
X-XXXX-3-0	Daily Quantity of Finished Compost Loaded: XXX wet tons/day Annual Quantity of Finished Compost Loaded: XXX wet tons/year Quantity of Finished Compost Storage Piles: XXX Dimensions of each Finished Compost Pile: LxWxH (all in feet)

**V. EQUIPMENT LISTING:**

X-XXXX-1-0:

ORGANIC WASTE MATERIAL RECEIVING, STORAGE, AND MIXING OPERATION

X-XXXX-2-0:

OPEN WINDROW ACTIVE AND CURING PHASE CO-COMPOSTING OPERATION

X-XXXX-3-0:

## FINISHED COMPOST STORAGE AND LOADOUT OPERATION

### VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

The existing co-composting facility will produce VOC, NH<sub>3</sub> and PM<sub>10</sub> emissions. Also, there is the potential for other odorous emissions.

*The following paragraphs may need to be revised based on the applicants proposed mitigation measures for Rule 4565 Compliance.*

To minimize VOC, NH<sub>3</sub>, and odor emissions, the facility will utilize good management practices to maintain the active phase composting windrows at the desired aerobic conditions. This will involve the following: (a). Mixing different types of organic material in quantities to achieve a carbon to nitrogen ratio at a range between 20:1 to 40:1; (b). Turning or aerating the windrow at a frequency to maintain a center pile temperature between 110°F to 140°F or a oxygen content greater than 5% or a pH between 5.5 to 9.0; (c). Add water to the windrow as needed to maintain a moisture content between 40% to 70%.

A water sprinkler system will be used, as needed, to control the fugitive dust (PM<sub>10</sub>) emissions during the receiving, handling, loading, mixing, turning, grinding, and screening of the green waste feedstock and composted materials. Fugitive dust (PM<sub>10</sub>) emissions from the windrows will be controlled by the high moisture content of the composting material (typically 40% to 65%) and by facility water trucks when required. On site haul roads will be kept adequately moist to reduce fugitive dust emissions with the use of a water truck.

### VII. CALCULATIONS:

Since the operations are exempt from District Rule 2201 (see Section VIII of this document), calculations needed to demonstrate compliance with various sections of the Rule (e.g. BACT, offset, and public notification) are not required. Daily and annual potential to emit (PE) along with the stationary source potential to emit (SSPE) calculations will be performed for reference purposes and in order to complete the emission profile for this particular facility.

#### A. Assumptions:

X-XXXX-1-0:

1. PM<sub>10</sub> will be emitted from the receiving, handling, and mixing of the organic waste feedstock materials.
2. VOC and NH<sub>3</sub> will be emitted from the storage of the organic waste feedstock materials.

3. PM<sub>10</sub> control efficiency of at least 70%<sup>(9)</sup> for handling of high moisture content material (25%) with wet spray dust suppression.
4. For feedstock organic materials receiving and transfer to storage there will be a total of 3 drop points consisting of the following: (a). 1-drop point from the receiving of the material; (b). 2-drop points from the transfer of the material from the receiving area to the storage pile.
5. For feedstock organic materials mixing there will be a total of 2 drop points consisting of the repeated lifting and dropping of the materials with a front-end loader.

X-XXXX-2-0:

1. VOC and NH<sub>3</sub> will be emitted from the active phase and curing phase windrows.
2. PM<sub>10</sub> will only be emitted during the forming of the active phase windrow piles. PM<sub>10</sub> emissions during the turning of the active phase windrows and forming of the curing phase windrows are assumed to be negligible due to high moisture content of materials handled (moisture content is typically 40% to 65%).
3. For the forming of the windrow composting piles there will be a total of 2 drop points consisting of the transfer of the mixed compost materials from the mixing pile to the windrow pile.

X-XXXX-3-0:

1. PM<sub>10</sub> will be emitted from the loading of the finished compost into trucks.
2. No VOC and NH<sub>3</sub> will be emitted from the finished compost since all decomposition of the organic material will be completed at the end of the curing phase.
3. For the loading of the finished compost into trucks there will be a total of 2 drop points consisting of the transfer of the finished compost materials from the storage piles to the truck.

**B. Emission Factors (EF):**

X-XXXX-1-0, X-XXXX-2-0, & X-XXXX-3-0:

1. Currently the EPA has suspended the AP-42 emission factors for wood product lumber processing operations. The District is not aware of any generally accepted wood waste or green waste receiving and transfer point emission factors. Therefore, the District will assume the AP-42 crushed stone emission factors as a conservative estimate as utilized under District project #C-1073961 for outdoor feedstock organic waste material receiving and conveyor transfer points with water spray PM<sub>10</sub> control efficiency of 70%. Therefore:

$$EF_{PM10/Controlled/Receiving \& \ Transfer \ Points} = 0.00033 \text{ lb-PM}_{10}/\text{ton}$$

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<sup>9</sup> Per AP-42, Table B.2-3 (AIRS Code 061), the average control efficiency for dust suppression with water spray is 70% for particulate matter with an aerodynamic diameter smaller than or equal to 10 microns (PM<sub>10</sub>).

2. For the green waste material stockpiles, the VOC and NH<sub>3</sub> emission factors will be based on the District's preliminary green waste compost report. Therefore:

$$EF_{\text{VOC/Stockpiles}} = 5.36 \text{ lb-VOC/wet ton}$$

$$EF_{\text{NH}_3/\text{Stockpiles}} = 0.06 \text{ lb-NH}_3/\text{wet ton}$$

3. For the co-composting windrows, the VOC and NH<sub>3</sub> emission factors will be based on the source tests conducted by the South Coast Air Quality Management District (SCAQMD) in support of their Rule 1133 (Emission Reductions from Composting and Related Operations). Therefore:

$$EF_{\text{VOC/Windrows}} = 1.78 \text{ lb-VOC/wet ton}$$

$$EF_{\text{NH}_3/\text{Windrows}} = 2.93 \text{ lb-NH}_3/\text{wet ton}$$

### C. Potential to Emit (PE) Calculations:

X-XXXX-1-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times EF_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times EF_{\text{VOC/Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times EF_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	5.36 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from Material Receiving, Handling, Mixing, and Storage of the Organic Waste Materials:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times EF_{\text{PM}_{10}/\text{Receiving \& Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$



$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC/Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	5	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	5.36 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	0.06 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-2-0:

Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions due to the forming of the Windrow Co-Composting Piles:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (wet ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC/Windrows}} \text{ (lb/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Windrows}} \text{ (lb/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/day)	EF	Daily PE (lb/day)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0.0
VOC	---	0	1.78 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0	2.93 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions due to the forming of the Windrow Co-Composting Piles:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{VOC/Stockpiles}} \text{ (lb/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Processing Rate (wet ton/day)} \times \text{EF}_{\text{NH}_3/\text{Stockpiles}} \text{ (lb/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-2-0				
Pollutant	Total Number of Drop Points	Processing Rate (wet ton/year)	EF	Annual PE (lb/year)
PM <sub>10</sub>	2	0	0.00033 lb-PM <sub>10</sub> /ton	0
VOC	---	0	1.78 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0	2.93 lb-NH <sub>3</sub> /wet ton	0

X-XXXX-3-0:

Daily PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The daily PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

Daily PE for Permit Unit X-XXXX-3-0				
Process Description	# of Transfer Points	Processing Rate (ton/day)	EF (lb-PM <sub>10</sub> /ton)	Daily PE (lb-PM <sub>10</sub> /day)
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0.0</b>

Annual PM<sub>10</sub> Emissions due to the loading of the Finished Compost into Trucks:

The Annual PM<sub>10</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \# \text{ of Drop Points} \times \text{Processing Rate (ton/day)} \\ \times \text{EF}_{\text{PM}_{10}/\text{Transfer Points}} \text{ (lb-PM}_{10}\text{/ton)}$$

Annual PE for Permit Unit X-XXXX-3-0				
Process Description	# of Drop Points	Processing Rate (ton/year)	EF (lb-PM <sub>10</sub> /ton)	Annual PE (lb-PM <sub>10</sub> /day)
Material Transfer from the Storage Piles to Trucks	2	0	0.00033	<b>0</b>

Stationary Source Potential Emissions (SSPE):

The total stationary source potential emissions will be based on the combined emissions from all permit units at the facility. Therefore:

Stationary Source Potential Emissions (SSPE)			
Permit Number	PM <sub>10</sub> (lb/year)	VOC (lb/year)	NH <sub>3</sub> (lb/year)
X-XXXX-1-0	0	0	0
X-XXXX-2-0	0	0	0
X-XXXX-3-0	0	---	---
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**VIII. COMPLIANCE**

**Rule 2010 – Permits Required**

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0 constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

As determined above in Section VII. (Calculations), this facility is a source of PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions, therefore, permits are required. In order to establish a baseline processing rate for this existing facility the following conditions will be listed on the permits:

X-XXXX-1-X:

- *The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]*
- *The quantity of biosolid waste materials received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] *(Delete if not applicable.)**
- *The quantity of animal manure received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] *(Delete if not applicable.)**

- *The quantity of poultry litter received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] (Delete if not applicable.)*
- *The quantity of organic waste materials mixed for co-composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]*

X-XXXX-2-0:

- *The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]*
- *The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]*

X-XXXX-3-0:

- *The quantity of finished compost loaded out shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]*

### **Rule 2020 - Exemptions**

Prior to November 16, 2007, the District did not require permits for green waste composting operations and is now being permitted due to a loss of exemption. Pursuant to District Rule 2020 (Exemptions), Section 9, the owner operator of an emissions unit that was exempt from written permits at the time of installation, which becomes subject to the provisions of District Rule 2010 (Permits Required), through loss of exemption, shall submit an application for a Permit to Operate and shall not be subject to District Rule 2201 (New and Modified Stationary Source Review Rule), until such time that emissions unit is modified.

### **Rule 2201 - New and Modified Stationary Source Review Rule**

An emissions unit that was installed at a time when permits were not required is exempt from District Rule 2201 for the initial permitting action, per District Rule 2020, Section 9.0. Therefore, as shown above, this facility is not subject to the requirements of this rule until the facility modifies their operation.

### **Rule 2520 - Federally Mandated Operating Permits**

The emissions from these operations are fugitive as defined in Section 3.14 of this rule and are not listed as a non-exempt fugitive source in 40 CFR 70.2 (Definitions). Therefore, the emissions from these operations are not included in the determination of a major source as defined in District Rule 2201, Section 3.24, and the provisions of this rule do not apply.

## 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 Ringelmann 1 or equivalent to 20% opacity. Opacity is expected to be less than 20% provided that these operations are properly performed. The following conditions will be listed on each permit:

- *{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]*
- *All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]*

Compliance is expected with this Rule.

## Rule 4102 - Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected provided that these operations are properly performed. The following condition will be placed on each permit:

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

Compliance is expected with this Rule.

## California Health & Safety Code 41700 (Health Risk Assessment)

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a risk management review be performed for all projects that result in any increases in emissions of hazardous air pollutants. This project is to issue permits for existing organic waste processing operations with no increase in hazardous air pollutants. Therefore, a risk management review is not required.

## Rule 4202 - Particulate Matter – Emission Rate

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The maximum allowable emissions rate is calculated using the following formulas:

$$E_{\text{Max.}} = 3.59 P^{0.62}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P \leq 30$  tons/hr)

or

$$E_{\text{Max.}} = 17.31 P^{0.16}$$

where: E = Emissions in lb/hr

P = Process weight in ton/hr (P > 30 tons/hr)

Permit Number	P (ton/hr)	E <sub>Proposed</sub> (lb-PM/hr)	E <sub>Max.</sub> (lb/hr)
X-XXXX-1-0 <sup>(10)</sup>	XX.X	XX.X	XX.X
X-XXXX-2-0 <sup>(11)</sup>	XX.X	XX.X	XX.X
X-XXXX-3-0 <sup>(12)</sup>	XX.X	XX.X	XX.X

Since the proposed PM Emission rates are less than the allowable maximum emission rates, these permit units are expected to operate in compliance with this rule.

### Rule 4565 - Biosolids, Animal Manure, and Poultry Litter Operations

#### Sections 1.0 (Purpose) and 2.0 (Applicability):

The purpose of this rule is to limit the emissions volatile organic compounds (VOC) from operations involving the management of biosolids, animal manure, or poultry litter. Per Section 2.0, this rule applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and the operator who landfills, land applies, composts, or co-composts these materials.

The existing facility will process and compost **[biosolids, animal manure, and/or poultry litter]** along with green waste organic materials. Therefore, the facility's composting operations are subject to the requirements of this rule.

*If the total throughput of biosolids, animal manure, and poultry litter is < 100 wet tons/year use the following paragraph and delete Sections 5.0 and 7.0 of the remaining discussion for this rule. Otherwise delete this italic section and continue with the remaining discussion for this rule.*

*The total throughput of **[biosolids, animal manure, and/or poultry litter]** are < 100 wet tons/year. Except for the applicable recordkeeping requirements of Section 6.1.1, the facility's composting operation is exempt from the requirements of this rule per Section 4.2.*

<sup>10</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hr/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day.

<sup>11</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day

<sup>12</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day

*For co-composting facilities with throughputs of at least 100,000 wet tons/year that have not proposed any mitigation measures to comply with the requirements of Section 5.0 of this rule, only utilize Section 7.0 below and delete the other sections. Otherwise, delete this italic section and continue with the remaining discussion for this rule.*

Section 5.0 (Requirements):

*Only utilized the following paragraphs and conditions which are applicable to your project.*

Section 5.3.1 requires operators of composting/co-composting facilities with throughputs < 20,000 wet tons/year to comply with one of the following:

- Implement at least three of the Class One mitigation measures as listed in Table 1 below.
- Implement at least two Class One mitigation measures in addition to one Class Two mitigation measure for active composting as listed in Table 1 below.

Section 5.3.2 requires operators of composting/co-composting facilities with throughputs of at least 20,000 wet tons/year but < 100,000 wet tons/year to comply with one of the following:

- Implement at least four of the Class One mitigation measures as listed in Table 1 below.
- Implement at least three Class One mitigation measures in addition to one Class Two mitigation measure on active composting processes as listed in Table 1 below.

Section 5.3.3 requires operators of composting/co-composting facilities with throughputs of at least 100,000 tons/year to comply with one of the following:

- Implement at least four of the Class One mitigation measures in addition to one Class Two mitigation measure for active composting as listed in Table 1 below.
- Implement at least two Class One mitigation measures in addition to one Class Two mitigation measure for active composting and one Class Two mitigation measure for curing composting as listed in Table 1 below.

To comply with the requirements of this section of the rule, the facility is proposing the following mitigation measures as indicated in Table 1 below.

*If the facility has not proposed any mitigation measures to comply with the requirements of this section of the rule, then send the facility an incompleteness letter requesting their proposed method to comply with this requirement. Utilize the generic letter enclosed at the end of this application review document.*

<b>Table 1 – Composting/Co-Composting Facility Mitigation Measures</b>		
<b>Class One Mitigation Measures</b>		<b>Facility Proposed</b>
1.	Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1”) in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.	[ ]
2.	Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.	[ ]
3.	Maintain the moisture content of every active and curing compost pile between 40% and 70%, by weight.	[ ]
4.	Manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty (20) to one (1).	[ ]
5.	Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.	[ ]
6.	Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.	[ ]
7.	Implement an alternative Class One mitigation measure(s) not listed above that demonstrates at least a 10% reduction, by weight, in VOC emissions.	[ ]
8.	Conduct all active composting in aerated static pile(s) vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
9.	Conduct all active composting in an in-vessel composting system vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
10.	Conduct all curing composting in aerated static pile(s) vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
11.	Conduct all curing composting in an in-vessel composting system vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
12.	Implement an alternative Class Two mitigation measure(s) not listed above that demonstrates at least 80% reduction, by weight, in VOC emissions.	[ ]

Section 5.3.4 requires operators selecting oxygen concentration or moisture content as a mitigation measure to test each active compost pile and each curing compost pile at least once each week using the applicable test methods in Section 6.2.2, unless the APCO and EPA determine, based on weekly test results, that a different testing frequency is warranted to ensure compliance. Since the facility is proposing to utilize the **[oxygen concentration and/or moisture content]** mitigation measure(s), the following conditions will be added to the permit to assure compliance with the requirements of this section.



- *The permittee shall test the oxygen concentration of each active compost pile and each curing compost pile at least once each week using TMECC Method 05.08-C (In-Situ Oxygen Refresh Rate). [District Rule 4565]*

**AND/OR**

- *The permittee shall test the moisture content of each active compost pile and each curing compost pile at least once each week using TMECC Method 03.09 (Total Solids and Moisture at  $70 \pm 5$  degrees Centigrade). [District Rule 4565]*

Section 5.3.5 requires operators selecting carbon to nitrogen ratio as a mitigation measure to test the material when it is prepared for active composting using the applicable test method in Section 6.2.2. Testing shall be done each day that materials are mixed. Samples shall be representative of the initial composition of the active compost pile. Since the facility is proposing to utilize the carbon to nitrogen ratio mitigation measure, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall test the carbon to nitrogen ratio of the composting material when it is prepared for active composting using TMECC Method 05.02A (Carbon to Nitrogen Ratio). Testing shall be done each day that materials are mixed and test samples shall be representative of the initial composition of the active compost pile. [District Rule 4565]*

Section 5.3.6 states that if a tested parameter is found to be outside the applicable limits specified above in Table 1, the operator shall take remedial action within 24 hours of discovery to bring the pile characteristics within the specified limits. The following condition will be added to the permit to assure compliance with the requirement of this section.

- *If the tested parameters of the mitigation measures are found to be outside the applicable limits the permittee shall take corrective action, within 24 hours of discovery, to bring the pile characteristics to within the specified limits. [District Rule 4565]*

*At this time, this In-House PTO application review will not be utilized for facilities, which propose the use of any Class Two Mitigation Measures. Therefore, Sections 5.4 through 5.7 will not be discussed in this application review and the following paragraph shall be used:*

The facility is not proposing the use of Aerated Static Piles, In-Vessel Systems, Biofilters, or any other type of VOC Emission Control Devices. Therefore, Sections 5.4, 5.5, 5.6, and 5.7 are not applicable to this project and no further discussion is necessary.

Section 6.0 (Administrative Requirements):

*Only utilized the following paragraphs and conditions which are applicable to your project.*

Section 6.1.1.1 requires operators claiming exemption under Section 4.0 to maintain records to demonstrate that the operation meets all of the conditions of the claimed exemption. Since the facility is exempt from the requirements this rule per Section 4.2, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall maintain annual records indicating the quantity of biosolids, animal manure, and poultry litter received, generated, and composted onsite, in tons/year. [District Rule 4565]*
- *{Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]*

Section 6.1.4 requires an operator of a composting facility subject to this rule to keep the following records:

- On a daily basis, an operator shall record the quantity of materials received that would be used in the compost/co-compost operation. These materials include, but are not limited to, material that may be recovered from the composting from the composting process for reuse in another batch of compostable material; biosolids; animal manure; poultry litter; and green waste.
- An operator shall keep records that demonstrate that the facility meets the Class One mitigation measures selected for the facility each day that a mitigation measure is performed. For operators using an approved alternative Class One mitigation measure, the operator shall keep records for the alternative mitigation measure each day the alternative mitigation measure is performed.
- An operator shall keep records according to 6.1.5 through 6.1.7, as applicable, for the composting operations subject to Class Two mitigation measures.

Since this composting/co-composting facility is subject to this rule, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall maintain a daily record of the quantity (in tons/day) and type (i.e. green waste, biosolids, animal manure, poultry litter, etc.) of each material received or generated onsite used in the composting/co-composting operation. [District Rule 4565]*

The facility is proposing to utilize Class One mitigation measure #1 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall maintain a daily record indicating the date and areas where compostable materials are mixed, screened, or stored have been scraped or swept such that no compostable material is greater than one inch (1") in height is visible in the areas, except for compostable material process piles or storage piles. [District Rule 4565]*

The facility is proposing to utilize Class One mitigation measure #2 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall maintain a record indicating the date and the tested oxygen concentration of each active compost pile and each curing compost pile. [District Rule 4565]*

The facility is proposing to utilize Class One mitigation measure #3 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- The permittee shall maintain a record indicating the date and the tested moisture content of each active compost pile and each curing compost pile. [District Rule 4565]

The facility is proposing to utilize Class One mitigation measure #4 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- The permittee shall maintain a record indicating the date and the tested carbon to nitrogen ratio of the composting material prepared and mixed for active composting use. [District Rule 4565]

The facility is proposing to utilize Class One mitigation measure #5 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- The permittee shall maintain a record indicating the date each active compost pile is turned and the type of covering (i.e. waterproof covering, six inches of finished compost, and/or six inches of soil) used to cover the active compost pile after turning. [District Rule 4565]

The facility is proposing to utilize Class One mitigation measure #6 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- The permittee shall maintain a record indicating the date each curing compost pile is turned and the type of covering used to cover the curing compost pile after turning. [District Rule 4565]

The facility is proposing to utilize Class One mitigation measure #7 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

*If the applicant is proposing to utilize an alternative Class One mitigation measure(s) then draft permit conditions based on the monitoring parameters as approved by the District indicated under the applicant's Alternative Mitigation Measures Compliance Plan.*

- *Draft specific recordkeeping permit condition(s) as approved by the District under the applicant's proposed Alternative Mitigation Measures Compliance Plan. [District Rule 4565]*

*At this time, this In-House PTO application review will not be utilized for facilities, which propose the use of any Class Two Mitigation Measures. Therefore, Sections 6.1.4.3, 6.1.5 through 6.1.7 will not be discussed in this application review and the following paragraph shall be used:*

The facility is not proposing the use of any Class Two Mitigation Measures. Therefore, Sections 6.1.4.3, 6.1.5, 6.1.6, and 6.1.7 are not applicable to this project and no further discussion is necessary.

Section 6.1.8 requires operators to retain applicable records on-site for a period of five years and to make the records available on-site during normal business hours to the APCO, ARB, or EPA, and to submit the records to the APCO, ARB, or EPA upon request. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- {Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]

Section 6.3 requires operators proposing to utilize an alternative mitigation measures compliance plan to provide detailed information regarding the proposed plan as list in section 6.3.1 for District review and approval. The applicant is not proposing the use of an alternative mitigation measures compliance plan and no further discussion is required.

*If the applicant is proposing the use of an alternative mitigation measures compliance plan, then replace the above paragraph with the following paragraph. Otherwise delete the following section.*

Section 6.3 requires operators proposing to utilize an alternative mitigation measures compliance plan to provide detailed information regarding their proposed plan as listed in section 6.3.1 for District review and approval. The applicant is proposing the use of a District approved alternative mitigation measures compliance plan consisting of the following:

*Provide a detailed discussion regarding the applicants proposed alternative mitigation measures compliance plan and include permit conditions to ensure compliance with their proposed plan to meet the requirements of sections 6.3.6 and 6.3.7.*

Section 7.0 (Compliance Schedule):

*Only utilized the following paragraphs and conditions which are applicable to your project.*

Section 7.3.1 requires that an operator of a composting/co-composting facility with throughputs less than 100,000 wet tons/year shall be in full compliance with all applicable rule requirements on and after September 15, 2008. The co-composting operation is expected to comply with the requirements of this rule once this In-House Permit to Operate is issued.

Section 7.3.2 requires that an operator of a composting/co-composting facility with throughputs of at least 100,000 wet tons/year shall be in full compliance with all applicable rule requirements on and after March 15, 2010. To ensure future compliance with the requirements of this rule, the following condition will be added to the permit:

- The permittee shall submit Authority to Construct applications to modify the existing permits for the co-composting operation for compliance with the applicable requirements of District Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) at least six (6)-months prior to March 15, 2010. [District Rule 4565]

*At this time, this In-House PTO application review will not be utilized for facilities with throughputs of at least 100,000 wet tons/year planning to convert composting/co-composting operations to energy generation operations. Therefore, Section 7.4 will not be discussed in this application review.*

Conclusion:

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4565 requirements is expected.

## **Rule 8011 - General Requirements**

The definitions, exemptions, requirements, administrative requirements, record keeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

## **Rule 8031 - Bulk Materials**

Pursuant to Section 2.0, this Rule is applicable to the outdoor handling and storage of any bulk material, which emits visible dust when stored or handled. The following condition will be included on the In-House PTO to ensure compliance with the requirements of this rule.

- All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

## **Rule 8041 - Carryout and Trackout**

Pursuant to Section 2.0, this Rule is applicable to all sites that are subject to Rule 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), Rule 8031 (Bulk Materials), and Rule 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

## **Rule 8051 - Open Areas**

Pursuant to Section 2.0, this Rule is applicable to any open area having 3.0 acres or more of disturbed surface area, which has remained undeveloped, unoccupied, unused or vacant for more than seven days. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]

## **Rule 8061 - Paved and Unpaved Roads**

Pursuant to Section 2.0, this Rule applies to any paved, or unpaved public or private road, street, highway, freeway, alley, way, access drive, access easement, or driveway constructed or modified after December 10, 1993. The following condition will be included on each ATC and PTO to ensure compliance with the requirements of this Rule.

- Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]

## **Rule 8071 - Unpaved Vehicle/Equipment Traffic Areas**

Pursuant to Section 2.0, this Rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger. The following conditions will be included on each In-House PTO to ensure compliance with the requirements of the Rule.

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]

## California Environmental Quality Act (CEQA)

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval for an existing operation, which did not require District permits at the time of installation. 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.

### IX. RECOMMENDATION

Issue permits X-XXXX-1-0, X-XXXX-2-0 and X-XXXX-3-0 subject to the permit conditions on the attached draft In-House Permits to Operate.

### X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
X-XXXX-1-0	3020-06	Miscellaneous	None
X-XXXX-2-0	3020-06	Miscellaneous	None
X-XXXX-3-0	3020-06	Miscellaneous	None

### XI. APPENDICES

Appendix I: Draft In-House Permits to Operate  
Appendix II: Emissions Profile



**APPENDIX I**  
**Draft In-House Permits to Operate**

## **APPENDIX II**

### **Emission Profiles**

## Standard Permit Conditions for Co-Composting Operations

X-XXXX-1-X:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of green waste materials received shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of biosolid waste materials received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] (Delete if not applicable.)
6. The quantity of animal manure received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] (Delete if not applicable.)
7. The quantity of poultry litter received and/or generated shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] (Delete if not applicable.)
8. The quantity of organic waste materials mixed for co-composting shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
9. The permittee shall scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping (except for compostable material in process piles or storage piles. [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above item #1.)
10. The permittee shall test the carbon to nitrogen ratio of the composting material when it is prepared for active composting using TMECC Method 05.02A (Carbon to Nitrogen Ratio). Testing shall be done each day that materials are mixed and test samples shall be representative of the initial composition of the active compost pile. [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above for item #4.)

11. If the tested parameters of the mitigation measures are found to be outside the applicable limits the permittee shall take corrective action, within 24 hours of discovery, to bring the pile characteristics to within the specified limits. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for items # 4.)
12. The permittee shall maintain a record indicating the date and the tested carbon to nitrogen ratio of the composting material prepared and mixed for active composting use. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for item # 4.)
13. A daily record shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received or generated onsite (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). [District Rules 1070 & 4565]
14. The permittee shall maintain a daily record indicating the date and areas where compostable materials are mixed, screened, or stored have been scraped or swept such that no compostable material is greater than one inch (1") in height is visible in the areas, except for compostable material process piles or storage piles. [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above for item #1.)
15. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity and type of each organic waste material received and/or generated onsite (in wet tons); (b). Total quantity and type of each organic waste material mixed for composting (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
16. {Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]
17. The permittee shall submit Authority to Construct applications to modify this permit for compliance with the applicable requirements of District Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) at least six (6)-months prior to March 15, 2010. [District Rule 4565] (Delete if the facility's composting throughput is less than 100,000 wet tons/year or if the facility is proposing mitigation measures for Rule 4565 compliance.)
18. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
19. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

20. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
21. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
22. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
23. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
24. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
25. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-2-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]

4. The quantity of active phase composting piles utilized onsite shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. The quantity of curing phase composting piles shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
6. The permittee shall test the oxygen concentration of each active compost pile and each curing compost pile at least once each week using TMECC Method 05.08-C (In- Situ Oxygen Refresh Rate). [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above.)
7. The permittee shall test the moisture content of each active compost pile and each curing compost pile at least once each week using TMECC Method 03.09 (Total Solids and Moisture at  $70 \pm 5$  degrees Centigrade). [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above.)
8. The permittee shall cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil. [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above.)
9. The permittee shall cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil. [District Rule 4565] (Delete if not proposed as a Class One Mitigation Measure from Table 1 above.)
10. If the tested parameters of the mitigation measures are found to be outside the applicable limits the permittee shall take corrective action, within 24 hours of discovery, to bring the pile characteristics to within the specified limits. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for items # 2, #3, or #7.)
11. The permittee shall maintain a record indicating the date and the tested oxygen concentration of each active compost pile and each curing compost pile. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for item # 2.)
12. The permittee shall maintain a record indicating the date and the tested moisture content of each active compost pile and each curing compost pile. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for item # 3.)

13. The permittee shall maintain a record indicating the date each active compost pile is turned and the type of covering (i.e. waterproof covering, six inches of finished compost, and/or six inches of soil) used to cover the active compost pile after turning. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for item # 5.)
14. The permittee shall maintain a record indicating the date each curing compost pile is turned and the type of covering used to cover the curing compost pile after turning. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for item # 6.)
15. A daily log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). [District Rules 1070 & 4565]
17. A cumulative annual log shall be maintained and shall include the following: (a). Total quantity of active phase composting piles utilized onsite (in wet tons); (b). Total quantity of curing phase composting piles utilized onsite (in wet tons). The records shall be updated at least monthly. [District Rule 1070]
18. The permittee shall maintain annual records indicating the quantity of biosolids, animal manure, and poultry litter received, generated, and composted onsite, in tons/year. [District Rule 4565] (Delete if facility is not exempt from Rule 4565 per Section 4.2)
19. {Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 & 4565]
20. The permittee shall submit Authority to Construct applications to modify this permit for compliance with the applicable requirements of District Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) at least six (6)-months prior to March 15, 2010. [District Rule 4565] (Delete if the facility's composting throughput is less than 100,000 wet tons/year or if the facility is proposing mitigation measures for Rule 4565 compliance.)
21. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
22. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

23. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
24. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
25. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
26. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
27. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
28. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

X-XXXX-3-0:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]



4. The quantity of finished compost loaded out shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010]
5. A daily log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). [District Rules 1070]
6. A cumulative annual log shall be maintained and shall indicate the total quantity of finished compost loaded out (in wet tons). The records shall be updated at least monthly. [District Rules 1070]
7. {Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rule 1070]
8. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
9. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
10. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
11. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
12. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
13. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]

14. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
15. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

**In-House PTO Application Incompleteness Letter for Rule 4565 Compliance**  
**Co-Composting Operation**

[Mail Date]

[Applicant First and Last Name]

[Facility Name]

[Facility Mailing Address or Post Office Box Number]

[City, State, and Zip Code]

**Re: Notice of Incomplete Application for Permit(s) to Operate at an existing Organic Waste Processing Operation**  
**Project Number: X-XXXXXXX**

Dear Mr. or Ms. [Last Name]

The District has received your Permit to Operate application for an existing co-composting operation utilizing **[green waste, biosolids, animal manure, and/or poultry litter]**, at [Site Location Address]. Based on our preliminary review, the application has been determined to be incomplete. The following additional information is required prior to further processing:

1. Based on the information provided in your application, your facility co-composts organic waste materials consisting of **[biosolids, animal manure, and/or poultry litter]** at a throughput rate of **[less than 20,000 wet tons/year OR at least 20,000 wet tons/year but less than 100,000 wet tons/year]** and is subject to the requirements of District Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations). You may view or print a copy of Rule 4565 at the following internet website:  
<http://www.valleyair.org/rules/currnrules/r4565.pdf>.

*Only use the following paragraphs which is applicable to your project.*

According to Section 5.3.1 of Rule 4565, operators of composting/co-composting facilities with throughputs less than 20,000 tons/year are required to comply with one of the following:

- - Implement at least three (3) of the Class One mitigation measures as listed in the attached Table for Composting/Co-Composting Facility Mitigation Measures.
- - Implement at least two (2) Class One mitigation measures in addition to one (1) Class Two mitigation measure for active composting as listed in the attached Table for Composting/Co-Composting Facility Mitigation Measures.

Therefore, indicate (with a check) on the right-side column of the attached Table for Composting/Co-Composting Facility Mitigation Measures, your proposed mitigation measures to comply with the requirements of Rule 4565, Section 5.3.1.

**OR**

According to Section 5.3.2 of Rule 4565, operators of composting/co-composting facilities with throughputs of at least 20,000 wet tons/year but less than 100,000 wet tons/year to comply with one of the following:

- - Implement at least four (4) of the Class One mitigation measures as listed in the attached Table for Composting/Co-Composting Facility Mitigation Measures.
- - Implement at least three (3) Class One mitigation measures in addition to one (1) Class Two mitigation measure for active composting as listed in the attached Table for Composting/Co-Composting Facility Mitigation Measures.

Therefore, indicate (with a check) on the right-side column of the attached Table for Composting/Co-Composting Facility Mitigation Measures, your proposed mitigation measures to comply with the requirements of Rule 4565, Section 5.3.2.

2. If you are proposing the use of an alternative Class One mitigation measure as listed in item 7 of the attached Table, please also provide the additional information as indicated in Section 6.3.1 of Rule 4565.
3. If you are proposing the use of a Class Two mitigation measure for active composting as listed in items 8 and 9 of the attached table, please provide a detailed description and flow diagram of all processing and control equipment that will be utilized along with the associated manufacturer's specification data for the processing equipment.

In response, please refer to the above project number, and send to the attention of **Mr./Ms. [Process Engineer's Name]**

Please submit the requested information within 30 days. The District will not be able to process your application until this information is received.

Thank you for your cooperation in this matter. If you have any questions, please contact **Mr./Ms. [Processing Engineer's Name]** at **[Processing Engineer's Phone Number]**.

Sincerely,

David Warner  
Director of Permit Services

Rupi Gill  
Permit Services Manager  
DW:[Processing Engineer's Initials]  
Attachment

<b>Table For Composting/Co-Composting Facility Mitigation Measures</b>		
<b>Class One Mitigation Measures</b>		<b>Facility Proposed</b>
1.	Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.	[ ]
2.	Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.	[ ]
3.	Maintain the moisture content of every active and curing compost pile between 40% and 70%, by weight.	[ ]
4.	Manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty (20) to one (1).	[ ]
5.	Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.	[ ]
6.	Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.	[ ]
7.	Implement an alternative Class One mitigation measure(s) not listed above that demonstrates at least a 10% reduction, by weight, in VOC emissions.	[ ]
<b>Class Two Mitigation Measures</b>		<b>Facility Proposed</b>
8.	Conduct all active composting in aerated static pile(s) vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
9.	Conduct all active composting in an in-vessel composting system vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
10.	Conduct all curing composting in aerated static pile(s) vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
11.	Conduct all curing composting in an in-vessel composting system vented to a VOC emission control device with a VOC control efficiency of at least 80% by weight.	[ ]
12.	Implement an alternative Class Two mitigation measure(s) not listed above that demonstrates at least 80% reduction, by weight, in VOC emissions.	[ ]

**Attachment D**  
**In-House PTO Application Review for**  
**Land Application of Organic Waste Materials**

**San Joaquin Valley Air Pollution Control District  
Permit to Operate  
Application Review  
for Land Application of Organic Waste Materials**

Facility Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Engineer: \_\_\_\_\_  
Lead Engineer: \_\_\_\_\_  
  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Application #(s): \_\_\_\_\_  
Project #: \_\_\_\_\_  
Deemed Complete: \_\_\_\_\_

---

**I. PROPOSAL:**

**[Facility Name]** is requesting that a Permit to Operate (PTO) be issued for their existing organic waste land application operation **[with biosolids OR with animal manure/poultry litter]**. Prior to November 16, 2007, the District did not require permits for organic waste land application operations **[with biosolids OR with animal manure/poultry litter]**. Based on the information provided by the applicant, the District has determined that the organic waste land application operations were installed prior to this date and District permits were not required at the time of installation. Pursuant to District Rule 2020, Section 9.0, this permit action is due to a loss of exemption and will not be subject to the requirements of District Rule 2201 (New and Modified Stationary Source Review Rule), until such time the emission units are modified. Therefore, a PTO will now be issued for the existing organic waste land application operation.

Per information provided by the applicant on their submitted application forms, this facility is capable of land applying organic waste material with **[biosolids OR animal manure/poultry litter]** at a maximum of **[Proposed Daily Quantity]** wet tons/day and **[Calculated Annual Quantity]** wet tons/year (based on operating 365 days/year).

**II. APPLICABLE RULES:**

Rule 2010: Permits Required (12/17/92)  
Rule 2020: Exemptions (12/20/07)  
Rule 2201: New and Modified Stationary Source Review Rule (9/21/06)  
Rule 2520: Federally Mandated Operating Permits (6/21/01)  
Rule 4101: Visible Emissions (2/17/05)  
Rule 4102: Nuisance (12/17/92)

Rule 4202: Particulate Matter - Emission Rate (12/17/92)  
Rule 4565: Biosolids, Animal Manure, and Poultry Litter Operations (3/15/07)  
Rule 4566: Green Waste Composting and Operations (Pending Adoption)  
Rule 8011: General Requirements (8/19/04)  
Rule 8031: Bulk Materials (8/19/04)  
Rule 8041: Carryout and Trackout ((8/19/04)  
Rule 8061: Paved and Unpaved Roads (8/19/04)  
Rule 8071: Unpaved Vehicle/Equipment Traffic Areas (9/16/04)  
California Health & Safety Code Section 41700 (Public Nuisance)  
California Health & Safety Code Section 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 **[Site Address]** in **[Site City]**, California. This facility and associated equipment are not located within 1,000 feet of a kindergarten through 12th grade school site boundary. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 do not apply to this project.

**OR**

The facility is located at **[Site Address]** in **[Site City]**, California. This facility and associated equipment are located within 1,000 feet of a kindergarten through 12th grade school site boundary ([Name of School]). However, this an existing operation and the proposed project does not result in an increase in toxic air contaminant emissions. Therefore, school noticing requirements of California Health and Safety Code Section 42301.6 is not required for this project.

### IV. PROCESS DESCRIPTION:

Organic waste materials consisting of **[Biosolids, animal manure, and/or poultry litter]** used for land application are delivered via trucks and unloaded directly onto the receiving section of the facility. [The receiving area is utilized to treat the received organic waste materials with the required additives for pathogen control \(only include this sentence if the facility treats the received organic waste material prior to land application.\)](#). The organic waste materials are then conveyed onto storage containers or directly loaded into transfer trailers for transport to the application site. At the application site the organic waste materials are loaded into spreaders for uniform distribution onto the soil. After spreading, the organic waste materials are land incorporated by tilling, injecting, or plowing into the soil.



The organic waste received has the consistency of a paste material with a moisture content of over 70% and particulate matter emissions are not expected from the receiving and mixing operations. However, particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>) is generated from the land incorporation of the organic waste materials due to surface soil disturbance from tilling, injecting, or plowing. Volatile Organic Compounds (VOC) and ammonia (NH<sub>3</sub>) emissions are emitted from the decomposition of the organic waste materials incorporated into the soil.

Operating Schedule & Process Rate:

The equipment may operate up to 24 hours per day and 365 days/year at the following proposed processing rates:

PTO Number	Maximum Processing Rates
X-XXXX-1-0	Daily Quantity of Biosolids Received or Generated: XXX wet tons/day Annual Quantity of Biosolids Received or Generated: XXXX wet tons/year Daily Quantity of Animal Manure Received or Generated: XXX wet tons/day Annual Quantity of Animal Manure Received or Generated: XXXX wet tons/year Dimensions of the Animal Manure Storage Piles: LxWxH (all in feet) Daily Quantity of Poultry Litter Received or Generated: XXX wet tons/day Annual Quantity of Poultry Litter Received or Generated: XXXX wet tons/year Dimensions of the Poultry Litter Storage Piles: LxWxH (all in feet) Total Daily Acreage Utilized for Land Application: XXXX acres/day Total Annual Acreage Utilized for Land Application: XXXX acres/year

**V. EQUIPMENT LISTING:**

X-XXXX-1-0:

ORGANIC WASTE MATERIAL LAND APPLICATION OPERATION

**VI. EMISSION CONTROL TECHNOLOGY EVALUATION:**

The existing organic waste land application operation will produce VOC, NH<sub>3</sub> and PM<sub>10</sub> emissions. Also, there is the potential for other odorous emissions.

*The following paragraphs may need to be revised based on the applicants proposed mitigation measures for Rule 4565 Compliance.*

To minimize VOC, NH<sub>3</sub>, and odor emissions, the facility will utilize good management practices by land applying the organic waste materials within three hours of receipt at the facility.

OR

To minimize VOC, NH<sub>3</sub>, and odor emissions, the facility will utilize good management practices by covering the organic waste materials within three hours of receipt at the facility. When conditions are appropriate for land application, the covered materials will be land applied within three hours after uncovering.

Fugitive dust (PM<sub>10</sub>) emissions from the land incorporation of the organic materials will be controlled by the high moisture content of the material (typically 70% to 80%) and by facility water trucks when required. On site haul roads will also be kept adequately moist to reduce fugitive dust emissions with the use of a water truck.

## **VII. CALCULATIONS:**

Since the operations are exempt from District Rule 2201 (see Section VIII of this document), calculations needed to demonstrate compliance with various sections of the Rule (e.g. BACT, offset, and public notification) are not required. Daily and annual potential to emit (PE) along with the stationary source potential to emit (SSPE) calculations will be performed for reference purposes and in order to complete the emission profile for this particular facility.

### **A. Assumptions:**

1. VOC and NH<sub>3</sub> will be emitted from the decomposition of the organic waste materials in the soil.
2. PM<sub>10</sub> will be emitted from the land incorporation of the organic materials into the soil.

### **B. Emission Factors (EF):**

1. The VOC and NH<sub>3</sub> emission factors will be based on the source tests conducted by the South Coast Air Quality Management District (SCAQMD) in support of their Rule 1133 (Emission Reductions from Composting and Related Operations). Therefore:

$$EF_{\text{VOC}} = 1.78 \text{ lb-VOC/wet ton}$$

$$EF_{\text{NH}_3} = 2.93 \text{ lb-NH}_3/\text{wet ton}$$

2. The PM<sub>10</sub> emissions will be based on an emission factor from the California Air Resources Board (CARB) for emissions inventory source category for agricultural land preparation in Section 7.4, Table A. for discing, tilling, or chiseling. Therefore:

$$EF_{\text{PM}_{10}} = 1.2 \text{ lb-PM}_{10}/\text{acre-pass}$$

### **C. Potential to Emit (PE) Calculations:**

#### Daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Land Incorporation of the Organic Waste Materials:

The daily PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Daily PE}_{\text{PM}_{10}} = \text{Quantity of Land Fertilized (acres/day)} \times \# \text{ of Passes}^{(13)} \\ \times \text{EF}_{\text{PM}_{10}} \text{ (lb-PM}_{10}\text{/acre-pass)}$$

$$\text{Daily PE}_{\text{VOC}} = \text{Organic Waste Material Applied (wet ton/day)} \\ \times \text{EF}_{\text{VOC}} \text{ (lb-VOC/wet ton)}$$

$$\text{Daily PE}_{\text{NH}_3} = \text{Organic Waste Material Applied (wet ton/day)} \times \text{EF}_{\text{NH}_3} \text{ (lb-NH}_3\text{/wet ton)}$$

Daily Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Passes	Processing Rate	EF	Daily PE (lb/day)
PM <sub>10</sub>	1	0 (acres/day)	1.2 lb-PM <sub>10</sub> /acre-pass	0.0
VOC	---	0 (wet tons/day)	1.78 lb-VOC/wet ton	0.0
NH <sub>3</sub>	---	0 (wet tons/day)	2.93 lb-NH <sub>3</sub> /wet ton	0.0

Annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> Emissions from the Land Incorporation of Organic Waste Materials:

The annual PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions will be calculated as follows:

$$\text{Annual PE}_{\text{PM}_{10}} = \text{Quantity of Land Fertilized (acres/year)} \times \# \text{ of Passes}^{(14)} \\ \times \text{EF}_{\text{PM}_{10}} \text{ (lb-PM}_{10}\text{/acre-pass)}$$

$$\text{Annual PE}_{\text{VOC}} = \text{Organic Waste Material Applied (wet ton/year)} \\ \times \text{EF}_{\text{VOC}} \text{ (lb-VOC/wet ton)}$$

$$\text{Annual PE}_{\text{NH}_3} = \text{Organic Waste Material Applied (wet ton/year)} \\ \times \text{EF}_{\text{NH}_3} \text{ (lb-NH}_3\text{/wet ton)}$$

Annual Emissions for Permit Unit X-XXXX-1-0				
Pollutant	Total Number of Passes	Processing Rate	EF	Annual PE (lb/year)
PM <sub>10</sub>	1	0 (acres/year)	1.2 lb-PM <sub>10</sub> /acre-pass	0
VOC	---	0 (wet tons/year)	5.36 lb-VOC/wet ton	0
NH <sub>3</sub>	---	0 (wet tons/year)	0.06 lb-NH <sub>3</sub> /wet ton	0

<sup>13</sup> Quantity of passes by the discing or tilling equipment to land incorporate the organic waste material into the soil.

<sup>14</sup> Quantity of passes by the discing or tilling equipment to land incorporate the organic waste material into the soil.

Stationary Source Potential Emissions (SSPE):

The total stationary source potential emissions will be based on the combined emissions from all permit units at the facility. Therefore:

Stationary Source Potential Emissions (SSPE)			
Permit Number	PM <sub>10</sub> (lb/year)	VOC (lb/year)	NH <sub>3</sub> (lb/year)
X-XXXX-1-0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**VIII. COMPLIANCE**

**Rule 2010 – Permits Required**

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0 constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

As determined above in Section VII. (Calculations), this facility is a source of PM<sub>10</sub>, VOC, and NH<sub>3</sub> emissions, therefore, a permit is required. In order to establish a baseline processing rate for this existing facility the following conditions will be listed on the permit:

X-XXXX-1-X:

- The quantity of land fertilized with **[biosolids, animal manure, and/or poultry litter]** shall not exceed **XXXX** acres in any one day and **XXXX** acres in any one calendar year. [District Rule 2010]
- The quantity of biosolids land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] ([Delete if not applicable.](#))
- The quantity of animal manure land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] ([Delete if not applicable.](#))

- The quantity of poultry litter land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] (Delete if not applicable.)

### **Rule 2020 - Exemptions**

Prior to November 16, 2007, the District did not require permits for green waste composting operations and is now being permitted due to a loss of exemption. Pursuant to District Rule 2020 (Exemptions), Section 9, the owner operator of an emissions unit that was exempt from written permits at the time of installation, which becomes subject to the provisions of District Rule 2010 (Permits Required), through loss of exemption, shall submit an application for a Permit to Operate and shall not be subject to District Rule 2201 (New and Modified Stationary Source Review Rule), until such time that emissions unit is modified.

### **Rule 2201 - New and Modified Stationary Source Review Rule**

An emissions unit that was installed at a time when permits were not required is exempt from District Rule 2201 for the initial permitting action, per District Rule 2020, Section 9.0. Therefore, as shown above, this facility is not subject to the requirements of this rule until the facility modifies their operation.

### **Rule 2520 - Federally Mandated Operating Permits**

The emissions from these operations are fugitive as defined in Section 3.14 of this rule and are not listed as a non-exempt fugitive source in 40 CFR 70.2 (Definitions). Therefore, the emissions from these operations are not included in the determination of a major source as defined in District Rule 2201, Section 3.24, and the provisions of this rule do not apply.

### **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 Ringelmann 1 or equivalent to 20% opacity. Opacity is expected to be less than 20% provided that these operations are properly performed. The following conditions will be listed on each permit:

- {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]
- All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

## Rule 4102 - Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected provided that these operations are properly performed. The following condition will be placed on each permit:

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

Compliance is expected with this Rule.

## California Health & Safety Code 41700 (Health Risk Assessment)

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a risk management review be performed for all projects that result in any increases in emissions of hazardous air pollutants. This project is to issue permits for existing organic waste processing operations with no increase in hazardous air pollutants. Therefore, a risk management review is not required.

## Rule 4202 - Particulate Matter – Emission Rate

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The maximum allowable emissions rate is calculated using the following formulas:

$$E_{Max.} = 3.59 P^{0.62}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P \leq 30$  tons/hr)

or

$$E_{Max.} = 17.31 P^{0.16}$$

where: E = Emissions in lb/hr  
P = Process weight in ton/hr ( $P > 30$  tons/hr)

Permit Number	P (ton/hr)	E <sub>Proposed</sub> (lb-PM/hr)	E <sub>Max.</sub> (lb/hr)
X-XXXX-1-0 <sup>(15)</sup>	XX.X	XX.X	XX.X

Since the proposed PM Emission rates are less than the allowable maximum emission rates, these permit units are expected to operate in compliance with this rule.

<sup>15</sup> For this permit unit the maximum process rate is XX.X tons/hr based on a processing rate limit of XXX tons/day and operating 24 hr/day. The E<sub>Proposed</sub> is XX.X lb/hr based on an emission rate of XX.X lb/day and operating 24 hrs/day.

## Rule 4565 - Biosolids, Animal Manure, and Poultry Litter Operations

### Sections 1.0 (Purpose) and 2.0 (Applicability):

The purpose of this rule is to limit the emissions volatile organic compounds (VOC) from operations involving the management of biosolids, animal manure, or poultry litter. Per Section 2.0, this rule applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and the operator who landfills, land applies, composts, or co-composts these materials.

The existing facility land applies **[biosolids, animal manure, and/or poultry litter]**. Therefore, the facility's composting operations are subject to the requirements of this rule.

*If this facility complies with all the listed criteria in Section 4.3 of this rule, then the facility is exempt from the requirements of this rule except for the recordkeeping requirements of Section 6.1.1. Use the following discussion for Section 4.0 and delete this italic section and Sections 5.0 and 7.0 for the remaining discussion of this rule. Otherwise delete this italic section and Section 4.0 below and continue with the remaining discussion for this rule.*

### Section 4.0 (Exemptions)

Except for the applicable recordkeeping requirements of Section 6.1.1, the provisions of this rule shall not apply to operators who land apply any combination of biosolids, animal manure, and poultry litter and that meet all of the following criteria as listed below:

- Receive, in total, less than 10,000 wet tons per year of any combination of biosolids, animal manure, or poultry litter; and
- Are not intentionally conducting pathogen reduction on any biosolids, animal manure, or poultry litter at the facility; and
- Are not subject to the regulations of the California Integrated Waste Management Board pertaining to solid waste transfer/processing or disposal; and
- Do not receive or collect tipping fees.

This facility meets all of the above listed criteria. Except for the applicable recordkeeping requirements of Section 6.1.1, the facility's **[biosolids, animal manure, and/or poultry litter]** land application operation is exempt from the requirements of this rule per Section 4.3. The following condition will be added to the permit to assure compliance with the exemption requirements of this section.

- *The total combined quantity of [biosolids, animal manure, or poultry litter] received at the facility shall be less than 10,000 wet tons per year. [District Rule 4565]*
- *The permittee shall not intentionally conduct pathogen reduction on any biosolids, animal manure or poultry litter at the facility. [District Rule 4565]*
- *The facility shall not receive or collect tipping fees. [District Rule 4565]*
- *The facility shall not be subject to the regulations of the California Integrated Waste Management Board pertaining to solid waste transfer/processing or disposal. [District Rule 4565]*

**Section 5.0 (Requirements):**

Section 5.2 requires an operator that land-applies material containing biosolids, animal manure, or poultry litter shall implement at least one of the mitigation measures in Table 1 below. To comply with the requirements of this section of the rule, the facility is proposing the following mitigation measures as indicated in the right column of Table 1 below.

*If the facility has not proposed any mitigation measures to comply with the requirements of this section of the rule, then send the facility an incompleteness letter requesting their proposed method to comply with this requirement. Utilize the generic letter enclosed at the end of this application review document.*

<b>Table 1 - Land Application Mitigation Measures</b>		
<b>Mitigation Measures</b>		<b>Facility Proposed</b>
1.	Directly inject the biosolids, animal manure, or poultry litter at least three inches (3") below the soil surface within three (3) hours of receipt at the facility.	[ ]
2.	Land incorporate the biosolids, animal manure, or poultry litter within three (3) hours of receipt at the facility. Materials received after 6 pm must be land incorporated by noon of the following calendar day.	[ ]
3.	Cover the biosolids, animal manure, or poultry litter within three (3) hours of receipt at the facility. The covers shall be one of the following: a waterproof cover; or at least six (6) inches of finished compost; or at least six (6) inches of soil. When conditions are appropriate to allow direct injection or land incorporation of the covered material, the material shall be directly injected or land incorporated within three (3) hours of uncovering the material.	[ ]
4.	Implement an alternative mitigation measure(s) not listed above that demonstrates at least a 10% reduction, by weight, in VOC emissions.	[ ]



Section 6.0 (Administrative Requirements):

*Only utilized the following paragraphs and conditions which are applicable to your project.*

Section 6.1.1.1 requires operators claiming exemption under Section 4.0 to maintain records to demonstrate that the operation meets all of the conditions of the claimed exemption. Since the facility is exempt from the requirements this rule per Section 4.3, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *The permittee shall maintain annual records indicating the quantity of biosolids, animal manure, or poultry litter received and land applied onsite, in tons/year. [District Rule 4565]*
- *{Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]*

Section 6.1.3 requires an operator of subject to this rule that land applies any combination of biosolids, animal manure, or poultry litter shall maintain an operations log. In the operations log, the operator shall record the following information on a daily basis:

- The time at which the biosolids, animal manure, or poultry litter arrives on site; and
- The quantity of biosolids, animal manure, or poultry litter received; and
- Other information necessary to determine compliance with the selected mitigation measures.

This organic waste material land application operation is subject to this rule and is proposing to utilize Mitigation Measure #1 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and quantity (in tons) the received material was directly injected at least 3 inches below the soil surface at the facility. [District Rule 4565]*

This organic waste material land application operation is subject to this rule and is proposing to utilize Mitigation Measure #2 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and quantity (in tons) the received material was land incorporated into the soil at the facility. [District Rule 4565]*

This organic waste material land application operation is subject to this rule and is proposing to utilize Mitigation Measure #3 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and type of cover (e.g. waterproof cover, 6 inches of finished compost, 6 inches of soil, etc.) used to cover the received material; (d). Quantity (in tons) of material and elapsed time (in minutes) after the material was uncovered for direct inject or land incorporation into the soil. [District Rule 4565]*

This organic waste material land application operation is subject to this rule and is proposing to utilize Mitigation Measure #4 as indicated in Table 1 above. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

*If the applicant is proposing to utilize an alternative mitigation measure(s) that demonstrates at least a 10% reduction in VOC emissions, then draft permit conditions based on the monitoring parameters as approved by the District indicated under the applicant's Alternative Mitigation Measures Compliance Plan.*

- *Draft specific recordkeeping permit condition(s) as approved by the District under the applicant's proposed Alternative Mitigation Measures Compliance Plan. [District Rule 4565]*

Section 6.1.8 requires operators to retain applicable records on-site for a period of five years and to make the records available on-site during normal business hours to the APCO, ARB, or EPA, and to submit the records to the APCO, ARB, or EPA upon request. Therefore, the following condition will be added to the permit to assure compliance with the requirements of this section.

- *{Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]*

Section 6.3 requires operators proposing to utilize an alternative mitigation measures compliance plan to provide detailed information regarding the proposed plan as list in section 6.3.1 for District review and approval. The applicant is not proposing the use of an alternative mitigation measures compliance plan and no further discussion is required.

*If the applicant is proposing the use of an alternative mitigation measures compliance plan, then replace the above paragraph with the following paragraph. Otherwise delete the following section.*

Section 6.3 requires operators proposing to utilize an alternative mitigation measures compliance plan to provide detailed information regarding their proposed plan as listed in section 6.3.1 for District review and approval. The applicant is proposing the use of a District approved alternative mitigation measures compliance plan consisting of the following:

*Provide a detailed discussion regarding the applicants proposed alternative mitigation measures compliance plan and include permit conditions to ensure compliance with their proposed plan to meet the requirements of sections 6.3.6 and 6.3.7.*

#### Section 7.0 (Compliance Schedule):

*Only utilized the following paragraph which is applicable to your project.*

Section 7.2.1 requires that all land application operators with usage of biosolids, animal manure, or poultry litter totaling 100,000 wet tons per year or less shall be in full compliance with all applicable rule requirements on and after March 15, 2008. The land application operation is expected to comply with the requirements of this rule once this In-House Permit to Operate is issued.

Section 7.2.2 requires that all application operators with usage of biosolids, animal manure, or poultry litter totaling more than 100,000 wet tons per year shall be in full compliance with all applicable rule requirements on and after September 15, 2008. The land application operation is expected to comply with the requirements of this rule once this In-House Permit to Operate is issued.

#### Conclusion:

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4565 requirements is expected.

## **Rule 8011 - General Requirements**

The definitions, exemptions, requirements, administrative requirements, record keeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

## **Rule 8031 - Bulk Materials**

Pursuant to Section 2.0, this Rule is applicable to the outdoor handling and storage of any bulk material, which emits visible dust when stored or handled. The following condition will be included on the In-House PTO to ensure compliance with the requirements of this rule.

- All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

## **Rule 8041 - Carryout and Trackout**

Pursuant to Section 2.0, this Rule is applicable to all sites that are subject to Rule 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), Rule 8031 (Bulk Materials), and Rule 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]

## **Rule 8051 - Open Areas**

Pursuant to Section 2.0, this Rule is applicable to any open area having 3.0 acres or more of disturbed surface area, which has remained undeveloped, unoccupied, unused or vacant for more than seven days. The following condition will be included on each In-House PTO to ensure compliance with the requirements of the Rule:

- Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]

## **Rule 8061 - Paved and Unpaved Roads**

Pursuant to Section 2.0, this Rule applies to any paved, or unpaved public or private road, street, highway, freeway, alley, way, access drive, access easement, or driveway constructed or modified after December 10, 1993. The following condition will be included on each ATC and PTO to ensure compliance with the requirements of this Rule.

- Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]

## **Rule 8071 - Unpaved Vehicle/Equipment Traffic Areas**

Pursuant to Section 2.0, this Rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger. The following conditions will be included on each In-House PTO to ensure compliance with the requirements of the Rule.

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
- Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]

## California Environmental Quality Act (CEQA)

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval for an existing operation, which did not require District permits at the time of installation. 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.

### IX. RECOMMENDATION

Issue permit X-XXXX-1-0 subject to the permit conditions on the attached draft In-House Permit to Operate.

### X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
X-XXXX-1-0	3020-06	Miscellaneous	None

### XI. APPENDICES

Appendix I: Draft In-House Permit to Operate  
Appendix II: Emissions Profile

**APPENDIX I**  
**Draft In-House Permit to Operate**

## **APPENDIX II**

### **Emissions Profile**



## Standard Permit Conditions for Land Application Operations

X-XXXX-1-X:

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
3. All materials for processing shall be maintained adequately moist to prevent visible emissions in excess of 20% opacity. [District Rule 4101]
4. The quantity of land fertilized with **[biosolids, animal manure, and/or poultry litter]** not exceed **XXXX** acres in any one day and **XXXX** acres in any one calendar year. [District Rule 2010]
5. The quantity of biosolids land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] [\(Delete if not applicable.\)](#)
6. The quantity of animal manure land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] [\(Delete if not applicable.\)](#)
7. The quantity of poultry litter land applied shall not exceed **XXXX** wet tons in any one day and **XXXX** wet tons in any one calendar year. [District Rule 2010] [\(Delete if not applicable.\)](#)
8. The total combined quantity of **[biosolids, animal manure, or poultry litter]** received at the facility shall be less than 10,000 wet tons per year. [District Rule 4565] [\(Delete if not applicable for exempt from Rule 4565 per Section 4.3.\)](#)
9. The permittee shall not intentionally conduct pathogen reduction on any biosolids, animal manure or poultry litter at the facility. [District Rule 4565] [\(Delete if not applicable for exempt from Rule 4565 per Section 4.3.\)](#)
10. The facility shall not be subject to the regulations of the California Integrated Waste Management Board pertaining to solid waste transfer/processing or disposal. [District Rule 4565] [\(Delete if not applicable for exempt from Rule 4565 per Section 4.3.\)](#)
11. The permittee shall maintain annual records indicating the quantity of biosolids, animal manure, or poultry litter received and land applied onsite, in tons/year. [District Rule 4565] [\(Delete if not applicable for exempt from Rule 4565 per Section 4.3.\)](#)

12. The permittee shall directly inject the **[biosolids, animal manure, and/or poultry litter]** at least three inches below the soil surface within three hours of receipt at the facility. [District Rule 4565] (Delete if not proposed as a Mitigation Measure from Table 1 above item #1.)
13. For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and quantity (in tons) the received material was directly injected at least 3 inches below the soil surface at the facility. [District Rule 4565] (Delete if not proposed as a Mitigation Measure from Table 1 above item #1.)
14. The permittee shall land incorporate the **[biosolids, animal manure, and/or poultry litter]** within three hours of receipt at the facility. Materials received after 6 PM must be land incorporated by noon of the following calendar day. [District Rule 4565] (Delete if not proposed as a Mitigation Measure from Table 1 above for item #2.)
15. For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and quantity (in tons) the received material was land incorporated into the soil at the facility. [District Rule 4565] (Delete if not proposed as a Mitigation Measure from Table 1 above for item #2.)
16. The permittee shall cover the **[biosolids, animal manure, and/or poultry litter]** within three hours of receipt at the facility. The covers shall be one of the following: a waterproof cover; or at least six inches of finished compost; or at least six inches of soil. When conditions are appropriate to allow direct injection or land incorporation of the covered material, the material shall be directly injected or land incorporated within three hours of uncovering the material. [District Rule 4565] (Delete if not proposed as a Mitigation Measure from Table 1 above for item #3.)
17. For each load of material received, the permittee shall maintain a daily record of the following: (a). Date; (b). Time of day, type (e.g. biosolids, animal manure, poultry litter, etc.), and quantity (in tons) of material received; (c). Time of day and type of cover (e.g. waterproof cover, 6 inches of finished compost, 6 inches of soil, etc.) used to cover the received material; (d). Quantity (in tons) of material and elapsed time (in minutes) after the material was uncovered for direct inject or land incorporation into the soil. [District Rule 4565] (Delete if applicant is not proposing to use Class One Mitigation Measure from Table 1 above for items # 3.)
18. {Modified 3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District, ARB, or EPA inspection upon request. [District Rules 1070 and 4565]

19. All bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
20. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rule 8041]
21. Any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused or vacant for more than seven days shall comply with the requirements of District Rule 8051 (Open Areas), unless specifically exempted under section 4.0. [District Rule 8051]
22. Any new or existing public or private paved or unpaved road, road construction project, or road modification project shall implement the control measures and design criteria of, and comply with the requirements of District Rule 8061 (Paved and Unpaved Roads), unless specifically exempted under section 4.0 of Rule 8061. [District Rule 8061]
23. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
24. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, the permittee shall apply water, gravel, road mix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]
25. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]
26. This permit does not authorize the facility to operate without the required permits from other local, state, or federal agency and does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080]

**In-House PTO Application Incompleteness Letter for Rule 4565 Compliance**  
**Land Application Operation**

[Mail Date]

[Applicant First and Last Name]

[Facility Name]

[Facility Mailing Address or Post Office Box Number]

[City, State, and Zip Code]

**Re: Notice of Incomplete Application for Permit(s) to Operate at an existing Organic Waste Processing Operation**  
**Project Number: X-XXXXXXX**

Dear Mr. or Ms. [Last Name]

The District has received your Permit to Operate application for an existing **[biosolids, animal manure, and/or poultry litter]** land application operation, at [Site Location Address]. Based on our preliminary review, the application has been determined to be incomplete. The following additional information is required prior to further processing:

1. Based on the information provided in your application, your facility land applies **[biosolids, animal manure, and/or poultry litter]** and is subject to the requirements of District Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations). You may view or print a copy of Rule 4565 at the following internet website:  
<http://www.valleyair.org/rules/currnrules/r4565.pdf>.

According to Section 5.2 of Rule 4565, an operator that land applies materials containing biosolids, animal manure, or poultry litter shall implement at least one of the mitigation measures indicated on the attached table. Therefore, indicate (with a check) on the right-side column of the attached Table for Land Application Mitigation Measures, your proposed mitigation measure to comply with the requirements of Rule 4565, Section 5.2.

If you are proposing the use of an alternative mitigation measure as listed in item 4 of the attached Table, please also provide the additional information as indicated in Section 6.3.1 of Rule 4565.

In response, please refer to the above project number, and send to the attention of **Mr./Ms. [Process Engineer's Name]**

Please submit the requested information within 30 days. The District will not be able to process your application until this information is received.

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Thank you for your cooperation in this matter. If you have any questions, please contact **Mr./Ms. [Processing Engineer's Name]** at **[Processing Engineer's Phone Number]**.

Sincerely,

David Warner  
Director of Permit Services

Rupi Gill  
Permit Services Manager

DW:[**Processing Engineer's Initials**]  
Attachment

**Table For Land Application Mitigation Measures**

<b>Mitigation Measures</b>		<b>Facility Proposed</b>
1.	Directly inject the biosolids, animal manure, or poultry litter at least three inches (3") below the soil surface within three (3) hours of receipt at the facility.	[ ]
2.	Land incorporate the biosolids, animal manure, or poultry litter within three (3) hours of receipt at the facility. Materials received after 6 pm must be land incorporated by noon of the following calendar day.	[ ]
3.	Cover the biosolids, animal manure, or poultry litter within three (3) hours of receipt at the facility. The covers shall be one of the following: a waterproof cover; or at least six (6) inches of finished compost; or at least six (6) inches of soil. When conditions are appropriate to allow direct injection or land incorporation of the covered material, the material shall be directly injected or land incorporated within three (3) hours of uncovering the material.	[ ]
4.	Implement an alternative mitigation measure(s) not listed above that demonstrates at least a 10% reduction, by weight, in VOC emissions.	[ ]