



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

APR 27 2012

David Rothbart
County Sanitation Districts of Los Angeles County
1955 Workman Mill Rd.
Whittier, CA 90601-1415

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1111582 and C-1112854

Dear Mr. Rothbart:

Enclosed for your review and comment is the District's analysis of County Sanitation Districts of Los Angeles County's application for an Authority to Construct for the Westlake Farms Composting Facility, at Section 35, Township 22s, Range 19e, Mt. Diablo Baseline and Meridian, approximately 4 miles SE of Kettleman City in Kings County, CA.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Brian Clements of Permit Services at (559) 230-5921.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Warner", with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

DW:bc

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

APR 27 2012

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1111582 and C-1112854

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of County Sanitation Districts of Los Angeles County's application for an Authority to Construct for the Westlake Farms Composting Facility, at Section 35, Township 22s, Range 19e, Mt. Diablo Baseline and Meridian, approximately 4 miles SE of Kettleman City in Kings County, CA.

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

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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

APR 27 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1111582 and C-1112854

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of County Sanitation Districts of Los Angeles County's application for an Authority to Construct for the Westlake Farms Composting Facility, at Section 35, Township 22s, Range 19e, Mt. Diablo Baseline and Meridian, approximately 4 miles SE of Kettleman City in Kings County, CA.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Brian Clements of Permit Services at (559) 230-5921.

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David Warner
Director of Permit Services

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Hanford Sentinel
Hanford Sentinel

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to County Sanitation Districts of Los Angeles County for the Westlake Farms Composting Facility, at Section 35, Township 22s, Range 19e, Mt. Diablo Baseline and Meridian, approximately 4 miles SE of Kettleman City in Kings County, CA.

The analysis of the regulatory basis for this proposed action, Project #C-1111582 **and C-1112854**, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT AUTHORITY TO CONSTRUCT APPLICATION REVIEW

Co-Composting Facility

Facility Name: Westlake Farms Composting Facility (WFCF)
Applicant/Operator: County Sanitation Districts of Los Angeles County (CSDLAC)
Mailing Address: 1955 Workman Mill Rd.
Whittier, CA 90601-1415

Contact 1: Patrick Griffith, Senior Engineer - CSDLAC
Phone: (562) 908-4288, x2117
Fax: (562) 692-9690
E-Mail: pgriffith@lacsdsd.org

Contact 2: David Rothbart, Supervising Engineer - CSDLAC
Phone: (562) 699-7411
Fax: (562) 692-9690
E-Mail: drothbart@lacsdsd.org

SJVAPCD Project #'s: C-1111582 and C-1112854
Application #'s: C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, '-26-0 thru '-28-0
Project Complete Date: September 7, 2011

Processing Engineer: Brian Clements, Permit Services Department - SJVAPCD
Lead Engineer: Sheraz Gill, Permit Services Department - SJVAPCD
Date: April 24, 2012

I. PROPOSAL

Project C-1111582:

County Sanitation Districts of Los Angeles County (CSDLAC) is requesting an Authority to Construct (ATC) permit for an additional transportable trommel screen powered by a Tier 3 Certified diesel-fired internal combustion (IC) engine, as well as two additional emergency standby-by engines, at the recently permitted Westlake Farms Composting Facility (WFCF). For the purposes of this permitting project, all equipment (emission units) will be treated as new since the previously issued ATCs have not been implemented. This project will be processed with a public notice since there will be additional emission sources that have not been included in previous public notices. There is no change to the previously permitted bulking agent or biosolid throughputs. The WFCF will, as previously permitted, receive and process a maximum of 500,000 tons of biosolids from the CSDLAC and 400,000 tons of bulking agents per year.

The WFCF will include biosolids and bulking agents receiving and mixing, screening and grinding equipment, active, mature and curing compost using the Gore Composting System, various belt conveyors, front-end loaders, transportable diesel-fired IC engines,

finished product truck loadout, and a gasoline dispensing station. Draft ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 are shown **Appendix K**.

Under public notice project C-1043946, the San Joaquin Valley Air Pollution Control District (District) issued ATC permits for the WFCF utilizing biofilters as the compost pile control technology.

Under public notice project C-1073961 the District issued ATC permits for the WFCF utilizing GORE covers as the compost pile control technology.

Under project C-1101871 the District re-issued ATC permits for the WFCF utilizing GORE covers to incorporate requirements of Rule 4565 as well as a few other minor proposed processing changes.

Upon implementation of the ATC permits under project C-1111582, the ATC permits under previous projects C-1043946, C-1073961, and C-1101871 shall be cancelled by the District.

Project C-1112854:

CSDLAC is requesting Authority to Construct (ATC) permits for two emergency stand-by IC engines. Note, the Application Review document for these two emergency engines, including draft ATC permits '-27-0 and '-28-0, is attached to this document as **Appendix S**.

II. APPLICABLE RULES

- Rule 1081 Source Sampling (12/16/93)
- Rule 2010 Permits Required (12/17/92)
- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 4001 New Source Performance Standards (4/14/99)
- Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
- Rule 4101 Visible Emissions (2/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4202 Particulate Matter Emission Rate (12/17/92)
- Rule 4301 Fuel Burning Equipment (12/17/92)
- Rule 4565 Biosolids, Animal Manure, and Poultry Litter (3/15/07)
- Rule 4566 Organic Material Composting Operations (8/18/11)
- Rule 4621 Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants (12/20/07)
- Rule 4622 Transfer of Gasoline into Vehicle Fuel Tanks (12/20/07)
- Rule 4701 Stationary Internal Combustion Engines - Phase 1 (8/21/03)
- Rule 4702 Stationary Internal Combustion Engines - Phase 2 (8/18/11)
- Rule 4801 Sulfur Compounds (12/17/92)
- Rule 8011 General Requirements (8/19/04)
- Rule 8021 Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities (8/19/04)
- Rule 8031 Bulk Materials (8/19/04)

- Rule 8041 Carryout and Trackout (8/19/04)
- Rule 8051 Open Areas (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
- California Code of Regulations (CCR), Title 17 (Public Health), Division 3 (Air Resources), Chapter 1 (Air Resources Board), Subchapter 7.5 (Air Toxic Control Measures), Measure 93116 (Portable Diesel Engines)

III. PROJECT LOCATION

The WFCF will be located at Section 35, Township 22s, Range 19e, Mt. Diablo Baseline and Meridian, approximately 4 miles South East of Kettleman City in Kings County, CA.

This project is not located within 1,000 feet of a K-12 school. Therefore, the noticing provisions of CH&SC 42301.6 do not apply.

IV. PROCESS DESCRIPTION

Definitions¹:

Active-Phase Composting:

In the Gore Composting System, the active phase of the Composting process that begins when organic materials are mixed together for Composting and lasts a minimum of 28 days.

Aerated Static Compost Pile :

Stationary Compost Piles, which have air drawn negatively or positively through the pile with low pressure, high volume blowers and a piping system.

Agricultural (Ag) Waste:

Vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources.

Biosolids:

The solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or

¹ The definitions shown here are not absolute, and apply solely to the proposed Westlake project.

grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works.

Bulking Agent:

A constituent of the compost Feedstock, consisting of Agricultural (Ag) Waste and/or Green Waste.

Co-Composting:

Composting where biosolids are mixed with other materials, including amendments, to produce compost. Co-composting includes both the active and curing phases of the composting process.

Compost:

The controlled biological decomposition of organic material, such as biosolids, or crop residues, under aerobic (with air) or anaerobic (without air) conditions to form a humus-like material.

Compost Material:

Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof.

Curing-Phase Composting:

The phase of the co-Composting process that begins immediately after the end of the Maturation phase of Composting and lasts 14 days or until the Compost has a Solvita Maturity Index of 7 or the product respiration rate is below 10 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry.

Feedstocks:

Composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids.

Green Waste:

Urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources.

Maturation-Phase Composting:

In the Gore Composting System, the maturation phase of the co-composting process begins immediately after the end of the active phase of composting and lasts 14 days.

Reclaimed Compost:

Compost that has undergone the Active-Phase Composting cycle once and is then recycled through the mixing system to be blended with fresh Feedstocks.

Solvita Maturity Index:

Definition taken from SCAQMD Rule 1133.2 (*Emissions Reductions from Co-Composting Operations*) - "an index that defines the stage where Compost exhibits resistance to further decomposition, as tested by the Solvita Maturity Test."

BULKING AGENT RECEIVING, TRANSFER, AND STORAGE OPERATIONS

The process begins with the delivery of the Bulking Agents by truck. The loads are dumped at the facility to be stored in water basins and push-wall areas. Front end loaders will be used to push the bulking agent into the designated storage bunker. On an annual basis, approximately 80% of the Bulking Agent received will be delivered straight to storage, while up to 20% may be delivered outdoors to be screened and/or ground for proper sizing, or to serve as an emergency stockpile. On a daily basis, all of the bulking agent except the emergency stockpile will be stored within a covered, three sided bunker. The facility receives the following Bulking Agents:

Bulking Agent (C-6048-1 and '-2)	Throughput (tons/day)	Throughput (tons/year)
Local (SJ Valley) agricultural waste	3,800	150,000
Local (SJ Valley) Green Waste	3,800	50,000
CSDLAC municipal Green Waste		200,000
Total	3,800*	400,000

*The potential to emit (PE) from this material is based on processing up to 3,800 tons/day of either Ag Waste or Green Waste.

Also, the applicant has indicated that there will be an emergency outdoor stockpile of Bulking Agent onsite at all times. The applicant has indicated that the emergency Bulking Agent stockpile will be a seven-day supply or 7,350 tons (equivalent to 32,665 yd³).

Per the applicant, the densities of the Bulking Agent are as follows:

Bulking Agent	Density (ton/yd³)
Agricultural waste	0.225
Green Waste	0.309
Annual Average	0.278*

*Average density = $(0.225 \times 150,000 \div 400,000) + (0.309 \times 250,000 \div 400,000)$

= 0.278 ton/yd³

Particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀) is generated from the Bulking Agent stockpiling and transfers due to the material drops and disturbance. If the Bulking Agent is delivered to the emergency stockpile, the applicant has indicated there is one material transfer point. If the Bulking Agent is delivered to storage, the applicant has indicated there are three material transfer points leading up to mixing with Biosolids. The water basins and three-sided bunkers will house the Bulking Agent. The bunkers are equipped with overhead water sprays to keep PM₁₀ emissions to a minimum. Note, a process flow diagram is included in **Appendix H**. Each transfer point will be considered an emission point and will be reflected in the Potential to Emit (PE) calculations. Volatile Organic Compounds (VOC) and ammonia (NH₃) emissions are generated from the Bulking Agents also. Note, all Bulking Agent Piles (initial, screened, ground, etc.) are considered part of this permit unit.

BULKING AGENT SCREENING

If needed, the bulking agents can be processed to achieve proper sizing for mixing with the biosolids. Materials too large must be broken down to ensure proper composting. The bulking agent is loaded via front-end loader to the feed hopper of one of two transportable bulking agent rotary drum trommel screens. Both transportable bulking agent trommel screens are powered by an onboard 250 bhp diesel fired IC engine. The engines will be of the latest available EPA/ARB certification for 250 bhp non-road engines (Tier 3). Both Bulking Agent screens/engines are of identical make and model; each will be issued an ATC permit. There are two screens, one for each location, north and south. The screen separates the Bulking Agent into two sizes, over-sized (overs) and under-sized (unders). PM₁₀ emissions are generated from the screening action. The unders are properly sized for composting and are piled until they are transferred via front-end loader to the mixing building feed hopper or the emergency stockpile. The applicant has identified the following screening throughputs below.

Bulking Agent Screening Operations		
Permit Unit	Throughput (ton/day)	Throughput (ton/year)
C-6048-3	3,800*	80,000
C-6048-4		

*Based on a combined engine-operating schedule of 19 hours per day.

In addition, since a diesel-fired IC engine powers each screen, combustion air contaminants such as NO_x, SO_x, PM₁₀, CO, and VOC are also created from these operations.

BULKING AGENT GRINDING

The overs (material that does not filter through the screen) are piled until they are transferred via front-end loader to the feed hopper of one of the two transportable grinders (north and south). Each grinder is powered by an onboard 1,050 bhp diesel fired IC engine. The grinder reduces the overs into smaller pieces, which are similar in size to the screening unders. PM₁₀ emissions are generated from the grinding action. This ground material is piled until it is transferred via front-end loader to the mixing building feed hopper or emergency storage pile. The engines generate combustion air contaminants such as NO_x, SO_x, PM₁₀, CO, and VOC. The engines will be of the latest available EPA/ARB certification (Tier 2) for 1,050 bhp non-road engines. Both Bulking Agent grinders are of identical make and model; each will be issued an ATC permit. The applicant has identified the following grinding throughputs below.

Bulking Agent Grinding Operations		
Permit Unit	Throughput (ton/day)	Throughput (ton/year)
C-6048-5	770*	80,000
C-6048-6		

*based on a combined engine operating schedule of 10.3 hours per day.

BIOSOLIDS RECEIVING AND STORAGE OPERATIONS

The mixing buildings are fully enclosed and are vented to a biofilter(s) for VOC, NH₃, and odor control. High-speed building roll-up doors remain closed except upon truck deliveries of biosolids. The hostler and trailer drive into a building; the doors close behind them. Once inside the buildings, the biosolids are dumped into feed hoppers prior to storage and mixing. The maximum throughput of biosolids will be 500,000 tons per year.

Biosolids Receiving/Storage Operations		
Permit Unit	Throughput (ton/day)	Throughput (ton/year)
C-6048-7	4,200	500,000
C-6048-8		

FEEDSTOCKS MIXING OPERATIONS

Biosolids are stored in one of two mixing buildings (north and south). Bulking agent is conveyed to the Mixing Buildings. The mixing buildings are enclosed and each vented to a biofilter for VOC, NH₃, and odor control. Once in the building, the biosolids and bulking agent is mixed using mixers (vertical auger or pugmill). The Feedstocks,

Biosolids (500,000 tons/year) and Bulking Agents (400,000 tons/year), are mixed at specific ratios for Composting.

The potential to emit (PE) from these operations will be based on no more than 7,300 tons of material mixed in any one-day combined.

Mixing Buildings - Daily Throughputs	
Permit Unit	Reclaimed Compost, Biosolids, Mixed Feedstocks (ton/day)
C-6048-7	7,300 ton/day
C-6048-8	

Mixing Buildings - Annual Throughputs			
Permit Unit	Bulking Agent	Biosolids (ton/year)	Reclaimed Compost (ton/year)
C-6048-7	400,000 ton/year (1,439,000 yd ³ /year)	500,000	400,000
C-6048-8			

COMPOST TROMMEL SCREENS

Compost completing the Cure phase of Composting will be moved by front-end loaders to the Compost screens (North or South). The Compost screens are located in the vicinity of the cure piles and are powered by electric motors. There are redundant compost screens at each station (North and South); however, only one screen per station will operate at a time. All the Compost screens are of identical make and model.

PM₁₀ emissions are potentially generated from the screening action. The Compost is screened and separated into overs and unders. The overs are transferred via conveyor back to the bulking agent storage bunkers to be re-used as bulking agent in subsequent compost mixes. The unders are transferred via front end loader to nearby trucks. The District will identify the screening operation's VOC and NH₃ emissions as uncontrolled.

Compost Screening Operations		
Permit Unit	Throughput (ton/day)	Throughput (ton/year)
C-6048-9	7,300	1,300,000
C-6048-10		

COMPOST PILES

The facility receives 900,000 tons/year of compostable feedstock material (bulking agent + biosolids). The feedstock will be composted using the Gore Composting System. The Gore System uses three distinct phases of composting: active, maturation and cure. Upon delivery of the feedstock to the composting area, active phase compost piles are formed using a front end loader. To form the piles, the mixed Feedstocks will be placed over an air distribution system. After the pile is formed, a GORE cover is immediately and gently pulled over the compost pile by a mobile winding machine. The cover is sealed at the edges to the ground to prevent fugitive air leaks. Small, positive blowers feed air into the compost piles. The operation of the blowers is designed to maintain aerobic conditions throughout the pile, to maintain adequate moisture content, and to maintain the required temperature for biological activity and pathogen destruction. The covers protect the compost material from direct penetration of liquid water in either direction, as well as from wind and vectors. They also insulate the compost, which enhances the composting process. A fine film of condensation develops on the inside of the cover during the composting process, which suppresses odors and gaseous pollutants by dissolving them in the film of water which then drops back into the composting material where the dissolved organics continue to be broken down by bacteria.

The active phase of the process continues for four weeks. Upon completion of the active phase of composting, front end loaders will be used to break down the active piles and place the compost into conveyor feed hoppers. The compost will then be conveyed to the maturation composting area. Front end loaders will form maturation piles on top of an air distribution system. As is the case with the active piles, the maturation piles are covered and aerated. The maturation phase will last two weeks, at which point the pile is broken down by front end loaders and moved to an adjacent area to commence the cure phase. The cure phase is covered with Gore covers and lasts two weeks.

The active phase piles are approximately 165' long, 26' wide and 12' high (approximately 25,740 yd³). The maturation and cure phase piles will be approximately 10-25% smaller due to the degradation of the material.

Upon completion of the composting process, a stable end product is produced. The finished compost material is screened to remove large pieces of bulking agent as a final step in the process.

FINISHED COMPOST SCREENING AND TRUCK LOADOUT OPERATIONS (NORTH AND SOUTH)

A portable trommel screen powered by a 125 bhp Tier 3 certified diesel-fired engine will be used to screen the finished product and remove overs. Screened finished compost will be front-end loaded to nearby trucks at the following maximum throughputs:

Truck Loadout		
Permit Unit	Throughput (ton/day)	Throughput (ton/year)
C-6048-20	7,400	900,000

GASOLINE DISPENSING OPERATION

Gasoline is delivered to a storage tank via a delivery vessel. Gasoline is then dispensed from the storage tank into the facility's vehicle tanks during refueling. The equipment will consist of one 1,000 gallon above ground gasoline storage tank and one dispensing nozzle. The maximum throughput is 1,000 gal/month and 12,000 gal/year.

WASTE WATER TREATMENT SYSTEM

General. In keeping with the overall project objective of maximizing the system sustainability, wastewater generated at the WFCF will be treated to Title 22 disinfected tertiary standards to support water-recycling practices.

Sources. Sources of wastewater include: restroom facilities (located in the Maintenance Building, Personnel Facilities Building, Administration Building, and Mixing Building); break areas (located in the Maintenance Building and Mixing Building); designated lunchroom (located in the Administration Building); and showers (located in the Personnel Facility and Administration Building).

Capacity. The design flow of the wastewater treatment system is 3-5 gpm. This plant primarily serves the working staff of the Composting Facility. Operational projections estimate a total of 130 employees at buildout, in 3 shifts of 50 workers or in 1-2 shifts for showers, which are likely to occur during shift change (i.e. at the end of each shift).

WW System. The wastewater² treatment system proposed for the WFCF is a fully self-contained membrane bioreactor (MBR) system that requires minimum site preparation for installation (i.e. a slab is sufficient). The pre-anoxic configuration is the most common process used for biological nitrogen removal in municipal wastewater treatment. In pre-anoxic systems, an unaerated, subsurface mixed anoxic tank precedes an aeration tank. In these systems, the organic substrate in the influent wastewater provides the electron donor for oxidation reduction reactions using nitrate instead of oxygen in the anoxic tank. The aeration tank employs an efficient fine

² Zenon Z-Mod® MBR

bubble diffuser to add a controlled amount of air to affect further treatment. No anaerobic zones are present in the system. The process is known as substrate denitrification. The system is capable of producing Title 22 effluent.

Assuming worst case operating conditions, the VOC emissions potential from this system is less than 2 lbs per year. This was calculated using the worse case data from an industry-wide survey of wastewater treatment facilities in Southern California due to SCAQMD Rule 1179 (267 lb VOC/MGD-yr) using SCAQMD Method 25.2 Modified. As such, this WW system is exempt from District permitting requirements as a low emitting unit, per Rule 2020 (*Exemptions*).

NON-POTABLE (PROCESS) WATER TREATMENT SYSTEM

General. The facility non-potable (process) water treatment system will provide Title 22 disinfected tertiary water³ to the Facility to accommodate the following needs: Composting operations; dust control; wash-water; landscape irrigation; and non-potable toilet flushing. In addition, the facility non-potable water treatment system will also supply finished water to meet the anticipated fire flow demand. The Kings County Fire Department requested pH adjustment of the Westlake finished process water to protect their personnel and equipment.

Source. Raw process water will be supplied to the facility through a connection to the Blakeley Canal. The Blakeley Canal is located near the southern boundary of the proposed project site. The Blakeley Canal receives water from the State Water Project, the Kings River, and groundwater from deep wells on lands owned by Westlake Farms.

Capacity. The system will treat **900 gpm**, which is consistent with the projected process demands for the complete project.

Pretreatment. The non-potable (process) water source (Blakeley Canal) for the composting facility is subject to both annual and seasonal variation in the raw water quality as a function of the combination of available sources (SWP Aqueduct, Kings River surpluses, farms irrigation wells, re-circulated agricultural tail water/stormwater, Kettleman City and Lemoore WWTP effluent) at a given time. A stainless steel traveling water screen is recommended to assist in attenuating a degree of the anticipated water quality variation.

Process System. The recommended system combines the time tested conventional technologies of flocculation, clarification, and filtration into one treatment unit. These physical methods of water treatment do not require aeration or surface agitation. The process water has no potential to emit. As such, this system is not subject to District permitting requirements, per Rule 2010 (*Permits Required*).

³ California Code of Regulations, Title 22 Social Security, Division 4 Environmental Health, Chapter 3, Water Recycling Criteria.

V. EQUIPMENT LISTINGS

For miscellaneous electric equipment proposed for this facility, see **Appendix N**.

C-6048-1-3:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (NORTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

C-6048-2-3:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (SOUTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

C-6048-3-3:

TRANSPORTABLE BULKING AGENT ROTARY DRUM TROMMEL SCREEN (NORTH) POWERED BY AN ONBOARD 250 BHP TIER 3 CERTIFIED CATERPILLAR MODEL 3126B OR EQUIVALENT* DIESEL-FIRED IC ENGINE

*Since the applicant is not committed to a specific engine, as shown on the ATC equipment description above, the following conditions will be included on this ATC permit according to District Policy APR 1040 (Flexibility in Equipment Descriptions in ATCs):

- The permittee shall obtain APCO approval for the use of any equivalent engine not specifically approved by this Authority to Construct. Approval of an equivalent engine shall only be made after the APCO's determination that the submitted design and performance data for the proposed alternate engine are equivalent to the approved engine.
- The permittee's request for approval of an equivalent engine shall include, at minimum, the following information: EPA and CARB certification, engine manufacturer and model number, maximum power rating (bhp), and manufacturer's guaranteed Emission Factors.
- Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct.
- No Emission Factor and no emission rate shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment.

C-6048-4-3:

TRANSPORTABLE BULKING AGENT ROTARY DRUM TROMMEL SCREEN (SOUTH) POWERED BY AN ONBOARD 250 BHP TIER 3 CERTIFIED CATERPILLAR MODEL 3126B OR EQUIVALENT* DIESEL-FIRED IC ENGINE

C-6048-5-3:

TRANSPORTABLE BULKING AGENT GRINDER (NORTH) POWERED BY AN ONBOARD 1,050 BHP TIER 2 CERTIFIED CATERPILLAR MODEL 3412E OR EQUIVALENT* DIESEL-FIRED IC ENGINE

C-6048-6-3:

TRANSPORTABLE BULKING AGENT GRINDER (SOUTH) POWERED BY AN ONBOARD 1,050 BHP TIER 2 CERTIFIED CATERPILLAR MODEL 3412E OR EQUIVALENT* DIESEL-FIRED IC ENGINE

*Since the applicant is not committed to a specific engine, as shown on the ATC equipment descriptions above, the conditions shown above for C-6048-3-0 will be included on these ATC permits according to District Policy APR 1040 (Flexibility in Equipment Descriptions in ATCs).

C-6048-7-3:

NORTH CO-COMPOSTING FEEDSTOCKS MIXING OPERATION IN AN ENCLOSED BUILDING SERVED BY BIOFILTER(S), INCLUDES 600 CUBIC YARD BIOSOLIDS RECEIVING/STORAGE CAPACITY; AND AN OUTDOOR CONVEYING OPERATION THAT INCLUDES FOUR COMPOST CONVEYOR TRAINS WITH A 209 CUBIC YARD TOTAL HOLDING CAPACITY

C-6048-8-3:

SOUTH CO-COMPOSTING FEEDSTOCKS MIXING OPERATION IN AN ENCLOSED BUILDING SERVED BY BIOFILTER(S), INCLUDES 600 CUBIC YARD BIOSOLIDS RECEIVING/STORAGE CAPACITY; AND AN OUTDOOR CONVEYING OPERATION THAT INCLUDES FOUR COMPOST CONVEYOR TRAINS WITH A 209 CUBIC YARD TOTAL HOLDING CAPACITY

C-6048-9-3:

TWO COMPOST ROTARY DRUM TROMMEL SCREENS (NORTH) POWERED BY AN ELECTRIC MOTOR

C-6048-10-3:

TWO COMPOST ROTARY DRUM TROMMEL SCREENS (SOUTH) POWERED BY AN ELECTRIC MOTOR

C-6048-19-3:

CO-COMPOSTING OPERATION INCLUDING ACTIVE-PHASE, MATURATION PHASE AND CURING-PHASE POSITIVE AERATED COMPOST PILES ALL WITH GORE COVERS

C-6048-20-3:

FINISHED COMPOST TRUCK LOADOUT OPERATIONS (NORTH AND SOUTH)

C-6048-21-3:

GASOLINE DISPENSING OPERATION WITH ONE 1,000 GALLON CONVAULT ABOVEGROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR

RECOVERY SYSTEM, AND 1 FUELING POINT WITH 1 GASOLINE DISPENSING NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-F)

C-6048-26-0:

TRANSPORTABLE 139 BHP JOHN DEERE MODEL 4045H DIESEL-FIRED TIER 3 CERTIFIED IC ENGINE POWERING A TROMMEL SCREEN USED FOR FINISHED COMPOST

VI. Emission Control Technology Evaluation

The proposed composting facility will produce volatile organic compound emissions (VOCs), ammonia (NH₃) and particulate matter (PM₁₀) emissions. Also, there is the potential for other odorous emissions, such as hydrogen sulfide (H₂S). However, based on information available for these types of operations, the H₂S emissions are negligible. In addition, the IC engines at the facility will produce combustion products such as NO_x, SO_x, CO, VOC, and PM₁₀.

a. Bulking Agent and Compost transfer, screening, and grinding

PM₁₀ emissions are generated from the Bulking Agent transfers, screening and grinding. PM₁₀ emissions are also generated from the Compost transfers and screening. These operations will be limited to 5% opacity to ensure minimal PM₁₀ emissions. The operations will use water sprays to reduce the dust, if necessary.

The Bulking Agent (Ag Waste and Green Waste) will also produce uncontrolled VOC and NH₃ emissions.

b. Diesel IC engines

The facility will operate four different diesel IC engines at the facility. These engines produce combustion products such as NO_x, SO_x, CO, VOC, and PM₁₀.

The engines will be of the latest EPA/CARB certification and will be equipped with:

- Turbocharger
- Intercooler/aftercooler
- Very Low (0.0015%) sulfur diesel

The emission control devices/technologies and their effect on diesel engine emissions detailed below are from *Non-catalytic NO_x Control of Stationary Diesel Engines*, by Don Koeberlein, CARB.

The turbocharger reduces the NO_x emission rate from the engine by approximately 10% by increasing the efficiency and promoting more complete burning of the fuel.

The intercooler/aftercooler functions in conjunction with the turbocharger to reduce the inlet air temperature. By reducing the inlet air temperature, the peak combustion

temperature is lowered, which reduces the formation of thermal NO_x. NO_x emissions are reduced by approximately 15% with this control technology.

The use of very low-sulfur (0.0015% by weight sulfur maximum) diesel fuel reduces SO_x emissions by over 99% from standard diesel fuel.

c. Feedstocks Mixing

The mixing building is fully enclosed with 100% of the generated emissions vented to a biofilter. The applicant will verify the building capture efficiency according to the proposed monitoring plan (see Rule 2201 discussion of Section VIII of this document for further discussion). The biofilter controls VOCs by 80% and NH₃ by 90%.

Biofilter Design Specifications (serving Mixing Buildings)	
Composition	Shredded wood, nugget bark, and finished Compost
Total volume	300,000 ft ³ (total for 2 mixing buildings)
Empty-bed residence time	60 sec minimum
Gas flux	4.0 ft ³ /ft ² -min
Control efficiency	80% for VOC and 90% for NH ₃
Max inlet temp.	120 °F
Max outlet temp.	120 °F
Total exhaust flow rate	300,000 acfm

d. Composting

The VOC and NH₃ emissions from the active, maturation, and curing composting piles will be controlled using the GORE Composting System. With this system, a fine film of condensation develops on the inside of the cover during the composting process, which suppresses odors and gaseous pollutants by dissolving them in the film of water which then drops back into the composting material where the dissolved organics continue to be broken down by bacteria. The average VOC and NH₃ control levels over the entire composting cycle are approximately 91% and 56%, respectively.

Discussion of Biofilter Control Technology

Biofiltration is an effective treatment option for odors, VOC and NH₃ emissions. The biofilter uses moist organic materials to adsorb and then biologically degrade odors and VOC compounds into non-harmful substances. VOC is oxidized to CO₂ and water, and NH₃ is degraded into nitrate.

The biofilter filtration media must have a good adsorption capacity and good resistance to compaction to provide a suitable environment for microorganism metabolism and growth while having a high porosity for minimal backpressure. Typically, biofilter media is made up of wood waste and a smaller portion of

compost, which would provide an air-filled porosity between 40% and 60% and a pH between 6 and 8.

Materials that have been used for biofilter construction include compost, soil, peat, chipped brush and bark, sometimes blended with a biologically inert material such as gravel to maintain porosity.

The applicant has provided the following description of the biofilters: packed porous beds of predominantly organic media that serve as the treatment sites for microbial breakdown of contaminants in gas streams. As the odorous gases pass through the media, these pollutants are removed through biological oxidation, adsorption, and absorption. The biofilter media will consist of a mixture of materials such as shredded wood, nugget bark, and finished compost. The gas distribution system with the bed will consist of a network of perforated piping or other type of system designed to achieve the same effect. A sprinkler system will be installed to maintain the proper moisture content in the media.

* Page 3-5, Emission Control Systems (Biofilter), SCAQMD "Technology Assessment for Proposed Rule 1133", March 2002.

VII. GENERAL CALCULATIONS

A. Assumptions

- All calculations and physical constants used are corrected to Standard Conditions as defined in District Rule 1020, Section 3.47 (60 °F and 14.7 lb/in²).
- The facility may operate 24 hr/day and 365 days/year (per applicant).

C-6048-1 and '-2:

BULKING AGENT RECEIVING AND STORAGE OPERATIONS

- Pollutants generated from Bulking Agent receiving and storage: PM₁₀, VOC, and NH₃.
- Bulking agent storage bunkers capacity is 24,350 yd³ (applicant)
- Emergency stockpile is a seven-day (7,350 ton, equivalent to 32,665 yd³) supply (per applicant).
- Green Waste throughput is 250,000 ton/year (per applicant).
- Ag Waste throughput is 150,000 ton/year (per applicant).
- Total Bulking Agent throughputs: 3,800 ton/day and 400,000 ton/year (per applicant).
- On an annual basis, 80% Bulking Agent received is delivered to one of two three sided bunker systems (North and South), up to 20% of the Bulking Agent received may be delivered to the screening/grinding/emergency stockpile areas.
- Combined Bulking Agent storage of '-1 and '-2 will not exceed 57,020 yd³ (per applicant).
- Density of Ag Waste is 0.225 ton/yd³ (per applicant).
- Density of Green Waste is 0.309 ton/yd³ (per applicant).
- Density of combined Bulking Agents is 0.278 ton/yd³ (based on applicant's throughputs and densities of ag and Green Waste).
- Three Bulking Agent transfer points (or PM emission points) for bulking agent delivered to the three sided bunkers.
- One Bulking Agent transfer point (or PM emission points) for bulking agent delivered to the emergency stockpile.
- As a conservative estimate, uncontrolled PM₁₀ transfer emissions will be based on AP-42, Table 11.19.2-2, (6/03) Crushed Stone, Conveyor transfer point.
- Water spray PM₁₀ control efficiency is at least 70% (AP-42, Section 11.19.1, *Sand and Gravel Processing*).
- PM emissions due to Bulking Agent handling will be minimized due to the maintained moisture content (per applicant).
- PM emissions due to Bulking Agent handling will be limited to ≤ 5% opacity.

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS POWERED BY IC ENGINES

- Pollutants generated from screening: PM₁₀.

- PM emissions due to Bulking Agent handling will be minimized due to the maintained moisture content (per applicant).
- PM emissions due to Bulking Agent handling will be limited to $\leq 5\%$ opacity.
- Pollutants generated from IC engines: NO_x , SO_x , PM_{10} , CO, and VOC.
- VOC and NH_3 emissions during screening are attributed to permit units C-6048-1 and '-2.
- The IC engines may consume up to 260 gal/day and 21,350 gal/year combined, which corresponds with the screening throughputs (per applicant).
- Bulking Agent screen throughputs: 3,800 ton/day and 80,000 ton/year (per applicant).
- Screen throughputs shall be verified with records of either number of front-end loader or hopper loads.
- Density of diesel fuel: 7.1 lb/gal
- EPA diesel fuel F-factor: 9,190 dscf/MMBtu
- Fuel heating value: 137,000 Btu/gal
- Brake Specific Fuel Consumption (BSFC): 7,500 Btu/bhp-hr ⁽⁴⁾
- Will utilize very low-sulfur (0.0015% by weight sulfur maximum) fuel

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY IC ENGINES

- Pollutants generated from grinding: PM_{10} .
- VOC and NH_3 emissions during grinding are attributed to permit units C-6048-1 and '-2.
- PM emissions will be minimal due to the maintained moisture content, and limited to $\leq 5\%$ opacity (per applicant).
- Pollutants generated from IC engines: NO_x , SO_x , PM_{10} , CO, and VOC.
- The IC engines may consume up to 590 gal/day and 34,336 gal/year combined, which corresponds with the grinding throughputs (per applicant).
- Bulking Agent grinder throughputs: 770 ton/day and 80,000 ton/year (per applicant).
- Grinder throughputs shall be verified with records of either number of front-end loader or hopper loads.
- Density of diesel fuel: 7.1 lb/gal
- EPA F-factor: 9,190 dscf/MMBtu
- Fuel heating value: 137,000 Btu/gal
- Brake Specific Fuel Consumption (BSFC): 7,500 Btu/bhp-hr ⁽⁵⁾
- Will utilize very low-sulfur (0.0015% by weight sulfur maximum) fuel

C-6048-7 and '-8:

MIXING OPERATIONS AND COMPOST CONVEYOR TRAINS

- Pollutants generated from biosolids receiving/storage, feedstocks transfer, storage, and mixing: VOC, and NH_3 .

⁴ Per CAPCOA Portable IC Engine Tech. Ref. Document, 5/95.

⁵ Per CAPCOA Portable IC Engine Tech. Ref. Document, 5/95.

- No PM₁₀ emissions from newly mixed feedstocks due to high moisture content of the mixed Feedstocks.
- PM₁₀ due to Compost transfers are attributed to permit units C-6048-9 and '-10.
- Mixed Feedstocks and recycled compost conveying may result in uncontrolled VOC and NH₃ emissions for up to 24 hr/day, conservative estimate (per applicant).
- The PE calculations are based on a Mixing Building Capture Efficiency of 100% (applicant proposed). The capture efficiency will be verified by an FID test. In an extraordinary maintenance or breakdown situation, the facility may contact the District to request an emergency variance for the uncontrolled emissions.
- Biofilter control efficiencies are 80% and 90% for VOC and NH₃ respectively (per applicant).
- Facility receives no more than 400,000 ton/year of Bulking Agent (per applicant).
- Facility receives no more than 500,000 ton/year of Biosolids (per applicant).
- Recycled Compost (Compost screening overs) shall not exceed 400,000 ton/year (per applicant).
- Combined throughputs (Bulking Agent, recycled Compost, Biosolids, and conveying): 7,300 ton/day (per applicant).

C-6048-9 and '-10:

RECYCLED COMPOST SCREENING OPERATIONS

- PM₁₀ emissions generated due to screening and transfers.
- PM emissions will be minimal due to the maintained moisture content, and limited to ≤ 5% opacity (per applicant).
- VOC and NH₃ emissions generated during screening and transfers are attributed to permit units C-6048-7 and '-8.
- The two Compost screens are powered by electric motors (per applicant).
- Combined Compost screen throughputs: 7,300 ton/day and 1,300,000 ton/year, since 400,000 ton/year is reclaimed (per applicant).
- Screen throughputs shall be verified with records of either number of front-end load or hopper loads to gantries.
- PM₁₀ emissions due to screening are minimal due to the maintained moisture content of the Compost.
- Compost screening PM emissions will be limited to ≤ 5% opacity (per applicant).

C-6048-19:

CO-COMPOSTING OPERATION INCLUDING ACTIVE, MATURE AND CURING-PHASE AERATED COMPOST PILES

- Composting piles generated VOC and NH₃ emissions.
- PM₁₀ emissions due to Compost transfers are attributed to permit units C-6048-9 and '-10.
- The active phase piles are approximately 165' long, 26' wide and 12' high (approximately 25,740 yd³).

- Active-Phase Piles shall not exceed a surface area of 105,000 square meters (per applicant).
- Mature-Phase Piles shall not exceed a surface area of 42,000 square meters combined (per applicant).
- Cure-Phase Piles shall not exceed a surface area of 42,000 square meters combined (per applicant).
- Density of Active-Phase Compost is 0.5 ton/yd³ (per applicant).
- Density of Mature and Curing-Phase Compost is 0.45 ton/yd³ (per applicant).
- Annual Compost throughput is 1,300,000 wet tons/year conservatively (per applicant).
- The average control efficiencies for the GORE system are 91% and 56% for VOC and NH₃ respectively (per applicant).
- Composting (Active, Mature and Curing) will last a minimum of 56 days (per applicant). Composting process finishes after 56 days since material reaches the stage where Compost exhibits resistance to further decomposition (cessation of VOC and NH₃ emissions).

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATIONS

- PM₁₀ emissions generated from finished Compost truck loadout.
- PM emissions due to Compost loadout will be minimal due to the maintained moisture content, and limited to ≤ 5% opacity (per applicant).
- No VOC or NH₃ emissions since Composting completes at the Curing-Phase piles after a minimum composting period of 56 days.
- No packaging of finished product is proposed. Finished product will be loaded into trucks using front-end loaders (per applicant).
- Loadout throughputs: 7,400 ton/day and 900,000 ton/year (per applicant). These are conservative estimates since there will be weight losses due to CO₂ evolution and moisture vaporization during the composting process.

C-6048-21:

GASOLINE STORAGE AND DISPENSING OPERATION

- VOC is the only pollutant emitted from this operation.
- This facility may operate 24 hours per day, 365 days per year.
- Nozzles pump at 10 gal/min (from ARB Executive Orders).
- Stations are designated to handle peak gasoline dispensing periods, so an estimated use factor of 50% is considered conservative.
- If the time that a vehicle spends at a fueling station is 8 minutes, only about 2 minutes of that time is actually spent dispensing fuel (20 gallons @ 10 gal/min). Therefore, a utilization factor of 0.25 will be used for calculations.

C-6048-26:

TRANSPORTABLE FINISHED COMPOST SCREEN POWERED BY IC ENGINE

- Pollutants generated from screening: PM₁₀.

- PM emissions due to screening will be minimized due to the maintained moisture content and water sprays (per applicant).
- PM emissions due to screening will be limited to $\leq 5\%$ opacity.
- Pollutants generated from IC engines: NO_x , SO_x , PM_{10} , CO , and VOC .
- The IC engine may consume up to 97 gal/day and 35,078 gal/year (per applicant).
- Screen throughput: 1,400 ton/day maximum (per applicant).
- Screen throughputs shall be verified with records of either number of front-end loader or hopper loads.
- Density of diesel fuel: 7.1 lb/gal
- EPA diesel fuel F-factor: 9,190 dscf/MMBtu
- Fuel heating value: 137,000 Btu/gal
- Brake Specific Fuel Consumption (BSFC): 7,500 Btu/bhp-hr ⁽⁶⁾
- Will utilize very low-sulfur (0.0015% by weight sulfur maximum) fuel

B. Emission Factors (EF)

Note: The District is comfortable with proposed emission levels due to testing of, and experience with similar operations; and since the facility will perform ongoing monitoring and testing.

C-6048-1 and '-2:

BULKING AGENT RECEIVING AND STORAGE OPERATIONS

Uncontrolled Ag Waste EFs (VOC and NH_3)		
Pollutant	EFs	Reference
VOC	2.19 E-5 lb/ton-hr (4.93 E-6 lb/yd ³ -hr)	Applicant proposed, based on testing ⁷
NH_3	2.37 E-7 lb/ton-hr (5.33 E-8 lb/yd ³ -hr)	

⁶ Per CAPCOA Portable IC Engine Tech. Ref. Document, 5/95.

⁷ "Assessment of VOC and Ammonia Emissions From a Bulking Agent Stockpile at The Westlake Farms Composting Facility", Stratford, CA; prepared for the CSDLAC by CH2M Hill, April 27, 2005. A summary is attached as Appendix L.

Uncontrolled Green Waste EFs (VOC and NH ₃)		
Pollutant	EFs	Reference
VOC	2.18 E-3 lb/ton-hr (6.74 E-4 lb/yd ³ -hr)	Applicant proposed, based on testing ⁸
NH ₃	2.87 E-5 lb/ton-hr (8.87 E-6 lb/yd ³ -hr)	

Uncontrolled Average Bulking Agent EFs (for Annual Calculations)*		
Pollutant	EFs	Reference
VOC	1.37 E-3 lb/ton-hr (3.81 E-4 lb/yd ³ -hr)	See individual Bulking Agent EFs above
NH ₃	1.80 E-5 lb/ton-hr (5.01 E-6 lb/yd ³ -hr)	

$$\begin{aligned} \text{*Average VOC EF} &= (2.19\text{E-}5 \times 150,000 \div 400,000) + (2.18\text{E-}3 \times 250,000 \div 400,000) \\ &= 1.37\text{E-}3 \text{ lb/ton-hr} \end{aligned}$$

$$\begin{aligned} \text{*Average NH}_3 \text{ EF} &= (2.37 \text{ E-}7 \times 150,000 \div 400,000) + (2.87 \text{ E-}5 \times 250,000 \div 400,000) \\ &= 1.80\text{E-}5 \text{ lb/ton-hr} \end{aligned}$$

$$\begin{aligned} \text{Average density} &= (0.225 \times 150,000 \div 400,000) + (0.309 \times 250,000 \div 400,000) \\ &= 0.278 \text{ ton/yd}^3 \end{aligned}$$

Bulking Agent EF (PM ₁₀) - Receiving/Storage		
Pollutant	EFs	Reference
PM ₁₀	0.001 lb/ton	AP-42, Table 11.19.2-2, (6/03) Crushed Stone, Conveyor transfer point + water spray control*

Bulking Agent EF (PM ₁₀) - Emergency Stockpile		
Pollutant	EFs	Reference
PM ₁₀	0.00033 lb/ton	AP-42, Table 11.19.2-2, (6/03) Crushed Stone, Conveyor transfer point + water spray control*

*The District is not aware of any generally accepted Bulking Agent receiving emissions factors. Therefore, the District will assume the AP-42 crushed stone Emission Factors as a conservative estimate. The AP-42, Table 11.19.2-2, (6/03)

⁸ "Ammonia, Methane, VOC Emissions from a Non-Curbside Greenwaste Chipping and Grinding Facility", Source Test 02-186, Conducted at IntraVia Rock & Sand Inc., SCAQMD, July 2002. A summary is attached as Appendix M.

Crushed Stone, Conveyor transfer point uncontrolled EF is 0.0011 lb-PM₁₀/ton. The water spray control efficiency is 70% ⁽⁹⁾. Therefore, the applicable controlled EF is:

$$\text{EF (controlled)} = 0.0011 \text{ lb-PM}_{10}/\text{ton} \times (1-0.70) = 0.00033 \text{ lb-PM}_{10}/\text{ton}$$

$$\text{EF (final)} = 0.00033 \text{ lb-PM}_{10}/\text{ton} \times 3 \text{ emission points} = 0.001 \text{ lb-PM}_{10}/\text{ton} \text{ (receiving/storage)}$$

$$\text{EF (final)} = 0.00033 \text{ lb-PM}_{10}/\text{ton} \times 1 \text{ emission points} = 0.00033 \text{ lb-PM}_{10}/\text{ton} \text{ (emergency ag storage delivery)}$$

C-6048-3 and -4:

TRANSPORTABLE BULKING AGENT SCREENS

Bulking Agent Screening EF	
Pollutant	EF (lb-PM₁₀/ton)⁺
PM ₁₀	0.003

⁺ Based on a wood chipping (grinding) total PM EF of 0.00005 kg/tonne (controlled with cyclone); from NCASI Technical Bulletin 884. Note, "tonne" refers to metric ton, which is 2,204.62 lb. A worst-case uncontrolled EF would be if the cyclone achieved 99% control efficiency. Therefore, the uncontrolled EF is:

$$\text{EF (uncontrolled)} = 0.00005 \text{ kg/tonne} \times 2.2046 \text{ lb/kg} \times 2,000 \text{ lb/ton} \\ \times \text{tonne}/2,204.62 \text{ lb} \div (1 - 0.99) = 0.01 \text{ lb-PM}_{10}/\text{ton}$$

$$\text{-Water spray PM}_{10} \text{ control efficiency} = 70\% \text{ }^{(9)}$$

$$\text{EF (controlled)} = 0.01 \text{ lb-PM}_{10}/\text{ton} \times (1 - 0.70) = 0.003 \text{ lb-PM}_{10}/\text{ton}$$

⁹ Water spray PM₁₀ control efficiency is at least 70% (AP-42, Section 11.19.1, *Sand and Gravel Processing*).

250 bhp IC Engine EFs		
Pollutant	EF (g/bhp-hr)	Reference
NO _x	3.0	Applicant Proposed (Tier 3 – Latest Certification for this size engine)
SO _x	0.00512 (from 0.0015% fuel S content)*	
PM ₁₀	0.149	
CO	2.6	
VOC	0.15 ⁽¹⁰⁾	

*EF = 0.0015% × 7.1 lb-fuel/gal × 2 lb-SO₂/lb-S × 1 gal-fuel/137,000 Btu × 1 hp input/0.35 hp output
× 2,542.5 Btu/hp-hr × 453.6 lb

EF = 0.0051 g-SO_x/bhp-hr

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS

Bulking Agent Grinding EF		
Pollutant	EF (lb/ton)	Reference
PM ₁₀	0.003	See Screening EF reference from above
1,050 bhp IC Engine EFs		
Pollutant	EF (g/bhp-hr)	Reference
NO _x	4.9	Applicant proposed (Tier 2 - Latest Certification for this size engine)
SO _x	0.00512	
PM ₁₀	0.149	
CO	2.6	
VOC	0.25	

¹⁰ The Carl Moyer program assumes the VOC emission factor is 5% of the NO_x EF.

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, MIXING OPERATIONS, AND COMPOST TRANSFERS

The applicant has proposed the following Emission Factors, based on source emissions testing at LACSD's Joint Water Pollution Control Plant, 9/07 (see **Appendix Q**):

Biosolids Receiving/Storage EFs			
Pollutant	Uncontrolled EFs (mg/m² min)*	Controlled EFs (mg/m² min)	Reference
VOC	6.16 (1.26E-6 lbs/ft ² min)	1.23 (2.52E-7 lbs/ft ² min)	Uncontrolled + 80% biofilter control (applicant)
NH ₃	3.24 (6.64E-7 lbs/ft ² min)	0.32 (6.64E-8 lbs/ft ² min)	Uncontrolled + 90% biofilter control (applicant)

*Measured at an average material depth of 3 feet.

Converting the EFs:

Biosolids Receiving/Storage EFs			
Pollutant	Controlled EFs (mg/m² min)	Controlled EFs (lb/ton-day)	Controlled EFs (lb/ft³-day)
VOC	1.23 (2.52E-7 lbs/ft ² min)	3.62E-3	1.21E-4
NH ₃	0.32 (6.64E-8 lbs/ft ² min)	9.54E-4	3.19E-5
Conversion from lbs/ft ² -min to lb/ton-day: $\text{Lb/ft}^2\text{-min} \times 1/3 \text{ ft (test depth)} \times 1,440 \text{ min/day} \times \text{m}^3/1.18 \text{ ton} \times 35.315 \text{ ft}^3/\text{m}^3$			
Conversion from lbs/ft ² -min to lb/ft ³ -day: $\text{Lb/ft}^2\text{-min} \times 1/3 \text{ ft (test depth)} \times 1,440 \text{ min/day}$			

The uncontrolled EF (no biofilter control removed 80% and 90% control for VOC and NH₃ respectively) are:

Biosolids Receiving/Storage EFs			
Pollutant	Uncontrolled EFs (mg/m² min)	Uncontrolled EFs (lb/ton-day)	Uncontrolled EFs (lb/ft³-day)
VOC	6.15 (1.26E-6 lbs/ft ² min)	0.02	0.001
NH ₃	3.2 (6.64E-7 lbs/ft ² min)	9.54E-3	3.19E-4

The proposed co-composting EFs for VOC and NH₃ for the WFCF, shown in the following two tables, are based on source testing of another co-composting facility¹¹. The composting EFs will conservatively be used for the mixing building operations:

VOC EFs from Co-Composting Piles (lb/yd³-hr)			
ASP Phase	Emissions Location	Individual EFs - Uncontrolled (lb/yd³-hr)	Total EFs - Uncontrolled (lb/yd³-hr)
Active	ASP	1.94 E-5	2.12 E-4
	Biofilter	1.93 E-4	
Curing	ASP	4.85 E-6	1.01 E-4
	Biofilter	9.58 E-5	

NH₃ EFs from Co-Composting Piles (lb/yd³-hr)			
ASP Phase	Emissions Location	Individual EFs - Uncontrolled (lb/yd³-hr)	Total EFs - Uncontrolled (lb/yd³-hr)
Active	ASP	6.22 E-5	2.30 E-4
	Biofilter	1.97 E-4	
Curing	ASP	6.22 E-5	2.30 E-4
	Biofilter	1.97 E-4	

¹¹ Emissions Evaluation of ASP Composting of Anaerobically Digested Biosolids at the Davenport Composting Facility, 7/8/02; corrected by Tom Card 4/04. Based on a minimum 22 day residence time for Active-Phase Composting.

Controlled Reclaimed Compost EFs - Mixing Building			
Pollutant	Uncontrolled EFs (lb/yd³-hr)	Controlled EFs (lb/yd³-hr)	Reference
VOC	1.01 E-4	2.02 E-5	Uncontrolled Curing-Phase EFs + 80% control (applicant)
NH ₃	2.30 E-4	2.30 E-5	Uncontrolled Curing-Phase EFs + 90% control (applicant)

Controlled Biosolids and Feedstocks Mixing - Mixing Building			
Pollutant	EFs - Uncontrolled	EFs - Controlled	Reference
VOC	2.12 E-4 lb/yd ³ -hr (4.24 E-4 lb/ton-hr)	4.24 E-5 lb/yd ³ -hr (8.48 E-5 lb/ton-hr)	Uncontrolled Active-Phase EFs + 80% control (applicant)
NH ₃	2.30 E-4 lb/yd ³ -hr (4.60 E-4 lb/ton-hr)	2.30 E-5 lb/yd ³ -hr (4.60 E-5 lb/ton-hr)	Uncontrolled Active-Phase EFs + 90% control (applicant)

C-6048-9 and '-10:

RECYCLED COMPOST SCREENING OPERATIONS

Compost Transfer and Screening EF		
Pollutant	EF	Reference
PM ₁₀	0.0005 lb/ton*	AP-42, Table 11.19.2-2, (6/03) Crushed stone, Truck Unloading - Conveyor

*Final EF = 0.0001 lb/ton × 5 emission points (hopper, screen, overs pile, overs hopper, Curing pile) = 0.0005 lb/ton

C-6048-19:

CO-COMPOSTING OPERATION INCLUDING ACTIVE, MATURE AND CURING-PHASE AERATED COMPOST PILES

The applicant has proposed the following Emission Factors, based on source testing of another co-composting facility utilizing GORE covers¹²:

¹² Full Scale Evaluation of Gore Technology on LACSD Biosolids at Cedar Grove Composting, Everett, WA; August 2007

VOC EFs from Co-Composting Piles			
Phase	Emissions Location	EFs - Uncontrolled	EFs - Controlled
Active	Pile	13.65 mg/m ² min (2.79E-6 lbs/ft ² min)	0.99 mg/m ² min (2.03E-7 lbs/ft ² min)
Mature	Pile	13.87 mg/m ² min (2.84E-6 lbs/ft ² min)	0.99 mg/m ² min (2.03E-7 lbs/ft ² min)
Cure	Pile	6.8 mg/m ² min (1.39E-6 lbs/ft ² min)	1.45 mg/m ² min (2.97E-7 lbs/ft ² min)
Total		34.32 mg/m ² min (7.02E-6 lbs/ft ² min)	3.43 mg/m ² min (7.03E-7 lbs/ft ² min)

NH ₃ EFs from Co-Composting Piles			
Phase	Emissions Location	EFs - Uncontrolled	EFs - Controlled
Active	Pile	36.88 mg/m ² min (7.55E-6 lbs/ft ² min)	13.05 mg/m ² min (2.67E-6 lbs/ft ² min)
Mature	Pile	13.49 mg/m ² min (2.76E-6 lbs/ft ² min)	10.21 mg/m ² min (2.09E-6 lbs/ft ² min)
Cure	Pile	0.9 mg/m ² min (1.84E-7 lbs/ft ² min)	2.99 mg/m ² min (6.12E-7 lbs/ft ² min)
Total		51.27 mg/m ² min (10.50E-6 lbs/ft ² min)	26.25 mg/m ² min (5.37E-6 lbs/ft ² min)

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

Truck Loadout	
Pollutant	EF (lb/ton)*
PM ₁₀	0.0003 (one emission point)

* Based on a wood chipping (grinding) total PM EF of 0.00005 kg/tonne (controlled with cyclone); from NCASI Technical Bulletin 884. Note, "tonne" refers to metric ton, which is 2,204.62 lb. A realistic, yet conservative, uncontrolled EF would be if the cyclone achieved 90% control efficiency. Therefore, the uncontrolled EF is:

$$\text{EF (uncontrolled)} = 0.00005 \text{ kg/tonne} \times 2.2046 \text{ lb/kg} \times 2,000 \text{ lb/ton} \\ \times \text{tonne}/2,204.62 \text{ lb} \div (1 - 0.90) = 0.001 \text{ lb-PM}_{10}/\text{ton}$$

-Water spray PM₁₀ control efficiency = 70%¹³

¹³ Water spray PM₁₀ control efficiency is at least 70% (AP-42, Section 11.19.1, Sand and Gravel Processing).

$$EF \text{ (controlled)} = 0.001 \text{ lb-PM}_{10}/\text{ton} \times (1 - 0.70) = 0.0003 \text{ lb-PM}_{10}/\text{ton}$$

C-6048-21:
GASOLINE STATION

These Emission Factors were obtained from Appendix A - Emission Factors For Gasoline Stations published by CAPCOA Air Toxic "Hot Spots" Program in the Gasoline Service Station Industry wide Risk Assessment Guidelines dated December 1997.

0.42	lb/1,000 gal	Tank filling loss (95%)
0.053	lb/1,000 gal	Breathing loss (A/G tank)
0.42	lb/1,000 gal	Vehicle fueling loss (95%)
0.42	lb/1,000 gal	Spillage
<u>1.313</u>	lb/1,000 gal	Total VOC losses

The Emission Factor (in lb VOC/FP-day) for the gasoline dispensing is calculated as follows:

$$EF\text{-GDF} \text{ (lb VOC/FP)} = 1.313 \text{ lbs/1,000 gal} \times 1,440 \text{ min/day} \times 10 \text{ gal/min} \\ \times 0.25 \times 0.5 = 2.36 \text{ lb-VOC/FP-day}$$

C-6048-26:
TRANSPORTABLE COMPOST SCREEN

Compost Screening EF		
Pollutant	EF (lb/ton)	Reference
PM ₁₀	0.003	See Screening EF reference from above
139 bhp IC Engine EFs		
Pollutant	EF (g/bhp-hr)	Reference
NO _x	2.7	CARB Executive Order (Tier 3 Certified)
SO _x	0.00512	Based on Ultra Low Sulfur Fuel
PM ₁₀	0.149	CARB Executive Order (Tier 3 Certified)
CO	1.2	CARB Executive Order (Tier 3 Certified)
VOC	0.14	CARB Executive Order (Tier 3 Certified)

C. Emission Calculations:

1. Daily and Annual Pre-Project Potential to Emit (PE1)

Since the facility is new, the daily and annual PE1 = 0 for all pollutants.

2. Daily Post-Project Potential to Emit (PE2)

C-6048-1 and '-2:

BULKING AGENT RECEIVING AND STORAGE OPERATIONS

Bulking Agent Receiving and Storage Daily PE2			
Outdoor Bulking Agent Receiving/Processing			
Pollutant	EF	Capacity (yd³)	PE2 (lb/day)
VOC	2.18 E-3 lb/ton-hr (6.74 E-4 lb/yd ³ -hr)	24,350	393.9
NH ₃	2.87 E-5 lb/ton-hr (8.87 E-6 lb/yd ³ -hr)		5.2
Assumes Bulking Agent can be all Green Waste on any given day (highest EF).			
PE2 _{VOC&NH3} = EF (lb/yd ³ -hr) × Capacity (yd ³) × 24 hr			

Outdoor Ag Waste Emergency Stockpile Daily PE2			
Pollutant	EF	Emergency Stockpile Capacity	PE2 (lb/day)
VOC	2.19 E-5 lb/ton-hr	7,350 ton	3.9
NH ₃	2.37 E-7 lb/ton-hr		0.04 ⇒ 0
PE2 = EF (lb/ton-hr) × capacity (ton) × 24 hr/day			

Bulking Agent Receiving and Transfer Daily PE2 - PM₁₀			
Pollutant	EFs	Throughput	PE2 (lb/day)
PM ₁₀	0.001 lb/ton	3,800 ton/day	3.8*
$PE2_{PM10} = EF \text{ (lb/ton)} \times \text{throughput (ton/day)}$			
*Denotes Permit Unit Total. Includes 3 transfer points or emission units. For BACT applicability, each emission unit has a PE = $3.8 \div 3 = 1.3$ lb/day.			

Bulking Agent Emergency Stockpile Daily PE2 - PM₁₀			
Pollutant	EFs	Throughput	PE2 (lb/day)
PM ₁₀	0.00033 lb/ton	3,800 ton/day	1.3
$PE2_{PM10} = EF \text{ (lb/ton)} \times \text{throughput (ton/day)}$			

Total Outdoor Daily PE2 for Permit Units C-6048-1 and '-2			
Emission Units	PM₁₀ (lb/day)	VOC (lb/day)	NH₃ (lb/day)
Outdoor Bulking Agent Processing	3.8	393.9	5.2
Outdoor Ag Waste Emergency Stockpile	1.3	3.9	0
Total	5.1	397.8	5.2

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS POWERED BY IC ENGINES

Bulking Agent Screening			
Pollutant	EF (lb-PM₁₀/ton)	Throughput (ton/day)	PE2 (lb/day)
PM ₁₀	0.003	3,800	11.4
VOC and NH ₃ emissions during screening are attributed to permit units C-6048-1 and '-2.			
$PE2_{PM10} = EF \text{ (lb/ton)} \times \text{throughput (ton/day)}$			

250 bhp IC Engines				
Pollutant	Power Rating (bhp)	Fuel Use (gal/day)	EF (g/bhp-hr)	PE2 (lb/day)
NO _x	250	260	3.0	31.4
SO _x			0.00512	0.05 ⇒ 0.1
PM ₁₀			0.149	1.6
CO			2.6	27.2
VOC			0.15	1.6

The applicant has proposed a daily fuel limit of 260 gal/day for these IC engines. The daily PE for each pollutant will therefore be based on this fuel limit, as calculated below:

Daily PE2 = Fuel Use (gal/day) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)

Example (for NO_x emissions):
Daily PE2 = 260 gal/day × 1/7,500 Btu/bhp-hr × 3.0 g-NO_x/bhp-hr × lb/453.6 g × 137,000 Btu/gal

Daily PE2 = 31.4 lb-NO_x/day

Total Daily PE2 for Permit Units C-6048-3 and '-4 (lb/day)					
Emission Units	NO _x	SO _x	PM ₁₀	CO	VOC
Bulking Agent Screen	0	0	11.4	0	0
250 bhp IC engines	31.4	0.1	1.6	27.2	1.6
Total	31.4	0.1	13.0	27.2	1.6

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY IC ENGINES

Bulking Agent Grinding			
Pollutant	EF (lb-PM ₁₀ /ton)	Throughput (ton/day)	PE2 (lb/day)
PM ₁₀	0.003	770	2.3

VOC and NH₃ emissions during grinding are attributed to permit units C-6048-1 and '-2.

PE2_{PM10} = EF (lb/ton) × throughput (ton/day)

1,050 bhp IC Engines				
Pollutant	Power Rating (bhp)	Fuel Use (gal/day)	EF (g/bhp-hr)	PE2 (lb/day)
NO _x	1,050	590	4.9	116.4
SO _x			0.00512	0.1
PM ₁₀			0.149	3.5
CO			2.6	61.8
VOC			0.25	5.9

The applicant has proposed a daily fuel limit of 590 gal/day for these IC engines. The daily PE for each pollutant will therefore be based on this fuel limit, as calculated below:

Daily PE2 = Fuel Use (gal/day) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)

Example (for NO_x emissions):
Daily PE2 = 590 gal/day × 1/7,500 Btu/bhp-hr × 4.9 g-NO_x/bhp-hr × lb/453.6 g × 137,000 Btu/gal

Daily PE2 = 116.4 lb-NO_x/day

Total Daily PE2 for Permit Units C-6048-5 and '-6 (lb/day)					
Emission Unit	NO _x	SO _x	PM ₁₀	CO	VOC
Bulking Agent Grinder	0	0	2.3	0	0
1,050 bhp IC engines	116.4	0.1	3.5	61.8	5.9
Total	116.4	0.1	5.8	61.8	5.9

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, MIXING OPERATIONS AND COMPOST TRANSFERS

Biosolids Receiving/Storage (Emissions Generated Inside Mixing Building Served by Biofilter)			
Pollutant	Controlled EFs (lb/ton-day)	Daily Throughput (tons)	PE2 (lb/day)
VOC	3.62E-3	4,200	15.2
NH ₃	9.54E-4		4.0
PE _{VOC & NH₃} (lb/day) = EF (lbs/ton-day) × 4,200 ton			

Indoor Feedstocks Mixing and Reclaimed Compost PE2 (Emissions Generated Inside Mixing Building Served by Biofilter)			
Pollutant	EFs	Throughput	PE2 (lb/day)
VOC	4.24 E-5 lb/yd ³ -hr (8.48 E-5 lb/ton-hr)	7,300 ton/day	14.9
NH ₃	2.30 E-5 lb/yd ³ -hr (4.60 E-5 lb/ton-hr)		8.1
As a conservative estimate of the daily emissions, the highest EFs between the controlled Feedstocks mixing and reclaimed Compost have been utilized. Assumes 24-hr/day residence time in mixing building:			
PE2 = EF (lb/ton-hr) × throughput (ton/day) × 24 hrs			

Outdoor Compost Conveying PE2 (Mixing Building to Active Phase)			
Pollutant	EFs	Conveyor Holding Capacity (yd³)	PE2 (lb/day)
VOC	4.24 E-4 lb/ton-hr (2.12 E-4 lb/yd ³ -hr)	181	0.9*
NH ₃	4.60 E-4 lb/ton-hr (2.30 E-4 lb/yd ³ -hr)		1.0*
As a conservative estimate of the daily emissions, the highest EFs between the uncontrolled Feedstocks mixing and uncontrolled reclaimed Compost have been utilized. The District has conservatively estimated the potential to emit by using the physical capacity of the conveying system and the proposed maximum operating schedule, as follows:			
PE2 = EF (lb/yd ³ -hr) × holding capacity of conveyors (181 yd ³) × 24 hrs/day			
*Denotes permit unit total, which includes 2 conveyors or emission units. For BACT applicability, each emission unit has a PE2 of less than 2.0 lb/day for all pollutants.			

Outdoor Compost Conveying PE2 (Active Phase To Maturation Phase)			
Pollutant	EFs	Conveyor Holding Capacity (yd³)	PE2 (lb/day)
VOC	4.24 E-4 lb/ton-hr (2.12 E-4 lb/yd ³ -hr)	27.6	0.1*
NH ₃	4.60 E-4 lb/ton-hr (2.30 E-4 lb/yd ³ -hr)		0.1*
<p>As a conservative estimate of the daily emissions, the highest EFs between the uncontrolled Feedstocks mixing and uncontrolled reclaimed Compost have been utilized. The District has conservatively estimated the potential to emit by using the physical capacity of the conveying system and the proposed maximum operating schedule, as follows:</p> <p>PE2 = EF (lb/yd³-hr) × holding capacity of conveyors (27.6 yd³) × 24 hrs/day</p> <p>*Denotes permit unit total, which includes 2 conveyors or emission units. For BACT applicability, each emission unit has a PE2 of less than 2.0 lb/day for all pollutants.</p>			

Total Daily PE2 for Permit Units C-6048-7 and '-8		
Emission Source	VOC (lb/day)	NH₃ (lb/day)
Biosolids Receiving/Storage	15.2	4.0
Reclaimed Compost/Feedstocks Mixing	14.9	8.1
Outdoor Conveying Mixing to Active-Phase	0.9	1.0
Outdoor Conveying Active-Phase to Maturation-Phase	0.1	0.1
Outdoor Conveying Maturation-Phase to Curing-Phase*	0.1	0.1
Total	31.2	13.3

*Conservative estimate, equivalent to Active-Maturation conveying

C-6048-9 and '-10:
COMPOST SCREENING OPERATIONS

Pollutant	EF (lb-PM ₁₀ /ton)	Throughput (ton/day)	PE2 (lb/day)
PM ₁₀	0.0005	7,300	3.7*

VOC and NH₃ emissions during screening are attributed to permit units C-6048-7 and '-8.

PE2_{PM10} = EF (lb/ton) × throughput (ton/day)

*Denotes Permit Unit Total. Includes 5 transfer points or emission units (hopper, screen, overs pile, overs hopper, and Curing pile). For BACT applicability, each emission unit has a PE2 = 3.7 ÷ 5 = 0.7 lb/day.

C-6048-19:
COMPOST PILES WITH GORE COVERS

Active-Phase Daily PE2			
Pollutant	Active Phase EF	Max Surface Area of Active-Phase Piles	Daily PE2 (lb/day)
VOC	0.99 mg/m ² min (2.03E-7 lbs/ft ² min)	104,949 m ² (1,129,140 ft ²)	228.4
NH ₃	13.05 mg/m ² min (2.67E-6 lbs/ft ² min)		3,010.1

Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.

Daily PE2 = Active-Phase EF (mg/m² min)
× Total Active-Phase Piles Surface Area (m²) × 1,440 min/day
× g/1,000 mg × lb/453.6 g × inert material factor (9/13)

The factor of 9/13 accounts for inert recycled wood chips in compost mix.

Maximum volume based on 180 piles, each with a surface area of 583.05 m².

Maturation-Phase Daily PE2			
Pollutant	Mature-Phase EF	Max Surface Area/Volume of Mature-Phase Piles	Daily PE2 (lb/day)
VOC	0.99 mg/m ² min (2.03E-7 lbs/ft ² min)	41,979 m ² (451,620 ft ²)	91.3
NH ₃	10.21 mg/m ² min (2.09E-6 lbs/ft ² min)		942.0
<p>Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.</p> <p>Daily PE2 = Maturation-Phase EF (mg/m² min) × Total Maturation-Phase Piles Surface Area (m²) × 1,440 min/day × g/1,000 mg × lb/453.6 g × inert material factor (9/13)</p> <p>The factor of 9/13 accounts for inert recycled wood chips in compost mix.</p> <p>Maximum volume based on 90 piles, each with a surface area of 466.44 m².</p>			

Curing-Phase Daily PE2			
Pollutant	Cure-Phase EF	Max Surface Area/Volume of Cure-Phase Piles	Daily PE2 (lb/day)
VOC	1.45 mg/m ² min (2.97E-7 lbs/ft ² min) (6.44E-6 lbs/yd ³ min)	41,979 m ² (451,620 ft ²) (20,849 yd ³)	133.8
NH ₃	2.99 mg/m ² min (6.12E-7 lbs/ft ² min) (1.33E-5 lbs/yd ³ min)		275.9
<p>Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.</p> <p>Daily PE2 = Curing-Phase EF (mg/m² min) × Total Curing-Phase Piles Surface Area (m²) × 1,440 min/day × g/1,000 mg × lb/453.6 g × inert material factor (9/13)</p> <p>The factor of 9/13 accounts for inert recycled wood chips in compost mix.</p> <p>Maximum volume based on 90 piles, each with a surface area of 466.44 m².</p>			

Total Daily PE2 for Permit Unit C-6048-19		
Emission Source	VOC (lb/day)	NH ₃ (lb/day)
Active-Phase	228.4	3,010.1
Maturation-Phase	91.3	942.0
Curing-Phase	133.8	275.9
Total	453.5	4,228.0

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

Truck Loadout			
Pollutant	EF (lb-PM ₁₀ /ton)	Throughput (ton/day)	PE2 (lb/day)
PM ₁₀	0.0003	7,400	2.2
<p>VOC and NH₃ emissions cease upon completion of Curing-Phase. Therefore, no VOC and NH₃ emissions during truck loadout.</p> <p>$PE_{2PM_{10}} = EF \text{ (lb/ton)} \times \text{throughput (ton/day)}$</p>			

C-6048-21:

GASOLINE STATION

Gasoline Station			
Pollutant	EF (lb-VOC/Fueling Point-day)	# of Fueling Points	PE2 (lb/day)
VOC	2.36	1	2.4
<p>$PE = EF \text{ (lb-VOC/Fueling Point-day)} \times \text{\# of Fueling Points}$</p>			

C-6048-26:

TRANSPORTABLE COMPOST SCREEN POWERED BY IC ENGINE

Compost Screening			
Pollutant	EF (lb-PM₁₀/ton)	Throughput (ton/day)	PE2 (lb/day)
PM ₁₀	0.003	1,400	4.2
PE2 _{PM10} = EF (lb/ton) × throughput (ton/day)			

IC Engine				
Pollutant	Power Rating (bhp)	Usage (gal/day)	EF (g/bhp-hr)	PE2 (lb/day)
NO _x	139	97	2.7	10.5
SO _x			0.00512	0.02 ⇒ 0
PM ₁₀			0.149	0.6
CO			1.2	4.7
VOC			0.14	0.5
<p>The daily PE for each pollutant will therefore be calculated below:</p> <p>Daily PE2 = Fuel Use (gal/day) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)</p> <p>Example (for NO_x emissions): Daily PE2 = 97 gal/day × 1/7,500 Btu/bhp-hr × 2.7 g-NO_x/bhp-hr × lb/453.6 g × 137,000 Btu/gal</p> <p>Daily PE2 = 10.5 lb-NO_x/day</p>				

Total Daily PE2 for Permit Units C-6048-26 (lb/day)					
Emission Units	NO_x	SO_x	PM₁₀	CO	VOC
Compost Screen	0	0	4.2	0	0
IC engine	10.5	0	0.6	4.7	0.5
Total	10.5	0	4.8	4.7	0.5

Facility-Wide “Compost Material” Emissions

Facility-Wide Compost Material Emissions*			
Permit Unit	Emission Source	VOC (lb/day)	NH₃ (lb/day)
C-6048-1 & '-2	Outdoor Bulking Agent Storage/Processing (Except Emergency Stockpile)	393.9	5.2
	Outdoor Ag Waste Emergency Stockpile	3.9	0
C-6048-7 & '-8	Biosolids Receiving/Storage	15.2	4.0
	Indoor Feedstocks/Reclaimed Compost Mixing	14.9	8.1
	Outdoor Conveying (Mixing to Active-Phase)	0.9	1.0
	Outdoor Conveying (Active-Phase to Maturation-Phase)	0.1	0.1
	Outdoor Conveying (Maturation-Phase to Curing-Phase)	0.1	0.1
C-6048-19	Compost Piles (Active-Phase)	228.4	3,010.1
	Compost Piles (Maturation-Phase)	91.3	942.0
	Compost Piles (Curing-Phase)	133.8	275.9
Total		882.5	4,246.5

****The applicant has requested a facility-wide non-combustion (compost material emissions only) specific limiting condition (SLC) for maximum operational flexibility. The SLC will be in the form of the total mass emission rate as tabulated above.***

3. Annual PE2

C-6048-1 and '-2:

BULKING AGENT RECEIVING AND STORAGE OPERATIONS

Bulking Agent Annual PE2 (VOC and NH₃)			
Outdoor Bulking Agent Receiving and Processing			
Pollutant	EF	Throughput (ton/year)	PE2 (lb/year)
VOC	1.37 E-3 lb/ton-hr	400,000	13,152
NH ₃	1.80 E-5 lb/ton-hr		173
PE2 _{VOC&NH3} = EF (lb/ton-hr) × throughput (ton/year) × 24 hr			

Bulking Agent Receiving and Processing Annual PE2 (PM₁₀)			
Outdoor Transfers			
Pollutant	EF (lb/ton)	Throughput (ton/year)	PE2 (lb/year)
PM ₁₀	0.001	400,000	400
PE2 _{PM10} = EF (lb/ton) × throughput (ton/day)			

Ag Waste Two-day Emergency Stockpile			
Pollutant	EF	Emergency Stockpile Capacity	PE2 (lb/year)
VOC	2.19 E-5 lb/ton-hr	7,350 ton	1,410
NH ₃	2.37 E-7 lb/ton-hr		15
PE2 = EF (lb/ton-hr) × capacity (ton) × 8,760 hr/year			

Total Annual PE2 for Permit Units C-6048-1 and '-2 (lb/year)			
Emission Units	PM₁₀	VOC	NH₃
Bulking Agent Outdoors	400	13,152	173
Ag Waste Emergency Piles		1,410	15
Total	400	14,562	188

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS POWERED BY IC ENGINES

Bulking Agent Screening			
Pollutant	EF (lb-PM₁₀/ton)	Throughput (ton/year)	PE2 (lb/year)
PM ₁₀	0.003	80,000	240
<p>VOC and NH₃ emissions during screening are attributed to permit unit C-6048-1 and '-2.</p> <p>PE2 = EF (lb/ton) × throughput (ton/year)</p>			

250 bhp IC Engines		
Pollutant	EF (g/bhp-hr)	PE2 (lb/year)
NO _x	3.0	2,579
SO _x	0.00512	4
PM ₁₀	0.149	128
CO	2.6	2,235
VOC	0.15	129
<p>The applicant has proposed an annual fuel limit of 21,350 gal/year for these IC engines. The annual PE for each pollutant will therefore be based on this annual fuel limit, as calculated below:</p> <p>Annual PE2 = Fuel Use (gal/yr) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)</p> <p>Example (for NO_x emissions): Annual PE2 = 21,350 gal/yr × 1/7,500 Btu/bhp-hr × 3.0 g-NO_x/bhp-hr × lb/453.6 g × 137,000 Btu/gal</p> <p>Annual PE2 = 2,579 lb-NO_x/yr</p>		

Total Annual PE2 for Permit Units C-6048-3 and '-4 (lb/year)					
Emission Unit	NO_x	SO_x	PM₁₀	CO	VOC
Bulking Agent Screen	0	0	240	0	0
250 bhp IC engines	2,579	4	128	2,235	129
Total	2,579	4	368	2,235	129

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY IC ENGINES

Bulking Agent Grinding			
Pollutant	EF (lb-PM₁₀/ton)	Throughput (ton/year)	PE2 (lb/year)
PM ₁₀	0.003	80,000	240
VOC and NH ₃ emissions during screening are attributed to permit unit C-6048-1 and -2.			
PE2 = EF (lb/ton) × throughput (ton/year)			

1,050 bhp IC Engines		
Pollutant	EF (g/bhp-hr)	PE2 (lb/year)
NO _x	4.9	6,775
SO _x	0.00512	7
PM ₁₀	0.149	206
CO	2.6	3,595
VOC	0.25	346
The applicant has proposed an annual fuel limit of 34,336 gal/year for these IC engines. The annual PE for each pollutant will therefore be based on this annual fuel limit, as calculated below:		
Annual PE2 = Fuel Use (gal/yr) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)		
Example (for NO _x emissions): Annual PE2 = 34,336 gal/yr × 1/7,500 Btu/bhp-hr × 4.9 g-NO _x /bhp-hr × lb/453.6 g × 137,000 Btu/gal		
Annual PE2 NO _x = 6,775 lb/yr		

Total Annual PE2 for Permit Units C-6048-5 and '-6 (lb/year)					
Emission Units	NO_x	SO_x	PM₁₀	CO	VOC
Bulking Agent Grinding	0	0	240	0	0
1,050 bhp IC engines	6,775	7	206	3,595	346
Total	6,775	7	446	3,595	346

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, MIXING OPERATIONS, AND COMPOST TRANSFERS

Biosolids Receiving/Storage (Served by Biofilter) Annual PE2			
Pollutant	Controlled EFs (lb/ton-day)	Annual Throughput (tons)	PE2 (lb/year)
VOC	3.62E-3	500,000 (1,369.86 ton/day average)	1,810
NH ₃	9.54E-4		477
$PE_{VOC \& NH_3} \text{ (lb/year)} = EF \text{ (lbs/ton-day)} \times 1,369.86 \text{ ton/day} \times 365 \text{ days/year}$			

Feedstocks Mixing and Reclaimed Compost PE2 - Mixing Buildings			
Pollutant	EFs	Throughput	PE2 (lb/year)
VOC	4.24 E-5 lb/yd ³ -hr (8.48 E-5 lb/ton-hr)	1,300,000 ton/year	2,646
NH ₃	2.30 E-5 lb/yd ³ -hr (4.60 E-5 lb/ton-hr)		1,435
<p>As a conservative estimate of the annual emissions, the highest EFs between the controlled Feedstocks mixing and controlled reclaimed Compost have been utilized. Assumes a maximum 24-hour residence time in mixing building.</p> $PE2 = EF \text{ (lb/ton-hr)} \times \text{throughput (ton/year)} \times 24 \text{ hr residence}$			

Compost Conveying Mixing Building to Active Phase PE2			
Pollutant	EFs	Conveyor Holding Capacity (yd³)	PE2 (lb/year)
VOC	2.12 E-4 lb/yd ³ -hr (4.24 E-4 lb/ton-hr)	181	336
NH ₃	2.30 E-4 lb/yd ³ -hr (4.60 E-4 lb/ton-hr)		364
<p>As a conservative estimate of the daily emissions, the highest EFs between the uncontrolled Feedstocks mixing and uncontrolled reclaimed Compost have been utilized. The District has conservatively estimated the potential to emit by using the physical capacity of the conveying system and a worst-case 24-hr operating day:</p> <p>PE2 = EF (lb/yd³-hr) × holding capacity of conveyors (181 yd³) × 8,760 hrs/yr</p>			

Compost Conveying Active Phase To Maturation Phase PE2			
Pollutant	EFs	Conveyor Holding Capacity (yd³)	PE2 (lb/year)
VOC	2.12 E-4 lb/yd ³ -hr (4.24 E-4 lb/ton-hr)	27.6	51
NH ₃	2.30 E-4 lb/yd ³ -hr (4.60 E-4 lb/ton-hr)		55
<p>As a conservative estimate of the daily emissions, the highest EFs between the uncontrolled Feedstocks mixing and uncontrolled reclaimed Compost have been utilized. The District has conservatively estimated the potential to emit by using the physical capacity of the conveying system and a worst-case 24-hr operating day:</p> <p>PE2 = EF (lb/yd³-hr) × holding capacity of conveyors (27.6 yd³) × 8,760 hrs/yr</p>			

Total Annual PE2 for Permit Units C-6048-7 and '-8 (lb/year)		
Emission Source	VOC	NH₃
Biosolids Receiving/Storage	1,810	477
Reclaimed Compost/Feedstocks Mixing	2,646	1,435
Outdoor Conveying Mixing to Active-Phase	336	364
Outdoor Conveying Active-Phase to Maturation-Phase	51	55
Outdoor Conveying Maturation-Phase to Curing-Phase*	51	55
Total	4,894	2,386

*Conservative estimate; equivalent to Active-Maturation transfer emissions.

C-6048-9 AND '-10:
COMPOST SCREENING

Compost Screening			
Pollutant	EF (lb-PM₁₀/ton)	Throughput (ton/year)	PE2 (lb/year)
PM ₁₀	0.0005	1,300,000	650
<p>VOC and NH₃ emissions during screening are attributed to permit units C-6048-7 and '-8.</p> <p>PE2_{PM10} = EF (lb/ton) × throughput (ton/year)</p>			

C-6048-19:
COMPOST PILES WITH GORE COVERS

Active-Phase Annual PE2			
Pollutant	Active Phase EF (mg/m² min)	Max Surface Area of Active-Phase Piles	Annual PE2 (lb/year)
VOC	0.99 (2.03E-7 lbs/ft ² min)	104,949 m ² (1,129,140 ft ²)	83,348
NH ₃	13.05 (2.67E-6 lbs/ft ² min)		1,098,678
<p>Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.</p> <p>Annual PE2 = Active-Phase EF (mg/m² min) × Total Active-Phase Piles Surface Area (m²) × 1,440 min/day × 365 days/year × g/1,000 mg × lb/453.6 g × inert material factor (9/13)</p> <p>The factor of 9/13 accounts for inert recycled wood chips in compost mix.</p> <p>Maximum volume based on 180 piles, each with a surface area of 583.05 m².</p>			

Maturation-Phase Annual PE2			
Pollutant	Mature-Phase EF (mg/m² min)	Max Surface Area of Mature-Phase Piles	Annual PE2 (lb/year)
VOC	0.99 (2.03E-7 lbs/ft ² min)	41,979 m ² (451,620 ft ²)	33,339
NH ₃	10.21 (2.09E-6 lbs/ft ² min)		343,829
<p>Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.</p> <p>Annual PE2 = Maturation-Phase EF (mg/m² min) × Total Maturation-Phase Piles Surface Area (m²) × 1,440 min/day × 365 days/year × g/1,000 mg × lb/453.6 g × inert material factor (9/13)</p> <p>The factor of 9/13 accounts for inert recycled wood chips in compost mix.</p> <p>Maximum volume based on 90 piles, each with a surface area of 466.44 m².</p>			

Curing-Phase Annual PE2			
Pollutant	Cure-Phase EF (mg/m² min)	Max Surface Area of Cure-Phase Piles	Annual PE2 (lb/year)
VOC	1.45 (2.97E-7 lbs/ft ² min)	41,979 m ² (451,620 ft ²)	48,829
NH ₃	2.99 (6.12E-7 lbs/ft ² min)		100,690
<p>Assumes PM₁₀ emissions are negligible when creating Active-Phase Piles due to high moisture content of mixed Feedstocks.</p> <p>Annual PE2 = Curing-Phase EF (mg/m² min) × Total Curing-Phase Piles Surface Area (m²) × 1,440 min/day × 365 days/year × g/1,000 mg × lb/453.6 g × inert material factor (9/13)</p> <p>The factor of 9/13 accounts for inert recycled wood chips in compost mix.</p> <p>Maximum volume based on 90 piles, each with a surface area of 466.44 m².</p>			

Total Annual PE2 for Permit Unit C-6048-19		
Emission Source	VOC (lb/year)	NH₃ (lb/year)
Active-Phase	83,348	1,098,678
Maturation-Phase	33,339	343,829
Curing-Phase	48,829	100,690
Total	165,516	1,543,197

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

Pollutant	EF (lb/ton)	Throughput (ton/year)	PE2 (lb/year)
PM ₁₀	0.0003	900,000	270
<p>VOC and NH₃ emissions cease upon completion of Curing-Phase (no further decomposition). Therefore, no VOC and NH₃ emissions during truck loadout.</p> <p>PE = EF (lb/ton) × throughput (ton/year)</p>			

C-6048-21:
GASOLINE STATION

Pollutant	Daily PE (lb/day)	Max Operating Schedule (days/year)	PE2 (lb/year)
VOC	2.4	365	876
PE = Daily PE (lb/day) × 365 days/year			

C-6048-26:
TRANSPORTABLE COMPOST SCREEN POWERED BY IC ENGINE

Compost Screening			
Pollutant	EF (lb-PM ₁₀ /ton)	Throughput	PE2 (lb/year)
PM ₁₀	0.003	1,400 ton/day × 365	1,533
PE2 = EF (lb/ton) × throughput (ton/day) × 365 days/yr			

IC Engine		
Pollutant	EF (g/bhp-hr)	PE2 (lb/year)
NO _x	2.7	3,814
SO _x	0.00512	7
PM ₁₀	0.149	210
CO	1.2	1,695
VOC	0.14	198
<p>The applicant has proposed an annual fuel limit of 35,078 gal/year for these IC engines. The annual PE for each pollutant will therefore be based on this annual fuel limit, as calculated below:</p> <p>Annual PE2 = Fuel Use (gal/yr) × 1/BSFC (Btu/bhp-hr) × EF (g/bhp-hr) × lb→g conversion × HHV (Btu/gal)</p> <p>Example (for NO_x emissions): Annual PE2 = 35,078 gal/yr × 1/7,500 Btu/bhp-hr × 2.7 g-NO_x/bhp-hr × lb/453.6 g × 137,000 Btu/gal</p> <p>Annual PE2 = 3,814 lb-NO_x/yr</p>		

Total Annual PE2 for Permit Unit '-26 (lb/year)					
Emission Unit	NO_x	SO_x	PM₁₀	CO	VOC
Compost Screen	0	0	1,553	0	0
IC engine	3,814	7	210	1,695	198
Total	3,814	7	1,763	1,695	198

Facility-Wide “Compost Material” Emissions

Facility-Wide Compost Material Emissions*			
Permit Unit	Emission Source	VOC (lb/year)	NH₃ (lb/year)
C-6048-1 & '-2	Outdoor Bulking Agent Storage/Processing (Except Emergency Stockpile)	13,152	173
	Outdoor Ag Waste Emergency Stockpile	1,410	15
C-6048-7 & '-8	Biosolids Receiving/Storage	1,810	477
	Indoor Feedstocks/Reclaimed Compost Mixing	2,646	1,435
	Outdoor Conveying (Mixing to Active-Phase)	336	364
	Outdoor Conveying (Active-Phase to Maturation-Phase)	51	55
	Outdoor Conveying (Maturation-Phase to Curing-Phase)	51	55
C-6048-19	Compost Piles (Active-Phase)	83,348	1,098,678
	Compost Piles (Maturation-Phase)	33,339	343,829
	Compost Piles (Curing-Phase)	48,829	100,690
Total		184,972	1,545,771

****The applicant has requested a facility-wide non-combustion (compost material emissions only) specific limiting condition (SLC) for maximum operational flexibility. The SLC will be in the form of the total mass emission rate as tabulated above.***

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

SSPE1 calculations are necessary for the following determinations:

- Major Source status,
- Offset applicability, and
- Public Notice (due to Stationary Source Increase in Permitted Emissions or SSIPE)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Since the facility is treated as new, the SSPE1 for all pollutants is zero.

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

SSPE2 calculations are necessary to aid the following determinations:

- Major Source status,
- Offset applicability, and
- Public Notice (due to Stationary Source Increase in Permitted Emissions or SSIPE)

Pursuant to Section 4.10 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)						
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NH ₃
C-6048-1	0	0	400	0	14,562	188
C-6048-2						
C-6048-3	2,579	4	368	2,235	129	2,579
C-6048-4						
C-6048-5	6,775	7	446	3,595	346	6,775
C-6048-6						
C-6048-7	0	0	0	0	4,894	2,386
C-6048-8						
C-6048-9	0	0	650	0	0	0
C-6048-10						
C-6048-19	0	0	0	0	165,516	1,543,197
C-6048-20	0	0	270	0	0	0
C-6048-21	0	0	0	0	876	0
C-6048-24	112	0	2	27	4	0
C-6048-25	102	0	2	13	2	0
C-6048-26	3,814	7	1,763	1,695	198	0
C-6048-27	163	0	6	139	9	0
C-6048-28	184	0	7	157	10	0
Total (lb/year)	13,729	18	3,914	7,861	186,546	1,555,125

6. Major Source Determination

A Major Source Determination is necessary for:

- Identify Major Sources and
- BE determinations (for amount of offsets required calculations)

Pursuant to Section 3.24 of District Rule 2201, a major source has a SSPE2 equal to or exceeding one or more of the thresholds shown in the table below.

Pursuant to Section 3.24.1 of District Rule 2201, fugitive emissions do not add to the SSPE2 for Major Source determination purposes, unless the source is included in the list of source categories identified in the major source definition in 40 CFR Part 70.2.

The EPA defines fugitive emissions as “...*those emissions that could not reasonably pass through a stack, chimney, vent or other functionally-equivalent opening.*”

Since the emissions from new composting facilities can and have been captured and controlled, the emissions from this type of operation are therefore reasonably collected and vented. Therefore, the District has determined that there are no fugitive emissions associated with this composting operation.

Pursuant to Section 3.24.2 of District Rule 2201, the quantity of ERCs that have been banked onsite for actual emission reductions (AERs) do not add to the SSPE2 for Major Source determination purposes. There have been no ERCs that have been banked onsite for AERs at the proposed facility.

Also, per the CAA, Section 302(z), a major stationary source does not include “those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine...”. Therefore, the emissions from the transportable (nonroad) engines have been subtracted from the Major Source totals.

Major Source Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
SSPE2	13,382	18	3,901	7,565	186,329
PE2 (Transportable 250 bhp IC engines)	2,579	4	128	2,235	129
PE2 (Transportable 1,050 bhp IC engines)	6,775	7	206	3,595	346
PE2 (Transportable 125 bhp IC engine)	3,814	7	210	1,695	198
Major Source SSPE2	0	0	3,357	0	185,854
Major Source Thresholds	50,000	140,000	140,000	200,000	50,000
Major Source	NO	NO	NO	NO	YES

As shown in the table above, this facility is a Major Source for VOC emissions.

7. Baseline Emissions (BE)

The BE calculation is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, if the SSPE2 balance is greater than the offset threshold.

Pursuant to Section 3.7 of District Rule 2201, BE = PE1 for the following:

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

Otherwise, BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

Since all proposed emissions units are new for NSR purposes, BE = PE1 = 0 for all pollutants.

8. SB 288 Major Modification

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

Since the proposed facility has not been constructed (previous ATCs not implemented), the facility is considered new and not a modification. Therefore, the project cannot qualify as a Major Modification.

9. Federal Major Modification

As shown above, this project does not constitute a Major Modification. Therefore, in accordance with District Rule 2201, Section 3.17, this project does not constitute a Federal Major Modification.

VIII. COMPLIANCE

Rule 1081 Source Sampling

This Rule requires adequate and safe facilities for using in sampling to determine compliance with emissions limits, and specifies methods and procedures for source testing and sample collection. The following conditions will be placed on applicable ATCs to ensure compliance with the requirements of this rule.

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] N
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] N
- The inlet duct(s) to each biofilter shall be equipped with safe, accessible, permanent provisions to allow collection of gas samples consistent with applicable test methods. [District Rule 1081] N

Rule 2010 Permits Required

This rule requires any person building, altering, or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, to first obtain authorization from the District in the form of an ATC. By the submission of the above-described ATC applications, the applicant is complying with the requirements of this Rule.

Rule 2201 New and Modified Source Review

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit > two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,

- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds/ year of CO.

a. New emissions units – PE > 2 lb/day

As explained above, the applicant is proposing a new facility with all new equipment. The maximum daily emissions, calculated in section VII.C.1, are summarized and compared to the BACT thresholds below.

BACT Applicability			
C-6048-1 and '-2 (Outdoor Bulking Agent receiving and transfer)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	1.3	2 lb/day	No
VOC	393.9		Yes
NH ₃	5.2		Yes

BACT Applicability			
C-6048-1 and '-2 (Emergency Ag Waste stockpile)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	3.9	2 lb/day	Yes
NH ₃	0		No

BACT Applicability			
C-6048-3 and '-4 (transportable Bulking Agent screens)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	11.4	2 lb/day	Yes

BACT Applicability			
C-6048-3 and '-4 (transportable 250 bhp IC engines)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
NO _x	31.4	2 lb/day	Yes
SO _x	0.1		No
PM ₁₀	1.6		No
CO	27.2	2 lb/day and SSPE2 > 200,000 lb/year	No
VOC	1.6	2 lb/day	No

BACT Applicability C-6048-5 and '6 (transportable Bulking Agent grinder)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	2.3	2 lb/day	Yes

BACT Applicability C-6048-5 and '6 (transportable 1,050 bhp IC engines)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
NO _x	116.4	2 lb/day	Yes
SO _x	0.1		No
PM ₁₀	3.5		Yes
CO	61.8	2 lb/day and SSPE2 > 200,000 lb/year	No
VOC	5.9	2 lb/day	Yes

BACT Applicability C-6048-7 and '8 (Biosolids Receiving/Storage)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	15.2	2 lb/day	Yes
NH ₃	4.0		Yes

BACT Applicability C-6048-7 and '8 (Mixing of Feedstocks/Reclaimed Compost)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	14.9	2 lb/day	Yes
NH ₃	8.1		Yes

BACT Applicability C-6048-7 and '8 (Outdoor Compost Conveying)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	0.9	2 lb/day	No
NH ₃	1.0		No

BACT Applicability C-6048-9 and '10 (Reclaimed Compost Screen and Transfers)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	0.7	2 lb/day	No

BACT Applicability C-6048-19 (Compost Piles Active-Phase)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	228.4	2 lb/day	Yes
NH ₃	3,010.1		Yes

BACT Applicability C-6048-19 (Compost Piles Maturation-Phase)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	91.3	2 lb/day	Yes
NH ₃	942.0		Yes

BACT Applicability C-6048-19 (Compost Piles Curing-Phase)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	133.8	2 lb/day	Yes
NH ₃	275.9		Yes

BACT Applicability C-6048-20 (Finished Compost truck loadout operation)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	2.2	2 lb/day	Yes

BACT Applicability C-6048-21 (Gasoline Station)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
VOC	2.4	2 lb/day	Yes

BACT Applicability C-6048-26 (transportable compost screen)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
PM ₁₀	4.2	2 lb/day	Yes

BACT Applicability C-6048-26 (transportable 125 bhp IC engine)			
Pollutant	PE2 (lb/day)	BACT Threshold	BACT Triggered?
NO _x	10.5	2 lb/day	Yes
SO _x	0.02 ⇒ 0		No
PM ₁₀	0.6		No
CO	4.7	2 lb/day and SSPE2 > 200,000 lb/year	No
VOC	0.5	2 lb/day	No

2. BACT Guidelines

C-6048-1 and '-2 (Outdoor Bulking Agent)

As shown above, BACT is triggered for VOC and NH₃ emissions. Currently, there is no applicable BACT guideline. This project will involve the creation of a new BACT Guideline (*Compost Material Transfers*) that will apply to the proposed operations (see **Appendix A**).

C-6048-3 and '-4 (Transportable Bulking Agent screens)

As shown above, BACT is triggered for PM₁₀ emissions. District BACT Guideline 6.4.1 (*Compost Materials - Screening, Transportable, Wood Waste Processing*) is applicable (see **Appendix B**).

C-6048-3 and '-4 (Transportable IC engines)

As shown above, BACT is triggered for NO_x emissions. District BACT Guideline (*Transportable Compression-Ignited Internal Combustion Engines*) is applicable (see **Appendix C**).

C-6048-5 and '-6 (Transportable Bulking Agent grinders)

As shown above, BACT is triggered for PM₁₀ emissions. District BACT Guideline 6.4.2 (*Tub Grinder - Transportable, Wood Waste Processing*) is applicable (see **Appendix D**).

C-6048-5 and '-6 (Transportable IC engines)

As shown above, BACT is triggered for NO_x, PM₁₀, and VOC emissions. District BACT Guideline (*Transportable Compression-Ignited Internal Combustion Engines*) is applicable (see **Appendix C**).

C-6048-7 and '-8 (Biosolids receiving/storage)

As shown above, BACT is triggered for VOC and NH₃ emissions. Currently, there is no applicable BACT guideline. This project will involve the creation of a new BACT Guideline (*Enclosed Feedstocks Storage and Mixing*) that will apply to the proposed operations (see **Appendix E**).

C-6048-7 and '-8 (Feedstocks/reclaimed compost mixing)

As shown above, BACT is triggered for VOC and NH₃ emissions. Currently, there is no applicable BACT guideline. This project will involve the creation of a new

BACT Guideline (*Enclosed Feedstocks Storage and Mixing*) that will apply to the proposed operations (see **Appendix E**).

C-6048-19 (Co-Composting Piles)

As shown above, BACT is triggered for VOC and NH₃ emissions. The District BACT Guideline created under District ATC project S-1032219 (*Co-Composting with Biosolids*) is applicable (see **Appendix F**).

C-6048-20 (Compost truck loadout)

As shown above, BACT is triggered for PM₁₀ emissions. Currently, there is no applicable BACT guideline. This project will involve the creation of a new BACT Guideline (*Compost Material Transfers*), which will apply to the proposed operations (see **Appendix A**).

C-6048-21 (Gasoline dispensing facility)

As shown above, BACT is triggered for VOC emissions. District BACT Guideline 4.6.1 (*Motor Vehicle Gasoline Storage And Dispensing Operation*) is applicable (see **Appendix G**).

C-6048-26 (Transportable compost screens)

As shown above, BACT is triggered for PM₁₀ emissions. District BACT Guideline 6.4.1 (*Compost Materials - Screening, Transportable, Wood Waste Processing*) is applicable (see **Appendix B**).

C-6048-26 (Transportable IC engine)

As shown above, BACT is triggered for NO_x emissions. District BACT Guideline (*Transportable Compression-Ignited Internal Combustion Engines*) is applicable (see **Appendix C**).

3. Top-Down BACT Analyses

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

C-6048-1 and '-2 (Outdoor Bulking Agent receiving)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix A**), BACT has been satisfied with the following:

- VOC: Minimize uncontrolled receiving and storage time (7 Days max)
- NH₃: Minimize uncontrolled receiving and storage time (7 Days max)

C-6048-3 and '-4 (Transportable Bulking Agent screens)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix B**), BACT has been satisfied with the following:

- PM₁₀: Visible emissions less than of 5% opacity

C-6048-3 and '-4 (Transportable IC engines)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix C**), BACT has been satisfied with the following:

NO_x: Engine of latest available CARB certification - Tier 3

C-6048-5 and '-6 (Transportable Bulking Agent grinders)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix D**), BACT has been satisfied with the following:

PM₁₀: Visible emissions less than of 5% opacity

C-6048-5 and '-6 (Transportable IC engines)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix C**), BACT has been satisfied with the following:

NO_x: Engine of latest available CARB certification - Tier 2*

PM₁₀: Engine of latest available CARB certification - Tier 2*

VOC: Engine of latest available CARB certification - Tier 2*

*Tier 2 is the latest available certification for engines greater than 750 bhp.

C-6048-7 and '-8 (Biosolids receiving/storage)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix E**), BACT has been satisfied with the following:

VOC: Fully enclosed receiving/storage vented to a biofilter with $\geq 80\%$ control

NH₃: Fully enclosed receiving/storage vented to a biofilter with $\geq 90\%$ control

C-6048-7 and '-8 (Mixing of Feedstocks/reclaimed Compost)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix E**), BACT has been satisfied with the following:

VOC: Fully enclosed mixing building vented to a biofilter with $\geq 80\%$ control

NH₃: Fully enclosed mixing building vented to a biofilter with $\geq 90\%$ control

C-6048-19 (Co-Composting Piles)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix F**), BACT has been satisfied with the following:

VOC: Gore Composting System

NH₃: Gore Composting System

C-6048-20 (Compost truck loadout)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix A**), BACT has been satisfied with the following:

PM₁₀: Visible emissions less than of 5% opacity

C-6048-21 (gasoline dispensing facility)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix G**), BACT has been satisfied with the following:

VOC: ARB certified Phase I and Phase II

C-6048-26 (Compost screen)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix B**), BACT has been satisfied with the following:

PM₁₀: Visible emissions less than of 5% opacity

C-6048-26 (Transportable IC engine)

Pursuant to the attached Top-Down BACT Analysis (see **Appendix C**), BACT has been satisfied with the following:

NO_x: Engine of latest available CARB certification - Tier 3

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant-by-pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset thresholds shown in the table below.

Pollutant	NO_x	SO_x	PM₁₀	CO	VOC
SSPE2	13,382	18	3,901	7,565	186,527
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered	NO	NO	NO	NO	YES

As shown in the table above, the SSPE2 for VOCs is above the offset trigger threshold. Therefore, offsets are triggered for VOCs.

2. Quantity of Offsets Required

As shown above, offsets are triggered for VOCs. Therefore, offset calculations will be required for this project. Pursuant to Section 4.7.2, the quantity of offsets is calculated as follows for sources with a SSPE1 less than the offset thresholds.

$$\text{Offsets Required (lb/yr)} = [\text{SSPE2} - \text{Offset Exempt Equipment} - \text{Offset trigger level} + \text{ICCE}] \times \text{DOR}$$

Where,

ICCE (lb/year) = Increase in Cargo Carrier Emissions = 0

DOR = Distance Offset Ratio, determined pursuant to Section 4.8, Table 4-2.

Distance Ratios for each ERC

The applicant has proven the right to use the below-listed ERC, and has proposed to withdraw the below-listed ERC for this project. The distance ratios below are according to Rule 2201, Section 4.8, Table 4-2.

ERC Certificate Number	Generated within 15 Miles of Proposed Facility	Distance Offset Ratio
N-463-1	No	1.5
N-471-1	No	1.5
N-472-1	No	1.5
S-2147-1	No	1.5
S-2188-1	No	1.5
S-2283-1	No	1.5
S-2414-1	No	1.5
S-2643-1	No	1.5
S-2702-1	No	1.5

Offsets Required_{VOC} (lb/yr) = [186,546 - 25* - 20,000 + 0] × 1.5 = 249,782 lb/year

*Where, the amount of 25 lbs removed is the total emissions from the emergency engines (offset exempt permit units) '-24, '-25, '-27, and '-28.

The ATCs for this project will each include a set of offset related conditions that identify the amount of offsets required for each pollutant without taking into account the distance ratio. Also included on each ATC for this project, will be conditions that identify the specific ERC certificates that shall be surrendered upon operation of the equipment. The calculations to follow verify that those identified ERC certificates cover the offsetting amount after consideration to distance ratios. The amount of offsets required is summarized in the following table:

Amount of Offsets Required		
Pollutant	Offset Quantity Required (lb/yr)	Offset Quantities Required (lb/qtr)
VOC	249,782	62,446

Determination of Sufficient VOC ERCs Identified				
Certificate Number	Q1 (lb)	Q2 (lb)	Q3 (lb)	Q4 (lb)
N-463-1	5,184	6,702	5,130	4,351
N-471-1	341	6	397	1,331
S-2188-1	2,690	2,690	2,690	2,690
S-2283-1	24,500	24,500	24,500	24,500
S-2414-1	5,000	5,000	5,000	5,000
S-2643-1	15,000	15,000	15,000	15,000
S-2702-1	10,000	10,000	10,000	10,000
Total Provided	62,715	63,898	62,717	62,872
Total Required	62,446	62,446	62,446	62,446
Sufficient ERCs	Yes	Yes	Yes	Yes

As shown in the table above, there will be a balance remaining in each quarter. Therefore, the applicant has provided enough ERCs to offset the proposed emissions.

Offset Permit Conditions

The following group of conditions will appear on each ATC for this project:

- Prior to operating equipment under any of the Authority to Construct permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-2, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]

Note, the above-condition lists the quarterly amounts of offsets required **without the distance ratio factored into it**. The quarterly values were calculated as follows:

$$\text{Offsets Required (lb/yr)} = [\text{SSPE2} - \text{Offset Exempt Equipment} - \text{Offset trigger level} + \text{ICCE}]$$

$$\text{Offsets Required}_{\text{VOC}} \text{ (lb/qtr)} = [186,527 - 6 - 20,000 + 0] \div 4 = 41,630 \text{ lb/year}$$

- ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public

noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources and Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Modifications that increase the SSPE from below offset thresholds to above offset thresholds,
- d. New facilities with SSPE2s greater than the offset thresholds, and/or
- e. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source or Major Modification

New Major Source

New Major Sources are facilities, which are becoming a Major Source as a result of this project. As shown in Section VII.C.5 above, the SSPE2 is greater than the Major Source threshold for VOC emissions. Therefore, the facility is proposed as a new Major Source. Public noticing is required for this project for new Major Source purposes.

Major Modification

The facility is new (not currently in existence); therefore, this project is not a modification. Public noticing for Major Modification purposes is not required.

b. PE > 100 lb/day

For new emissions units, public notification is required if the PE > 100 lb/day for any pollutant. As shown in Section VII.C.1 above, the PE for the 1,050 bhp transportable IC engines is greater than 100 lb/day for NO_x. The PE for the co-Composting Piles is greater than 100 lb/day for both VOC and NH₃ emissions, and the PE for the Bulking Agent Receiving is greater than 100 lb/day for VOC emissions. Therefore, public noticing is required for this project for PE > 100 lb/day.

c. Modifications to increase above offset threshold

Since the facility is new, the project is not a modification and does not trigger public notice for modification purposes.

d. New facility Offset Threshold exceedence

As detailed above, offset threshold for VOC emissions was exceeded with this project; therefore public noticing is required for offset purposes.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. Public notice is not triggered for the SSIPE since the facility is considered new.

2. Public Notice Action

As discussed above, public noticing is required for this project for new Major Source purposes, emissions in excess of 100 lb/day for NO_x, VOC, and NH₃, offset thresholds being exceeded for VOC, and the SSIPE.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

C-6048-1 and '-2:

BULKING AGENT RECEIVING AND STORAGE

- Visible emissions shall not exceed 5% opacity at any point in the Bulking Agent receiving, transfer or storage process. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible from any Bulking Agent does not exceed 5% opacity. [District Rules 2201 and 4101] N
- The maximum amount of bulking agent received under permit units C-6048-1 and C-6048-2 shall not exceed either of the following limits: 3,800 wet-ton/day or 400,000 wet-ton/year. [District Rule 2201 and California Environmental Quality Act] N
- The maximum volume of bulking agent stored under permit units C-6048-1 and C-6048-2 shall not exceed 24,350 yd³ at any one time. [District Rule 2201] N

- Emissions from the Bulking Agent receiving, transfers and stockpiling shall not exceed 0.001 lb-PM10/wet ton. [District Rule 2201] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201] N
- All bulking agent shall be processed in the mixing building and sent to compost within seven calendar days of receipt at the facility. This condition does not apply to the emergency agricultural waste stockpile. [District Rule 2201] N

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS AND IC ENGINES

- Visible emissions from Bulking Agent screening shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions from the Bulking Agent screening does not exceed 5% opacity. [District Rules 2201 and 4101] N
- Combined amount of diesel fuel consumed by units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 260 gal/day or 21,350 gal/year. [District Rule 2201] N
- The combined Bulking Agent screen throughput of units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 3,800 ton/day or 80,000 wet ton/year. [District Rule 2201] N
- Emissions from the Bulking Agent screening operation shall not exceed 0.003 lb-PM10/wet ton. [District Rule 2201] N

For the IC Engines, the DELs are stated in the form of Emission Factors (g/bhp-hr), the maximum engine horsepower rating of 250 bhp, and the maximum fuel use.

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS AND IC ENGINES

- Visible emissions from Bulking Agent grinding shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions from Bulking Agent grinding does not exceed 5% opacity. [District Rules 2201 and 4101] N

- Combined amount of diesel fuel consumed by units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 590 gal/day or 34,336 gal/year. [District Rule 2201] N
- The combined Bulking Agent grinding throughput of units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 770 wet ton/day or 80,000 wet ton/year. [District Rule 2201] N
- Emissions from the Bulking Agent grinding operation shall not exceed 0.003 lb-PM10/wet ton. [District Rule 2201] N

For the IC Engines, the DELs are stated in the form of Emission Factors (g/bhp-hr), the maximum engine horsepower rating of 1,050 bhp, and the maximum fuel use.

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, FEEDSTOCKS MIXING, AND CONVEYING

- All VOC and NH₃ emissions generated inside the mixing building shall be vented to the mixing building biofilter(s). [District Rule 2201] N
- The VOC and NH₃ control efficiencies across the biofilter(s) shall not be less than 80% and 90%, respectively. [District Rule 2201] N
- The total quantity of biosolids received at this facility shall not exceed either of the following limits: 4,200 wet ton/day or 500,000 wet ton/year. [District Rule 2201 and California Environmental Quality Act] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201] N

C-6048-9 and '-10:

RECLAIMED COMPOST SCREENING AND TRANSFER

- Visible emissions from Compost screening and transfer shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions from Compost screening and transfer does not exceed 5% opacity. [District Rules 2201 and 4101] N
- The combined compost screen throughput of units C-6048-9 and C-6048-10 shall not exceed either of the following limits: 7,300 wet ton/day or 1,300,000 wet ton/year. [District Rule 2201] N

- Emissions from the Compost transfer and screening operations under permit units C-6048-9 and C-6048-10 shall not exceed 0.0005 lb-PM₁₀/wet ton. [District Rule 2201] N

C-6048-19:

CO-COMPOSTING WITH ACTIVE-PHASE, MATURATION-PHASE AND CURING-PHASE COMPOST PILES

- All Active, Mature and Curing-Phase Composting shall be performed using the Gore Composting System, which includes an engineered, under pile, grid aeration system and Gore covers [District Rule 2201] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201] N
- Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201] N
- All compost shall meet at least one of the following stability criteria prior to leaving the cure-phase piles: 1) The compost emits no more than four (4) mg CO₂-C per gram of organic material per day (per TMECC Method 05-08-B), 2) The compost has a Solvita Maturity Index of 7 or greater (per TMECC Method 05-08-E), or 3) The material has been composted at least 40 consecutive calendar days after the active-phase composting period. [District Rule 2201] N
- Until the first source tests are available, the facility shall compost no more than 25% of its capacity. [District Rule 2201] N¹⁴

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

- Visible emissions from the Compost loadout operation shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions from the Compost loadout operation does not exceed 5% opacity. [District Rules 2201 and 4101] N
- The Compost loadout throughputs shall not exceed either of the following limits: 7,400 wet ton/day or 900,000 wet ton/year. [District Rule 2201] N
- Emissions from the Compost loadout operation shall not exceed 0.003 lb-PM₁₀/wet ton. [District Rule 2201] N

¹⁴ The proposed composting EFs and resulting mass emission limits are based on an actual source for a co-composting facility using GORE covers, which is the identical emission unit and control technique proposed. Therefore, the District is comfortable with a safety factor of 4 (equivalent to an operational capacity limit of 25%) as a compliance assumption until the first source test is performed.

C-6048-21:
GASOLINE STATION

For the gasoline dispensing operation the DEL is established by the number of fueling points (based on the permitted facility configuration) and the Emission Factor of 2.36 lb VOC/Fueling Point-day.

C-6048-26:
TRANSPORTABLE COMPOST SCREEN AND IC ENGINE

- Visible emissions from compost screening shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions from the compost screening does not exceed 5% opacity. [District Rules 2201 and 4101] N
- The amount of diesel fuel consumed by permit unit C-6048-26 shall not exceed either of the following limits: 97 gal/day or 35,078 gal/year. [District Rule 2201] N
- The compost screen throughput shall not exceed 1,400 ton/day. [District Rule 2201] N
- Emissions from the Bulking Agent screening operation shall not exceed 0.003 lb-PM10/wet ton. [District Rule 2201] N

For the IC Engine, the DELs are stated in the form of Emission Factors (g/bhp-hr), the maximum engine horsepower rating, and the maximum fuel use.

E. Compliance Assurance

1. Source Testing

C-6048-1 and '-2:
BULKING AGENT RECEIVING AND STORAGE

Pursuant to District Policy APR 1705, "*Annual source testing must be considered if significant performance deterioration can be expected over time or if the margin of compliance is low.*" As proposed, the PE is based on the results of one source test. The EFs and corresponding PE has been set at the exact level of that source test; therefore, the margin of compliance is zero. That is, no tolerances have been set on the EFs to allow for variability upon source testing. Therefore, annual source testing may be appropriate for this case; especially since the amount of offsets is dependent on the assumed EFs. The proposed emissions shall be verified via source testing.

District practice to establish an EF from a specific source category is to require tests on *four* consecutive occasions. Since there is no control device that could

deteriorate or require ongoing maintenance, the number of tests to establish an EF is finite. Four source tests will establish the EF tolerances and certainty.

Testing will be done consistent with the other permit units at this facility, and according to proposed methods as identified in Rule 1133.2 section (g) (as shown below for the mixing permits C-6048-7 and '-8). The following conditions related to source testing of the bulk agent piles will be included on the permit:

- Source testing for VOC and NH₃ emissions shall be performed on the surface of two District identified Bulking Agent Piles (one Green Waste, one Ag Waste) using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201] N
- Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after commencing operation (mixing Biosolids with Bulking Agents). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). Source testing the Bulking Agent under permit units C-6048-1 and C-6048-2 may cease after demonstrating compliance on four consecutive source tests. [District Rule 2201] N
- District approved independent testing lab(s) shall perform the source testing. [District Rule 2201] N
- All source testing shall take place under conditions considered representative of normal source operation. [District Rule 2201] N
- The source test summary shall include the uncontrolled Ag Waste and Green Waste Emission Factors for VOC and NH₃ (lb-pollutant/yd³-hr), the total respective pile volumes and the densities of Ag Waste and Green Waste (ton/yd³). [District Rule 2201] N

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

Screening:

The emissions from this emissions unit (PM₁₀) are based on conservative estimates; therefore, source testing is not required to verify the emissions.

IC engines:

The engines are not subject to any source testing for Rules 4701 or 4702 since the engines will be Tier certified units. District Policy APR 1705 (*Source Testing Frequency*) does not require source testing for these units either.

There are no source testing requirements for these permit units.

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

Grinding:

The emissions from this emissions unit (PM₁₀) are based on conservative estimates; therefore, source testing is not required to verify the emissions.

IC engines:

The engines are not subject to any source testing for Rules 4701 or 4702 since the engines will be Tier certified units. District Policy APR 1705 (*Source Testing Frequency*) does not require source testing for these units either.

There are no source testing requirements for these permit units.

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, FEEDSTOCKS MIXING OPERATIONS, AND COMPOST TRANSFERS

Mixing Building Biofilters and Biosolids Stored:

Pursuant to District Policy APR 1705, "*Annual source testing must be considered if significant performance deterioration can be expected over time or if the margin of compliance is low.*" To verify the proposed emissions and the biofilter control efficiency, initial source testing for VOC and NH₃ is required. To verify long-term biofilter maintenance and emissions compliance, annual/ongoing source testing is required.

Testing of the biofilter inlet and outlet VOC and NH₃ is required to demonstrate ≥ 80% and 90% destruction efficiency of VOC and NH₃ respectively, across the biofilters, which is BACT for this class and category of source.

Testing of the stored biosolid surfaces is necessary to quantify emissions to verify compliance with emission limits.

Testing will be done consistent with previously performed testing of similar facilities, and will use the methods identified in Rule 1133.2, section (g) and Appendix A:

SCAQMD Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions

SCAQMD Method 207.1 – Determination of Ammonia Emissions from Stationary Sources

SCAQMD Method 1.1 – Sample and Velocity Traverses for Stationary Sources

SCAQMD Method 1.2 – Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts

SCAQMD Method 2.1 – Determination of Stack Gas Velocity and Volumetric flow Rate (S-Type Pitot Tube)

SCAQMD Method 2.2 – Direct Measurement of Gas Volume through Pipes and Small Ducts

SCAQMD Method 2.3 – Determination of Gas Velocity and Volumetric Flow Rate From Small Stacks or Ducts

SCAQMD Method 4.1 – Determination of Moisture Content in Stack Gases

The following conditions related to mixing building biofilter source testing will be included on the permit:

- Source testing for VOC and NH₃ on one District approved mixing building biofilter inlet shall be performed using SCAQMD methods 25.3, 207.1, 1.1, 1.2, 2.1, 2.2, 2.3, 3.1 and 4.1, and/or other District approved methods. Source testing at the biofilter outlet (or surface) shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods.
- Source testing at the stored biosolids surface shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods.
- Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after commencing operation (mixing Biosolids with Bulking Agents).¹⁵ Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc).
- District approved independent testing lab(s) shall perform the source testing.
- All source testing shall take place under conditions considered representative of normal source operation.
- For biofilter source test purposes, each tested biofilter shall be divided into 16 areas and preliminary velocity measurements will be made at each of the 16 areas with sampling points located as far as practical in the middle of each zone. Nine sampling locations with the airflow rates within 10% of the average will be selected for VOC and NH₃ sampling. The preliminary velocity

¹⁵ This testing schedule corresponds with the Compost pile testing window (between 90 and 270 days after first processing mixed Feedstocks).

measurements shall be done using SCAQMD methods 1.1, 1.2, 2.1, 2.2 and 2.3.

- For stored biosolids source test purposes, the biosolids storage shall be divided into 16 areas with the sampling and measuring points located as far as practical in the middle of each area. Nine sampling and measuring locations with representative, average airflow rates will be selected for VOC and NH₃ sampling.
- The source test summary shall include the VOC and NH₃ mass emission rates (lb-pollutant/hr) from the mixing building biofilter(s), the VOC and NH₃ control efficiencies for each tested mixing building biofilter, VOC and NH₃ mass emission rates (lb-pollutant/yd³-hr) from the stored biosolids, and the volume (yd³) and density (ton/yd³) of each type of feedstock in the mixing building during testing.

Conveying:

The emissions from the outdoor compost transfers are based on conservative estimates; therefore, source testing is not required to verify the emissions.

C-6048-9 and -10:

COMPOST SCREENS

The emissions from this emissions unit (PM₁₀) are based on conservative estimates; therefore, source testing is not required to verify the emissions.

C-6048-19:

CO-COMPOSTING OPERATION INCLUDING ACTIVE, MATURE AND CURING-PHASE PILES

Pursuant to District Policy APR 1705, "*Annual source testing must be considered if significant performance deterioration can be expected over time or if the margin of compliance is low.*" To verify the proposed emissions, initial source testing for VOC and NH₃ is required. To verify long-term compost pile maintenance, annual/ongoing source testing is required.

In order to do accurate testing, the composting operation needs to be operating for a period of time before performing source testing. Therefore testing will be performed no sooner than 90 days after commencing operation, and no later than 270 days after commencing operation (end of proposed start-up period). This will ensure all biological processes have had time to come up to normal operating conditions. Both NH₃ and VOC emissions will be tested.

Testing will be done consistent with previously performed testing of similar facilities, and will use the methods identified in Rule 1133.2 section (g) and Appendix A, as shown above for the mixing building permit. The following conditions related to source testing of the Compost Piles will be included on the permit:

- Source testing for VOC and NH₃ emissions shall be performed on at least one District-approved pile from each phase (active, maturation, and curing). Source testing at the pile surface (uncontrolled) and cover surface (controlled) shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods.
- Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after commencing operation (mixing Biosolids with Bulking Agents). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc).
- District approved independent testing lab(s) shall perform the source testing.
- All source testing shall take place under conditions considered representative of normal source operation.
- For compost pile source test purposes, each tested pile shall be divided into 16 areas with the sampling and measuring points located as far as practical in the middle of each area. Nine sampling and measuring locations with representative, average airflow rates will be selected for VOC and NH₃ sampling for each pile surface.
- The source test summary shall include the following Active-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Active-Phase pile surface (uncontrolled), and Active-Phase cover surface (controlled).
- The source test summary shall include the following Mature-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Mature-Phase pile surface (uncontrolled), and Mature-Phase cover surface (controlled).
- The source test summary shall include the following Cure-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Cure-Phase pile surface (uncontrolled), and Cure-Phase cover surface (controlled).
- The source test summary shall include the following for VOC and NH₃: The total controlled compost mass emission rates (lb/day) and the density of each tested pile (ton/yd³).

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

The emissions from this emissions unit (PM₁₀) are based on conservative estimates; therefore, source testing is not required to verify the emissions.

C-6048-21:
GASOLINE STATION

The operation is subject to the following standard test conditions:

- The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B within 60 days after initial start-up and at least once every 12 months thereafter.
- For certified Phase II vapor recovery systems with liquid removal devices, the permittee shall perform and pass an ARB TP-201.6 Liquid Removal Test within 60 days after initial start-up and whenever the liquid in the vapor path exceeds 100 ml of liquid. The amount of liquid in the vapor path shall be measured by lowering the gasoline dispensing nozzle into a container until such time that no more liquid drains from the nozzle. The amount of liquid drained into the container shall be measured using a graduated cylinder or graduated beaker. The vapor path shall be inspected once per month if monthly throughput is below 2,500 gallons, or once per week otherwise.

C-6048-26:
TRANSPORTABLE COMPOST SCREEN POWERED BY DIESEL-FIRED IC ENGINE

Screening:

The emissions from this emissions unit (PM₁₀) are based on conservative estimates; therefore, source testing is not required to verify the emissions.

IC engine:

The engine is not subject to any source testing for Rules 4701 or 4702 since the engines will be Tier certified units. District Policy APR 1705 (*Source Testing Frequency*) does not require source testing for these units either.

There are no source testing requirements for these permit units.

2. Monitoring

C-6048-1 and -2:
BULKING AGENT RECEIVING AND STORAGE

No monitoring is required to demonstrate compliance with Rule 2201.

C-6048-3 and -4:
TRANSPORTABLE BULKING AGENT SCREENS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

Screening:

No monitoring is required to demonstrate compliance with Rule 2201.

IC engines:

No monitoring is required to demonstrate compliance with Rule 2201. The engines are subject to Rule 4702 monitoring however. See the Rule 4702 discussion below for the applicable monitoring conditions.

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

Screening:

No monitoring is required to demonstrate compliance with Rule 2201.

IC engines:

No monitoring is required to demonstrate compliance with Rule 2201. The engines are subject to Rule 4702 monitoring however. See the Rule 4702 discussion below for the applicable monitoring conditions.

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, FEEDSTOCKS MIXING OPERATIONS AND COMPOST TRANSFERS

Mixing Building:

The following monitoring related conditions will be added to the permit to ensure the mixing building captures the VOC and NH₃ emissions generated from the Feedstocks mixing operations, and to ensure the biofilters are maintained at their optimum control efficiency:

- Within 60 days after initial operation (first mixing of Feedstocks), the permittee shall submit mixing building monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and levels, and (5) the protocol to establish the building's VOC and NH₃ capture efficiency.
- Within 60 days after initial operation (first mixing of Feedstocks), the permittee shall submit biofilter monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC and NH₃ emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and NH₃ levels, (5) the protocol to establish the correlation between the portable analyzer measurements and the source test results, and (6) the monitoring

plan if no correlation between the portable analyzer measurements and source test results can be made.

- The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations.
- No measurable increase over background levels of VOC outside the mixing building shall occur at any mixing building opening including any opening that occurs briefly for access or maintenance.
- VOC emissions to verify the capture efficiency of the mixing building shall be measured according to the approved monitoring plan within 60 days after District approval of the mixing building monitoring plan, and once every 24 months thereafter.
- The permittee shall measure the concentrations of VOC and NH₃ emissions from the mixing building biofilter surfaces according to the approved monitoring plan during the initial source test and at least once every month thereafter.
- If either the VOC or NH₃ concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the permittee shall notify the District within the 24 hours and submit a plan of action to return the emissions to their normal levels. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition.
- All biofilter(s) shall be equipped with an operational humidification and moisture addition system capable of maintaining suitable biofilter media moisture content.
- The biofilter(s) humidifier and sprinkler systems shall be used as needed to maintain biofilter media moisture content within a suitable operating range.
- The biofilter(s) shall be visually checked weekly for compaction, channeling (cracks), unreasonable vegetative growth or noticeable increase in detectable odors.

Conveyors:

No monitoring is required to demonstrate compliance with Rule 2201.

C-6048-9 and '-10:
COMPOST SCREENS

No monitoring is required to demonstrate compliance with Rule 2201.

C-6048-19:

CO-COMPOSTING OPERATION INCLUDING ACTIVE, MATURE AND CURING-PHASE PILES

- The permittee shall conduct maintenance inspections of the cover each time a cover is placed on a compost pile. Any tears or other abnormalities in the cover that could jeopardize the ability of the cover to act as an air pollution control device shall be repaired immediately or the cover shall be replaced. The permittee shall conduct an inspection of the blower and air distribution system prior to commencing construction of a compost pile. Any abnormalities that impact the ability of the air distribution system to provide air to the compost pile shall be repaired prior to constructing the pile.
- Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit compost pile monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC and NH₃ emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and NH₃ levels, (5) the protocol to establish the correlation between the portable analyzer measurements and the source test results, and (6) the monitoring plan if no correlation between the portable analyzer measurements and source test results can be made. [District Rule 2201] N
- The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rule 2201] N
- The permittee shall measure the concentrations of VOC and NH₃ emissions from the compost pile surfaces according to the approved monitoring plan during the initial source test and at least once every month thereafter. [District Rule 2201] N
- If either the VOC or NH₃ concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the permittee shall notify the District within the 24 hours and submit a plan of action to return the emissions to their normal levels. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification requirements of this condition. [District Rule 2201] N

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

No monitoring is required to demonstrate compliance with Rule 2201.

C-6048-21:
GASOLINE STATION

- The permittee shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 2,500 gallons - one day per month; B) 2,500 to less than 25,000 gallons - one day per week; or C) 25,000 gallons or greater - five days per week.

C-6048-26:
TRANSPORTABLE COMPOST SCREEN POWERED BY ONBOARD DIESEL-FIRED IC ENGINE

Screening:

No monitoring is required to demonstrate compliance with Rule 2201.

IC engine:

No monitoring is required to demonstrate compliance with Rule 2201. The engines are subject to Rule 4702 monitoring however. See the Rule 4702 discussion below for the applicable monitoring conditions.

3. Recordkeeping

Record keeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201.

C-6048-1 and -2:
BULKING AGENT RECEIVING AND TRANSFER

- The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19)
- The permittee shall keep daily records of the total VOC and NH₃ emissions from Outdoor Bulking Agent, based on the following equation: Outdoor Bulking Agent Emissions (lb/day) = 24 (hr/day) × [Uncontrolled Green Waste Emission Factor (lb/yd³-hr) × Total Outdoor Green Waste Average Pile Volume (yd³) + Uncontrolled Ag Waste Emission Factor (lb/yd³-hr) × Total Outdoor Ag Waste Average Pile Volume not including emergency stockpile (yd³)] + [Uncontrolled Ag Waste Emission Factor (lb/yd³-hr) × Emergency Stockpile Volume (yd³) × 24 hr/day].

- Until the first source test results are available, the Uncontrolled Green Waste Emission Factors are $6.74 \text{ E-4 lb-VOC/yd}^3\text{-hr}$ and $8.87 \text{ E-6 lb-NH}_3\text{/yd}^3\text{-hr}$, the Uncontrolled Ag Waste Emission Factors are $4.93 \text{ E-6 lb-VOC/yd}^3\text{-hr}$ and $5.33 \text{ E-8 lb-NH}_3\text{/yd}^3\text{-hr}$.
- The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). All source test results shall be submitted to the District for approval of the Emission Factors.
- The permittee shall keep daily and annual records of the amount of bulking agent received at the facility, in wet tons and cubic yards (yd^3).
- The permittee shall keep weekly records of the outdoor bulking agent pile(s) maximum temperature, in degrees F.
- {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] N

C-6048-3 and '-4:

TRANSPORTABLE BULKING AGENT SCREENS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

- The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702] N
- The permittee shall keep daily and annual records of the amount of Bulking Agent screened, in wet tons. [District Rule 2201] N
- {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] N

C-6048-5 and '-6:

TRANSPORTABLE BULKING AGENT GRINDERS POWERED BY ONBOARD DIESEL-FIRED IC ENGINES

- The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702] N

- The permittee shall keep daily and annual records of the amount of Bulking Agent ground, in wet tons. [District Rule 2201] N
- {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] N

C-6048-7 and '-8:

BIOSOLIDS RECEIVING/STORAGE, FEEDSTOCKS MIXING OPERATIONS, AND COMPOST TRANSFERS

- The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19).
- The permittee shall keep daily records of the total VOC and NH₃ emissions from Biosolids Receiving/Storage, based on the following equation: Biosolids emissions (lb/day) = Biosolids throughput (ton) × (1 - Mixing Building Biofilter Control Efficiency) × Uncontrolled Biosolids Emission Factor (lb/ton-day).
- The permittee shall keep daily records of the total VOC and NH₃ emissions from Indoor Feedstocks Mixing, based on the following equation: Indoor Feedstocks Mixing (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) × (1 - Mixing Building Biofilter Control Efficiency) × Daily Mixing Average Volume (yd³) × Operating Schedule (hr/day).
- The permittee shall keep daily records of the total VOC and NH₃ emissions from Outdoor Compost Conveying, based on the following equation: Outdoor Compost Conveying Emissions (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) × 209 yd³ conveyor capacity × 24 hr/day.
- Until the first source test results are available, the Uncontrolled Biosolids Emission Factors are 0.02 lb-VOC/ton-day and 9.54 E-3 lb-NH₃/ton-day and the Biofilter Control Efficiencies for VOC and NH₃ are 40% and 45% respectively.¹⁶
- Until the first source test results are available, the Uncontrolled Active-Phase Emission Factors are 2.12 E-4 lb-VOC/yd³-hr and 2.30 E-4 lb-NH₃/yd³-hr, and the Biofilter Control Efficiencies for VOC and NH₃ are 40% and 45% respectively.

¹⁶ Current literature on biofilters suggests start-up (new biofilters) control will be least 50% of its optimal or minimum control. Since the minimum control of the biofilters is 80% and 90% for VOC and NH₃ respectively, the start-up control will be assumed at 40% and 45% for VOC and NH₃ respectively.

- The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). The Uncontrolled Active-Phase Emission Factors utilized in the emissions equations shall be established according to permit unit C-6048-19. All source test results shall be submitted to the District for approval of the Emission Factors.
- The permittee shall maintain records of: (1) the date and time of VOC and NH₃ monitoring measurements, (2) make and model of the portable analyzer(s), (3) portable analyzer calibration records, (4) a description of any corrective action taken to maintain the emissions within the acceptable range, and (5) mixing building Capture Efficiency. [District Rule 2201] N
- The permittee shall submit all mixing building Capture Efficiency monitoring results to the District for approval.
- The permittee shall keep monthly records of visual biofilter inspections and actions taken to correct compaction, channeling, unreasonable vegetative growth or a noticeable increase in odors, including date of inspection and date actions were taken to correct problem(s). [District Rule 2201] N
- {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] N

C-6048-9 and '-10:
COMPOST SCREENS

- The permittee shall keep daily and annual records of the amount of Compost screened, in wet tons. [District Rule 2201] N
- {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] N

C-6048-19:
CO-COMPOSTING OPERATION INCLUDING ACTIVE, MATURE AND CURING-PHASE PILES

- The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks

Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19).

- The permittee shall keep daily records of the VOC and NH₃ emissions from the Compost Piles (Active + Mature + Curing Phases), based on the following equation: Compost Piles Emissions (lb/day) = 60 min/hr x 24 hr/day [(Total Active-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Active-Phase Piles Volume (yd³)) + (Total Mature-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Mature-Phase Piles Volume (yd³)) + (Total Cure-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Cure-Phase Piles Volume (yd³))].
- When available, the Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). All source test results shall be submitted to the District for approval of the Emission Factors.
- Until the first source tests are available, the permittee shall maintain records of the composting throughput to assure the facility is composting no more than 25% of its capacity. Composting at 25% of capacity or less is considered a compliance method for the mass emission limits of this permit.¹⁷
- The permittee shall keep records to verify all finished compost meets the required stability criteria.
- {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] N

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATION

- The permittee shall keep daily and annual records of the amount of Compost loaded out, in wet tons. [District Rule 2201] N
- {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] N

C-6048-21:

GASOLINE STATION

¹⁷ The proposed composting EFs and resulting mass emission limits are based on an actual source for a co-composting facility using GORE covers, which is the identical emission unit and control technique proposed. Therefore, the District is comfortable with a safety factor of 4 (equivalent to an operational capacity limit of 25%) as a compliance assumption until the first source test is performed.

- The permittee shall maintain monthly gasoline throughput records.
- The permittee shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs.

C-6048-26:

TRANSPORTABLE COMPOST SCREEN POWERED BY ONBOARD DIESEL-FIRED IC ENGINE

- The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702] N
- The permittee shall keep daily and annual records of the amount of Bulking Agent screened, in wet tons. [District Rule 2201] N
- {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] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Impact Analysis (AAQIA)

Section 4.14.1 of Rule 2201 requires that an ambient air quality analysis (AAQIA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to **Appendix I** of this document for the AAQIA summary sheet.

The proposed location is in an attainment area for NO_x, CO, PM₁₀ and SO_x. As shown by the AAQIA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, PM₁₀ or SO_x.

The proposed location is in a non-attainment area for PM_{2.5}. However, the PM_{2.5} emissions from the project are below the EPA's level of significance as found in 40

CFR Part 51.165 (b)(2), based on the following assumption (included as a special permit condition):

- The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. This facility is a new Major Source, therefore this requirement is applicable. Included in **Appendix J** is CSDLAC's compliance certification.

Rule 2520 Federally Mandated Operating Permits

This facility will be subject to Rule 2520 (Title V) because it meets the following criteria specified in section 2.0:

- A Major Source (for VOC emissions).

Pursuant to Rule 2520, section 5.3.1, the facility must submit a Title V application within 12 months of commencing operation. No action is required at this time. The following condition will be placed on each ATC permit:

- The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520] N

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

The requirements of 40 CFR Part 60, Subpart IIII (*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*) covers stationary diesel engines. Since the proposed diesel-fired IC engines are portable, this NSPS subpart does not apply.

There are no additional potentially applicable NSPS subparts.

Rule 4002 National Emission Standards for Hazardous Air Pollutants NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

The requirements of 40 CFR Part 63, Subpart ZZZZ (*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*) covers stationary engines located at Major HAP sources. Since the proposed diesel-fired IC engines are portable, this NESHAPs subpart does not apply.

There are no additional potentially applicable NESHAPs subparts.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

IC engines:

Visible emissions from the EPA/CARB certified IC engines are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on District experience of inspections of similar engines, compliance is expected. The engines will be subject to the following condition:

- {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 operations at facility, except IC engines:

In addition, all operations besides the diesel IC engine exhausts shall meet the following conditions (applicant proposed) in order to justify the PM₁₀ PE calculations:

- Visible emissions shall not exceed 5% opacity. [District Rules 2201 and 4101] N
- Water sprays shall be used, as needed, to ensure visible emissions do not exceed 5% opacity. [District Rules 2201 and 4101] N

Therefore, compliance with District Rule 4101 requirements is expected.

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 as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. A permit condition will be listed on the permit as follows:

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

The use of the Gore Composting System satisfies District BACT requirements for VOC and NH₃ emissions and is expected to minimize odors.

Due to the rural location of the facility and use of control equipment satisfying District BACT requirements, public nuisance conditions are not expected as a result of these operations, provided the control equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Appendix I**), the total facility prioritization score was assumed to be > 1.0. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure. As shown on the attached assessment summary memo, the acute and chronic risks are negligible, the cancer risk for each unit is less than 1 in a million, and the facility's total cancer risk is less than 10 in a million. As a result, the project is approvable and Toxic BACT (TBACT) is not triggered. The following assumptions were included in the risk analysis:

- The sulfur content of the diesel fuel used shall not exceed 0.0015% by weight.
- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction.
- Fuel use limits as proposed by the applicant.

Permit conditions have been included to enforce these above-listed assumptions. Compliance with the District's Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard ft³.

IC engines:

Particulate matter emissions from the engines will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following:

$$\text{PM Conc.} = 0.13 \text{ g-PM}_{10}/\text{bhp-hr} \times 1 \text{ g-PM}/0.96 \text{ g-PM}_{10} \times 1 \text{ bhp-hr}/2,542.5 \text{ Btu} \times \text{MMBtu}/9,051 \text{ dscf} \\ \times 0.35 \text{ Btu}_{\text{out}}/1 \text{ Btu}_{\text{in}} \times 15.43 \text{ gr/g}$$

PM Conc. = 0.03 gr-PM/dscf

Since 0.03 grain-PM/dscf is \leq to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Therefore, the following condition will be listed on the ATCs to ensure compliance:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Bulking Agent transfer, screening, grinding, Compost transfer, and loadout

This rule applies only to sources with stacks. Therefore, this rule does not apply to these emission sources.

Rule 4202 Particulate Matter Emission Rate

Rule 4202 establishes PM emission limits as a function of process weight rate in tons/hr. A discharge into the atmosphere from any source operation, particulate matter in excess of that allowed by the process weight tables of this rule are not expected.

Bulking Agent/Compost transfer, screening, grinding, loadout

Each PM emitting operation processes more than 30 ton/hr. The maximum allowable emission rate for process throughputs greater than 30 tons per hour is calculated using the following equation:

$$E = 17.31 (P)^{0.16}$$

Where,

E = emissions, lb/hr

P = process throughput, ton/hr (worst case for any process = 350 ton/hr)

Therefore;

$$E = 17.31 (350)^{0.16} = 44.2 \text{ lb/hr}$$

As shown in the calculations section above, the PM_{10} PE for each permit unit is less than the calculated value of 44.2 lb/hr allowed by the rule. Therefore, compliance with this rule is expected.

Diesel fired IC engines:

Rule 4202 establishes PM emission limits as a function of process weight rate in tons/hr. Gas and liquid fuels are excluded from the definition of process weight. Therefore, Rule 4202 does not apply to the proposed IC engines.

Rule 4301 Fuel Burning Equipment

Pursuant to section 2.0, the provisions of this rule apply to any piece of fuel burning equipment. Section 3.1 defines fuel burning equipment as “any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer”.

The IC engines produce power mechanically, not by indirect heat transfer. Therefore, IC engines do not meet the definition of fuel burning equipment. Therefore, Rule 4301 does not apply to any source at the proposed facility.

Rule 4565 Biosolids, Animal Manure, and Poultry Litter

Applicability (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 proposed facility will co-compost biosolids (permit unit ¹-19); therefore, this rule applies.

Composting/Co-composting Requirements (Section 5.3):

Section 5.3 Applies to composting/co-composting operations. Section 5.3.3 applies to those composting/co-composting facilities with throughputs of at least 100,000 wet-tons per year, and requires the facility to meet either Section 5.3.3.1 or 5.3.3.2. The facility will comply with Section 5.3.3.2, which requires the implementation of 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. The mitigation measure options are shown in Table 2 from the rule:

Table 2 – Composting/Co-composting Facility Mitigation Measures	
<i>Class One Mitigation Measures</i>	
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.	<i>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.</i>
6.	<i>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.</i>
7.	Implement an alternative Class One mitigation measure(s) not listed above that demonstrates at least a 10% reduction, by weight, in VOC emissions.
<i>Class Two Mitigation Measures</i>	
8.	<i>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.</i>
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.	<i>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.</i>
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.

The facility has proposed to meet Section 5.3.3.2, which requires the implementation of 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. The applicant selected the measures that are bolded and italicized in the table above. See draft ATC '19-2 for related permit conditions.

VOCs from Aerated Static Piles and In-Vessel Systems (Section 5.4):

This monitoring section applies since the composting will take place in Aerated Static Piles (ASPs). Section 5.4 includes the following requirements:

- 5.4.1 In addition to the requirements of Section 5.3, an aerated static pile shall have no measurable increase (< 0.45 ppmv increase) over background levels of hydrocarbons within three feet of any surface of the aerated static pile.
- 5.4.2 In addition to the requirements of Section 5.3, an in-vessel composting operation shall have no measurable increase (< 0.45 ppmv increase) over background levels of hydrocarbons outside the in-vessel enclosure, including any opening that occurs briefly for access or maintenance.
- 5.4.3 An operator shall test for VOCs once each calendar quarter.
 - 5.4.3.1 The location and number of test points for aerated static pile composting system shall be determined using TMECC 02.01-B (Selection of Sampling Locations for Windrows and Piles).
 - 5.4.3.2 The openings of an in-vessel composting system shall be tested according to the test method specified in Section 6.2.3.2.
 - 5.4.3.3 The hydrocarbon analyzer shall meet the requirements specified in Section 6.2.4.2.
- 5.4.4 In lieu of complying with the applicable requirements of Sections 5.4.1 or 5.4.2, an operator may monitor one or more alternative parameters. The operator must demonstrate, to the satisfaction of the APCO and EPA, that the alternative parameter(s) correlates to the composting system capturing as much of the VOC emissions as technologically practical.

The facility has proposed to meet Sections 5.4.4 in lieu of Sections 5.4.1 and 5.4.2. Under this project, there are no changes to the compost pile permit; as such, the current testing and monitoring requirements satisfy this section. See draft ATC '19-2 for related permit conditions.
- 5.4.5 In lieu of complying with the requirements of Section 5.4.3, an operator may use a different analyzer or test on a different schedule if the operator demonstrates, to the satisfaction of the APCO and EPA, that the alternate analyzer or alternate schedule is as indicative of system performance as the requirements Section 5.4.3.

The facility has proposed to meet Sections 5.4.5 in lieu of Section 5.4.3. Section 5.4.3 requires test method TMECC 02.01-B (Selection of Sampling Locations for Windrows and Piles) be performed monthly. However, this is a core-sample test that would require the removal of the GORE covers monthly in order to perform. As this would result in unnecessary increases in emissions, the current and previously approved testing and monitoring requirements satisfy this section. See draft ATC '19-2 for related permit conditions.

Biofilter Requirements (Section 5.5):

This section does not apply since none of the compost piles are controlled by biofilters.

Non-Biofilter VOC Emission Control Device Requirements (Section 5.6):

This section applies since the facility uses non-biofilter controls (GORE covers) on their ASPs. Section 5.6 includes the following requirements:

- 5.6.1 In addition to the applicable requirements of Sections 5.3 and 5.4, an operator using a VOC emission control device that is not a biofilter shall monitor key system operating parameters that demonstrate continuous operation and compliance of the VOC emission control device during composting operations. Examples of key system operating parameters include, but are not limited to, temperatures, pressures, and flow rates.
- 5.6.2 In addition to the applicable requirements of Sections 5.3 and 5.4, operators using a VOC emission control device that is not a biofilter shall operate and maintain the VOC emission control device in accordance with the manufacturer's recommendations and any additional operating and maintenance standards determined necessary by the APCO, ARB, and EPA to ensure proper operation of the VOC control device.

Under this project, there are no changes to the compost pile permit; as such, the current testing and monitoring requirements satisfy this section. See draft ATC '19-2 for related permit conditions.

Source Testing Requirements for VOC Emission Control Device (Section 5.7):

Section 5.7 identifies the following:

- 5.7.1 The VOC emission control device (biofilter or non-biofilter) shall be tested for VOC control efficiency within ninety days of installation and every two years thereafter. VOC emission control devices with an active Permit-to-Operate on March 15, 2007 shall be tested for VOC control efficiency on or before September 30, 2007, and every two

years thereafter.

5.7.2 The source test must be conducted under representative operating conditions with respect to seasonal conditions, compost composition, process throughput, processing of materials, and pile geometries.

Under this project, there are no changes to the compost pile permit; as such, the current testing and monitoring requirements satisfy this section. See draft ATC '19-2 for related permit conditions.

Composting Facility Records (Section 6.1.4):

An operator of a composting facility subject to this rule shall keep the following records:

6.1.4.1 Throughput 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 process for reuse in another batch of compostable material; biosolids; animal manure; poultry litter; and green waste.

6.1.4.2 Class One Mitigation Measure Records

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.

6.1.4.3 Class Two Mitigation Measure Records

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.

See draft ATC '19-2 for related permit conditions.

VOC Inspection Records (Section 6.1.5):

The operator shall maintain an inspection logbook. The following information shall be contained in the logbook:

6.1.5.1 The date of the VOC inspection.

6.1.5.2 The reading of the portable hydrocarbon analyzer in ppmv for each inspection location.

6.1.5.3 If an alternate parameter is monitored, list the parameter monitored and record the level of the alternate parameter for each inspection location.

See draft ATC '19-2 for related permit conditions.

Composting/Co-Composting Compliance Schedule (Section 7.3.2):

Section 7.3.2 requires operators of facilities with throughputs of at least 100,000 wet tons per year to be in full compliance with all applicable rule requirements by March 15, 2010. Since the date has passed, the above-mentioned rule requirements will be incorporated in the applicant's ATC permits at this time.

Rule 4566 Organic Material Composting Operations

The provisions of this rule apply to composting facilities that compost and/or stockpile organic material.

Stockpiles used for composting operations that are subject to Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) and have organic material and biosolids, animal manure, or poultry litter on site are exempt from all stockpile requirements of this rule for the materials associated with those operations.

Composting operations that are subject to Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations) are exempt from all requirements of this rule.

Rule 4621 Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants

This rule applies to the transfer of gasoline into stationary storage tanks with capacity of greater than 250 gallons.

This rule requires that gasoline storage tanks be equipped with a permanent submerged fill pipe and an ARB-certified Phase I vapor recovery system. The rule further requires that the vapor recovery system be maintained and operated according to manufacturer's specifications.

The proposed Air Resources Board (ARB) certified aboveground tank integrates an ARB certified Phase I vapor recovery system that is equipped with a submerged fill pipe. The facility is also required to conduct equipment inspections to verify that the vapor recovery system is operating according to manufacturer's specification. Compliance with this rule is expected.

Rule 4622 Transfer of Gasoline into Vehicle Fuel Tanks

This rule applies to gasoline dispensing facilities that fuel motor vehicles except existing facilities with a throughput of less than or equal to 24,000 gallons of gasoline per calendar year and less than or equal to 10,000 gallons in any consecutive 30-day period.

Sections 5.1, 5.2 and 5.3 require that a Phase II vapor recovery system be properly installed, operated and maintained on any gasoline dispenser used to fill a motor vehicle fuel tank with a capacity greater than five gallons. This facility has proposed a certified aboveground tank with an integrated ARB certified Phase II system and the operator will be required to conduct inspections to verify that the equipment is operating according to the manufacturer specifications. Compliance is expected.

Section 5.4 requires the owner/operator to implement a periodic maintenance inspection program. The program shall be documented in an operation and maintenance (O&M) manual. Conditions will be added to the permit to verify compliance with this section (see conditions discussed in Section VIII.E.2).

Section 5.5 restricts the transfer of gasoline into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations, or an equipment defect that is identified in any applicable ARB Executive Order. The periodic maintenance inspections listed above along with the District's compliance inspections will verify compliance with this section.

Section 5.6 requires that the operator of any fuel dispensing system shall tag "Out-of-Order" on all dispensing equipment for which vapor recovery has been impaired. The periodic maintenance inspections listed above along with the District's compliance inspections will verify compliance with this section.

Section 5.7 requires that the vapor recovery system shall be maintained to have no leaks as determined by EPA Test Method 21. The periodic maintenance inspections listed above along with the District's compliance inspections will verify compliance with this section.

Section 5.9 requires that no person top off a motor vehicle fuel tank. Compliance with this section will be verified by District's inspections.

Section 5.11 requires that the owner of a vapor recovery system shall not tamper with or permit tampering with the system in a manner that would impair the operation or effectiveness of the system. The periodic maintenance inspections listed above along with the District's compliance inspections will verify compliance with this section.

Section 6.0 requires recordkeeping and testing. This issue has been address in Section VIII.E.1 &3. Compliance with this section is expected.

Rule 4701 Stationary Internal Combustion Engines – Phase 1

Rule 4701 limits the emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 50 bhp, that requires a Permit to Operate (PTO).

Transportable engines as defined in the rule are not subject to the emission limits of this rule per Section 4.2. The subject emission units are subject to the administrative requirements of Sections 6.1, 6.2.2, and 6.2.3. These administrative requirements are satisfied by related Rule 4702 conditions.

Therefore, compliance with the requirements of this rule is expected.

Rule 4702 Stationary Internal Combustion Engines - Phase 2

Purpose:

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines.

Applicability:

This rule applies to any internal combustion engine with a rated brake horsepower greater than 50 horsepower.

Requirements:

Section 5.1 requires that the owner of an internal combustion engine shall not operate it in such a manner that results in emissions exceeding the limits in the Engine Emission Limits table below:

Engine Type	Emission Limit/Standard	Compliance Date
1. Certified Compression-Ignited Engine		
a. EPA Certified Tier 3 or Tier 4 Engine	Certified Standard at time of replacement	At time of installation

The proposed engines meet the rule requirements since they are of the latest *available* tier for the particular power range.

Monitoring:

Section 5.7.1 requires that the owner of an engine subject to the requirements of Section 5.1 or 4.2 shall comply with the requirements specified in Sections 5.7.2 through 5.7.5.

Section 5.7.2 requires the owner to properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier.

Section 5.7.3 requires the owner to monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.

Section 5.7.4 requires each engine to install and operate a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and is allowed by Permit-to-Operate or Stationary Equipment Registration condition. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions. As allowed by 5.7.4, the applicant is proposing a non-resettable totalizing, fuel flow meter for each diesel-fired IC engine. The fuel flow meter will serve to verify compliance with the daily and annual emissions for each engine. The following condition applies to each engine:

- A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rule 4702] N

Section 5.7.5 is applicable to engines retrofitted with a NO_x exhaust control. The engines in this project do not have add-on NO_x controls. Therefore, the requirements of Section 5.7.5 are not applicable.

Emission Control Plan:

Section 6.1 requires that the owner of an engine subject to the requirements of Section 5.1 or Section 8.0, except for an engine specified in Section 6.1.1, shall submit to the APCO an emission control plan (ECP) of all actions to be taken to satisfy the emission requirements of Section 5.1 and the compliance schedules of Section 7.0.

Section 6.1.1 states Sections 6.1.2 through Section 6.1.3 shall not apply to an engine specified below:

6.1.1.1 A certified compression-ignited engine that has not been retrofitted with an exhaust control and is not subject to the requirements of Section 8.0.

The engines in this project are certified compression-ignited engines not retrofitted with exhaust control and are not subject to Section 8.0. Therefore, an ECP is not required.

Recordkeeping:

Section 6.2 requires that except for engines subject to Section 4.0, the owner of an engine subject to the requirements of Section 5.1 shall maintain an engine operating log to demonstrate compliance with this rule. This information shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The engine-operating log shall include, on a monthly basis, the following information:

- Total hours of operation,
- Type of fuel used,
- Maintenance or modifications performed,
- Monitoring data,
- Compliance source test results, and
- Any other information necessary to demonstrate compliance with this rule.

Section 6.2.2 requires that the data collected pursuant to the requirements of Section 5.7 shall be maintained for at least five years, shall be readily available, and made available to the APCO upon request.

Compliance Testing:

Section 6.3 requires that the owner of an engine subject to the requirements of Section 5.1 or the requirements of Section 8.0, shall comply with the requirements of Section 6.3, except for an engine specified in Section 6.3.1.

Section 6.3.1 states Sections 6.3.2 through Section 6.3.4 shall not apply to an engine specified below:

6.3.1.1 A certified compression-ignited engine that has not been retrofitted with an exhaust control and is not subject to the requirements of Section 8.0.

The engines in this project are certified compression-ignited engines not retrofitted with exhaust control and are not subject to Section 8.0. Therefore, source testing is not applicable.

Inspection and Monitoring (I&M) Plan:

Section 6.5 requires that the owner of an engine subject to the requirements of Section 5.1 or the requirements of Section 8.0, except for an engine specified in Section 6.5.1, shall submit to the APCO for approval, an I&M plan that specified all actions to be taken to satisfy the requirements of Section 6.5 and 5.7.

Section 6.5.1 states Sections 6.5.2 through Section 6.5.9 shall not apply to an engine specified below:

6.5.1.1 A certified compression-ignited engine that has not been retrofitted with an exhaust control and is not subject to the requirements of Section 8.0.

The engines in this project are certified compression-ignited engines not retrofitted with exhaust control and are not subject to Section 8.0. Therefore, an I&M Plan is not applicable.

Compliance Schedule

Section 7.3.1.2 requires the owner of an engine that is subject to Section 5.1 and that is required to submit an ATC in order to comply with the requirements of Rule 4702, shall submit such documents 6 months before the engine is required to be in compliance with the requirements of Section 5.1 of Rule 4702. The engines are currently in compliance with rule, no further action is required at this time.

Rule 4801 Sulfur Compounds

This rule contains a limit on sulfur compounds. The limit at the point of discharge is 0.2 percent by volume, 2000 ppmv, calculated as sulfur dioxide (SO₂), on a dry basis averaged over 15 consecutive minutes.

The maximum sulfur content of the diesel combusted shall not exceed 0.0015 wt%.

$$\text{S Conc.} = 0.0015\% \text{ S} \times 7.1 \text{ lb/gal} \times 64 \text{ lb-SO}_2/32 \text{ lb-S} \times \text{MMBtu}/9,051 \text{ scf} \times \text{gal-fuel}/0.137 \text{ MMBtu} \\ \times \text{lb-mol}/64 \text{ lb-SO}_2 \times 10.73 \text{ psi-ft}^3/\text{lb-mol-}^\circ\text{R} \times 520 \text{ }^\circ\text{R}/14.7 \text{ psi}$$

$$\text{S Conc.} = 1 \text{ ppmv}$$

Since 1.0 ppmv is \leq 2000 ppmv, this project is expected to comply with Rule 4801.

Rule 8011 General Requirements

The definitions, exemptions, requirements, administrative requirements, recordkeeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM₁₀ Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

Rule 8021 Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities

The purpose of this Rule is to limit fugitive dust emissions from construction, demolition, excavation, and related activities. It requires the use of reasonably available control measures (RACM), as defined in Rule 8010, to maintain visible dust emissions (VDE) under the 40% opacity requirement.

The permittee will commit to implementing RACM via the use of dust control measures (e.g., water, approved chemical stabilizers, etc.) during construction to maintain opacity to a level below 40% per Rule 8020 requirements. The following condition will be included on the ATC and PTO to ensure compliance with the requirements of this rule:

- Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements

for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]

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 ATC and 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] N

Note, all Bulking Agent and Compost transfers and storage Piles will be limited to no greater than 5% opacity; therefore, the requirements of this rule will be met.

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 the ATC and 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 the ATC and 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 the 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 the ATCs and PTOs 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, 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] N
- Whenever any portion of the site becomes inactive, 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] N

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant

environmental effects of proposed activities.

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

The County of Kings (County) is the public agency having principal responsibility for approving the Project. As such, the County served as the Lead Agency for the project. On April 20, 2004, the County certified the Final Environmental Impact Report (FEIR), finding that after implementing all feasible mitigation measures emissions of PM10 in the area of the processing facility would be cumulatively significant and unavoidable. The County approved the project and adopted a Statement of Overriding Consideration (SOC). The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CEQA Guidelines §15096). Pursuant to CEQA Guidelines 15091(a), the District has considered the Final EIR certified by the County and finds that the EIR adequately characterizes the project's potential impact on air quality.

The District's engineering evaluation of the project (this document) demonstrates that the District would impose permit conditions requiring the applicant to meet BACT and to provide offsets for VOCs (in the form of Emission Reduction Credits) due to the offset threshold being exceeded. Thus, the District concludes that through a combination of project design elements and permit conditions, project specific stationary source emissions will be reduced and mitigated to less than significant levels.

As a Responsible Agency the District is required to issue findings for significant air quality impacts detailed in the Lead Agency's EIR and adopt an SOC. However, as a single purpose agency, the District lacks the broader scope of authority given to local governments. The District has required all feasible mitigation measures to lessen the stationary source impacts to air quality from this project, and does not believe that it should overrule the land use decisions made by a general-purpose agency. Accordingly, after reviewing the County's SOC and the substantial evidence it relied on in adopting the SOC, the District finds that it had no basis on which to disagree with the SOC and evidence relied on therein. The District therefore adopts the County's SOC by reference as its own.

The following requirements will also be added to the applicable permits based on the EIR:

- For transportation of Puente Hills Green Waste in excess of 100,000 tons/year, the permittee shall use trucks that comply with the 2004 federal emission standards for heavy-duty engines.
- The maximum amount of bulking agent received at this facility shall not exceed 400,000 wet-ton/year.
- The total quantity of Biosolids received at this facility shall not exceed 500,000 wet ton/year.

California Health & Safety Code, Section 42301.6 (School Notice)

As discussed in Section III of this evaluation, this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Code of Regulations (CCR), Title 17 (Public Health), Division 3 (Air Resources), Chapter 1 (Air Resources Board), Subchapter 7.5 (Air Toxic Control Measures), Measure 93116 (Portable Diesel Engines)

§ 93116.1 - Applicability

Except as provided in §93116.1(b), all portable engines having a maximum rated hp of 50 bhp and greater and fueled with diesel are subject to this regulation. The proposed engine(s) are portable and are subject to this regulation.

§ 93116.2 - Definitions

Like District "transportable", federal "non-road", and California "off-road" engines, California "portable" engines are also mobile.

(bb) Portable means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. For the purposes of this regulation, dredge engines on a boat or barge are considered portable. The engine is not portable if:

- (1) the engine or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than 12 consecutive months. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination. Any engine, such as a back-up or stand-by engine, that replace engine(s) at a location, and is intended to perform the same or similar function as the engine(s) being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of all engine(s), including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

- (2) the engine remains or will reside at a location for less than 12 consecutive months if the engine is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two years) and that operates at that single location at least three months each year; or
- (3) the engine is moved from one location to another in an attempt to circumvent the portable residence time requirements.

§ 93116.2 - Requirements

Fuel and Fuel Additive Requirements:

This regulation stipulates that diesel-fueled portable engines shall use one of the following fuels:

1. CARB Diesel Fuel; or
2. An alternative diesel fuel that has been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines; or
3. CARB diesel fuel utilizing fuel additives that have been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.

The proposed engines will use CARB certified diesel fuel.

Diesel PM Standards:

Portable diesel-fueled engines that have not been permitted or registered prior to January 1, 2006, (meaning new engines or those operating illegally) are subject to "the most stringent of the federal or California emission standard for nonroad engines".

The proposed engines are of the latest available CARB certification (Tier 3), and satisfy the requirement.

Fleet Requirements:

The earliest fleet average PM requirement is 1/1/2013; therefore, there is no fleet requirement at this time.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue the ATCs subject to the permit conditions on the attached draft ATCs in **Appendix K**.

X. Billing Information

Annual Permit Fee Schedules			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-6048-1-3	3020-06	Miscellaneous	\$105
C-6048-2-3	3020-06	Miscellaneous	\$105
C-6048-3-3	3020-10-C	250 bhp IC engine	\$240
C-6048-4-3	3020-10-C	250 bhp IC engine	\$240
C-6048-5-3	3020-10-F	1,050 bhp IC engine	\$749
C-6048-6-3	3020-10-F	1,050 bhp IC engine	\$749
C-6048-7-3	3020-01-H	3,600 hp (electric)	\$1,030
C-6048-8-3	3020-01-H	3,600 hp (electric)	\$1,030
C-6048-9-3	3020-01-G	800 hp (electric)	\$815
C-6048-10-3	3020-01-G	800 hp (electric)	\$815
C-6048-19-3	3020-01-H	4,160 hp (electric)	\$1,030
C-6048-20-3	3020-06	Miscellaneous	\$105
C-6048-21-3	3020-11-A	1 Nozzle	\$34
C-6048-26-0	3020-10-B	139 bhp IC engine	\$117
Annual Total			\$7,047

Appendices

- A: *BACT Guideline (Compost Materials Transfers) and Top-Down Analysis for VOC, NH₃, and PM₁₀*
- B: *BACT Guideline 6.4.1 (Compost Materials Screening) and Top-Down Analysis for PM₁₀*
- C: *BACT Guideline 3.2.11 (Transportable IC Engines) and Top-Down Analysis for NO_x*
- D: *BACT Guideline 6.4.2 (Compost Materials Grinding) and Top-Down Analysis for PM₁₀*
- E: *BACT Guideline (Feedstocks Mixing and Storage) and Top-Down Analysis for VOC and NH₃*
- F: *BACT Guideline 6.4.7 (Co-Composting with Biosolids) and Top-Down Analyses for VOC and NH₃*
- G: *BACT Guideline 4.6.1 (Gasoline Dispensing) and Top-Down Analysis for VOC*
- H: *Site Layout*
- I: *Risk Management Review (RMR) & Ambient Air Quality Impact Analysis (AAQIA) Summaries*
- J: *Compliance Certification*
- K: *Draft ATCs C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0*
- L: *Source Test Summary - VOC & NH₃ Emissions from Bulking Agent Stockpile, Stratford, CA, 2005*
- M: *Source Test Summary - NH₃, CH₄, VOC Emissions from Greenwaste, Intravia Rock & Sand, 2002*
- N: *Electric Motor List*
- O: *Summary of Kettleman City Community Meeting on May 30, 2007*
- P: *Summary of "Full Scale Evaluation of GORE Technology on LACSD Biosolids at Cedar Grove Composting", Air Emissions Source Test, Conducted at Cedar Grove Composting in Everett, WA., August 2007*
- Q: *Summary of Source Testing "Assessment of Air Emissions from Fresh and Aged Biosolids" at LACSD's Joint Water Pollution Control Plant - Carson Facility, 10/07*
- R: *Summary of "Emissions Evaluation of Aerated Static Pile Composting of Anaerobically Digested Biosolids as the Davenport Composting Facility", 7/8/02*
- S: *Engineering Evaluation for Project C-1112854 (Emergency Stand-By Engines)*

Appendix A

*BACT Guideline (Outdoor Compost Materials Transfers)
and Top-Down Analyses for VOC, NH₃, and PM₁₀*

San Joaquin Valley Air Pollution Control District

Best Available Control Technology (BACT) Guideline x.x.x

Emission Unit: Outdoor Compost Materials Transfers/Storage (Compost and/or Compost Bulking Agents)

Industry Type: Compost

Last Update: March 15, 2008

Equipment Rating: > 300,000 wet ton-Compost/year

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Bulking Agents: Minimize material transfer/storage times to controlled areas to prevent composting, (examples: temperature of bulking agent must remain below decomposition temperature of 130 °F, bulking agents mixed/controlled with 7 days of receipt at facility)	<ol style="list-style-type: none"> 1. 98% overall control (enclosed vented to thermal/catalytic oxidizer) 2. 95% overall control (enclosed vented to carbon adsorption unit) 3. 80% overall control (enclosed vented to biofilter) 	
NH ₃	Bulking Agents: Minimize material transfer/storage times to controlled areas to prevent composting, (examples: temperature of bulking agent must remain below decomposition temperature of 130 °F, bulking agents mixed/controlled with 7 days of receipt at facility)	<ol style="list-style-type: none"> 1. 99% overall control (enclosed building vented to wet scrubber) 2. 90% overall control (enclosed vented to biofilter) 	
PM ₁₀	Compost: Use of water sprinkler system or maintaining moisture content of process materials to prevent visible emissions in excess of 5% opacity	99% overall control (enclosed vented to dust collector)	

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

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

Top Down BACT Analyses for VOC, NH₃, and PM₁₀

C-6048-1:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (NORTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

C-6048-2:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (SOUTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

C-6048-20:

FINISHED COMPOST TRUCK LOADOUT OPERATIONS (NORTH AND SOUTH)

Step 1 - Identify All Possible Control Technology Options

The following VOC emission control options were found based on a review of emission controls for active composting operations.

Option 1 - Enclosed building (100% capture) vented to carbon adsorption unit (generally accepted VOC control technique)

Option 2 - Enclosed building (100% capture) vented to a thermal or catalytic reduction unit (generally accepted VOC control technique)

Option 3 - Enclosed building (100% capture) vented to a biofilter

Biofilter uses microbiological organisms (microbes) or “bugs” to decompose or breakdown a VOC into less reactive compounds such as CO₂ and water. This decomposition typically takes place aerobically (in the presence of O₂). An established type of biofilter involves a porous medium (typically soil, compost or wood chips - Green Waste), that contain large populations of microbes. This type of system can be used as an after control. Other types of after control biofilters may be referred to as biotrickling or bioscrubbers. These types of filters and bioscrubber types function with the microbes suspended or mobilized in liquid phase. Per the Final Staff Report for SCAQMD Rule 1133.2, biofilters can achieve 80% and 90% control for VOC and NH₃ respectively for well-designed, well-operated, and well-maintained biofilters.

Option 4 - Negatively Aerated Static Pile (ASP) vented to a biofilter

Stationary Piles, which have air drawn negatively through the pile with low pressure, high volume blowers and a piping system. The air would be ducted to a biofilter for VOC and NH₃ control.

Alternate Basic Equipment: None

Option 5 - Minimize uncontrolled material transfer times

The applicant has proposed to limit the uncontrolled Bulking Agent transfer periods from when it is received at the facility to when it enters the mixing building. That is, the material will be moved to a controlled area before it begins to compost and facilitate anaerobic composting conditions. Composting typically begins at 130 °F.

Step 2 - Eliminate Technologically Infeasible Options

All options from above are technologically feasible, except for Options 3 & 4 - Capture methods with biofilter controls. This control method would be ineffective due to the short time periods that the material remains in a storage bunker. Once delivered to a storage bunker, the bulking agent will be transferred to the controlled mixing building within approximately three (3) working days.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank of VOC Control Options by Effectiveness			
Rank	Option	Overall Control	Achieved in Practice
1	100% Capture and Thermal or Catalytic Reduction	98% for VOC ⁽¹⁾	No
2	100% Capture and Carbon Adsorption	95% for VOC ⁽²⁾	No
3	Minimize uncontrolled material transfer periods	0 ⁽³⁾	Yes, applicant proposed

⁽¹⁾ Thermal or catalytic reduction for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 98% is readily achievable.

⁽²⁾ Carbon adsorption for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 95% is readily achievable.

⁽³⁾ Since there is not an accurate way to calculate a control efficiency for this control method, it will be assigned zero control as a conservative estimate.

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, which has not been proposed.

I. Cost Effectiveness Analysis: Thermal/Catalytic Reduction

The first step to controlling emissions is to capture emissions. Therefore, a cost analysis will be performed to determine if the annualized cost of enclosing the bulking agent receiving/storage area and the bulking agent emergency stockpile area (to capture the emissions) will be adequate to cause capture and control with thermal or catalytic incineration to be not cost effective per District BACT policy. Demonstrating that enclosing these areas is not cost effective, also demonstrates that a thermal or catalytic oxidation system would not be cost effective either.

Building Cost:

Building Size = area of 157,976 ft² ^(1, 2) would be required to house outdoor bulking agent receiving/storage and emergency stockpile areas

Building Cost = \$50/ft² (SCAQMD Rule 1133 Staff Report, 3/22/02, p. 4-6)

$$\begin{aligned} &= 157,976 \text{ ft}^2 \times \$50/\text{ft}^2 \\ &= \$7,898,800 \end{aligned}$$

Capital recovery factor (10% over 10 years) = 0.163

Annualized building cost = \$7,898,800 × 0.163 = \$1,287,504/year

Uncontrolled VOC emissions:

Per District BACT policy, emission reductions are based on the difference between industry standard emissions and the controlled emissions. For this case, industry standard emissions will be set equal to the uncontrolled EFs (worst-case assumption). The enclosure would capture emissions from the bulking agent receiving/storage areas and emergency stockpile. From C-6048-1 and '-2, the uncontrolled Outdoor Emissions are 3,193 lb/year.

VOC Reductions:

$$\begin{aligned} \text{VOC Reductions} &= 14,562 \text{ lb-VOC/year} \times 0.98 \\ &= 14,271 \text{ lb-VOC/year (equivalent to 7.1} \\ &\quad \text{tons/year)} \end{aligned}$$

¹ For the bulking agent emergency stockpile, based on 7,350 ton bulking agent emergency stockpile which is equivalent to approximately 32,665 cu.yds. Assuming a square pile with an average pile height of 12 feet results in a pile area of approximately 73,496 sq.ft.

² For each of the bulking agent storage areas, based on eleven 30'x60' bunkers on one side of the area and eight 25'x38' bunkers on the opposing side of the area with a 30' wide corridor between bunkers results in overall dimensions of 128'x330' (42,240 sq.ft.) for each storage area.

Cost of Reductions:

$$\begin{aligned}\text{Cost of Reductions} &= \$1,287,504/\text{year} \div 7.1 \text{ tons/year} \\ &= \$181,339/\text{ton}\end{aligned}$$

The cost of an enclosure to capture the VOC emissions from the bulking agent receiving and storage areas and emergency stockpile is greater than the \$17,500/ton cost-effectiveness threshold of the District BACT policy. Therefore, capture and control with a thermal or catalytic oxidation system is not cost effective. The equipment is therefore not cost effective and is being removed from consideration at this time.

II. Cost Effectiveness Analysis: Carbon Adsorption

As shown above, the cost of an enclosure to capture the VOC emissions from the bulking agent receiving and storage areas and emergency stockpile is greater than the \$17,500/ton cost-effectiveness threshold of the District BACT policy. Therefore, capture and control with a carbon adsorption system is not cost effective. The equipment is therefore not cost effective and is being removed from consideration at this time.

Step 5: Select BACT:

The applicant's proposal meets the BACT requirements for VOC emissions from this class and category of source (minimize transfer time from bulking agent delivery to mixing).

D. BACT Analysis for NH₃ Emissions

Step 1 - Identify All Possible Control Technology Options

Option 1 - Enclosed building (100% capture) vented to a biofilter

Biofilter uses microbiological organisms (microbes) or "bugs" to decompose or breakdown VOCs and NH₃, among others, into less reactive compounds such as CO₂ and water. This decomposition typically takes place aerobically (in the presence of O₂). An established type of biofilter involves a porous medium (typically soil, Compost or wood chips - Green Waste), that contain large populations of microbes. This type of system can be used as an after control. Other types of after control biofilters may be referred to as biotrickling or bioscrubbers. These types of filters and bioscrubber types function with the microbes suspended or mobilized in liquid phase.

Option 2 - Enclosed building (100% capture) Wet Scrubber (Absorption)

The absorption process works by the diffusion of a compound from a gas into a liquid. In order for diffusion to occur, the gaseous compound (the solute) must be soluble within the liquid (the solvent). The common scrubbing liquids for this case would be sulfuric acid and water. In order to make absorption work well for air pollution control, the diffusion rate across the liquid/gas boundary must also be adequate, and the contact between the air and water must be

maximized. According to Ceilcote Air Pollution Control, Bay Products, Inc., and Tri-Mer, 99% NH₃ control is readily achievable for wet scrubbers.

Option 3 - Negatively Aerated Static Pile (ASP) vented to a biofilter

Stationary Piles, which have air drawn negatively through the pile with low pressure, high volume blowers and a piping system. The air would be ducted to a biofilter for VOC and NH₃ control.

Option 4 - Minimize uncontrolled material transfer times

The applicant has proposed to limit the uncontrolled Bulking Agent transfer periods from when it is received at the facility to when it enters the mixing building. That is, the material will be moved to a controlled area before it begins to compost and facilitate anaerobic composting conditions. Composting typically begins at 130 °F.

Alternate Basic Equipment: None

Step 2 - Eliminate Technologically Infeasible Options

All options from above are technologically feasible, except for Options 1 & 3 – Capture methods with biofilter controls. This control method would be ineffective due to the short time periods that the material remains in a storage bunker. Once delivered to a storage bunker, the bulking agent will be transferred to the controlled mixing building within approximately three (3) working days.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank of NH₃ Control Options by Effectiveness			
Rank	Option	Control	Achieved in Practice
1	100% capture to wet scrubber	99%	No
2	Minimize uncontrolled material transfer periods	0 ⁽¹⁾	Yes, applicant proposed

⁽³⁾ Since there is not an accurate way to calculate a control efficiency for this control method, it will be assigned zero control as a conservative estimate.

Step 4 - Cost Effectiveness Analysis

I. Cost Effectiveness Analysis: Wet Scrubber

A partial cost analysis will be performed to determine if the annualized purchase cost of a wet scrubber will be adequate to cause NH₃ control via a wet scrubbing to be not cost effective per District BACT policy.

Uncontrolled NH₃ emissions = 188 lb/year

NH ₃ Reductions (ton/year) 99% control	
Total	0.01

Annualized Purchase Cost

The capital equipment cost (provided by Tri-Mer) for a 99% efficient wet scrubber controlling NH₃ emissions at the proposed emission rate, flow rate, and operating schedule is no less than \$500,000 (conservatively estimated).

The annualized total cost of the equipment is:

$$A = [P \times i(i + 1)^n] \div [(i + 1)^n - 1]$$

Where: n = lifetime of the equipment, assume 10 years
P = present value of the capital to be annualized (\$500,000)
I = the interest rate, assumed to be 10%.

$$A = [\$500,000 \times 0.1(1.1)^{10}] \div [(1.1)^{10} - 1] = \$81,373/\text{year}$$

Cost of Reductions:

$$\$81,373/\text{year} \times \text{year}/0.01 \text{ ton-NH}_3 = \$8,137,300/\text{ton-NH}_3 \text{ reduced}$$

Note: No cost effectiveness threshold for NH₃ exists. However, because NH₃ is a precursor to PM₁₀ (NH₃ forms ammonia nitrate in the atmosphere) the cost effectiveness threshold for PM₁₀ of \$11,400/ton will be used. Since the cost-effectiveness threshold is \$11,400/ton-NH₃ reduced, this option is not cost effective. The equipment is therefore not cost effective and is being removed from consideration at this time.

Step 5: Select BACT:

The applicant's proposal meets the BACT requirements for VOC emissions from this class and category of source (minimize transfer time from bulking agent delivery to mixing).

E. BACT Analysis for PM₁₀ Emissions

Step 1 - Identify All Possible Control Technology Options

Option 1 - Use of water sprinkler system or maintaining moisture content of process materials to prevent visible emissions in excess of 5% opacity (generally accepted PM₁₀ control technique)

Option 2 - Dust collector (generally accepted PM₁₀ control technique)

Alternate Basic Equipment: None

Step 2 - Eliminate Technologically Infeasible Options

All options from above are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank of VOC Control Options by Effectiveness			
Rank	Option	Control	Achieved in Practice
1	100% capture and dust collector	99%	No
2	Water sprays to achieve $\leq 5\%$ opacity	70% ⁽²⁾	Yes, applicant proposed

⁽¹⁾ A dust collector for PM₁₀ control is a common control technique. It is District practice to assume that a PM₁₀ control efficiency of 99% readily achievable.

⁽²⁾ Water spray PM₁₀ control efficiency is at least 70% (AP-42, Section 11.19.1, *Sand and Gravel Processing*).

Step 4 - Cost Effectiveness Analyses

A cost-effective analysis will now be performed for each control technology, which has not been proposed.

I. Cost Effectiveness Analysis: Dust Collection

The first step to controlling emissions is capture. Therefore, a partial cost analysis will be performed to determine if the annualized cost of enclosing the Green Waste stockpile area (to capture the emissions) will be adequate to cause PM₁₀ capture and control with a dust collector to be not cost effective per District BACT policy. Demonstrating that enclosing the stockpile area alone is not cost effective, also demonstrates that a dust collector would not be cost effective either.

Building Cost:

Building Size = addition area of 63,000 ft² would be required to house Compost Piles (conservative estimate from plot plan)

Building Cost = \$50/ft² (SCAQMD Rule 1133 Staff Report, 3/22/02, p. 4-6)
 = \$3,150,000

Capital recovery factor (10% over 10 years) = 0.163

Annualized building cost = \$3,150,000 × 0.163 = \$513,450/year

Uncontrolled PM₁₀ emissions:

The enclosure would capture emissions from the Bulking Agent Piles as well as the mixing emissions.

Per District BACT policy, emission reductions are based on the difference between industry standard emissions and the controlled emissions. As a conservative estimate, the industry standard emissions will be based on uncontrolled material transfer emissions:

Uncontrolled Emission Sources (removed 70% control via water sprays)	PM ₁₀ (lb/year)
Truck loadout	9,000

Reductions via Baghouse (99% control)	PM ₁₀ (ton/year)
Total	4.5

Cost of Reductions:

Cost of Reductions = \$513,450/year ÷ 4.5 tons/year = \$114,100/ton

The cost of an enclosure to capture the PM₁₀ emissions from Bulking Agent processing is greater than the \$11,400/ton cost effectiveness threshold of the District BACT policy. Therefore, capture and control with a dust collection system is not cost effective. The equipment is therefore not cost effective and is being removed from consideration at this time.

II. Cost Effectiveness Analysis: Water sprays to achieve ≤ 5% opacity

A cost effectiveness analysis is not required for proposed controls. The applicant has proposed the use of a water sprinkler system or maintaining a moisture content of the Bulking Agent materials to prevent visible emissions in excess of 5% opacity. This control method will be listed as Achieved in Practice (AIP).

Step 5: Select BACT:

The applicant has proposed to use the only control technology not eliminated in Step 4 above. Therefore, the applicant's proposal meets the BACT requirements for PM₁₀ emissions from this class and category of source.

Appendix B

BACT Guideline 6.4.1 (Compost Materials Screening) and Top-Down Analysis for PM₁₀

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 6.4.1*

Last Update: April 3, 1998

**Emission Unit: Composted Materials - Screening, Transportable, Wood Waste
Processing**

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
PM ₁₀	Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity		

Top Down BACT Analysis for PM₁₀ Emissions

This PM₁₀ top down BACT analysis applies to C-6048-3 and '-4 (Bulking Agent screening).

Step 1 - Identify All Possible PM₁₀ Control Technologies

SJVAPCD BACT Clearinghouse Guideline 6.4.1 identifies Achieved in Practice (AIP) BACT as "Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity".

SJVAPCD BACT Clearinghouse Guideline 6.4.1 does not identify any technologically feasible control technologies.

SJVAPCD BACT Clearinghouse Guideline 6.4.1 does not identify any alternate basic equipment control technologies.

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity

d. Step 4 - Cost Effectiveness Analysis

Per the District BACT Policy (APR 1305), Section IX.D, a cost effectiveness analysis is not required for achieved in practice controls. The only control technology alternative in the ranking list from Step 3 has been AIP; therefore a cost effectiveness analysis will not be performed.

e. Step 5 - Select BACT

The applicant is proposing the use of water to maintain adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity for all PM₁₀ generating emission units. As the applicant is proposing the most effective control technology remaining from step 3 above, the BACT requirement for PM₁₀ emissions will be met.

Appendix C

*BACT Guideline (Transportable IC Engines)
and Top-Down Analysis for NO_x, PM₁₀, and VOC*

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline

Emission Unit: Transportable Compression-Ignited IC Engines (Non-Agricultural)

Industry Type: Non-Agricultural

Equipment Rating: ≤ 1,200 bhp

Last Update: August 28, 2006

Pollutant	Achieved in Practice	Technologically Feasible	Alternate Basic Equipment
VOC	<ul style="list-style-type: none"> The proposed engine shall meet the latest available CARB certification standard for the particular horsepower range. <p>(Example: a 200 bhp engine proposed in 2007 shall be Tier 3 certified and meet the emission standard of ≤ 0.149 g-PM₁₀/bhp-hr)</p>		<ul style="list-style-type: none"> LPG/Propane Fired Engine
NO _x			
CO			
PM ₁₀			
SO _x	<ul style="list-style-type: none"> Very Low Sulfur Fuel (0.0015% fuel S by weight) 		

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

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

Top-Down BACT Analysis for NO_x , PM_{10} , and VOC Emissions

I. Step 1 - Identify All Possible Control Technologies

Option 1 - Latest available certified compression-ignited engine, Achieved in Practice (AIP)

Option 2 - LPG fired engine, Alternate Basic Equipment (ABE)

II. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options shown in Step 1.

III. Step 3 - Rank Technologies

Control Technology	Rank	Emission Factors (g/bhp-hr)	Technology Classification for BACT
LPG/Propane Engine + 3-way catalyst system	1	NO_x : 0.35 (\approx 25 ppmvd @ 15% O ₂) VOC: 0.5 (\approx 100 ppmvd @ 15% O ₂) CO: 3.4 (\approx 400 ppmvd @ 15% O ₂) PM_{10} : 0.063	ABE
Latest Tier Certification Levels	2	NO_x + VOC: 3.0 - 5.6 CO: 2.6 - 3.7 PM_{10} : 0.149 - 0.3	AIP

IV. Step 4 - Cost Effectiveness Analyses

Cost Effectiveness Analysis: LPG Engine (shown on next page)

The cost analysis shown is a multi-pollutant cost analysis for NO_x , SO_x , CO, PM_{10} , and VOC emissions. As demonstrated in the cost analysis, an LPG engine as ABE is not cost effective for any engine 50 - 1,200 bhp. Therefore, an LPG engine is not cost effective for the proposed 250 and 1,050 bhp IC engines.

Cost Effectiveness Analysis: Latest Available Certified Compression-Ignited Engine

Per District BACT Policy, a cost effectiveness analysis is not required for AIP controls since the control must be implemented.

V. Step 5 - Select BACT

The remaining control not eliminated in Step 4 (latest available certification) is considered AIP BACT for this class and category of source. The applicant has proposed the latest certification (Tier 3); therefore, BACT is satisfied.

Portable IC Engine Alternate Basic Equipment (ABE) Cost Analysis: LPG vs Diesel

bhp	MCET ⁴ (\$/year)	Diesel Engine Purchase (\$/year)	Diesel Fuel ¹ (\$/year)	LPG Engine (\$/year)	3-way Cat (\$/year)	LPG Fuel ² (\$/year)	Cost Difference (ABE - Diesel) (\$/year)	Is LPG Cost Effective?
50	\$14,709	\$978	\$37,406	\$2,282	\$2,445	\$58,145	\$24,488	NO
100	\$29,417	\$1,467	\$74,812	\$3,668	\$2,445	\$116,290	\$46,124	NO
150	\$44,126	\$2,396	\$112,218	\$4,075	\$2,445	\$174,435	\$66,341	NO
200	\$58,835	\$2,869	\$149,623	\$6,341	\$2,445	\$232,579	\$88,873	NO
250	\$73,544	\$4,157	\$187,029	\$8,183	\$2,445	\$290,724	\$110,166	NO
300	\$88,252	\$4,189	\$224,435	\$8,981	\$2,445	\$348,869	\$131,671	NO
400	\$117,670	\$6,145	\$299,247	\$10,562	\$2,445	\$465,159	\$172,774	NO
500	\$147,087	\$6,292	\$374,058	\$12,844	\$2,445	\$581,449	\$216,388	NO
600	\$176,505	\$8,802	\$448,870	\$16,007	\$2,445	\$697,738	\$258,518	NO
700	\$205,922	\$10,562	\$523,682	\$19,234	\$2,445	\$814,028	\$301,463	NO
800	\$235,340	\$12,714	\$598,493	\$23,146	\$2,445	\$930,318	\$344,701	NO
900	\$264,757	\$15,159	\$673,305	\$27,710	\$2,445	\$1,046,608	\$388,298	NO
1,000	\$294,174	\$18,256	\$748,117	\$33,252	\$2,445	\$1,162,897	\$432,221	NO
1,100	\$323,592	\$21,842	\$822,928	\$39,935	\$2,445	\$1,279,187	\$476,797	NO
1,200	\$353,009	\$26,243	\$897,740	\$47,922	\$2,445	\$1,395,477	\$521,861	NO

Assumptions:

Industry Standard EF's (g/bhp-hr) ³					Engine Rating (bhp)	Diesel Engine Purchase ² (\$)	LPG Engine ⁶ (\$)	3-way Cat (\$) ⁹
NOx	VOC	SOx	PM10	CO	50	\$6,000	\$14,000	\$15,000
4.78	0	0.0051	0.149	3.03	100	\$9,000	\$22,500	\$15,000
Diesel Fuel Cost (\$/gal):					150	\$14,700	\$25,000	\$15,000
Diesel Brake Specific Fuel Consumption ⁷ (Btu/bhp-hr):					200	\$17,600	\$38,900	\$15,000
Spark-Ignited BSFC ⁷ (Btu/bhp-hr):					250	\$25,500	\$50,200	\$15,000
Capital recovery factor (10%, 10 yrs):					300	\$25,700	\$55,100	\$15,000
LPG fuel cost ⁸ (\$/gal):					400	\$37,700	\$64,800	\$15,000
Op Schedule (hr/year):					500	\$38,600	\$78,800	\$15,000
LPG EF's (g/bhp-hr) ⁵					600	\$54,000	\$98,200	\$15,000
NOx	VOC	SOx	PM10	CO	700	\$64,800	\$118,000	\$15,000
0.35	0.5	0.01	0.063	3.4	800	\$78,000	\$142,000	\$15,000
					900	\$93,000	\$170,000	\$15,000
					1,000	\$112,000	\$204,000	\$15,000
					1,100	\$134,000	\$245,000	\$15,000
					1,200	\$161,000	\$294,000	\$15,000

¹Takes into account annual average of 65% load.

²Per District ERIP Dept.: Includes capital engine cost, misc. material, tax, and installation.

³The NOx and PM10 EFs are Tier 2 levels. Note, the Tier 2 level of 4.78 is actually for NOx+HC (conservatively used solely for NOx here). The CO EF is from AP-42, Table 3.3-1, 10/96 (for diesel engines less than 600 hp). The SOx EF is based on very low S fuel since that kind of fuel is AIP.

⁴The emissions reductions used for the MCET are based on the difference between industry stnd diesel emissions (Tier 2) and required District Rule 4702 spark-ignited engine emission levels.

⁵Achievable via 3-way catalyst on a rich burn engine.

⁶Per Cummins, includes purchase, misc. equip. and tax.

⁷CAPCOA Portable IC Engine Tech. Ref. Document, 5/95.

⁸Per Red Triangle Oil (559-485-4320), a local propane supplier

⁹Per Ceasar Balman (Engine Control Systems), turnkey cost about \$3,000; needs replacing every 2 yrs (total \$15,000 over 10 yrs)

LPG HHV (Btu/gal): 90,500 (from AP-42, A-6, 9/85)
453.6 g/lb x 2,000 lb/ton = 907,200 g/ton

Appendix D

*BACT Guideline 6.4.2 (Compost Materials Grinding)
and Top-Down Analysis for PM₁₀*

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.2*

Last Update: April 3, 1998

Emission Unit: Tub Grinder - Transportable, Wood Waste Processing

Pollutant	Achieved in Practice or contained in SIP	Technological ly Feasible	Alternate Basic Equipment
PM ₁₀	Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity		

Top Down BACT Analysis for PM₁₀ Emissions

This PM₁₀ top down BACT analysis applies to C-6048-5 and -6 (Bulking Agent grinding).

Step 1 - Identify All Possible PM₁₀ Control Technologies

SJVAPCD BACT Clearinghouse Guideline 6.4.2 identifies Achieved in Practice (AIP) BACT as "Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity".

SJVAPCD BACT Clearinghouse Guideline 6.4.2 does not identify any technologically feasible control technologies.

SJVAPCD BACT Clearinghouse Guideline 6.4.2 does not identify any alternate basic equipment control technologies.

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity.

d. Step 4 - Cost Effectiveness Analysis

Per the District BACT Policy (APR 1305), Section IX.D, a cost effectiveness analysis is not required for achieved in practice controls. The only control technology alternative in the ranking list from Step 3 has been AIP; therefore a cost effectiveness analysis will not be performed.

e. Step 5 - Select BACT

The applicant is proposing the use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity for all PM₁₀ generating emission units. As the applicant is proposing the most effective control technology remaining from step 3 above, the BACT requirement for PM₁₀ emissions will be met.

Appendix E

*BACT Guideline (Biosolids Receiving/Storage and Mixing) and
Top-Down Analyses for VOC and NH₃*

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline

Emission Unit: Biosolids Receiving and Feedstocks Mixing

Industry Type: Co-Composting using Biosolids and Bulking Agents

Equipment Rating: > 300,000 wet ton-Compost/year

Last Update: March 15, 2008

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	≥ 80% overall control (enclosed vented to biofilter with ≥ 80% control)	1. 98% overall control (enclosed vented to thermal/catalytic oxidizer) 2. 95% overall control (enclosed vented to carbon adsorption unit)	
NH ₃	≥ 80% overall control (enclosed vented to biofilter with ≥ 80% control)	99% overall control (enclosed vented to wet scrubber)	

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

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

Top Down BACT Analyses - Mixing Buildings

BACT Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technology Options

Option 1 - Enclosure(100% capture) vented to carbon adsorption unit (generally accepted VOC control technique)

Option 2 - Enclosure (100% capture) vented to a thermal or catalytic reduction unit (generally accepted VOC control technique)

Option 3 - Enclosure (100% capture) vented to a biofilter with 80% control for VOC and NH₃ respectively

Alternate Basic Equipment: None

Step 2 - Eliminate Technologically Infeasible Options

All options from above are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank of VOC Control Options by Effectiveness			
Rank	Option	Overall Control	Achieved in Practice
1	100% Capture and Thermal or Catalytic Reduction	98% ⁽¹⁾	No
2	100% Capture and Carbon Adsorption	95% ⁽²⁾	No
3	100% Capture and Biofilter	80% ⁽³⁾	Yes - applicant proposed

⁽¹⁾ Thermal or catalytic reduction for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 98% is readily achievable.

⁽²⁾ Carbon adsorption for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 95% readily achievable.

⁽³⁾ The applicant has proposed to vent the biosolids receiving and mixing emissions to a biofilter with a minimum 80% VOC control.

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, which has not been proposed.

I. Cost Effectiveness Analysis: Thermal/Catalytic Reduction

A partial cost analysis will be performed to determine if the annual natural gas cost will be adequate to cause VOC capture and control with thermal or catalytic incineration to be not cost effective per District BACT policy. The increase in temperature of the contaminated air stream required by a catalytic incineration system is less than for thermal incineration, so less fuel gas is needed to heat the exhaust stream. Therefore, by demonstrating that a catalytic incinerator would cause such a system to not be cost effective, will also be sufficient to show that a thermal oxidation system would not be cost effective either.

Annual Natural Gas Requirement:

$$\text{Natural Gas Requirement} = (\text{flow})(C_{p\text{Air}})(\Delta T) \div (\text{HEF})$$

Where:

Flow (Q) = exhaust flow rate of VOC contaminated air stream: 100,000 acfm⁽¹⁾

C_{pAir} = specific heat of air: 0.0194 Btu/scf - °F

ΔT = increase in the temperature of the contaminated air stream required for catalytic oxidation to occur (It will be conservatively assumed that the air stream would increase in temperature from 100 °F to 600 °F.)

HEF = heat exchanger factor: 0.7⁽²⁾

$$\text{Gas Requirement} = [100,000 \text{ scf/min} \times 0.0194 \text{ Btu/scf} - \text{°F} \times (600 \text{ °F} - 100 \text{ °F})] \div 0.7 = 1,385,714 \text{ Btu/min}$$

Uncontrolled VOC emissions:

As a conservative estimate, the reductions will be based on the uncontrolled emissions.

Uncontrolled VOC Emissions (lb/year)	
Emission Source	VOC
Biosolids receiving (removed the 80% biofilter control)	9,980
Feedstocks Mixing (removed the 80% biofilter control)	13,230
Total	23,210

VOC Reductions 98% control	
Total	22,746 lb/yr ⇒ 11.4 ton/year

¹ Although the applicant has identified a total building exhaust flow rate of 300,000 acfm, a flow rate of 100,000 acfm will be used as a conservative estimate for this cost analysis.

² Vataavuk, William, Estimating Costs of Air Pollution Control, 1991, page 150.

Annual Natural Gas Cost:

The fuel usage will be reduced by the heating value of the influent VOC stream. The heating value of the VOC's being controlled is not known so the heating value of MEK (13,729 Btu/lb) will be utilized in the calculation:

Btu content = 35,460 lb-VOC/year × 13,729 Btu/lb = 486,830,340 Btu/yr
Gas Cost: \$7.00/MMBtu ⁽³⁾
Oxidizer Operating hours = (8 hr/day)(365 day/yr) = 2,920 hr/year

Gas Cost = [(1,385,714 Btu/min × 60 min/hr × 2,920 hr/year) - 486,830,340 Btu/yr] × (\$7.00/MMBtu × MMBtu/10⁶ Btu)

Gas Cost = \$1,637,832/yr

Cost of Reductions:

Cost of Reductions = \$1,637,832/yr ÷ 11.4 tons/year = \$143,670/ton

The cost of VOC reduction utilizing either a thermal or catalytic oxidizer is greater than the \$17,500/ton cost effectiveness threshold of the District BACT policy. The above cost number does not include any purchase, installation, or maintenance costs. Inclusion of these additional costs would raise the cost per ton number even higher. The equipment is therefore not cost effective and is being removed from consideration at this time.

II. Cost Effectiveness Analysis: Carbon Adsorption

Carbon adsorption occurs when air containing VOCs is blown through a carbon unit and the VOCs are adsorbed onto the surface of the cracks in the activated carbon particles.

Uncontrolled VOC emissions:

As a conservative estimate, the reductions will be based on the uncontrolled emissions.

Uncontrolled VOC Emissions (lb/year)	
Total	23,210

VOC Reductions 95% control	
Total	22,050 lb/yr ⇒ 11.0 ton/year

³ Industrial natural gas price for CA averaged approximately \$7.00/1,000 scf (\$7.00/MMBtu) for the last 6 months; per http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm

Carbon Costs:

Two main areas of cost are the cost of the device itself, replacement of the saturated carbon, and the operating cost of the carbon adsorption system. To size the vessel(s) needed, the carbon requirement must be analyzed:

Since carbon can adsorb 20% of its weight in VOCs, and the control efficiency of carbon adsorption is 95%, the total amount of carbon required per year can be determined as follows:

$$\text{Carbon required} = 22,050 \text{ lb-VOC reduced/yr} \times 1 \text{ lb-Carbon}/0.2 \text{ lb-VOC} = 110,250 \text{ lb-Carbon/yr or } 55 \text{ ton-Carbon/yr}$$

The analysis will be based on a single vessel with an annual carbon replacement schedule is proposed (approximately 100,000 lbs).

The cost of a carbon adsorption system sized for a typical 14,000 scfm enclosed automotive spray booth is estimated using the calculations from Chapter 12 of Air Pollution Control - A Design Approach by C. David Cooper and F.C. Alley. This flowrate is extremely conservative due to the proposed flowrate of the mixing building biofilters, which is significantly higher than the automotive spray booth flowrate assumption.

Capital Cost:

The purchase price for a carbon-steel package adsorber, complete with fan, instrumentation and piping can be estimated from the following relationship equation:
$$\text{PEC} (\$) = 20,000 + 0.277M_c^{1.200}$$

Where PEC = Purchase price in 1977 dollars
 M_c = mass of carbon in the system

$$\begin{aligned} \text{PEC} &= 20,000 + (0.277)(100,000^{1.200}) \\ &= 20,000 + (0.277)(1,000,000) \\ &= 20,000 + (277,000) \end{aligned}$$

$$\text{PEC} = \$327,000$$

The total capital investment is equal to 1.25 times the purchase cost. The sales tax and freight charges total 8% of the base equipment cost. Finally, adjusting from 1977 dollars to 2012 dollars, multiply by 2.75% inflation/yr for 35 years (1.963).

Therefore,

$$\text{Capital} = (\$327,000) \times (1.25) \times (1.08) \times (1.963) = \$829,926$$

$$\text{Capital (Annualized 10\%, for 10 years - District BACT Policy)} = \$866,566$$

$$A = \$866,566 \times 0.163 = \$141,250/\text{yr}$$

Carbon Replacement Cost:

Cost of carbon = 110,250 lb-Carbon/yr x \$0.80/lb = \$88,200/yr

Total Annual Carbon Adsorption Cost:

Total annual cost = \$141,250/yr + \$88,200/yr = \$229,450/yr

Cost of Reductions:

Cost/ton of emissions (\$/ton)= \$229,450/yr ÷ 11.0 ton-VOC/yr = \$20,859/ton-VOC

Cost/ton of emission reductions = \$20,859/ton-VOC

The VOC cost effectiveness threshold is \$17,500 per ton (per BACT Policy addendum dated 8/14/2008). Since the calculated controlled cost exceeds the cost effective value of \$17,500/ton for VOC, a carbon adsorption system is deemed not cost effective for this project.

III. Cost Effectiveness Analysis: Biofilter

A cost effectiveness analysis is not required for proposed controls. The applicant has proposed an overall VOC control efficiency of 80%; therefore, a cost analysis will not be performed. Enclosure with biofilter control will be listed as Achieved in Practice (AIP).

Step 5: Select BACT:

The applicant has proposed to use the only control technology not eliminated in Step 4 above. Therefore, the applicant's proposal meets the BACT requirements for VOC emissions from this class and category of source.

BACT Analysis for NH₃ Emissions

Step 1 - Identify All Possible Control Technology Options

Option 1 - Enclosure (100% capture) vented to a biofilter (80% control)

Option 2 – Enclosure (100% capture) vented to Wet Scrubber (Absorption)

Alternate Basic Equipment: None

Step 2 - Eliminate Technologically Infeasible Options

All options from above are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank of NH3 Control Options by Effectiveness			
Rank	Option	Control	Achieved in Practice
1	100% capture to wet scrubber	99%	No
2	100% capture to biofilter	80% ⁽¹⁾	Yes - applicant proposed

⁽¹⁾ The applicant has proposed to vent the mixing emissions to a biofilter with a minimum 80% NH₃ control.

Step 4 - Cost Effectiveness Analysis

The District does not have a cost effective threshold for ammonia emissions; therefore, no cost analysis will be performed. A surrogate value is not appropriate for use since a direct relationship is not available for any of the other pollutants. As such, the District is only requiring Achieved-in-Practice controls for NH₃. The applicant has proposed to implement the AIP biofilter control to satisfy BACT.

Step 5: Select BACT:

The applicant has proposed to use the only control technology not eliminated in Step 4 above (biofilter control). Therefore, the applicant's proposal meets the BACT requirements for NH₃ emissions from this class and category of source.

Appendix F

*BACT Guideline 6.4.7 (Co-Composting with Biosolids)
and Top-Down Analyses for VOC and NH₃*

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 6.4.7

Emission Unit: Co-Composting Piles with Biosolids

Industry Type: Co-Composting using
Biosolids and Bulking Agents

Equipment Rating: Co-Composting Piles > 100,000 tpy
throughput (wet, Biosolids + Bulking Agents/amendments
introduced into Compost process).

Last Update: November 17, 2004
(for Project #1032219 - South Kern)

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equip
<p>VOC & NH3</p>	<p>Active phase</p> <p>Negatively aerated static piles with engineered, under pile, grid aeration system venting to control device with $\geq 80\%$ control efficiency.</p> <p>Cure phase</p> <p>Negatively aerated static piles with engineered, under pile, grid aeration system venting to control device with $\geq 80\%$ control efficiency.</p>	<p>Active phase</p> <ol style="list-style-type: none"> 1. Enclose aerated static piles and vent to control device with $\geq 80\%$ control efficiency. 2. Enclose windrows and vent to control device with $\geq 80\%$ control efficiency. <p>Cure phase</p> <ol style="list-style-type: none"> 1. Enclose aerated static piles and vent to control device with $\geq 80\%$ control efficiency. 2. Enclose windrows and vent to control device with $\geq 80\%$ control efficiency. 	

Top Down BACT Analysis - Composting Piles

Step 1 - Identify All Possible Active Phase VOC and NH₃ Control Technologies

SJVAPCD BACT Clearinghouse Guideline 6.4.1 identifies Achieved in Practice (AIP) BACT as “Negatively aerated static Piles with engineered, under pile, grid aeration system venting to control device with $\geq 80\%$ control efficiency”.

SJVAPCD BACT Clearinghouse Guideline 3.3.13 identifies technologically feasible BACT as “Enclose aerated static Piles and vent to control device with $\geq 80\%$ control efficiency”.

SJVAPCD BACT Clearinghouse Guideline 3.3.13 identifies technologically feasible BACT as “Enclose windrows and vent to control device with $\geq 80\%$ control efficiency”.

SJVAPCD BACT Clearinghouse Guideline 3.3.13 does not identify any alternate basic equipment control technologies.

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Enclose ASPs and vent to control device with $\geq 80\%$ control efficiency for VOC and NH₃.
2. Enclose windrows and vent to control device with $\geq 80\%$ control efficiency for VOC and NH₃.
3. Negatively aerated static Piles with engineered, under pile, grid aeration system venting to control device with $\geq 80\%$ control efficiency for VOC and NH₃.

d. Step 4 - Cost Effectiveness Analysis

VOC

Per District BACT policy, a cost-effectiveness analysis is not required if the most stringent control technique is proposed. Since the proposed GORE covers achieve greater than 80% VOC control, the most stringent Technologically Feasible BACT option is satisfied.

NH₃

The District does not have a cost effective threshold for ammonia emissions; therefore, no cost analysis will be performed. A surrogate value is not appropriate for use since a direct relationship is not available for any of the other pollutants. As such, the District is only requiring AIP controls for NH₃. The applicant has proposed to implement mitigation measures that satisfy the AIP BACT requirements for this class and category of source (see Step 5 below for further discussion).

e. Step 5 - Select BACT

The applicant is proposing the use of the GORE System to control VOC and NH₃ emissions from the active phase of the co-composting process. As shown in a source test report submitted to the SJVAPCD (Appendix P), the overall VOC and NH₃ control levels for the proposed Gore System are approximately 91% and 56%, respectively. These emission control levels account for both the capture and emission control levels of the Gore system.

The proposed overall VOC emission control level of 91% for the Gore system is greater than the most stringent BACT option of 80% overall VOC control. As such, BACT is satisfied for VOC emissions.

For NH₃, the only remain control left from Step 4 are AIP. The SJVAPCD's final staff report for Rule 4565 shows a capture efficiency of approximately 33%, and coupled with an 80% control, the overall control efficiency is approximately 26% for unenclosed negative ASPs used to control emissions from co-composting of biosolids¹⁸. The 56% overall control achieved by the Gore System is higher than the 26% control of a negative ASP vented to a biofilter. The applicant is proposing a control technology that is as effective as the most effective control technology remaining from step 4 above, therefore, the BACT requirements for NH₃ emissions will be met by the proposed Gore System.

¹⁸ SJAPCD Final Staff Report Rule 4565 (Composting/Biosolids Operations), February 15, 2007, Appendix B, page B-4.

Appendix G

*BACT Guideline 4.6.4 (Gasoline Dispensing)
and Top-Down Analysis for VOC*

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 4.6.1*

Last Update: October 1, 2002**

Emissions Unit: Motor Vehicle Gasoline Storage and Dispensing Operation

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	CARB certified Phase I and Phase II vapor recovery systems		

** Determinations 4.6.1 and 4.6.2 were combined 10/01/02 since BACT requirements are now identical for both classes of this source category.

BACT Analysis for VOC Emissions:

Step 1 - Identify All Possible Control Technologies

Combined emission control system consisting of ARB certified Phase I and Phase II vapor recovery system.

Step 2 - Eliminate Technologically Infeasible Options

All control technologies listed in the clearinghouse are feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

ARB certified Phase I and Phase II vapor recovery systems

Step 4 - Cost Effectiveness Analysis

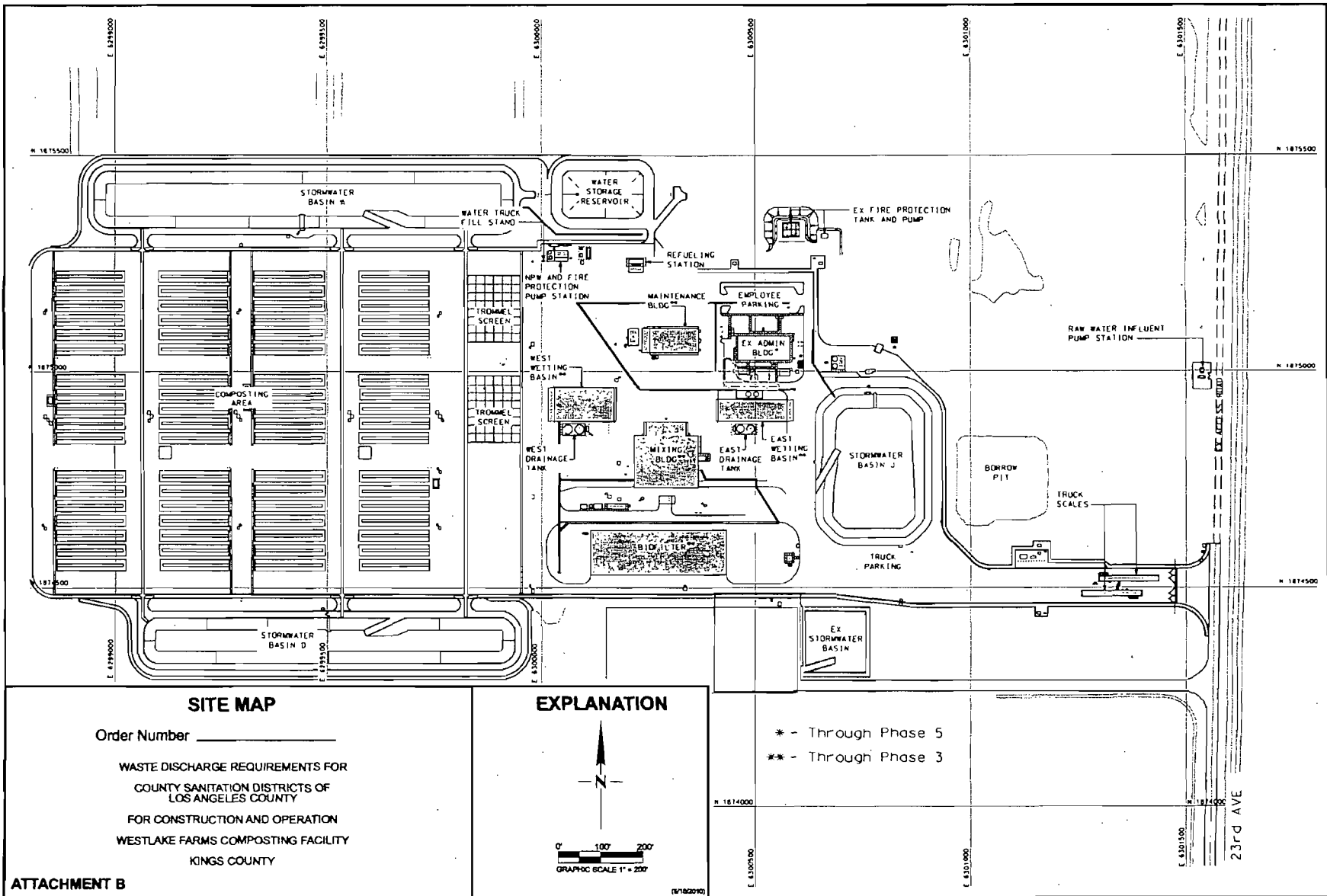
A cost effectiveness analysis is not required when the applicant proposes the most effective control method identified as technologically feasible. A combined Phase I and Phase II vapor recovery system is identified as technologically feasible and achieved in practice BACT. Therefore, further cost effectiveness analysis is not required.

Step 5 - Select BACT

The applicant's proposed use of Phase I and Phase II vapor recovery for the control of VOC emissions satisfies District's BACT requirements.

Appendix H

Site Layout



SITE MAP

Order Number _____

WASTE DISCHARGE REQUIREMENTS FOR
COUNTY SANITATION DISTRICTS OF
LOS ANGELES COUNTY

FOR CONSTRUCTION AND OPERATION
WESTLAKE FARMS COMPOSTING FACILITY
KINGS COUNTY

ATTACHMENT B

EXPLANATION

N

0' 100' 200'
GRAPHIC SCALE 1" = 200'

* - Through Phase 5
** - Through Phase 3

2370 AVE

Appendix I

Risk Management Review (RMR) & Ambient Air Quality Impact Analysis (AAQIA) Summaries

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Brian Clements, AQE – Permit Services
 From: Joe Aguayo, AQS – Technical Services
 Date: April, 18, 2012
 Facility Name: Westlake Farms
 Location: Kettleman City, CA
 Application #(s): C-6048-1-3, -2-3, -3-3, -4-3, -5-3, -6-3, -7-3, -8-3, -9-3, -10-3, -19-3, -20-3, -21-3, -26-0
 Project #: C-1111582

A. RMR SUMMARY

RMR Summary						
Permit Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk (10 ⁻⁶)	T-BACT Required?	Special Conditions?
Bulking Agent Rec/Sto (Unit 1-3)	0.0	0.00	0.00	0.0	No	No
Bulking Agent Rec/Sto (Unit 2-3)	0.0	0.00	0.00	0.0	No	No
Bulking Agent Screens/ICE (Unit 3-3)	N/A ¹	0.00	0.00	0.1	No	No
Bulking Agent Screens/ICE (Unit 4-3)	N/A ¹	0.00	0.00	0.1	No	No
Bulking Agent grinders/ICE (Unit 5-3)	N/A ¹	0.00	0.00	0.1	No	No
Bulking Agent grinders/ICE (Unit 6-3)	N/A ¹	0.00	0.00	0.2	No	No
Biosolids Rec/Sto (Unit 7-3)	0.0	0.00	0.00	0.0	No	No
Biosolids Rec/Sto (Unit 8-3)	0.0	0.00	0.00	0.0	No	No
Compost Screening (Unit 9-3)	0.0	0.00	0.00	0.0	No	No
Compost Screening (Unit 10-3)	0.0	0.00	0.00	0.0	No	No
Compost Piles (Unit 19-3)	0.0	0.54	0.04	0.0	No	No
Compost Truck Loadout (Unit 20-3)	0.0	0.00	0.00	0.0	No	No
Gas Dispensing Operation (Unit 21-3)	0.0	0.00	0.00	0.0	No	No
Compost Screen/ICE (Unit 26-0)	N/A ¹	0.00	0.00	0.4	No	No
Project Totals	>1.0	0.54	0.04	0.9	No	Yes
Facility Totals	>1.0	0.54	0.04	0.9	No	Yes

¹Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

Proposed Permit Conditions

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

Units # -1-3, -2-3, -7-3, -8-3, -9-3, -10-3, -19-3, -20-3, -21-3

No special conditions are required.

Units # -3-3, -4-3, -5-3, -6-3, and -26-0

1. The PM10 emissions rate shall not exceed 0.149 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

Facilitywide condition

1. For AAQA purposes the facility boundary was defined as the area within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944.

B. RMR REPORT

I. Project Description

Technical Services received a request on January 18, 2012, to perform an and Ambient Air Quality Analysis a Risk Management Review for the proposed installation of a transportable 139bhp diesel fired IC engine powering a trommel screen (unit 26-0). Additionally, the applicant has proposed the modification of: Bulking agent storing and receiving operations (1-3 and 2-3), transportable bulking agent screens powered by IC engines (3-3 and 4-3), transportable bulking agent grinders powered by IC engines (5-3 and 6-3), biosolids receiving/storage, mixing operations and compost transfers (7-3 and 8-3), compost screening operations (9-3 and 10-3), compost piles with gore covers (19-3), finished compost truck loadout operation (20-3), gasoline dispensing operation (21-3).

II. Analysis

Technical Services performed a health risk assessment using the VOC and PM₁₀ emissions from the Agricultural Dust spreadsheets and emissions provided by the project engineer. The cumulative prioritization scores were greater than 1.0, thus modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2007-2009 from Lemoore to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. Since each of the units involved in this project is located in different areas of the facility, staff has modeled each unit separately.

Analysis Parameters for Point Sources					
Permit Units	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Max Fuel Use (gal/yr)
Bulking Agent Screens/ICE (Unit 3-3)	4.15	0.1	83.72*	744.11	21,350
Bulking Agent Screens/ICE (Unit 4-3)					
Bulking Agent grinders/ICE (Unit 5-3)	4.15	0.2	88.69 ¹	756.33	34,336
Bulking Agent grinders/ICE (Unit 6-3)					
Compost Screen/ICE (Unit 26-0)	3.35	0.089	60.52 ¹	797.79	35,078

Analysis Parameters for Area Sources			
Permit Units	X-Length	Y-Length	Release Height
Bulking Agent Rec/Sto (Unit 1-3)	236.15	211.99	6.1
Bulking Agent Rec/Sto (Unit 2-3)	168.59	29.78	6.1
Bulking Agent Screens/ICE (Unit 3-3)	236.15	211.99	6.1
Bulking Agent Screens/ICE (Unit 4-3)	73.93	254.75	6.1
Bulking Agent grinders/ICE (Unit 5-3)	236.15	211.99	6.1
Bulking Agent grinders/ICE (Unit 6-3)	40.95	39.36	6.1
Biosolids Rec/Sto (Unit 7-3)	28.66	45.84	6.1
Biosolids Rec/Sto (Unit 8-3)	46.8	32.97	6.1
Compost Screening (Unit 9-3)	236.15	211.99	6.1
Compost Screening (Unit 10-3)	73.93	254.75	6.1
Compost Piles (Unit 19-3)	236.15	211.99	6.1
Compost Truck Loadout (Unit 20-3)	236.32	71.61	6.1
Gas Dispensing Operation (Unit 21-3)	10.89	12.61	6.1
Compost Screen/ICE (Unit 26-0)	236.15	69.99	6.1

Receptors were modeled as a uniform polar grid with the nearest receptors being 4511m away from unit 26-0. Receptors were assumed to be residential receptors.

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 9.8 lb/hr CO, 13.6 lb/hr NO_x, 0.0 lb/hr SO_x, and 1.6 lb/hr PM₁₀. The engineer supplied the maximum fuel rates for the IC engines and fugitive emission rates used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

Appendix J

Compliance Certification

Certification of Compliance of Major Stationary Sources

I, Gregory M. Adams, on behalf of the County Sanitation Districts of Los Angeles County, hereby certify under penalty of perjury as follows:

1. I am authorized to make this certification on behalf of the County Sanitation Districts of Los Angeles County.
2. This certification is made pursuant to Section 4.15.2 of Rule 2201 of the Rules and Regulations of the San Joaquin Valley Unified Pollution Control District.
3. To the best of the undersigned's knowledge, all major stationary sources owned or operated by the County Sanitation Districts of Los Angeles County in the State of California are either in compliance or on a schedule of compliance with all applicable state and federal emission limitations and standards.

Each of the statements herein is made in good faith. Accordingly, it is the County Sanitation Districts of Los Angeles County's understanding in submitting this certification that SJVUAPCD shall take no action against the County Sanitation Districts of Los Angeles County or any of its employees based on any statement made in this certification.

Gregory M. Adams
Assistant Departmental Engineer
Air Quality Engineering
Technical Services Department
County Sanitation Districts of Los
Angeles County

Dated: January 20, 2012

Appendix K

Draft ATCs C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-1-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.

MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (NORTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Biosolids are the solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-1-3: Apr 24 2012 1:30PM - CLEMENTB . Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]
7. Compost Material consists of Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof. [District Rule 2201]
8. Feedstocks are composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids. [District Rule 2201]
9. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
10. For transportation of Puente Hills green waste in excess of 100,000 tons/year, the permittee shall use trucks whose engines comply with the 2004 or later federal emission standards for heavy-duty on-road engines. [California Environmental Quality Act]
11. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. {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]
13. Visible emissions shall not exceed 5% opacity at any point in the Bulking Agent receiving, transfer or storage process. [District Rules 2201 and 4101]
14. Water sprays shall be used, as needed, to ensure visible from any Bulking Agent does not exceed 5% opacity. [District Rules 2201 and 4101]
15. The maximum amount of bulking agent received under permit units C-6048-1 and C-6048-2 shall not exceed either of the following limits: 3,800 wet-ton/day or 400,000 wet-ton/year. [District Rule 2201 and California Environmental Quality Act]
16. The maximum volume of bulking agent, not including the emergency agricultural waste stockpile, stored under permit units C-6048-1 and C-6048-2 shall not exceed 24,350 yd³ at any one time. The maximum volume of the emergency agricultural waste stockpile under permit units C-6048-1 and C-6048-2 shall not exceed 32,667 yd³ at any one time. [District Rule 2201]
17. Emissions from the Bulking Agent receiving, transfers and stockpiling shall not exceed 0.001 lb-PM10/wet ton. [District Rule 2201]
18. Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201]
19. Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201]
20. All bulking agent shall be processed in the mixing building and sent to compost within seven calendar days of receipt at the facility. This condition does not apply to the emergency agricultural waste stockpile. [District Rule 2201]
21. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
22. Source testing for VOC and NH₃ emissions shall be performed on the surface of two District identified Bulking Agent Piles (one Green Waste, one Ag Waste) using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

23. Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after operation commences (first mixing of Feedstocks). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). Source testing the Bulking Agent under permit units C-6048-1 and C-6048-2 may cease after demonstrating compliance on four consecutive source tests. [District Rule 2201]
24. District approved independent testing lab(s) shall perform the source testing. [District Rule 2201]
25. All source testing shall take place under conditions considered representative of normal source operation. [District Rule 2201]
26. The source test summary shall include the uncontrolled Ag Waste and Green Waste Emission Factors for VOC and NH3 (lb-pollutant/yd3-hr), the total respective pile volumes and the densities of Ag Waste and Green Waste (ton/yd3). [District Rule 2201]
27. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH3 emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19). [District Rule 2201]
29. The permittee shall keep daily records of the total VOC and NH3 emissions from the Outdoor Bulking Agent, based on the following equation: Outdoor Bulking Agent Emissions (lb/day) = 24 (hr/day) x [Uncontrolled Green Waste Emission Factor (lb/yd3-hr) x Total Outdoor Green Waste Average Pile Volume (yd3) + Uncontrolled Ag Waste Emission Factor (lb/yd3-hr) x Total Outdoor Ag Waste Average Pile Volume not including emergency stockpile (yd3)] + [Uncontrolled Ag Waste Emission Factor (lb/yd3-hr) x Emergency Stockpile Volume (yd3) x 24 hr/day]. [District Rule 2201]
30. Until the first source test results are available, the Uncontrolled Green Waste Emission Factors are 6.74 E-4 lb-VOC/yd3-hr and 8.87 E-6 lb-NH3/yd3-hr, the Uncontrolled Ag Waste Emission Factors are 4.93 E-6 lb-VOC/yd3-hr and 5.33 E-8 lb-NH3/yd3-hr. [District Rule 2201]
31. The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). All source test results shall be submitted to the District for approval of the Emission Factors. [District Rule 2201]
32. The permittee shall keep daily and annual records of the amount of bulking agent received at the facility, in wet tons and cubic yards (yd3). [District Rule 2201 and California Environmental Quality Act]
33. The permittee shall keep records to verify that all bulking agent, not including the emergency agricultural waste stockpile, is processed in the mixing building and sent to compost within seven calendar days of receipt at the facility. [District Rule 2201]
34. {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]
35. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
36. 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]
37. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

38. 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]
39. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
40. 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]
41. 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, permittee shall apply water, gravel, roadmix, 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]
42. Whenever any portion of the site becomes inactive, 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]
43. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
44. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
45. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-2-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

BULKING AGENT (AGRICULTURAL WASTE AND GREEN WASTE) RECEIVING AND STORAGE OPERATION (SOUTH); INCLUDES AN OUTDOOR RECEIVING/PROCESSING AREA AND AN OUTDOOR EMERGENCY SEVEN-DAY STOCKPILE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Biosolids are the solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-6048-2-3 : Apr 24 2012 1:30PM - CLEMENTB : Joint Inspection NOT Required

6. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]
7. Compost Material consists of Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof. [District Rule 2201]
8. Feedstocks are composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids. [District Rule 2201]
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10. For transportation of Puente Hills green waste in excess of 100,000 tons/year, the permittee shall use trucks whose engines comply with the 2004 or later federal emission standards for heavy-duty on-road engines. [California Environmental Quality Act]
11. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. {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]
13. Visible emissions shall not exceed 5% opacity at any point in the Bulking Agent receiving, transfer or storage process. [District Rules 2201 and 4101]
14. Water sprays shall be used, as needed, to ensure visible from any Bulking Agent does not exceed 5% opacity. [District Rules 2201 and 4101]
15. The maximum amount of bulking agent received under permit units C-6048-1 and C-6048-2 shall not exceed either of the following limits: 3,800 wet-ton/day or 400,000 wet-ton/year. [District Rule 2201 and California Environmental Quality Act]
16. The maximum volume of bulking agent, not including the emergency agricultural waste stockpile, stored under permit units C-6048-1 and C-6048-2 shall not exceed 24,350 yd³ at any one time. The maximum volume of the emergency agricultural waste stockpile under permit units C-6048-1 and C-6048-2 shall not exceed 32,667 yd³ at any one time. [District Rule 2201]
17. Emissions from the Bulking Agent receiving, transfers and stockpiling shall not exceed 0.001 lb-PM₁₀/wet ton. [District Rule 2201]
18. Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201]
19. Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201]
20. All bulking agent shall be processed in the mixing building and sent to compost within seven calendar days of receipt at the facility. This condition does not apply to the emergency agricultural waste stockpile. [District Rule 2201]
21. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
22. Source testing for VOC and NH₃ emissions shall be performed on the surface of two District identified Bulking Agent Piles (one Green Waste, one Ag Waste) using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

23. Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after operation commences (first mixing of Feedstocks). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). Source testing the Bulking Agent under permit units C-6048-1 and C-6048-2 may cease after demonstrating compliance on four consecutive source tests. [District Rule 2201]
24. District approved independent testing lab(s) shall perform the source testing. [District Rule 2201]
25. All source testing shall take place under conditions considered representative of normal source operation. [District Rule 2201]
26. The source test summary shall include the uncontrolled Ag Waste and Green Waste Emission Factors for VOC and NH₃ (lb-pollutant/yd³-hr), the total respective pile volumes and the densities of Ag Waste and Green Waste (ton/yd³). [District Rule 2201]
27. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19). [District Rule 2201]
29. The permittee shall keep daily records of the total VOC and NH₃ emissions from the Outdoor Bulking Agent, based on the following equation: Outdoor Bulking Agent Emissions (lb/day) = 24 (hr/day) x [Uncontrolled Green Waste Emission Factor (lb/yd³-hr) x Total Outdoor Green Waste Average Pile Volume (yd³) + Uncontrolled Ag Waste Emission Factor (lb/yd³-hr) x Total Outdoor Ag Waste Average Pile Volume not including emergency stockpile (yd³)] + [Uncontrolled Ag Waste Emission Factor (lb/yd³-hr) x Emergency Stockpile Volume (yd³) x 24 hr/day]. [District Rule 2201]
30. Until the first source test results are available, the Uncontrolled Green Waste Emission Factors are 6.74 E-4 lb-VOC/yd³-hr and 8.87 E-6 lb-NH₃/yd³-hr, the Uncontrolled Ag Waste Emission Factors are 4.93 E-6 lb-VOC/yd³-hr and 5.33 E-8 lb-NH₃/yd³-hr. [District Rule 2201]
31. The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). All source test results shall be submitted to the District for approval of the Emission Factors. [District Rule 2201]
32. The permittee shall keep daily and annual records of the amount of bulking agent received at the facility, in wet tons and cubic yards (yd³). [District Rule 2201 and California Environmental Quality Act]
33. The permittee shall keep records to verify that all bulking agent, not including the emergency agricultural waste stockpile, is processed in the mixing building and sent to compost within seven calendar days of receipt at the facility. [District Rule 2201]
34. {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]
35. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
36. 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]
37. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

38. 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]
39. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
40. 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]
41. 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, permittee shall apply water, gravel, roadmix, 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]
42. Whenever any portion of the site becomes inactive, 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]
43. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
44. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
45. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-6048-3-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.

MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE BULKING AGENT ROTARY DRUM TROMMEL SCREEN (NORTH) POWERED BY AN ONBOARD 250 BHP TIER 3 CERTIFIED CATERPILLAR MODEL 3126B OR EQUIVALENT DIESEL-FIRED IC ENGINE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-6048-3-3: Apr 24 2012 1:30PM -- CLEMENTB : Joint Inspection NOT Required

6. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
7. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. Particulate matter emissions from the engine shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. {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]
10. Visible emissions from bulking agent screening shall not exceed 5% opacity. [District Rules 2201 and 4101]
11. Water sprays shall be used, as needed, to ensure visible emissions from bulking agent screening does not exceed 5% opacity. [District Rules 2201 and 4101]
12. The combined bulking agent screen throughput of units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 3,800 ton/day or 80,000 wet-ton/year. [District Rule 2201]
13. Emissions from the bulking agent screening operation shall not exceed 0.003 lb-PM10/wet-ton. [District Rule 2201]
14. The combined amount of diesel fuel consumed by units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 260 gal/day or 21,350 gal/year. [District Rule 2201]
15. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rules 2201 and 4702]
16. The permittee shall obtain APCO approval for the use of any equivalent engine not specifically approved by this Authority to Construct. Approval of an equivalent engine shall only be made after the APCO's determination that the submitted design and performance data for the proposed alternate engine are equivalent to the approved engine. [District Rule 2201]
17. The permittee's request for approval of an equivalent engine shall include, at minimum, the following information: CARB certification/executive order, engine manufacturer and model number, maximum power rating (bhp), and manufacturer's guaranteed emission factors. [District Rule 2201]
18. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
19. No emission factor and no emission rate shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
20. This engine shall not be operated at one location or site at the facility for more than 12 consecutive months. [District Rules 2201 and 4701, and 17 CCR 93116]
21. Emissions from the engine shall not exceed any of the following limits: 3.0 g-NOx/bhp-hr, 2.6 g-CO/bhp-hr, or 0.15 g-VOC/bhp-hr. [District Rules 2201 and 4702, and 17 CCR 93116]
22. Emissions from this IC engine shall not exceed 0.149 g-PM10/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93116]
23. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be consumed by the engine. [District Rules 2201 and 4801, and 17 CCR 93116]
24. The engine's exhaust stack(s) shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
25. The engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]

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CONDITIONS CONTINUE ON NEXT PAGE

26. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
27. The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702]
28. Permittee shall keep daily and annual records of the amount of bulking agent screened, in wet-tons. [District Rule 2201]
29. {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]
30. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
31. 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]
32. 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]
33. 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]
34. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
35. 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]
36. 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, permittee shall apply water, gravel, roadmix, 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]
37. Whenever any portion of the site becomes inactive, 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]
38. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
39. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

40. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-4-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.

MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE BULKING AGENT ROTARY DRUM TROMMEL SCREEN (SOUTH) POWERED BY AN ONBOARD 250 BHP TIER 3 CERTIFIED CATERPILLAR MODEL 3126B OR EQUIVALENT DIESEL-FIRED IC ENGINE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-4-3 : Apr 24 2012 1:30PM -- CLEMENTB : Joint Inspection NOT Required

6. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
7. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. Particulate matter emissions from the engine shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. {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]
10. Visible emissions from bulking agent screening shall not exceed 5% opacity. [District Rules 2201 and 4101]
11. Water sprays shall be used, as needed, to ensure visible emissions from bulking agent screening does not exceed 5% opacity. [District Rules 2201 and 4101]
12. The combined bulking agent screen throughput of units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 3,800 ton/day or 80,000 wet-ton/year. [District Rule 2201]
13. Emissions from the bulking agent screening operation shall not exceed 0.003 lb-PM10/wet-ton. [District Rule 2201]
14. The combined amount of diesel fuel consumed by units C-6048-3 and C-6048-4 shall not exceed either of the following limits: 260 gal/day or 21,350 gal/year. [District Rule 2201]
15. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rules 2201 and 4702]
16. The permittee shall obtain APCO approval for the use of any equivalent engine not specifically approved by this Authority to Construct. Approval of an equivalent engine shall only be made after the APCO's determination that the submitted design and performance data for the proposed alternate engine are equivalent to the approved engine. [District Rule 2201]
17. The permittee's request for approval of an equivalent engine shall include, at minimum, the following information: CARB certification/executive order, engine manufacturer and model number, maximum power rating (bhp), and manufacturer's guaranteed emission factors. [District Rule 2201]
18. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
19. No emission factor and no emission rate shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
20. This engine shall not be operated at one location or site at the facility for more than 12 consecutive months. [District Rules 2201 and 4701, and 17 CCR 93116]
21. Emissions from the engine shall not exceed any of the following limits: 3.0 g-NOx/bhp-hr, 2.6 g-CO/bhp-hr, or 0.15 g-VOC/bhp-hr. [District Rules 2201 and 4702, and 17 CCR 93116]
22. Emissions from this IC engine shall not exceed 0.149 g-PM10/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93116]
23. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be consumed by the engine. [District Rules 2201 and 4801, and 17 CCR 93116]
24. The engine's exhaust stack(s) shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
25. The engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]

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CONDITIONS CONTINUE ON NEXT PAGE

26. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
27. The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702]
28. Permittee shall keep daily and annual records of the amount of bulking agent screened, in wet-tons. [District Rule 2201]
29. {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]
30. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
31. 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]
32. 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]
33. 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]
34. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
35. 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]
36. 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, permittee shall apply water, gravel, roadmix, 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]
37. Whenever any portion of the site becomes inactive, 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]
38. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
39. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

40. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-5-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE BULKING AGENT GRINDER (NORTH) POWERED BY AN ONBOARD 1,050 BHP TIER 2 CERTIFIED CATERPILLAR MODEL 3412E OR EQUIVALENT DIESEL-FIRED IC ENGINE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-6048-5-3 : Apr 24 2012 1:30PM - CLEMENTB Joint Inspection NOT Required

6. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
7. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. Particulate matter emissions from the engine shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. {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]
10. Visible emissions from bulking agent grinding shall not exceed 5% opacity. [District Rules 2201 and 4101]
11. Water sprays shall be used, as needed, to ensure visible emissions from bulking agent grinding does not exceed 5% opacity. [District Rules 2201 and 4101]
12. The combined bulking agent grinding throughput of units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 770 ton/day or 80,000 wet-ton/year. [District Rule 2201]
13. Emissions from the bulking agent grinding operation shall not exceed 0.003 lb-PM10/wet-ton. [District Rule 2201]
14. The combined amount of diesel fuel consumed by units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 590 gal/day or 34,336 gal/year. [District Rule 2201]
15. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rules 2201 and 4702]
16. The permittee shall obtain APCO approval for the use of any equivalent engine not specifically approved by this Authority to Construct. Approval of an equivalent engine shall only be made after the APCO's determination that the submitted design and performance data for the proposed alternate engine are equivalent to the approved engine. [District Rule 2201]
17. The permittee's request for approval of an equivalent engine shall include, at minimum, the following information: CARB certification/executive order, engine manufacturer and model number, maximum power rating (bhp), and manufacturer's guaranteed emission factors. [District Rule 2201]
18. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
19. No emission factor and no emission rate shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
20. This engine shall not be operated at one location or site at the facility for more than 12 consecutive months. [District Rules 2201 and 4701, and 17 CCR 93116]
21. Emissions from the engine shall not exceed any of the following limits: 4.9 g-NOx/bhp-hr, 2.6 g-CO/bhp-hr, or 0.25 g-VOC/bhp-hr. [District Rules 2201 and 4702 and 17 CCR 93116]
22. Emissions from this IC engine shall not exceed 0.149 g-PM10/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93116]
23. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be consumed by the engine. [District Rules 2201 and 4801, and 17 CCR 93116]
24. The engine's exhaust stack(s) shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
25. The engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]

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CONDITIONS CONTINUE ON NEXT PAGE

26. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
27. The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702]
28. Permittee shall keep daily and annual records of the amount of bulking agent ground, in wet-tons. [District Rule 2201]
29. {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]
30. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
31. 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]
32. 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]
33. 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]
34. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
35. 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]
36. 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, permittee shall apply water, gravel, roadmix, 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]
37. Whenever any portion of the site becomes inactive, 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]
38. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
39. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

40. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-6-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE BULKING AGENT GRINDER (SOUTH) POWERED BY AN ONBOARD 1,050 BHP TIER 2 CERTIFIED CATERPILLAR MODEL 3412E OR EQUIVALENT DIESEL-FIRED IC ENGINE

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-6-3 : Apr 24 2012 1:30PM -- CLEMENTB : Joint Inspection NOT Required

6. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
7. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. Particulate matter emissions from the engine shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. {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]
10. Visible emissions from bulking agent grinding shall not exceed 5% opacity. [District Rules 2201 and 4101]
11. Water sprays shall be used, as needed, to ensure visible emissions from bulking agent grinding does not exceed 5% opacity. [District Rules 2201 and 4101]
12. The combined bulking agent grinding throughput of units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 770 ton/day or 80,000 wet-ton/year. [District Rule 2201]
13. Emissions from the bulking agent grinding operation shall not exceed 0.003 lb-PM10/wet-ton. [District Rule 2201]
14. The combined amount of diesel fuel consumed by units C-6048-5 and C-6048-6 shall not exceed either of the following limits: 590 gal/day or 34,336 gal/year. [District Rule 2201]
15. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rules 2201 and 4702]
16. The permittee shall obtain APCO approval for the use of any equivalent engine not specifically approved by this Authority to Construct. Approval of an equivalent engine shall only be made after the APCO's determination that the submitted design and performance data for the proposed alternate engine are equivalent to the approved engine. [District Rule 2201]
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19. No emission factor and no emission rate shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
20. This engine shall not be operated at one location or site at the facility for more than 12 consecutive months. [District Rules 2201 and 4701, and 17 CCR 93116]
21. Emissions from the engine shall not exceed any of the following limits: 4.9 g-NO_x/bhp-hr, 2.6 g-CO/bhp-hr, or 0.25 g-VOC/bhp-hr. [District Rules 2201 and 4702 and 17 CCR 93116]
22. Emissions from this IC engine shall not exceed 0.149 g-PM10/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93116]
23. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be consumed by the engine. [District Rules 2201 and 4801, and 17 CCR 93116]
24. The engine's exhaust stack(s) shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
25. The engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]

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CONDITIONS CONTINUE ON NEXT PAGE

26. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
27. The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702]
28. Permittee shall keep daily and annual records of the amount of bulking agent ground, in wet-tons. [District Rule 2201]
29. {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]
30. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
31. 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]
32. 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]
33. 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]
34. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
35. 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]
36. 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, permittee shall apply water, gravel, roadmix, 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]
37. Whenever any portion of the site becomes inactive, 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]
38. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
39. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

40. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-7-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

NORTH CO-COMPOSTING FEEDSTOCKS MIXING OPERATION IN AN ENCLOSED BUILDING SERVED BY BIOFILTER(S), INCLUDES 600 CUBIC YARD BIOSOLIDS RECEIVING/STORAGE CAPACITY; AND AN OUTDOOR CONVEYING OPERATION THAT INCLUDES FOUR COMPOST CONVEYOR TRAINS WITH A 209 CUBIC YARD TOTAL HOLDING CAPACITY

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Biosolids are the solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

C-6048-7-3 : Apr 24 2012 1:30PM -- CLEMENTB : Joint Inspection NOT Required

6. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]
7. Compost Material consists of Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof. [District Rule 2201]
8. Feedstocks are composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids. [District Rule 2201]
9. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
10. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
11. {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]
12. The total quantity of biosolids received at this facility shall not exceed either of the following limits: 4,200 wet ton/day or 500,000 wet ton/year. [District Rule 2201 and California Environmental Quality Act]
13. All VOC and NH₃ emissions generated inside the mixing building shall be vented to the mixing building biofilter(s). [District Rule 2201]
14. The VOC and NH₃ control efficiencies across the biofilter shall not be less than 80% and 90% respectively. [District Rule 2201]
15. Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201]
16. Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201]
17. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
18. The exhaust duct(s) to each biofilter shall be equipped with safe, accessible, permanent provisions to allow collection of gas samples consistent with applicable test methods. [District Rule 1081]
19. Source testing for VOC and NH₃ on one District approved mixing building biofilter inlet shall be performed using SCAQMD methods 25.3, 207.1, 1.1, 1.2, 2.1, 2.2, 2.3, 3.1 and 4.1, and/or other District approved methods. Source testing at the biofilter outlet (or surface) shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]
20. Source testing at the stored biosolids surface shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]
21. Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after operation commences (first mixing of Feedstocks). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). [District Rule 2201]
22. District approved independent testing lab(s) shall perform the source testing. [District Rule 2201]
23. All source testing shall take place under conditions considered representative of normal source operation. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

24. For biofilter source test purposes, each tested biofilter shall be divided into 16 areas and preliminary velocity measurements will be made at each of the 16 areas with sampling points located as far as practical in the middle of each zone. Nine sampling locations with the airflow rates within 10% of the average will be selected for VOC and NH₃ sampling. The preliminary velocity measurements shall be done using SCAQMD methods 1.1, 1.2, 2.1, 2.2 and 2.3. [District Rule 2201]
25. For stored biosolids source test purposes, the biosolids storage shall be divided into 16 areas with the sampling and measuring points located as far as practical in the middle of each area. Nine sampling and measuring locations with representative, average airflow rates will be selected for VOC and NH₃ sampling. [District Rule 2201]
26. The source test summary shall include the VOC and NH₃ mass emission rates (lb-pollutant/hr) from the mixing building biofilter(s), the VOC and NH₃ control efficiencies for each tested mixing building biofilter, VOC and NH₃ mass emission rates (lb-pollutant/yd³-hr) from the stored biosolids, and the volume (yd³) and density (ton/yd³) of each type of feedstock in the mixing building during testing. [District Rule 2201]
27. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit mixing building monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and levels, and (5) the protocol to establish the building's VOC capture efficiency. [District Rule 2201]
29. Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit biofilter monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC and NH₃ emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and NH₃ levels, (5) the protocol to establish the correlation between the portable analyzer measurements and the source test results, and (6) the monitoring plan if no correlation between the portable analyzer measurements and source test results can be made. [District Rule 2201]
30. The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rule 2201]
31. No measurable increase over background levels of VOC outside the mixing building shall occur at any mixing building opening including any opening that occurs briefly for access or maintenance. [District Rule 2201]
32. VOC emissions to verify the capture efficiency of the mixing building shall be measured according to the approved monitoring plan within 60 days after District approval of the mixing building monitoring plan, and once every 24 months thereafter. [District Rule 2201]
33. The permittee shall measure the concentrations of VOC and NH₃ emissions from the mixing building biofilter surfaces according to the approved monitoring plan during the initial source test and at least once every month thereafter. [District Rule 2201]
34. If either the VOC or NH₃ concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the permittee shall notify the District within the 24 hours and submit a plan of action to return the emissions to their normal levels. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 2201]
35. All biofilter(s) shall be equipped with an operational humidification and moisture addition system capable of maintaining suitable biofilter media moisture content. [District Rule 2201]
36. The biofilter(s) humidifier and sprinkler systems shall be used as needed to maintain biofilter media moisture content within a suitable operating range. [District Rule 2201]
37. The biofilter(s) shall be visually checked weekly for compaction, channeling (cracks), unreasonable vegetative growth or noticeable increase in detectable odors. [District Rule 2201]

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38. The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19). [District Rule 2201]
39. The permittee shall keep daily records of the total VOC and NH₃ emissions from Biosolids Receiving/Storage, based on the following equation: Biosolids emissions (lb/day) = Biosolids throughput (ton) x (1 - Mixing Building Biofilter Control Efficiency) x Uncontrolled Biosolids Emission Factor (lb/ton-day). [District Rule 2201]
40. The permittee shall keep daily records of the total VOC and NH₃ emissions from Indoor Feedstocks Mixing, based on the following equation: Indoor Feedstocks Mixing (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) x (1 - Mixing Building Biofilter Control Efficiency) x Daily Mixing Average Volume (yd³) x Operating Schedule (hr/day). [District Rule 2201]
41. The permittee shall keep daily records of the total VOC and NH₃ emissions from Outdoor Compost Conveying, based on the following equation: Outdoor Compost Conveying Emissions (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) x 209 yd³ conveyor capacity x 24 hr/day. [District Rule 2201]
42. Until the first source test results are available, the Uncontrolled Active-Phase Emission Factors are 2.12 E-4 lb-VOC/yd³-hr and 2.30 E-4 lb-NH₃/yd³-hr, the Uncontrolled Biosolids Emission Factors are 0.02 lb-VOC/ton-day and 9.54 E-3 lb-NH₃/ton-day, and the Biofilter Control Efficiencies for VOC and NH₃ are 40% and 45% respectively. [District Rule 2201]
43. The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). The Uncontrolled Active-Phase Emission Factors utilized in the emissions equations shall be established according to permit unit C-6048-19. All source test results shall be submitted to the District for approval of the Emission Factors. [District Rule 2201]
44. The permittee shall maintain records of: (1) the date and time of VOC and NH₃ monitoring measurements, (2) make and model of the portable analyzer(s), (3) portable analyzer calibration records, (4) a description of any corrective action taken to maintain the emissions within the acceptable range, and (5) mixing building Capture Efficiency. [District Rule 2201]
45. The permittee shall submit all mixing building Capture Efficiency monitoring results to the District for approval. [District Rule 2201]
46. The permittee shall keep monthly records of visual biofilter inspections and actions taken to correct compaction, channeling, unreasonable vegetative growth or a noticeable increase in odors, including date of inspection and date actions were taken to correct problem(s). [District Rule 2201]
47. {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]
48. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
49. 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]
50. 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]
51. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

52. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
53. 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]
54. 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, permittee shall apply water, gravel, roadmix, 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]
55. Whenever any portion of the site becomes inactive, 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]
56. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
57. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
58. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-8-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

SOUTH CO-COMPOSTING FEEDSTOCKS MIXING OPERATION IN AN ENCLOSED BUILDING SERVED BY BIOFILTER(S), INCLUDES 600 CUBIC YARD BIOSOLIDS RECEIVING/STORAGE CAPACITY; AND AN OUTDOOR CONVEYING OPERATION THAT INCLUDES FOUR COMPOST CONVEYOR TRAINS WITH A 209 CUBIC YARD TOTAL HOLDING CAPACITY

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Biosolids are the solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-8-3, Apr 24 2012 1:30PM -- CLEMENTE Joint Inspection NOT Required

6. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]
7. Compost Material consists of Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof. [District Rule 2201]
8. Feedstocks are composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids. [District Rule 2201]
9. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
10. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
11. {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]
12. The total quantity of biosolids received at this facility shall not exceed either of the following limits: 4,200 wet ton/day or 500,000 wet ton/year. [District Rule 2201 and California Environmental Quality Act]
13. All VOC and NH₃ emissions generated inside the mixing building shall be vented to the mixing building biofilter(s). [District Rule 2201]
14. The VOC and NH₃ control efficiencies across the biofilter shall not be less than 80% and 90% respectively. [District Rule 2201]
15. Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201]
16. Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201]
17. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
18. The exhaust duct(s) to each biofilter shall be equipped with safe, accessible, permanent provisions to allow collection of gas samples consistent with applicable test methods. [District Rule 1081]
19. Source testing for VOC and NH₃ on one District approved mixing building biofilter inlet shall be performed using SCAQMD methods 25.3, 207.1, 1.1, 1.2, 2.1, 2.2, 2.3, 3.1 and 4.1, and/or other District approved methods. Source testing at the biofilter outlet (or surface) shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]
20. Source testing at the stored biosolids surface shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rule 2201]
21. Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after operation commences (first mixing of Feedstocks). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). [District Rule 2201]
22. District approved independent testing lab(s) shall perform the source testing. [District Rule 2201]
23. All source testing shall take place under conditions considered representative of normal source operation. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

24. For biofilter source test purposes, each tested biofilter shall be divided into 16 areas and preliminary velocity measurements will be made at each of the 16 areas with sampling points located as far as practical in the middle of each zone. Nine sampling locations with the airflow rates within 10% of the average will be selected for VOC and NH₃ sampling. The preliminary velocity measurements shall be done using SCAQMD methods 1.1, 1.2, 2.1, 2.2 and 2.3. [District Rule 2201]
25. For stored biosolids source test purposes, the biosolids storage shall be divided into 16 areas with the sampling and measuring points located as far as practical in the middle of each area. Nine sampling and measuring locations with representative, average airflow rates will be selected for VOC and NH₃ sampling. [District Rule 2201]
26. The source test summary shall include the VOC and NH₃ mass emission rates (lb-pollutant/hr) from the mixing building biofilter(s), the VOC and NH₃ control efficiencies for each tested mixing building biofilter, VOC and NH₃ mass emission rates (lb-pollutant/yd³-hr) from the stored biosolids, and the volume (yd³) and density (ton/yd³) of each type of feedstock in the mixing building during testing. [District Rule 2201]
27. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit mixing building monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and levels, and (5) the protocol to establish the building's VOC capture efficiency. [District Rule 2201]
29. Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit biofilter monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and calibration standards, (3) the locations where VOC and NH₃ emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and NH₃ levels, (5) the protocol to establish the correlation between the portable analyzer measurements and the source test results, and (6) the monitoring plan if no correlation between the portable analyzer measurements and source test results can be made. [District Rule 2201]
30. The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rule 2201]
31. No measurable increase over background levels of VOC outside the mixing building shall occur at any mixing building opening including any opening that occurs briefly for access or maintenance. [District Rule 2201]
32. VOC emissions to verify the capture efficiency of the mixing building shall be measured according to the approved monitoring plan within 60 days after District approval of the mixing building monitoring plan, and once every 24 months thereafter. [District Rule 2201]
33. The permittee shall measure the concentrations of VOC and NH₃ emissions from the mixing building biofilter surfaces according to the approved monitoring plan during the initial source test and at least once every month thereafter. [District Rule 2201]
34. If either the VOC or NH₃ concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the permittee shall notify the District within the 24 hours and submit a plan of action to return the emissions to their normal levels. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 2201]
35. All biofilter(s) shall be equipped with an operational humidification and moisture addition system capable of maintaining suitable biofilter media moisture content. [District Rule 2201]
36. The biofilter(s) humidifier and sprinkler systems shall be used as needed to maintain biofilter media moisture content within a suitable operating range. [District Rule 2201]
37. The biofilter(s) shall be visually checked weekly for compaction, channeling (cracks), unreasonable vegetative growth or noticeable increase in detectable odors. [District Rule 2201]

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38. The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19). [District Rule 2201]
39. The permittee shall keep daily records of the total VOC and NH₃ emissions from Biosolids Receiving/Storage, based on the following equation: Biosolids emissions (lb/day) = Biosolids throughput (ton) x (1 - Mixing Building Biofilter Control Efficiency) x Uncontrolled Biosolids Emission Factor (lb/ton-day). [District Rule 2201]
40. The permittee shall keep daily records of the total VOC and NH₃ emissions from Indoor Feedstocks Mixing, based on the following equation: Indoor Feedstocks Mixing (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) x (1 - Mixing Building Biofilter Control Efficiency) x Daily Mixing Average Volume (yd³) x Operating Schedule (hr/day). [District Rule 2201]
41. The permittee shall keep daily records of the total VOC and NH₃ emissions from Outdoor Compost Conveying, based on the following equation: Outdoor Compost Conveying Emissions (lb/day) = Uncontrolled Active-Phase Emission Factor (lb/yd³-hr) x 209 yd³ conveyor capacity x 24 hr/day. [District Rule 2201]
42. Until the first source test results are available, the Uncontrolled Active-Phase Emission Factors are 2.12 E-4 lb-VOC/yd³-hr and 2.30 E-4 lb-NH₃/yd³-hr, the Uncontrolled Biosolids Emission Factors are 0.02 lb-VOC/ton-day and 9.54 E-3 lb-NH₃/ton-day, and the Biofilter Control Efficiencies for VOC and NH₃ are 40% and 45% respectively. [District Rule 2201]
43. The Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). The Uncontrolled Active-Phase Emission Factors utilized in the emissions equations shall be established according to permit unit C-6048-19. All source test results shall be submitted to the District for approval of the Emission Factors. [District Rule 2201]
44. The permittee shall maintain records of: (1) the date and time of VOC and NH₃ monitoring measurements, (2) make and model of the portable analyzer(s), (3) portable analyzer calibration records, (4) a description of any corrective action taken to maintain the emissions within the acceptable range, and (5) mixing building Capture Efficiency. [District Rule 2201]
45. The permittee shall submit all mixing building Capture Efficiency monitoring results to the District for approval. [District Rule 2201]
46. The permittee shall keep monthly records of visual biofilter inspections and actions taken to correct compaction, channeling, unreasonable vegetative growth or a noticeable increase in odors, including date of inspection and date actions were taken to correct problem(s). [District Rule 2201]
47. {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]
48. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
49. 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]
50. 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]
51. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

52. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
53. 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]
54. 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, permittee shall apply water, gravel, roadmix, 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]
55. Whenever any portion of the site becomes inactive, 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]
56. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
57. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
58. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-9-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.

MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

TWO COMPOST ROTARY DRUM TROMMEL SCREENS (NORTH) POWERED BY AN ELECTRIC MOTOR

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {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]
6. Water sprays shall be used, as needed, to ensure visible emissions from the compost screening does not exceed 5% opacity. [District Rules 2201 and 4101]
7. The combined compost screen throughput of units C-6048-9 and C-6048-10 shall not exceed either of the following limits: 7,300 wet ton/day or 1,300,000 wet ton/year. [District Rule 2201]
8. Emissions from the compost transfer and screening operation shall not exceed 0.0005 lb-PM10/wet ton. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-9-3 : Apr 24 2012 1:30PM - CLEMENTB : Joint Inspection NOT Required

9. The permittee shall keep daily and annual records of the amount of compost screened, in wet tons. [District Rule 2201]
10. {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]
11. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
12. 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]
13. 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]
14. 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]
15. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
16. 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]
17. 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, permittee shall apply water, gravel, roadmix, 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]
18. Whenever any portion of the site becomes inactive, 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]
19. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
20. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
21. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-6048-10-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:
TWO COMPOST ROTARY DRUM TROMMEL SCREENS (SOUTH) POWERED BY AN ELECTRIC MOTOR

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {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]
6. Water sprays shall be used, as needed, to ensure visible emissions from the compost screening does not exceed 5% opacity. [District Rules 2201 and 4101]
7. The combined compost screen throughput of units C-6048-9 and C-6048-10 shall not exceed either of the following limits: 7,300 wet ton/day or 1,300,000 wet ton/year. [District Rule 2201]
8. Emissions from the compost transfer and screening operation shall not exceed 0.0005 lb-PM10/wet ton. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-6048-10-3; Apr 24 2012 1:30PM - CLEMENTB : Joint Inspection NOT Required

9. The permittee shall keep daily and annual records of the amount of compost screened, in wet tons. [District Rule 2201]
10. {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]
11. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
12. 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]
13. 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]
14. 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]
15. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
16. 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]
17. 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, permittee shall apply water, gravel, roadmix, 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]
18. Whenever any portion of the site becomes inactive, 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]
19. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
20. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
21. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-6048-19-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

CO-COMPOSTING OPERATION INCLUDING ACTIVE-PHASE, MATURATION PHASE AND CURING-PHASE POSITIVE AERATED COMPOST PILES ALL WITH GORE COVERS

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. Agricultural (Ag) Waste is vegetative crop residue, consisting of but not limited to: harvested trees, orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. Agricultural waste does not include manure or biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
5. Biosolids are the solid, semisolid, or liquid material obtained from wastewater, often used as fertilizer. Biosolids include, but are not limited to animal manure, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids do not include ash or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
C-6048-19-3: Apr 24 2012 1:30PM - CLEMENTB - Joint Inspection NOT Required

6. Bulking Agent is a constituent of the compost feedstock, consisting of Ag Waste and/or Green Waste. [District Rule 2201]
7. Compost Material consists of Bulking Agent, Biosolids, Active-Phase Compost, Maturation-Phase Compost, Curing-Phase Compost, or any combination thereof. [District Rule 2201]
8. Feedstocks are composting raw materials, including Bulking Agents (Ag Waste and Green Waste) and Biosolids. [District Rule 2201]
9. Green Waste is urban landscape waste, consisting of but not limited to: grass clippings, weeds, tree and shrub trimmings, wood waste, branches and stumps, home garden residues, and other plant remains. Green waste does not include manure or Biosolids, processed residues from canneries, wineries, or other industrial sources. [District Rule 2201]
10. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
11. Facility-wide Compost Material emissions shall not exceed either of the following limits: 882.5 lb-VOC/day or 4,246.5 lb-NH₃/day. [District Rule 2201]
12. Facility-wide Compost Material emissions shall not exceed either of the following limits: 184,972 lb-VOC/year or 1,545,771 lb-NH₃/year. [District Rule 2201]
13. All compost shall meet at least one of the following stability criteria prior to leaving the cure-phase piles: 1) The compost emits no more than four (4) mg CO₂-C per gram of organic material per day (per TMECC Method 05-08-B), 2) The compost has a Solvita Maturity Index of 7 or greater (per TMECC Method 05-08-E), or 3) The material has been composted at least 40 consecutive calendar days after the active-phase composting period. [District Rules 2201 and 4565]
14. All piles shall be covered with a waterproof covering (GORE cover) within 3 hours after the pile is constructed. [District Rules 2201 and 4565]
15. Until the first source tests are available, the facility shall compost no more than 25% of its capacity. [District Rule 2201]
16. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
17. Source testing for VOC and NH₃ emissions shall be performed on at least one District-approved compost pile from each phase (active, maturation, and curing). Source testing at the pile surface (uncontrolled) and cover surface (controlled) shall be performed using the EPA Flux Chamber Method, SCAQMD methods 25.3 and 207.1, and/or other District approved methods. [District Rules 2201 and 4565]
18. Initial source testing shall be performed no sooner than 90 days, but no later than 270 days after operation commences (first mixing of Feedstocks). Source testing shall be conducted every 15 months. After demonstrating compliance on two consecutive source tests, the source test frequency shall be not less than once every 27 months. If the result of the 27-month source test demonstrates non-compliance, the source testing frequency shall revert to at least once every 15 months. Successive source testing shall be conducted during each season of the year (e.g. 1st test: Spring, 2nd test: Summer, 3rd test: Fall, 4th test: Winter, 5th test: Spring, etc). [District Rules 2201 and 4565]
19. For compost pile source test purposes, each tested pile shall be divided into 16 areas with the sampling and measuring points located as far as practical in the middle of each area. Nine sampling and measuring locations with representative, average airflow rates will be selected for VOC and NH₃ sampling for each pile surface. [District Rules 2201 and 4565]
20. District approved independent testing lab(s) shall perform the source testing. [District Rules 2201 and 4565]
21. All source testing shall take place under conditions considered representative of normal source operation. [District Rules 2201 and 4565]
22. The source test summary shall include the following Active-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Active-Phase pile surface (uncontrolled), and Active-Phase cover surface (controlled). [District Rules 2201 and 4565]

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CONDITIONS CONTINUE ON NEXT PAGE

23. The source test summary shall include the following Mature-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Mature-Phase pile surface (uncontrolled), and Mature-Phase cover surface (controlled). [District Rules 2201 and 4565]
24. The source test summary shall include the following Cure-Phase flux emission factors for VOC and NH₃ (in lb/ft²-min and lb/yd³-min of Compost): Cure-Phase pile surface (uncontrolled), and Cure-Phase cover surface (controlled). [District Rules 2201 and 4565]
25. The source test summary shall include the following for VOC and NH₃ emissions: The total controlled compost mass emission rates (lb/day) and the density of each tested pile (ton/yd³). [District Rules 2201 and 4565]
26. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
27. The permittee shall conduct maintenance inspections of the cover each time a cover is placed on a compost pile. Any tears or other abnormalities in the cover that could jeopardize the ability of the cover to act as an air pollution control device shall be repaired immediately or the cover shall be replaced. The permittee shall conduct an inspection of the blower and air distribution system prior to commencing construction of a compost pile. Any abnormalities that impact the ability of the air distribution system to provide air to the compost pile shall be repaired prior to constructing the pile. [District Rules 2201 and 4565]
28. Within 60 days after operation commences (first mixing of Feedstocks), the permittee shall submit compost pile monitoring plans to the District. The plans shall include, but are not limited to: (1) portable analyzer specifications and sampling protocol, (2) portable analyzer operation and and calibration standards, (3) the locations where VOC and NH₃ emissions will be sampled with the portable analyzer(s), (4) the protocol to establish the background VOC and NH₃ levels, (5) the protocol to establish the correlation between the portable analyzer measurements and the source test results, and (6) the monitoring plan if no correlation between the portable analyzer measurements and source test results can be made. [District Rules 2201 and 4565]
29. The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rules 2201 and 4565]
30. The permittee shall measure the concentrations of VOC and NH₃ emissions from the compost pile surfaces according to the approved monitoring plan during the initial source test and at least once every month thereafter. [District Rules 2201 and 4565]
31. If either the VOC or NH₃ concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the permittee shall notify the District within the 24 hours and submit a plan of action to return the emissions to their normal levels. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification requirements of this condition. [District Rules 2201 and 4565]
32. The permittee shall keep daily and annual records of the facility-wide Compost Materials VOC and NH₃ emissions (lb-pollutant/day and lb-pollutant/year) based on the following equation: Facility-Wide Compost Materials Emissions = Outdoor Bulking Agent Emissions (C-6048-1 and C-6048-2) + Indoor Biosolids Receiving/Storage Emissions (C-6048-7 and C-6048-8) + Indoor Feedstocks Mixing Emissions (C-6048-7 and C-6048-8) + Outdoor Compost Conveying Emissions (C-6048-7 and C-6048-8) + Compost Piles Emissions (C-6048-19). [District Rule 2201]
33. The permittee shall keep daily records of the VOC and NH₃ emissions from the Compost Piles (Active + Mature + Curing Phases), based on the following equation: Compost Piles Emissions (lb/day) = 60 min/hr x 24 hr/day [(Total Active-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Active-Phase Piles Volume (yd³)) + (Total Mature-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Mature-Phase Piles Volume (yd³)) + (Total Cure-Phase Controlled Compost Emission Factor (lb/yd³ min) x Total Cure-Phase Piles Volume (yd³))]. [District Rule 2201]
34. When available, the Emission Factors utilized in the emissions equations shall be the average numbers from the latest source test during that season (i.e. emissions calculations during the Summer shall be based on the latest Summer source test). All source test results shall be submitted to the District for approval of the Emission Factors. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

35. Until the first source tests are available, the permittee shall maintain records of the composting throughput to assure the facility is composting no more than 25% of its capacity. Composting at 25% of capacity or less is considered a compliance method for the mass emission limits of this permit. [District Rule 2201]
36. The permittee shall maintain records of: (1) the date and time of VOC and NH₃ monitoring measurements, (2) make and model of the portable analyzer(s), (3) portable analyzer calibration records, and (4) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201 and 4565]
37. The permittee shall keep records to verify all finished compost meets the required stability criteria. [District Rules 2201 and 4565]
38. 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 Rules 1070 and 4565]
39. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
40. 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]
41. 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]
42. 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]
43. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
44. 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]
45. 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, permittee shall apply water, gravel, roadmix, 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]
46. Whenever any portion of the site becomes inactive, 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]
47. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
48. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

49. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-6048-20-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:
FINISHED COMPOST TRUCK LOADOUT OPERATIONS (NORTH AND SOUTH)

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Visible emissions from the compost loadout operation shall not exceed 5% opacity. [District Rules 2201 and 4101]
6. Water sprays shall be used, as needed, to ensure visible emissions from the compost loadout operation does not exceed 5% opacity. [District Rules 2201 and 4101]
7. The compost loadout throughput of this facility shall not exceed either of the following limits: 7,400 wet-ton/day or 900,000 wet-ton/year. [District Rule 2201]
8. Emissions from the compost loadout operation shall not exceed 0.0003 lb-PM10/wet-ton. [District Rule 2201]
9. Permittee shall keep daily and annual records of the amount of compost loaded out, in wet-tons. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

C-6048-20-3 : Apr 24 2012 1:30PM -- CLEMENTB . Joint Inspection NOT Required

10. {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]
11. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
12. 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]
13. 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]
14. 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]
15. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
16. 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]
17. 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, permittee shall apply water, gravel, roadmix, 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]
18. Whenever any portion of the site becomes inactive, 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]
19. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
20. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
21. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-21-3

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

GASOLINE DISPENSING OPERATION WITH ONE 1,000 GALLON CONVAULT ABOVEGROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR RECOVERY SYSTEM, AND 1 FUELING POINT WITH 1 GASOLINE DISPENSING NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-F)

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. {3977} The Phase I and Phase II vapor recovery systems shall be installed and maintained in accordance with the manufacturer specifications and the ARB Executive Orders specified in this permit, including applicable rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board that have been made conditions of the certification. [District Rules 4621 and 4622]
5. {1993} This gasoline storage and dispensing equipment shall not be used in retail sales, where gasoline dispensed by the unit is subject to payment of California sales tax on gasoline sales. [District Rule 4622]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
C-6048-21-3 : Apr 24 2012 1:30PM -- CLEMENTB : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {3980} The storage container(s) shall be installed, maintained, and operated such that they are leak-free. [District Rule 4621]
8. {3909} The permittee shall have all underground storage container installations and all underground piping configurations inspected by the APCO prior to backfilling. The permittee shall notify the District by telephone or other District-approved method and obtain a confirmation number at least three business days prior to the backfilling. [District Rules 4621 and 4622]
9. {3913} The Phase I and Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method specified in this permit. [District Rules 4621 and 4622]
10. {3914} A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration of total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with EPA Test Method 21. [District Rules 4621 and 4622]
11. {3915} No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621]
12. {3917} No person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order until the following conditions have been met: 1) the defect has been repaired, replaced, or adjusted as necessary to correct the defect; 2) the District has been notified, and the District has reinspected the system or authorized the system for use (such authorization shall not include the authority to operate the equipment prior to the correction of the defective components); and 3) all major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual. [District Rule 4622]
13. {3918} Upon identification of any major defects, the permittee shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired. Tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary. In the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use. [District Rule 4622]
14. {3919} The permittee shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with the requirements of this permit. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) copies of all vapor recovery performance tests; 2) all applicable ARB Executive Orders, Approval Letters, and District Permits; 3) the manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 4) system and/or component testing requirements, including test schedules and passing criteria for each of the standard tests required by this permit (the owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements), and 5) additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622]
15. {3923} The permittee shall conduct periodic maintenance inspections based on the greatest monthly throughput of gasoline dispensed by the facility in the previous year as follows: A) less than 2,500 gallons - one day per month; B) 2,500 to less than 25,000 gallons - one day per week; or C) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O & M Manual. [District Rules 4621 and 4622]
16. {3924} Periodic maintenance inspections of the Phase I vapor recovery system shall include, at a minimum, verification that 1) the fill caps and vapor caps are not missing, damaged, or loose; 2) the fill cap gasket and vapor cap gaskets are not missing or damaged; 3) the fill adapter and vapor adapter are securely attached to the risers; 4) where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing; 5) the dry break (poppet-valve) is not missing or damaged; and 6) the submerged fill tube is not missing or damaged. [District Rule 4621]

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CONDITIONS CONTINUE ON NEXT PAGE

17. {4628} Periodic maintenance inspections of the Phase II vapor recovery system shall include, at a minimum, verification that 1) the following nozzle components are in place and in good condition as specified in ARB Executive Order as applicable: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, and hold open latch (unless prohibited by law or the local fire control authority); 2) the hoses are not torn, flattened or crimped; 3) the vapor path of the coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid if applicable; and 4) the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit. [District Rule 4622]
18. {3926} In the event of a separation due to a drive off, the permittee shall, unless otherwise specified in the applicable ARB Executive Order, conduct a visual inspection of the affected equipment and either 1) perform qualified repairs on any damaged components and conduct applicable re-verification tests pursuant to the requirements of this permit, or 2) replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified. The activities shall be documented in accordance with the requirements of this permit before placing the affected equipment back in service. [District Rule 4622]
19. The gasoline throughput for this permit unit shall not exceed 657,000 gallons in any one calendar year. [District Rule 2201]
20. {3928} The permittee shall conduct all periodic vapor recovery system performance tests specified in this permit, no more than 30 days before or after the required compliance testing date, unless otherwise required under the applicable ARB Executive Order. [District Rules 4621 and 4622]
21. {1997} For certified Phase II vapor recovery systems with liquid removal devices, the permittee shall perform and pass an ARB TP-201.6 Liquid Removal Test within 60 days after initial start-up and whenever the liquid in the vapor path exceeds 100 ml of liquid. The amount of liquid in the vapor path shall be measured by lowering the gasoline dispensing nozzle into a container until such time that no more liquid drains from the nozzle. The amount of liquid drained into the container shall be measured using a graduated cylinder or graduated beaker. The vapor path shall be inspected once per month if monthly throughput is below 2,500 gallons, or once per week otherwise. [District Rule 4622]
22. {3978} The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B or TP-206.3 within 60 days after initial start-up and at least once every 12 months thereafter. [District Rules 4621 and 4622]
23. {4005} A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621 and 4622]
24. {4014} A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621 and 4622]
25. {4016} Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621 and 4622]
26. {3968} The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621]
27. {3969} The permittee shall maintain a copy of all test results. The test results shall be dated and shall contain the name, address, and telephone number of the company responsible for system installation and testing. [District Rule 4622]
28. {3970} The permittee shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name and applicable certification numbers of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622]

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CONDITIONS CONTINUE ON NEXT PAGE

29. {3971} The O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request. [District Rule 4622]
30. {4010} The permittee shall maintain monthly and annual gasoline throughput records. [District Rules 4621 and 4622]
31. {3975} All records required by this permit shall be retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 4621 and 4622]
32. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
33. 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]
34. 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]
35. 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]
36. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]
37. 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]
38. 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, permittee shall apply water, gravel, roadmix, 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]
39. Whenever any portion of the site becomes inactive, 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]
40. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
41. ERC certificate numbers (or splits from these certificate numbers) N-463-1, N-471-1, S-2188-1, S-2283-1, S-2414-1, S-2643-1 and S-2702-1 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC permit shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this ATC permit. [District Rule 2201]
42. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT
ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-26-0

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:
TRANSPORTABLE 139 BHP JOHN DEERE MODEL 4045H DIESEL-FIRED TIER 3 CERTIFIED IC ENGINE POWERING
A TROMMEL SCREEN USED FOR FINISHED COMPOST

CONDITIONS

1. Authority to Construct (ATC) permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 shall be implemented concurrently. [District Rule 2201]
2. All ATC permits previously issued under projects C-1043946, C-1073961, and C-1101871 shall be cancelled upon implementation of ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0. [District Rule 2201]
3. The Westlake Farms Compost Facility boundary is defined within the following UTM (NAD83) coordinates: 238829.3, 3985339; 240423.1, 3985280; 240299.3, 3981543; 240037, 3981672; 238705.6, 3981944. [District Rule 2201]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions from the engine shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. {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]
7. Visible emissions from screening shall not exceed 5% opacity. [District Rules 2201 and 4101]
8. Water sprays shall be used, as needed, to ensure visible emissions from screening does not exceed 5% opacity. [District Rules 2201 and 4101]
9. The screen throughput shall not exceed 1,400 ton/day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
C-6048-26-0 - Apr 24 2012 1:31PM - CLEMENTB - Joint Inspection NOT Required

10. Emissions from the screening operation shall not exceed 0.003 lb-PM10/wet-ton. [District Rule 2201]
11. The amount of diesel fuel consumed by the engine shall not exceed either of the following limits: 97 gal/day or 35,078 gal/year. [District Rule 2201]
12. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of diesel fuel combusted by the engine shall be installed, utilized, and maintained. [District Rules 2201 and 4702]
13. This engine shall not be operated at one location or site at the facility for more than 12 consecutive months. [District Rules 2201 and 4701, and 17 CCR 93116]
14. Emissions from the engine shall not exceed any of the following limits: 2.7 g-NO_x/bhp-hr, 1.2 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rules 2201 and 4702, and 17 CCR 93116]
15. Emissions from this IC engine shall not exceed 0.149 g-PM10/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93116]
16. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be consumed by the engine. [District Rules 2201 and 4801, and 17 CCR 93116]
17. The engine's exhaust stack(s) shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
18. The engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
19. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
20. The permittee shall maintain a daily engine operating log that includes all of the following information: date, quantity of fuel used, maintenance or modifications performed, monitoring data, records of operational characteristics monitoring, and any other information necessary to demonstrate compliance. [District Rules 2201 and 4702]
21. Permittee shall keep daily records of the amount of compost screened, in wet-tons. [District Rule 2201]
22. 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 Rules 2201, 4702, and 1070]
23. Disturbances of soil related to any construction, demolition, excavation, extraction, and other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities), unless specifically exempted under section 4.0 of Rule 8021. [District Rule 8021]
24. 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]
25. 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]
26. 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]
27. Any new or existing public or private paved or unpaved road, road construction project, or road modification project within the immediate boundaries of the composting facility 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]

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CONDITIONS CONTINUE ON NEXT PAGE

28. 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]
29. 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, permittee shall apply water, gravel, roadmix, 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]
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31. Prior to operating equipment under any of the ATC permits C-6048-1-3 thru '-10-3, '-19-3 thru '-21-3, and '-26-0 the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 41,630 lb, 2nd quarter - 41,630 lb, 3rd quarter - 41,630 lb, and fourth quarter - 41,630 lb. Offsets shall be provided at the applicable distance offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201]
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33. The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520]

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Appendix L

Summary of "Assessment of VOC and Ammonia Emissions From a Bulking Agent Stockpile at The Westlake Farms Composting Facility", Stratford, CA; prepared for the CSDLAC by CH2M Hill, April 27, 2005

RECEIVED

Final Report

MAY 11 2005

Permits Srvc
SJVAPCD

**Assessment of Volatile Organic
Compound and Ammonia
Emissions from a Bulking Agent
Stockpile**

at the

**Westlake Farms Composting Facility
Stratford, CA**

Prepared for
**Los Angeles County Sanitation District and
Lewis Brisbois Bisgaard & Smith LLP,
Attorneys at Law**

Prepared by



CH2MHILL

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Santa Ana, CA 92707

Thomas R. Card, P.E.
Environmental Management Consulting
41125 278th Way SE,
Enumclaw, WA 98022

Charles E. Schmidt, Ph.D.
19200 Live Oak Road
Red Bluff, CA 96080

April 27, 2005

TABLE ES-1
Summary of Measured Unit Emission Rates for Stockpiled Bulking Agent

	VOC (reported per method molecular weight of 14.36 gm/gmmole)	Ammonia
Unit Emission Rate (mg/min/m ²)	0.0591	0.00065
Unit Emission Rate (lb/hr/ft ²)	7.3×10^{-7}	7.9×10^{-9}

Notes:

These emission factors are estimates based on 50 percent the laboratory method quantification limit since no data was above that limit.

gm/gmmole – grams per gram mole

mg/min/m² – milligrams per minute per square meter

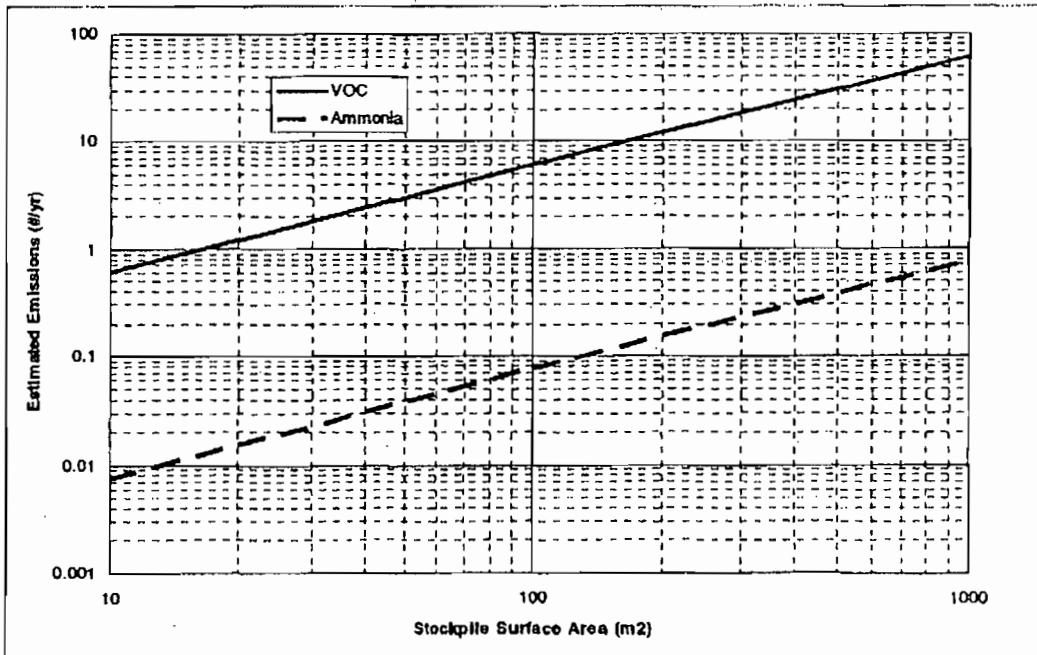


FIGURE ES-1. Estimated Annual Emissions for the Study Compounds

Appendix M

Summary of “Ammonia, Methane, VOC Emissions from a Non-Curbside Greenwaste Chipping and Grinding Facility”, Source Test 02-186, Conducted at Intravia Rock & Sand Inc., SCAQMD, July 2002

Post-It® Fax Note	7671	Date	11/2/02	# of pages	4
To	Brian Cantor	From	Sierra Research		
Co./Dept.		Co.			
Phone #		Phone #	916-444-6666		
Fax #	916-430-6060	Fax #			

SOURCE TEST REPORT

02-186

CONDUCTED AT

Intravia Rock & Sand Inc.
1961 West 16th Street
Upland, CA, 91785

AMMONIA, METHANE, VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS
FROM A NON-CURBSIDE GREENWASTE CHIPPING AND GRINDING FACILITY

TESTED: July 12, 2002

ISSUED:

REPORTED BY: Mei Wang
Air Quality Engineer I

REVIEWED BY:

Michael Garibay
Senior Air Quality Engineer

MONITORING AND SOURCE TEST ENGINEERING

MONITORING AND ANALYSIS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765

Test No: 02-186

-2-

Date: 7/12/2002

SUMMARY

- a. Firm and Mailing Address..... Intravia Rock & Sand Inc.
1961 West 16th Street, Upland, CA 91785
- b. Site Location..... 1961 West 16th Street, Upland, CA 91785
- c. Unit Tested Ground Piles, Tipping Pile
- d. Test Requested by..... Zorik Pirveysian, Planning, (909) 396-3133
- e. Reason for Test Request..... Information for Proposed Rule 1133.1
- f. Date of Test..... July 12, 2002
- g. Source Test Performed by E. Ramirez, G. Kasai, M. Garibay
R. Lem, W. Stredwick, M. Wang
- h. Test Arrangements Made Through..... Ron Willemson
President of Intravia Rock & Sand Inc
(909) 538-8714

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765

Test No: 02-186

-3-

Date: 7/12/2002

RESULTS

Table 1
Summary Results

Contaminant	Tipping Pile (Pile No. 1)		Ground Piles (Pile No. 3, 5 and 6)		Facility Total
	lb/hr per 1000 ft ² of Pile Surface Area	lb/hr	lb/hr per 1000 ft ² of Pile Surface Area	lb/hr	lb/hr
Ammonia	0.0030	0.071	0.0006	0.012	0.083
Methane	0.0029	0.068	0.0097	0.175	0.243
VOC	0.228	5.40	0.153	2.78	8.18

- Pile Surface Area – 23676 ft² tipping pile, and 18138 ft² ground piles (pile #3, #5 and #6), excluded 4" ground material
- Pile Volume – 216298 ft³ (8011 yd³) tipping pile, and 152298 ft³ (5641 yd³) ground piles (pile #3, #5 and #6) excluded 4" ground material
- lb/hr – 1000 ft² = lb/hr/surface area * 1000
- lb/hr = lb/hr – ft² * (Total Pile Surface Area)

Table 2
Total Facility Emissions

Contaminant	lb/hr	lb/yd ³	lb/ton of material
Ammonia	0.083	0.0055	0.017
Methane	0.243	0.020	0.058
VOC	8.18	0.59	1.50

- lb/yd³ = lb/hr * 24 hr/day * 21 days / total (tipping or ground) / piles volume (yd³) (tipping + ground)
- lb/ton = lb/yd³ * 2000lb/ton / pile density (lb/yd³) (tipping + ground)
- Facility didn't have input and throughput information by weight, assume tipping pile density as 618 lb/yd³ and ground pile density as 711 lb/yd³ based on the SCAQMD Source Test Report 02-190.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765

Test No: 02-186

-4-

Date: 7/12/2002

INTRODUCTION

On July 12, 2002, personnel from the South Coast Air Quality Management District (SCAQMD), conducted source tests at Intravia Rock & Sand Inc. The tests were intended to measure the total emissions of the operation over its chipping and grinding process during which the material is stored at the site for approximately 30 days. This facility receives yard trimming material (non-curbside greenwaste) and woodwaste. There were six piles total in this facility including 1 tipping pile and 5 ground piles (Figure 1). The tests were conducted on the tipping pile and a ground material pile (Picture 1 and Picture 2). The non-curbside greenwaste sampling for each pile was conducted on ten points around the piles (Figure 2, and Figure 3) by using the EPA Flux Chamber approach (Picture 3). The sampling results were used to represent the emissions from the piles in the chipping and grinding facility.

The testing was requested by the SCAQMD Planning Division in support of development of proposed Rule (PR) 1133.1 (Chipping and Grinding Activities).

The intent of this test is to provide an estimate of the ammonia and VOC emission rates from non-curbside greenwaste chipping and grinding activities, which will be compared with curbside greenwaste chipping and grinding emission rates.

Appendix N

Electric Motor List

ELECTRIC MOTOR LIST

Item Description	Motors per set	Motor HP	Sets per mixing bldg.	Mixing bldg.(1) subtotal HP	Facility subtotal HP
MIXING BUILDING EQUIPMENT					
Biosolids delivery truck unload conveyors	1	200	1	200	400
Biosolids Hopper	4	15	1	60	120
Biosolids Inclined Conveyor	1	15	2	30	60
Biosolids Transfer Conveyor	1	7.5	2	15	30
Biosolids Weigh Bin	4	7.5	4	120	240
Recycle Hopper	4	10	2	80	160
Recycle Conveyor	1	10	2	20	40
Recycle Transfer Conveyor	1	7.5	2	15	30
Recycle Weigh Bin	4	7.5	4	120	240
Wood Chip Hopper	4	10	1	40	80
Wood Chip Conveyor	1	10	2	20	40
Wood Chip Weigh Bin	4	7.5	4	120	240
Mixer	1	300	4	1200	2400
Mixer Discharge Conveyor	1	10	1	10	20
Compost Inclined Conveyor	1	20	2	40	80
Compost Transfer Conveyor	1	25	2	50	100
				2140	4280
LONG CONVEYORS TO & FROM COMPOST & CURE PILES					
Compost Transfer Conveyor N1	1	50	1	50	100
Compost Transfer Conveyor N2	1	50	1	50	100
Compost Return Conveyor N1	1	50	1	50	100
Compost Return Conveyor N2	1	50	1	50	100
Screened Compost Transfer Conveyor N1	1	30	1	30	60
Screened Compost Transfer Conveyor N2	1	30	1	30	60
				260	520
COMPOST PILE CONSTRUCTION EQUIPMENT					
(Powered by diesel gen. set described in revised submission 6/30/06)					
Compost Drag Conveyor Mounted to Gantry Crane	1	30	2	60	120
Compost Drag Conveyor Single Leg Gantry Crane motor A	1	20	2	40	80
Compost Drag Conveyor Single Leg Gantry Crane motor B	1	10	2	20	40
				120	240
SCREENING SYSTEM					
Compost Return Conveyor from N1 to screen feed conv.	1	15	2	30	60
Screen Feed Conveyor A	1	7.5	1	7.5	15
Screen Feed Conveyor B	1	7.5	1	7.5	15
Unscreened Compost Conveyor	1	15	2	30	60
Compost Screen	3	100	2	600	1200
Screened Compost Conveyor	1	5	2	10	20
Screened Compost Discharge Conveyor	1	30	2	60	120
Screened Compost Discharge Conveyor (Reversing)	1	5	1	5	10
Screened Compost Inclined Conveyor	1	10	2	20	40
Screened Wood Chip Recycle Conveyor	1	15	2	30	60
				800	1600
MIXING BUILDING VENTILATION FANS					
	12	100	1	1200	2400

FANS FOR COMPOST PILES, CURE PILES, AND BIOFILTERS

Compost pile aeration fans
 Cure pile aeration fans
 Biofilter supply fans

Fans per module	Motor HP	Module subtotal HP	Number of modules	Facility subtotal HP
12	10	120	16	1920
4	5	20	16	320
2	60	120	16	1920

(1) Includes two mixing buildings at buildout

4160

Appendix O

Summary of Kettleman City Community Meeting on May 30, 2007

The following is a summary of the significant comments from concerned citizens at the Kettleman City Community Center meeting on May 30, 2007.

Comment 1: The distance from Kettleman City to the WFCF is 4 miles.

Response 1: This is correct, the distance from Kettleman City to the WFCF is approximately 4 miles. The health risk to Kettleman City was evaluated using the proper distance.

Comment 2: How will the WFCF affect the proposed Quay Valley Ranch city?

Response 2: According to our health risk assessment (HRA), the health risk to the nearest receptors, which are closer than the proposed Quay Valley Ranch project, is less than significant. Thus, the risk at Quay Valley Ranch, if built, is expected to be less than significant as well.

Comment 3: What is the health risk on Kettleman City from the WFCF?

Response 3: As part of the application review process, the District performed a health risk assessment (HRA). This involves determining the dispersion of emissions into the surrounding area, and determining the resultant risk from the maximum concentrations of the compounds emitted that people may be subject to. Conservative assumptions were utilized to determine the worst-case health risk to all possible receptors. Please note that the values used to arrive at the project risk level have many safety factors built in. The purpose of those conservative assumptions and safety factors is to ensure that the most sensitive receptors (children, elderly people, pregnant women and people with weakened immune systems) are protected. The project risk values, from the HRA results, are less than significant; therefore, the District has determined the health risk to the surrounding community is less than significant.

The WFCF results in a cancer risk of approximately 3 in a million to the nearest resident in Kettleman City. As mentioned above, this risk to Kettleman City is well below the District's significance threshold; therefore, the project passes the health risk analysis.

Comment 4: A health survey needs to be done on Kettleman City as there are many cases of asthma, cancer, and valley fever in Kettleman City.

Response 4: The District does not have the authority nor the capability to perform a health survey. However, the District does perform a health risk analysis (HRA) for each proposed project. This involves determining the dispersion of emissions into the surrounding area, and determining the resultant risk from the maximum concentrations of the compounds emitted that people may be subject to. Conservative assumptions were utilized to determine the worst-case health risk to all possible receptors. Please note that the values used to arrive at the project risk level have many safety factors built in. The purpose of those safety factors is to ensure that the most sensitive receptors (children, elderly people, pregnant women and people with weakened immune systems) are protected. The project risk values, from the HRA results, are within acceptable limits; therefore, the District has determined the health risk to Kettleman City, and all other receptors is less than significant.

In addition to the HRA, the District also performed an Ambient Air Quality Impact Analysis (AAQIA). The AAQIA accounts for the background emissions and determines the cumulative impact that existing air pollution will cause when combined with the proposed facility. The proposed facility passes the AAQIA standards.

Comment 5: Will the WFCF cause more valley fever cases?

Response 5: The valley fever fungus lives in dry alkaline soil and is spread through the air like dust. The fungus spores can become entrained in the air if the soil containing the fungus is disturbed by farming, wind, construction, etc. Therefore, farmers, construction workers, and others who engage in activities that disturb the soil and create dust are at highest risk for valley fever.

Currently, the land that the WFCF will be located at is periodically disked for weed control, creating dust. With the installation of the facility, this land will no longer be disked and farmed, reducing the current soil disturbance for the long term. Also, the facility, including during construction, shall comply with the District's 8000 series prohibitory dust rules, which require dust emissions to be minimized.

Comment 6: What about odors from WFCF?

Response 6: Like all permitted operations, there will be an enforceable condition listed on the permits prohibiting the operation from becoming a public nuisance. The District's Compliance Department may be contacted for an odor complaint at (800) 870-1037. The District is on-call for odor complaints 24-hours per day, 7 days per week. Upon receiving an odor complaint, the District will investigate the situation. If the facility violates their permits and becomes a nuisance to a community, the facility will be subject to enforcement action through the District's Compliance Department, and the facility must eliminate the nuisance odors.

Prior to issuing the permits though, the District evaluates the facility's nuisance potential. The District will not issue a permit unless it is expected that the facility will not become a public nuisance. This WFCF has proposed the best emissions control technology available for this type and size of operation, which will minimize emissions.

Comment 7: If rats, flies, and mosquitoes flourish and migrate due to the WFCF, how will they be handled?

Response 7: The jurisdiction of the District is limited to air pollution. The District recommends contacting Kings County for this specific concern.

Comment 8: What if the District determines the facility meets all applicable rules and regulations, but there is an increase in number of cancer cases to the surrounding community?

Response 8: The District is confident that the facility's cancer risk to the surrounding community is less than significant. The District would not issue permits to an operation that may pose a significant cancer risk. As part of the application review process, the District

performed a health risk assessment (HRA). This involves determining the dispersion of emissions into the surrounding area, and determining the resultant risk from the maximum concentrations of the compounds emitted that people may be subject to. Conservative assumptions were utilized to determine the worst-case health risk to all possible receptors. Please note that the values used to arrive at the project risk level have many safety factors built in. The purpose of those conservative assumptions and safety factors is to ensure that the most sensitive receptors (children, elderly people, pregnant women and people with weakened immune systems) are protected.

Appendix P

Summary of "Full Scale Evaluation of GORE Technology on LACSD Biosolids at Cedar Grove Composting", Air Emissions Source Test, Conducted at Cedar Grove Composting in Everett, WA., August 2007

Los Angeles County Sanitation Districts
W.L. Gore & Associates
Cedar Grove Composting

Full Scale Evaluation of Gore Technology
On LACSD Biosolids at
Cedar Grove Composting
Everett, WA

Air Emissions Source Test

*Emissions Evaluation of Complete Compost Cycle
VOC and Ammonia Emissions*

RECEIVED

SEP 26 2007

Permits Srvc
SJVAPCD

Report

Prepared by

Thomas R. Card, PE

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Charles E. Schmidt, PhD

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August 2007

Executive Summary

A test program was conducted to determine air emissions from a covered co-composting process using biosolids from the Los Angeles County Sanitation Districts (LACSD) and San Joaquin Valley agricultural waste plus additional green waste from the Cedar Grove facility. The goal of the test was to develop emission factors for the Gore Cover System applicable to the proposed LACSD Westlake Farms Compost Facility. The test included volatile organic compounds (VOC) and ammonia measurements from a full-scale aerated static pile (ASP) that was configured and operated in accordance with the Gore™ Cover System composting technology. The pile was covered with Gore fabric and aerated intermittently under positive pressure. The system operated under a compost cycle of three phases (active, maturation and cure) lasting 28, 13, and 14 days, respectively. The analysis methods used were SCAQMD Methods 25.3 and 207.1 for non-methane organics and ammonia, respectively. The sampling method employed was the USEPA emission isolation flux chamber, dynamic method.

Table ES-1 shows a summary of the compost cycle emissions, calculated control efficiencies as well as emission factors per ton of throughput. The control efficiency was calculated by comparing the under-the-cover (uncontrolled) measurements with the on-the-cover values. Results show a VOC control efficiency of 91% over the compost cycle, and an ammonia removal of 56%. Absolute emission rates may be affected by the freezing weather conditions that prevailed, inadequate pile mixing, and the inclusion of green waste at higher amounts than normally anticipated. The poor mixing of biosolids with bulking agents likely increased ammonia, while green waste is known to generate more VOCs compared to agricultural waste.

Table ES.1 – Measured, full compost cycle VOC and NH3 emissions in pounds per ton of received material.

Gore Full Scale Test				
Throughput	249 wet tons mixed feed			
	Controlled Emissions		"Uncontrolled" Emissions	
	VOC	Ammonia	VOC	Ammonia
Total Emissions (pounds)	50	445	529	1,002
#/Ton	0.20	1.79	2.12	4.02
Control Efficiency (Cover only)	91%	56%		

SCAQMD Co-composting Windrow Emission Factors (#/ton mix) 1.78 2.93

The approach to calculating the full cycle emissions and control efficiencies for this report is straightforward. Detailed measurements were taken on nine separate days interspersed through the compost and curing stages. Emissions during the days in between the test days were calculated by linear interpolation.

Appendix Q

Summary of Source Testing “Assessment of Air Emissions from Fresh and Aged Biosolids” at LACSD’s Joint Water Pollution Control Plant – Carson Facility, 10/07

CE Schmidt, Ph.D.
Environmental Consultant

TECHNICAL MEMORANDUM
**ASSESSMENT OF AIR EMISSIONS FROM
FROM FRESH AND AGED BIOSOLIDS
CARSON FACILITY**

Prepared For:

Mr. Greg Adams
Assistant Department Engineer
Air Quality Engineer
LA County Sanitation Districts
24501 S. Figueroa Street
Carson, CA 90745

Prepared By:

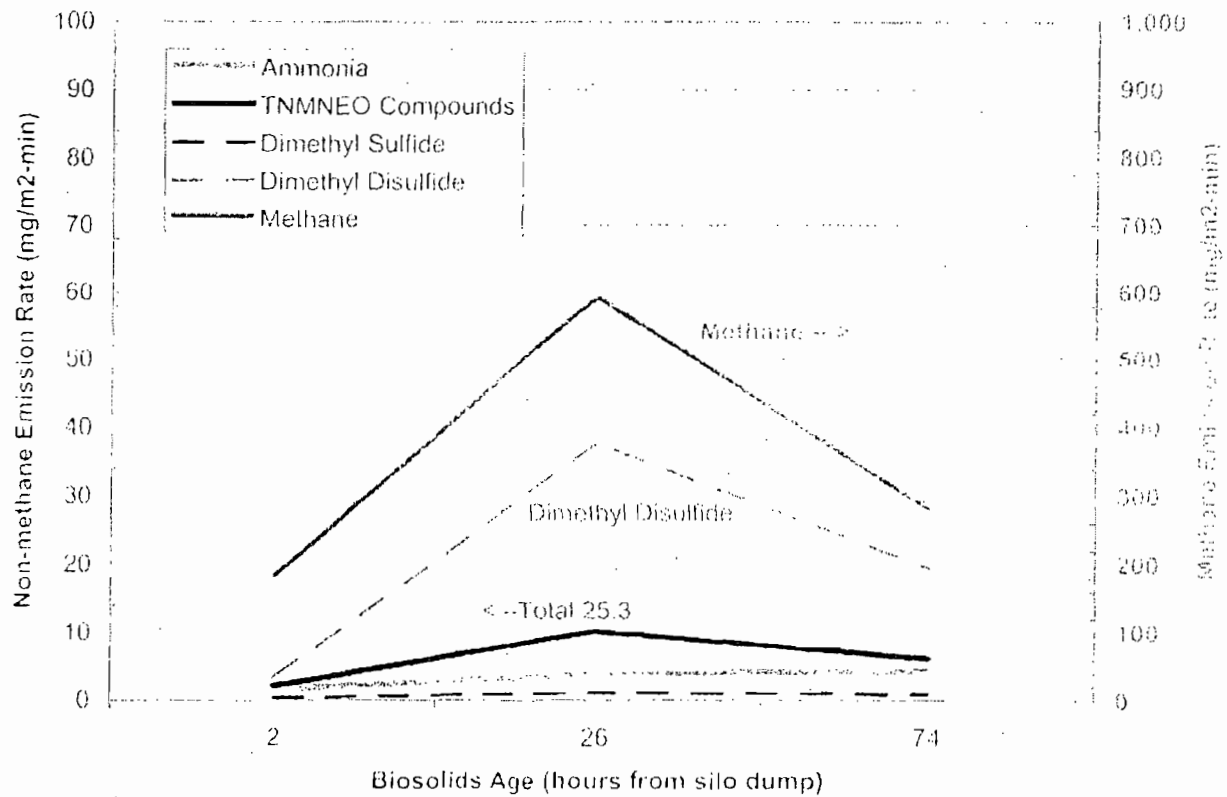
Dr. C.E. Schmidt
Environmental Consultant
19200 Live Oak Road
Red Bluff, California 96080

Mr. Tom Card
Environmental Management Consulting
41125 278th Way SE
Enumclaw, WA 98022

October 2007

Surface Emissions (mg/m²-min)

Compound	Pile Age (hours)			Average
	2	26	74	
Ammonia	1.64	3.77	4.31	3.24
Methane	184.09	593.88	281.97	353.31
TNMNEO Compounds	2.10	10.24	6.13	6.16
Dimethyl Sulfide	0.39	1.16	0.93	0.83
Dimethyl Disulfide	3.25	37.92	19.38	20.18



CE Schmidt, Ph.D.
Environmental Consultant

EXECUTIVE SUMMARY

An air emissions test was conducted at the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) located in Carson, California. Testing was conducted on fresh and aged biosolids material on August 29, 2007 in order to determine the air emissions of ammonia, total hydrocarbon compounds, and speciated hydrocarbon compounds. These data were collected for purpose of collecting air emission factors to be used in estimating air emissions from biosolids compost facilities.

The program consisted of testing air emissions from three different ages of biosolid material. Batches of biosolids were placed in the back of a truck trailer over a three day period and stored on site prior to testing. The material was representative of fresh biosolids (1-to-2 hours aged), one day old biosolids (26 hour aged), and three day old biosolids (74 hours aged). The testing is summarized below: Remove references to CSD TO-12 sampling

TEST	LOCATION	25.3	207.1	TO-14	TO-15
Fresh	Top 1	G-103	A-103	N/A	N/A
	Side 1	G-102	A-102	N/A	N/A
	Side 2	G-101	A-101	S-101	T-101
26 Hr Aged	Top 1	G-106	A-106	N/A	N/A
	Side 1	G-105	A-105	N/A	N/A
	Side 2	G-104	A-104	S-102	T-102
74 Hr Aged	Top 1	G-109	A-109	N/A	N/A
	Side 1	G-108	A-108	N/A	N/A
	Side 2	G-107/-110	A-107/-110	S-103/-105	T-103/-104
Blank		G-111	A-111	S-105	T-105

CE Schmidt, Ph.D.

Environmental Consultant

Project compounds were detected using a real time instrument for total hydrocarbon compounds, colorimetric tube for ammonia, SCAQMD Method 25.3 for total non-methane non-ethane organic compounds (TNMNEOCs), SCAQMD Method 207.1 for ammonia, USEPA Methods TO-14 for speciated sulfur compounds, and USEPA Method TO-15 (GC/MS) for speciated hydrocarbon compounds. Air emission testing was conducted using the USEPA surface emission isolation flux chamber (flux chamber) on all sources following the USEPA protocol. At equilibrium, all flux tests were screened for ammonia emissions using colorimetric tube detection (about 0.05 ppmv sensitivity) and hydrocarbon gases using a real-time field instrument (flame ionization detection- FID at about 0.010 ppmv sensitivity). Field testing also included field instrument calibration, blank sample collection (typically one blank per sample method per day), and replicate sample collection. Advective flow into the flux chamber was determined by using a tracer (10% helium) in the sweep air by the tracer-dilution method. Helium was reported as a study compound detected by GC/TCD in the SCAQMD 25.3 analysis.

Air emissions data are provided herein representing target species emissions from fresh and aged biosolids material. These data can be used as emission factors so that air emissions from biosolid sources on site can be added to the compost site emissions.

Appendix R

Summary of "Emissions Evaluation of Aerated Static Pile Composting of Anaerobically Digested Biosolids as the Davenport Composting Facility", 7/8/02

Draft

Emissions Test Report

Emissions Evaluation of Aerated Static Pile Composting of Anaerobically Digested Biosolids at the Davenport Composting Facility

Prepared for

SCAP

Southern California Alliance of
Publicly Owned Treatment Works

Prepared by

CH2MHILL

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530/529-4256 Fax: 530/529-4878

July 8, 2002

Table 1
Davenport Compost Sampling
Emissions Summary Table

Location	Odor (D/T)	Gas Phase Conc.		Unit Flux Rate		Flow Rate (cfm/ft2)
		NH3 (ppmv)	VOC (ppmv)	NH3 (ug/m/m2)	VOC (ug/m/m2)	
Compost Surface						
Compost, Bay 18 (7 days old)	240	61.6	6.10	3385.38	313.45	
Compost, Bay 11 (17 days old)		7.0	16.70	382.18	856.50	
Curing						
Curing, Bay 7 (4 days old)	3272	426.1	36.90	16033.59	1306.83	
Curing, Bay 1 (24 days old)		32.6	11.80	1742.08	593.91	
Biofilter						
Biofilter #1 Inlet, #1	1249	55.2	571.70			
Biofilter #1 Inlet, #2		89.3	508.50			
Biofilter #1, Cell #6, #1	182	0.6	12.90	101.75	2172.36	0.8
Biofilter #1, Cell #6, #2		0.3	5.30	34.97	535.51	0.5
Biofilter #1, Cell #8, #1	46	0.4	12.30	128.21	4104.23	1.7
Biofilter #1, Cell #8, #2		0.4	7.80	128.21	2627.04	1.7
Biofilter #2 Inlet, #1	315	7.4	15.60			
Biofilter #2 Inlet, #2		43.0	18.60			
Biofilter #2, Cell #2, #1	241	0.2	4.00	120.19	2020.80	2.5
Biofilter #2, Cell #2, #2		0.2	7.80	120.19	3940.56	2.5
Biofilter #2, Cell #4, #1	181	0.2	6.60	58.28	2222.88	1.7
Biofilter #2, Cell #4, #2	40	0.6	8.50	101.75	1431.40	0.8
Biofilter Removal Performance						
Biofilter #1						
Average In	1249	72.3	540.1			
Average Out	114	0.4	10.1			
% Rem	90.9%	99.5%	98.1%			
Biofilter #2						
Average In	315	25.2	17.1			
Average Out	154	0.3	6.7			
% Rem	51.1%	98.8%	60.7%			
Site Emissions Estimate						
Process	Area (m2)	Unit Rate		Annual Emissions		
		NH3 (ug/m/m2)	VOC (ug/m/m2)	NH3 (#/yr)	VOC (#/yr)	
Compost	10,000	1,874	585	21,714	6,779	
Curing	5,000	8,888	950	51,498	5,507	
Biofilter	20,000	99	2,382	2,299	55,203	
	Total			75,511	67,489	

Note:

1. Bold values are the detection limits for non-detected measurements.

Appendix S

Engineering Evaluation for Project C-1112854 (Emergency Stand-By IC Engines)

San Joaquin Valley Air Pollution Control District Authority to Construct Application Review Diesel-Fired Emergency Standby IC Engine

Facility Name: County Sanitation Districts of Los Angeles -- Westlake Farms Composting Date: April 24, 2012
Mailing Address: P.O. Box 4998 Engineer: Sandra Lowe-Leseth
Whittier, CA 90607-4998 Lead Engineer: Joven Refuerzo
Contact Person: David L. Rothbart
Telephone: (562) 908-4288 ext 2412
Application #: C-6048-27-0; C-6048-28-0
Project #: C-1112854
Complete: September 21, 2011

I. Proposal

County Sanitation Districts of Los Angeles - Westlake Farms Composting Facility is a proposed biosolids composting facility. The applicant is proposing to install two diesel-fired emergency standby engines:

1. 563 bhp (intermittent) diesel-fired certified Tier 3 emergency standby internal combustion (IC) engine powering an electrical generator to support the fire pump station during an electrical outage
2. 636 bhp (intermittent) diesel-fired certified Tier 3 emergency standby internal combustion (IC) engine powering an electrical generator to support the mixing building during an electrical outage.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Stationary Internal Combustion Engines – Phase 2 (1/18/07)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
California Environmental Quality Act (CEQA)

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 equipment will be located at 34318 23rd Avenue near Kettleman City, CA, within the SW/4 of Section 35, Township 22S, Range 19E.

The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The emergency standby engines each power an electrical generator. One supports the mixing building and the other supports the fire pump station. Other than emergency standby operation, each engine may be operated up to 50 hours per year for maintenance and testing purposes.

V. Equipment Listing

C-6048-27-0: 563 BHP CATERPILLAR MODEL C15 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-6048-28-0: 636 BHP CATERPILLAR MODEL C15 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

The applicant has proposed to install a Tier 3 certified diesel-fired IC engine that is fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

The proposed engines meet the latest Tier Certification requirements; therefore, the engines meet the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO_x emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	50 hours/year
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%
PM ₁₀ fraction of diesel exhaust:	0.96 (CARB, 1988)

Both engines have certified NO_x + VOC emissions of 3.7 g/kW-hr or 2.76 g/bhp-hr. It will be assumed the NO_x + VOC emission factor is split 95% NO_x and 5% VOC (per the District's Carl Moyer program).

B. Emission Factors

Emission Factors			
Pollutant	Emission Factor (g/kW-hr) ¹	Emission Factor (g/bhp-hr) ²	Source
NO _x	3.51	2.62	ARB Certification
SO _x	--	0.0051	Mass Balance Equation (below)
PM ₁₀	0.14	0.10	ARB Certification
CO	3.0	2.24	ARB Certification
VOC	0.19	0.14	ARB Certification

¹ Executive Order U-R-001-0375

² 1 kW = 1.341 hp

Mass Balance Equation

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb} - \text{fuel}}{\text{gallon}} \times \frac{2 \text{ lb} - \text{SO}_2}{1 \text{ lb} - \text{S}} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g} - \text{SO}_x}{\text{bhp} - \text{hr}}$$

C. Calculations

1. Pre-Project Emissions (PE1)

Since these are new emissions units, PE1 = 0.

2. Post-Project PE (PE2)

The engine rating used for these calculations is the maximum horsepower for the process the engines serve. The daily and annual PEs are calculated as follows:

C-6048-27-0 Project Emissions (PE2)						
Pollutant	Emission Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	2.62	563	24	50	78.0	163
SO _x	0.0051	563	24	50	0.2	0
PM ₁₀	0.1	563	24	50	3.0	6
CO	2.24	563	24	50	66.7	139
VOC	0.14	563	24	50	4.2	9

C-6048-28-0 Project Emissions (PE2)						
Pollutant	Emission Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	2.62	636	24	50	88.2	184
SO _x	0.0051	636	24	50	0.2	0
PM ₁₀	0.1	636	24	50	3.4	7
CO	2.24	636	24	50	75.4	157
VOC	0.14	636	24	50	4.7	10

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

See Application Review for C-1111582.

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

See Application Review for C-1111582.

5. Major Source Determination

See Application Review for C-1111582.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since these are new emissions units, BE = PE1 = 0 for all criteria pollutants.

7. SB 288 Major Modification

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

Since the proposed facility has not been constructed (previous ATCs not implemented), the facility is considered new and not a modification. Therefore, the project cannot qualify as a SB 288 Major Modification.

8. Federal Major Modification

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

Since the proposed facility has not been constructed (previous ATCs not implemented), the facility is considered new and not a modification. Therefore, the project cannot qualify as a Federal Major Modification.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit exceeding two pounds per

- day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
 - c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
 - d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

As discussed in Section I, the facility is proposing to install two new emergency standby IC engines. The engines are not existing engines that are being relocated within the boundaries of the stationary source, nor are the units existing engines that are being modified. Additionally, as determined in Sections VII.C.7 and VII.C.8, this project does not result in an SB288 Major Modification or a Federal Major Modification, respectively. Therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant. The daily emissions from the new engines are compared to the BACT threshold levels in the following table:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -27-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	78.0	> 2.0	n/a	Yes
SO _x	0.2	> 2.0	n/a	No
PM ₁₀	3.0	> 2.0	n/a	Yes
CO	66.7	> 2.0 and SSPE2 ≥ 200,000 lb/yr	6,166	No
VOC	4.2	> 2.0	n/a	Yes
Pollutant	Daily Emissions for unit -28-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	88.2	> 2.0	n/a	Yes
SO _x	0.2	> 2.0	n/a	No
PM ₁₀	3.4	> 2.0	n/a	Yes
CO	75.4	> 2.0 and SSPE2 ≥ 200,000 lb/yr	6,166	No
VOC	4.7	> 2.0	n/a	Yes

As shown above, BACT will be triggered for NO_x, PM₁₀, and VOC emissions from the engines for this project. BACT is not triggered for SO_x and CO.

2. BACT Guideline

BACT Guideline 3.1.1, which appears in Appendix B of this report, covers diesel-fired emergency IC engines.

3. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

Pursuant to the attached Top-Down BACT Analysis, which appears in Appendix B of this report, BACT is satisfied with:

- NO_x: Latest EPA Tier Certification level for applicable horsepower range
- VOC: Latest EPA Tier Certification level for applicable horsepower range
- PM₁₀: 0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)

The following conditions will be listed on each ATC to ensure compliance with the BACT emissions limits:

- {modified 4259} Emissions from this IC engine shall not exceed any of the following limits: 2.62 g-NO_x/bhp-hr, 2.24 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- {modified 4260} Emissions from this IC engine shall not exceed 0.10 g-PM₁₀/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]

B. Offsets

Since emergency standby IC engines are exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for this engine, and no offset calculations are required.

C. Public Notification

See Application Review for C-1111582.

D. Daily Emissions Limits

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.16 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.16.1 and 3.16.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. Therefore, the following conditions will be listed on the ATC to ensure compliance:

- {modified 4259} Emissions from this IC engine shall not exceed any of the following limits: 2.62 g-NO_x/bhp-hr, 2.24 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- {modified 4260} Emissions from this IC engine shall not exceed 0.10 g-PM₁₀/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency standby IC engines to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility will be subject to Rule 2520 (Title V) because it meets the following criteria specified in section 2.0: A Major Source (for VOC emissions).

Pursuant to Rule 2520, section 5.3.1, the facility must submit a Title V application within 12 months of commencing operation. No action is required at this time. The following condition will be placed on each ATC permit:

- The permittee shall submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) within 12 months of the date operation commences (first mixing of Feedstocks under either permit unit C-6048-7 or C-6048-8) for the facility. [District Rule 2520] N

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The following table demonstrates how the proposed engine(s) will comply with the requirements of 40 CFR Part 60 Subpart III.

40 CFR 60 Subpart III Requirements for New Emergency IC Engines Powering Generators (2007 and Later Model Year)	Proposed Method of Compliance with 40 CFR 60 Subpart III Requirements
Engine(s) must meet the appropriate Subpart III emission standards for new engines, based on the model year, size, and number of liters per cylinder.	The applicant has proposed the use of engine(s) that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart III.
Engine(s) must be fired on 500 ppm sulfur content fuel or less, and fuel with a minimum centane index of 40 or a maximum aromatic content of 35 percent by volume. Starting in October 1, 2010, the maximum allowable sulfur fuel content will be lowered to 15 ppm.	The applicant has proposed the use of CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart III. A permit condition enforcing this requirement was included earlier in this evaluation.
The operator/owner must install a non-resettable hour meter prior to startup of the engine(s).	The applicant has proposed to install a non-resettable hour meter. The following condition will be included on each engine's permit: <ul style="list-style-type: none"> • {4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart III] <p style="text-align: right;"><i>This table continues on next page</i></p>
Emergency engine(s) may be operated for the purpose of maintenance and testing up to 100 hours per year. There is no limit on emergency use.	The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine maintenance and testing to 50 hours/year. Thus, compliance is expected.

40 CFR 60 Subpart IIII Requirements for New Emergency IC Engines Powering Generators (2007 and Later Model Year)	Proposed Method of Compliance with 40 CFR 60 Subpart IIII Requirements
<p>The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.</p>	<p>The following condition will be included on each engine's permit:</p> <ul style="list-style-type: none"> • {4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 60 Subpart IIII]

Rule 4002 National Emission Standards for Hazardous Air Pollutants

40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

Emergency engines are subject to this subpart if they are operated at a major or area source of Hazardous Air Pollutant (HAP) emissions. A major source of HAP emissions is a facility that has the potential to emit any single HAP at a rate of 10 tons/year or greater or any combinations of HAPs at a rate of 25 tons/year or greater. An area source of HAPs is a facility is not a major source of HAPs. The proposed engine(s) are new stationary RICE located at an area source of HAP emissions; therefore, these engines are subject to this Subpart.

40 CFR 63 Subpart ZZZZ requires the following engines to comply with 40 CFR 60 Subpart IIII:

1. New emergency engines located at area sources of HAPs
2. Emergency engines rated less than or equal to 500 bhp and located at major sources of HAPs

The proposed engine(s) will be in compliance with 40 CFR 60 Subpart IIII.

Additionally, 40 CFR 63 Subpart ZZZZ requires engines rated greater 500 bhp and located at major sources of HAPs to meet the notification requirements of §63.6645(h); however, that section only applies if an initial performance test is required. Since an initial performance test is not required for emergency engines, the notification requirement is not applicable.

The proposed engines are expected to be in compliance with 40 CFR 63 Subpart ZZZZ.

Rule 4101 Visible Emissions

Rule 4101 states 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 as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be listed on the ATC to ensure compliance:

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

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

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

Rule 4201 Particulate Matter Concentration

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf, which, as calculated below, is equivalent to a PM₁₀ emission factor of 0.4 g-PM₁₀/bhp-hr.

$$0.1 \frac{\text{grain-PM}}{\text{dscf}} \times \frac{\text{g}}{15.43 \text{ grain}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{9,051 \text{ dscf}}{10^6 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{1 \text{ bhp-hr}} \times \frac{0.96 \text{ g-PM}_{10}}{1 \text{ g-PM}} = 0.4 \frac{\text{g-PM}_{10}}{\text{bhp-hr}}$$

The new engines have a PM₁₀ emission factor less than 0.4 g/bhp-hr. Therefore, compliance is expected and the following condition will be listed on the ATC:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Rule 4202 Particulate Matter - Emission Rate

This rule establishes PM emission limits as a function of process weight rate in tons/hr. Gas and liquid fuels are excluded from the definition of process weight. Therefore, Rule 4202 does not apply to IC engines.

Rule 4701 Internal Combustion Engines – Phase 1

District Rule 4701 is no longer applicable to diesel-fired emergency standby or emergency IC engines. Therefore, the proposed emergency internal combustion

engines will comply with the requirements of District Rule 4702 and no further discussion is required.

Rule 4702 Internal Combustion Engines

The following table demonstrates how the proposed engines will comply with the requirements of District Rule 4702.

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
<p>Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.</p>	<p>The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine maintenance and testing to 50 hours/year. Thus, compliance is expected.</p>
<p>Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract.</p>	<p>The following conditions will be included on each engine's permit:</p> <ul style="list-style-type: none"> • {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] • {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
<p>The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.</p>	<p>A permit condition enforcing this requirement was shown earlier in the evaluation.</p>
<p>The owner/operator must monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.</p>	<p>The following conditions will be included on each engine's permit:</p> <ul style="list-style-type: none"> • {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]

This table continues on next page

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
<p>Records of the total hours of operation of the emergency standby engine, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request.</p>	<p>The following conditions will be included on each engine's permit:</p> <ul style="list-style-type: none"> • {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] • {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] • {3475} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

$$R \text{ (universal gas constant)} = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$\frac{0.000015 \text{ lb} - S}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - S} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} - \text{mol} \cdot \text{°R}} \times \frac{520 \text{°R}}{14.7 \text{ psi}} \times 1,000,000 = 1.0 \text{ ppmv}$$

Since 1.0 ppmv is less than 2,000 ppmv, these engines are expected to comply with Rule 4801. Therefore, the following condition will be listed on each engine's ATC to ensure compliance:

- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite. Therefore, a risk management review (RMR) was performed for this project. The RMR results are summarized in the following table, and can be seen in detail in Appendix D.

RMR Summary				
Categories	Diesel-Fired IC Engine (Unit 27-0)	Diesel-Fired IC Engine (Unit 28-0)	Project Totals	Facility Totals
Prioritization Score	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Acute Hazard Index	N/A ²	N/A ²	N/A ²	0.016
Chronic Hazard Index	N/A ²	N/A ²	N/A ²	0.025
Maximum Individual Cancer Risk (10⁻⁶)	0.014	0.0093	0.023	0.023
T-BACT Required?	No	No		
Special Permit Conditions?	Yes	Yes		

- 1 Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
- 2 Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for Units # 27-0 and 28-0:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- {modified 4260} Emissions from this IC engine shall not exceed 0.10 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
- This engine shall be operated only for testing and maintenance of the engines, required regulatory purposes, and during emergency situations. Operation of the engines for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702 and 17 CCR 93115]

California Health & Safety Code 42301.6 (School Notice)

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

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

The following table demonstrates how the proposed engines will comply with the requirements of Title 17 CCR Section 93115.

<p style="text-align: center;">Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators</p>	<p style="text-align: center;">Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements</p>
<p>Emergency engines must be fired on CARB diesel fuel, or an approved alternative diesel fuel.</p>	<p>The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, was included earlier in this evaluation.</p>
<p>The engine(s) must emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr or must meet the diesel PM standard, as specified in the Off-road compression ignition standards for off-road engines with the same maximum rated power (Title 13 CCR, Section 2423).</p>	<p>The applicant has proposed the use of engines that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr.</p>
<p>The engine may not be operated more than 50 hours per year for maintenance and testing purposes.</p>	<p>The following conditions will be included on each engine's permit:</p> <ul style="list-style-type: none"> • This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
<p>New stationary emergency standby diesel-fueled CI engines (> 50 bhp) must meet the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423).</p>	<p>The applicant has proposed the use of engines that are certified to the latest EPA Tier Certification level for the applicable horsepower range.</p> <p style="text-align: right;"><i>This table continues on next page</i></p>

<p style="text-align: center;">Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators</p>	<p style="text-align: center;">Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements</p>
<p>Engines, with a PM10 emissions rate greater than 0.01 g/bhp-hr and located at schools, may not be operated for maintenance and testing whenever there is a school sponsored activity on the grounds. Additionally, engines located within 500 feet of school grounds may not be operated for maintenance and testing between 7:30 AM and 3:30 PM</p>	<p>The District has verified that this engine is not located within 500' of a school.</p>
<p>An owner or operator shall maintain monthly records of the following: emergency use hours of operation; maintenance and testing hours of operation; hours of operation for emission testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.</p>	<p>Permit conditions enforcing these requirements were shown earlier in the evaluation.</p>

California Environmental Quality ACT (CEQA)

See Application Review for C-1111582.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct C-6048-27-0 and -28-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix A

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
C-6048-27-0	3020-10-D	563 bhp IC engine	\$479.00
C-6048-28-0	3020-10-D	636 bhp IC engine	\$479.00

Appendices

- A. Draft ATCs
- B. BACT Guideline and BACT Analysis
- C. RMR/AAQIA Summary

Appendix A

Draft ATCs '-27-0 and '-28-0

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-6048-27-0

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:
563 BHP (INTERMITTENT) CATERPILLAR MODEL C15 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE
POWERING A FIRE PUMP STATION GENERATOR

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
5. {4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]
6. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
7. Emissions from this IC engine shall not exceed any of the following limits: 2.62 g-NOx/bhp-hr, 2.24 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
8. Emissions from this IC engine shall not exceed 0.14 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

C-6048-27-0: Apr 24 2012 3:47PM -- CLEMENTB -- Joint Inspection NOT Required

9. {4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 60 Subpart IIII]
10. {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
12. {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
13. {3498} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702]
14. {4262} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {3475} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-6048-28-0

LEGAL OWNER OR OPERATOR: COUNTY SANITATION DISTRICTS OF L.A. CO.
MAILING ADDRESS: 1955 WORKMAN MILL RD
WHITTIER, CA 90601-1415

LOCATION: SECTION 35, TOWNSHIP 22S, RANGE 19E
MT. DIABLO BASELINE AND MERIDIAN
KINGS COUNTY, CA

EQUIPMENT DESCRIPTION:

636 BHP (INTERMITTENT) CATERPILLAR MODEL C15 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
5. {4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]
6. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
7. Emissions from this IC engine shall not exceed any of the following limits: 2.62 g-NOx/bhp-hr, 2.24 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
8. Emissions from this IC engine shall not exceed 0.14 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-6048-28-0 Apr 24 2012 3:47PM -- CLEMENTB Joint Inspection NOT Required

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10. {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
11. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
12. {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
13. {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
14. {4262} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {3475} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

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Appendix B

BACT Guideline and BACT Analysis

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1
Last Update: 7/10/2009
Emergency Diesel IC Engine

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Latest EPA Tier Certification level for applicable horsepower range		
NOX	Latest EPA Tier Certification level for applicable horsepower range		
PM10	0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)		
SOX	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
VOC	Latest EPA Tier Certification level for applicable horsepower range		

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

Top Down BACT Analysis for the Emergency IC Engines

1. BACT Analysis for NO_x, VOC, and PM₁₀ Emissions:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.1 identifies achieved in practice BACT for emissions from emergency diesel IC engines as follows:

Pollutant	Achieved in Practice
NO _x , VOC	Latest EPA Tier Certification level for applicable horsepower range
PM ₁₀	0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from Step 1.

c. Step 3 - Rank remaining options by control effectiveness

No ranking needs to be done because only one control option is listed in Step 1.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control option listed for each pollutant. Therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x and VOC emissions from this emergency standby diesel IC engine is the latest EPA Tier Certification level for the applicable horsepower range. The applicant has proposed to install Tier 3 certified 546 and 619 bhp emergency standby diesel IC engines, which is the latest Tier Certification for an engine this size as shown in the attached Tier Certification table at the end of this Appendix.

BACT for PM₁₀ is 0.15 g/hp-hr, or the latest EPA Tier Certification level for the applicable horsepower range, whichever is more stringent. The applicant is proposing an engine that meets this requirement.

Appendix C

RMR/AAQIA Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Sandra Lowe-Leseth, AQE- Permit Services
 From: Cherie Clark, AQT - Permit Services
 Date: November 29, 2011
 Facility Name: County Sanitation District of LA/Westlake
 Location: Lemoore, CA
 Application #(s): C-6048-27-0 and C-6048-28-0
 Project #: C-1112854

A. RMR SUMMARY

RMR Summary				
Categories	Diesel-Fired IC Engine (Unit 27-0)	Diesel-Fired IC Engine (Unit 28-0)	Project Totals	Facility Totals
Prioritization Score	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Acute Hazard Index	N/A ²	N/A ²	N/A ²	0.016
Chronic Hazard Index	N/A ²	N/A ²	N/A ²	0.025
Maximum Individual Cancer Risk (10 ⁻⁶)	0.014	0.0093	0.023	0.023
T-BACT Required?	No	No		
Special Permit Conditions?	Yes	Yes		

- 1 Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
- 2 Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

Proposed Permit Conditions

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

Units # 27-0 and 28-0

1. The PM10 emissions rate shall not exceed .18 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. These engines shall be operated only for testing and maintenance of the engines, required regulatory purposes, and during emergency situations. Operation of the engines for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702 and 17 CCR 93115]

B. RMR REPORT

I. Project Description

Technical Services received a request on October 26, 2011 to perform a Risk Management Review for a proposed installation of a 546 bhp and a 619 bhp diesel-fired emergency IC engine powering an fire pump station and a mixing building, respectively.

II. Analysis

Technical Services performed a screening level health risk assessment using the District developed DICE database.

The following parameters were used for the review:

Analysis Parameters Unit 27-0			
Source Type	Point	Location Type	Rural
BHP	563	PM ₁₀ g/hp-hr	0.18
Closest Receptor (m)	1,070	Quad	4
Max Hours per Year	50	Type of Receptor	Business

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

Analysis Parameters Unit 28-0			
Source Type	Point	Location Type	Rural
BHP	636	PM ₁₀ g/hp-hr	0.18
Closest Receptor (m)	1,070	Quad	4
Max Hours per Year	50	Type of Receptor	Business

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The cancer risk associated with the operation of the proposed diesel IC engines is less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

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

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

A. RMR request from the project engineer