San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

April 12, 2023

Tony Bonanno
Shafter-Wasco Composting Facility
3700 M ST Suite 500
Bakersfield, CA 93301

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-9813
Project Number: S-1211716

Dear Ms. Bonanno:

Enclosed for your review and comment is the District's analysis of Shafter-Wasco Composting Facility's application for an Authority to Construct (ATC) for a new co-composting facility, at 17621 Scofield Ave in Shafter, CA.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and 45-day EPA notice comment periods, the District intends to issue the ATC. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. James Harader of Permit Services at (209) 557-6445.

Sincerely,

Brian Clements
Director of Permit Services

BC:JH

Enclosures

cc: Courtney Graham, CARB (w/ enclosure) via email
cc: Gerardo Rios, EPA (w/ enclosure) via email

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Executive Director/Air Pollution Control Officer

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www.valleyair.org www.healthyairliving.com

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

New Co-Composting Facility

Facility Name:	Shafter-Wasco Composting Facility	Date:	April 12, 2023
Mailing Address:	C/O Kern County Public Works 2700 M ST Suite 500 Bakersfield, CA 93301	Engineer:	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
Fax:	N/A		
E-Mail:	bonanno@kerncounty.com		
Application #(s):	S-9813-1-0, '3-0, '-4-0		
Project #:	S-1211716		
Deemed Complete:	February 14, 2023		

I. Proposal

Shafter-Wasco Composing Facility has requested Authority to construct permits for a new 100,000 wet-tons/year co-composting operation that will be located adjacent to Shafter-Wasco Landfill (Facility S-3431). The purpose of the project is to:

- Assist state and local governments (incorporated cities in Kern County) in complying with California's mandate of reducing greenhouse gas emissions by diverting organic waste from being disposed in landfills;
- Facilitate CalRecycle's statewide diversion goal of 75 percent recycling, composting, or source reduction of materials from landfills by 2025, established under California State Senate Bill (SB) 1383;
- Implement an organic waste recycling program to divert organic waste consistent with the requirement of California State Assembly Bill (AB) 1826, *Mandatory Commercial Organics Recycling*, which requires businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week; and
- Assist in meeting the requirements of AB32, *California Global Warming Solutions Act of 2006*, to reduce California GHG emissions to 1990 levels by 2020, and with the AB197, *State Air Resources Board: greenhouse gases: regulations*, target of reducing California greenhouse gas emissions to 40 percent below 1990 levels by 2030.

The proposed co-composting operation will consist of the following:

S-9813-1-0: Receiving, Storage, Sorting, and Mixing

The applicant is proposing to install a co-composting feedstock receiving, storing, and mixing operation rated at 400 wet-tons/day and 100,000 wet-tons/year. The operation will accept green materials, food materials, and manure from residential, self-haul, commercial, and franchise and municipal haulers. Green waste processed in the co-composting operation will include brush and yard trimmings, untreated wood wastes, natural fiber products, construction and demolition wood waste, orchard and vineyard prunings, grape pomace, and crop residues. Food material processed in the co-composting operation will include waste from restaurants, grocery stores, institutional cafeterias (such as prisons, schools and hospitals), and residential food scrap collection. Food materials also includes vegetative food materials that are separated from food materials. Vegetative food materials include fruits, vegetables, edible flowers and plants, outdated and spoiled produce, and coffee grounds.

Feedstock Grinding Operation (Permit-exempt)

The applicant is proposing to install a feedstock grinding operation with an electric-powered grinder. This operation was determined to be a low-emitting unit; therefore, a permit is not required for this unit. The proposed maximum throughput for this unit is 180 wet-tons/day. Please refer to Section VIII (Compliance Determination) of this document for further details on the permit exemption.

S-9814-3-0: Feedstock Screening Operation

The applicant is proposing to install a feedstock screening operation with an electric-powered screener. The proposed maximum throughput for this unit is 400 wet-tons/day and 100,000 wet-tons/year.

S-9813-4-0: Co-composting Operation

The applicant is proposing to install a co-composting operation (green waste, food waste, and manure). The active and curing phases of the composting operation will utilize positively aerated static piles with Gore® covers to control VOC and NH_3 emissions. The proposed maximum throughput for the co-composting operation is 400 wet-tons added each day and 100,000 wet-tons/year.

Finished Compost Screening Operation (Permit-exempt)

The applicant is proposing to install a finished compost screening operation with an electric-powered screen. This operation was determined to be a low-emitting unit; therefore, a permit is not required for this unit. The proposed maximum throughput for this operation is 400 wet-tons/day. Please refer to Section VIII (Compliance Determination) of this document for further details on the permit exemption.

Finished Composting Storage and Loadout (Permit-exempt)

The applicant is proposing to install a finished compost storage and loadout operation. This operation was determined to be a low-emitting unit; therefore, a permit is not required for this unit. The proposed maximum throughput for this operation is 400 wet-tons/day. Please refer to Section VIII (Compliance Determination) of this document for further details on the permit exemption.

Stationary Source Determination

This co-composting facility will be located adjacent to the Shafter-Wasco Landfill (S-3431). Pursuant to District Rule 2201, subsection 3.39.2, to be considered part of the same stationary source the landfill and organic waste composting operations must belong to the same industrial grouping by virtue of having the same two-digit standard industrial classification (SIC) code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material.

The SIC code for organic waste composting is 2875 (Fertilizers, mixing only) and includes compost, while the SIC code for landfills is 4953 (Refuse Systems). Since these operations have different two-digit SIC codes, the operations are not the same stationary source based on SIC code.

Raw organic waste material is received at a common receiving scale at the landfill, where the material that is suitable for composting is diverted to the composting area and the other organic waste that is not suitable for composting is diverted to the landfill for disposal. The finished composted material is sold to customers or may also be used as an alternative daily cover (ADC) at the landfill. However, less than 50% of the finished compost material will be used as ADC. Alternatively, the other organic waste diverted to the landfill is typically non-compostable, and the primary purpose of the landfill is to permanently dispose of this material rather than to create a sellable product. Therefore, these operations are considered to be distinct, separate processes with separate two-digit SIC codes, and the Shafter-Wasco Composting Facility is determined to not be the same stationary source as Shafter-Wasco Landfill as defined in Rule 2201.

II. Applicable Rules

Rule 2020	Exemptions (12/18/14)
Rule 2201	New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (8/15/19)
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 4565	Biosolids, Animal Manure, and Poultry Litter Operations (3/15/2007)
Rule 4566	Organic Material Composting Operations (8/18/2011)
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)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

II. Project Location

The facility will be located at 17621 Scofield Ave in Shafter, CA. The proposed operation will not be 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 applicant is proposing to install a co-composting operation adjacent to Shafter-Wasco Landfill. Co-composting is composting where biosolids and/or animal manure and/or poultry litter are mixed with green waste (such as yard trimmings, orchard prunings, demolition wood waste, grape pomace, crop residues), including amendments, to produce compost.

S-9813-1-0: Receiving, Storage, Sorting, and Mixing

Agricultural and/or municipal green waste, food waste, and manure feedstock materials used for composting will be delivered via trucks and unloaded directly into the receiving section of the staging area. The staging area will be used to remove non-organic contaminants and to sort the different received organic materials into storage piles. The different types of stored organic materials will be mixed together in the staging area in the proper proportions to produce the compost material.

Particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}) is generated from the feedstock stockpiling and transfers due to material drops and disturbance. Volatile Organic Compounds (VOC) and ammonia (NH_3) emissions are also generated from the decomposition of the stored feedstock materials.

The applicant is proposing to receive up to 400 wet-tons/day and 100,000 wet-tons/year of material. Materials will be stored a maximum of two days prior to being placed in bunkers for composting.

Feedstock Grinding Operation (Permit-Exempt)

The applicant proposed to install a feedstock grinding operation with an electric-powered grinder. Only PM_{10} emissions are expected from this operation.

The applicant is proposing a maximum throughput of 180 tons/day for this operation.

S-9813-3-0: Feedstock Screening Operation

The applicant proposed to install a feedstock screening operation with an electric-powered grinder. Only PM_{10} emissions are expected from this operation.

The applicant is proposing a maximum throughput of 400 tons/day and 100,000 tons/year for this operation.

S-9813-4-0: Co-composting Operation

Composting is the aerobic decomposition of organic materials by microorganisms under controlled conditions into a soil-like substance called compost. The facility is proposing to compost materials in a highly controlled fashion using covered aerated static piles (CASP). In this style of composting, incoming feedstock is used to create CASP composting rows within concrete bunkers to be composted. The CASP composting process takes approximately 6 to 12 weeks depending on variables such as types of material, time of year, and weather conditions. Water will be applied during compost pile production to help reduce fugitive dust and to prepare the materials for ideal composting conditions. The CASP system will consist of concrete bunkers with subgrade separation trenches to collect leachate and deliver air that is forced up through the compost to ensure an aerobic composting process. The active-phase piles will be covered with Gore® covers to control emissions.

After the active composting phase, materials are moved to an adjacent bunker for curing for 4 to 6 weeks, followed by a finishing stage of 2 to 4 weeks. The curing stage of composting will also utilize positive aspiration in the bunkers and Gore® covers to control emissions. Approximately 70% of the feedstock is expected to be green waste and food waste, with manure and other animal byproducts comprising of the other 30%. The expected mixture ratio is based upon historical records of materials received at the landfill. This operation will emit PM_{10}, VOC, and NH_3.

The applicant is proposing to compost up to 400 wet-tons of added material/day and 100,000 wet-tons of material/year.

Finished Compost Screening Operation (Permit-exempt)

The applicant proposed to install a finished compost screening operation with an electric-powered screen. Only PM_{10} emissions are expected from this operation.

The applicant is proposing a maximum throughput of 400 tons/day for this operation.

Finished Composting Storage and Loadout (Permit-exempt)

The applicant proposed to install a finished compost storage and loadout operation. For this operation, material is moved from the co-composting operation to a finished storage areas. The compost is loaded out from the finished storage area. Only PM_{10} emissions are expected from this operation.

The applicant is proposing a maximum throughput of 400 tons/day for this operation.

V. Equipment Listing

S-9813-1-0: ORGANIC WASTE MATERIALS AND MANURE RECEIVING, STORAGE, AND MIXING OPERATION

S-9813-3-0: FEEDSTOCK SCREENING OPERATION WITH AN ELECTRIC-POWERED SCREENER

S-9813-4-0: CO-COMPOSTING OPERATION (GREEN WASTE, FOOD WASTE, AND MANURE) UTILIZING POSITIVELY AERATED STATIC PILES WITH GORE COVERS FOR THE ACTIVE AND CURING COMPOSTING PHASES

As stated earlier, the remaining units were determined to be permit-exempt.

VI. Emission Control Technology Evaluation

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

Water will be applied during the raw material receiving, storage, sorting, and mixing processes as necessary to reduce PM_{10} emissions. No controls are proposed for VOC and NH_3 emissions from the receiving, storing, sorting, and mixing operations.

Feedstock Grinding Operation (Permit-exempt)

The permit exemption determination is based on uncontrolled PM emissions from this operation. Thus, no control of PM emissions from this operation is assumed.

S-9813-3-0: Feedstock Screening Operation

The applicant is proposing to use water sprays to control emissions from the screening operation such that visible emissions do not exceed 5% opacity.

S-9813-4-0: Co-composting Operation

The co-composting process has the potential to emit large quantities of VOCs, ammonia, and odor. The Gore® Cover System utilizes positively aerated static piles with an engineered cover to reduce these pollutants.

The positive aeration and cover system serve to promote aerobic decomposition throughout the pile, thereby reducing odorous compounds most typically associated with anaerobic decomposition or open windrow composting that relies on turning and simple diffusion of outside air to penetrate the pile. The presence of sufficient oxygen throughout the pile (5 – 15%) means that micro-organisms will have an aerobic environment promoting the rapid decomposition of organic matter to CO_2.

The Gore® Cover is an engineered laminate polymer cover with micro-pore structure that is permeable to small molecules (e.g. water vapor, air, and CO_2) but not to larger molecules (e.g. VOCs), dust, or bacteria. During the composting process, a film of condensate develops on the inside of the cover. Most of the VOCs (~73%) emitted from green waste composting are alcohols (isopropanol, ethanol, and methanol), which have high water solubility, facilitating their transfer into liquid water. Gaseous pollutants dissolve in this film, which ultimately drips back into the composting material where the dissolved organics and NH_3 continue to be broken down by micro-organisms. In this way, the cover retains potential air contaminants and gives biological processes the time to more fully decompose them. The following image shows a composting pile operating with a Gore® cover.

Source: Cal Recycle Blog – Gore® covers utilized on composting operation at Mid Valley Disposal

The Gore® cover system will reduce VOC emissions by at least 90% and will reduce NH_3 emissions by at least 90% when compared to uncontrolled emissions from a traditional windrow composting process. Additionally, the use of a cover system prevents the release of windblown dust from the composting piles.

Finished Compost Screening Operation (Permit-exempt)

The permit exemption determination is based on uncontrolled PM emissions from this operation. Thus, no control of PM emissions from this operation is assumed.

Finished Composting Storage and Loadout (Permit-exempt)

The permit exemption determination is based on uncontrolled PM emissions from this operation. Thus, no control of PM emissions from this operation is assumed.

VII. General Calculations

A. Assumptions

1. The proposed maximum throughput for each emission unit, with the exception of the feedstock grinder, is 400 tons/day and 100,000 tons/year. The maximum throughput for the feedstock grinder is 180 tons/day.
2. The proposed maximum organic feedstock material stockpile storage time is 48 hours.
3. Only particulate matter is emitted by the screening, grinding, and finished compost transfer and storage operations.
4. 90% of VOC and NH_3 emissions from the composting operation are emitted during the active phase of composting.

5. To streamline emission calculations, PM2.5 emissions are assumed to be equal to PM10 emissions. Specific PM2.5 emission calculations will be performed only if needed to determine if a project is a Federal Major Modification for PM2.5.

B. Emission Factors

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

The Environmental Protection Agency's AP-42, "Compilation of Air Pollution Emission Factors" does not include a factor for the receiving, sorting, and mixing of composting feedstock. To conservatively estimate emissions, the uncontrolled AP-42 emission factor of 0.0011 lb-PM10/ton of material for a crushed stone conveyor transfer point will be used using a 70% adjustment (reduction) to account for the high moisture content of composting feedstock[1]. The uncontrolled emission factor for receiving, mixing, and sorting composting feedstock is then:

$EF_{Receiving/Sorting/Mixing}$ = 0.0011 lb-PM/10/ton x (1-0.7)
$EF_{Receiving/Sorting/Mixing}$ = 0.00033 lb-PM_{10}/wet ton (per transfer point)

The following VOC and NH_3 emission factors for organic material stockpiles was obtained from Table 1 of the District's Composting Emission Factors Report (March 3, 2022)[2].

$EF_{VOC,\ organic\ material\ stockpile}$ = 0.2 lb/wet-ton/day
$EF_{NH3,\ organic\ material\ stockpile}$ = 0.02 lb/wet-ton/day

Feedstock Grinding Operation (Permit-exempt)

The PM_{10} emission factor for material grinding will be based on the NCASI Technical Bulletin 884 factor for a controlled wood chipping operation is:

Total PM EF = 0.00005 kg/tonne (controlled with a cyclone)

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. Additionally, compost material ground in this operation is typically green wood with a high moisture content. Therefore, a 70% adjustment[1] will be made to account for the high moisture content of the material entering the feedstock grinder.

$EF_{Feedstock\ Grinding}$ = 0.00005 kg/tonne × 2.2046 lb/kg × 2,000 lb/ton × tonne/2,204.62 lb ÷ (1 - 0.99) x (1-0.7) = 0.003 lb-PM_{10}/ton

$EF_{Feedstock\ Grinding}$ = 0.003 lb-PM_{10}/wet ton

[1] The 70% adjustment for high moisture content of compost feedstock materials is identical to 70% control efficiency that is assumed for water sprays when controlling emissions from a crushed stone operation.
[2] https://www.valleyair.org/busind/pto/emission_factors/Criteria/Criteria/Composting/Compost%20EF.pdf

Assuming 50% of PM is PM_{10}, the PM emission factor is:

$EF_{Feedstock\ Grinding}$ = 0.003 lb-PM_{10}/wet-ton x 2 lb-PM/lb-PM_{10} = 0.006 lb-PM/wet-ton

S-9813-3-0: Feedstock Screening Operation

The PM_{10} emission factor for material screening will be based on the NCASI Technical Bulletin 884 factor for a controlled wood chipping operation is:

Total PM EF = 0.00005 kg/tonne (controlled with a cyclone)

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. Additionally, compost material ground in this operation is typically green wood with a high moisture content. Therefore, a 70% adjustment[3] will be made to account for the high moisture content of the material entering the feedstock screener.

$EF_{Feedstock\ Screening}$ = 0.00005 kg/tonne × 2.2046 lb/kg × 2,000 lb/ton × tonne/2,204.62 lb ÷ (1 - 0.99) x (1-0.7) = 0.003 lb-PM_{10}/ton

$EF_{Feedstock\ Screening}$ = 0.003 lb-PM_{10}/wet ton

S-9813-4-0: Co-composting Operation

Pursuant to the California Air Resources Board (CARB) compost emission factor guidance and the District's Composting Emission Factors Report, the uncontrolled VOC emission factor for organic material composting is 3.58 lb/wet-ton, while the uncontrolled VOC emission factor for biosolids, manure, and poultry litter composting is 1.78 lb/wet-ton. A weighted uncontrolled VOC emission factor, based on the proposed 70% organic material and 30% manure mixture, is calculated below:

$EF_{VOC\ co\text{-}composting,\ uncontrolled}$ = 3.58 lb/wet-ton x 0.7 + 1.78 lb/wet-ton x 0.3
$EF_{VOC\ co\text{-}composting,\ uncontrolled}$ = 3.04 lb/wet-ton

Pursuant to the District's Composting Emission Factors Report, the uncontrolled NH_3 emission factor for organic material composting is 0.78 lb/wet-ton, while the uncontrolled NH_3 emission factor for biosolids, manure, and poultry litter composting is 2.93 lb/wet-ton. A weighted uncontrolled NH_3 emission factor, based on the proposed 70% organic material and 30% biosolids mixture, is calculated below:

$EF_{NH3\ co\text{-}composting,\ uncontrolled}$ = 0.78 lb/wet-ton x 0.7 + 2.93 lb/wet-ton x 0.3
$EF_{NH3\ co\text{-}composting,\ uncontrolled}$ = 1.425 lb/wet-ton

[3] The 70% adjustment for high moisture content of compost feedstock materials is identical to 70% control efficiency that is assumed for water sprays when controlling emissions from a crushed stone operation.

The Environmental Protection Agency's AP-42, "Compilation of Air Pollution Emission Factors" does not include a factor for the transfer of compost material. To conservatively estimate emissions, the uncontrolled AP-42 emission factor of 0.0011 lb-PM10/ton of material for a crushed stone conveyor transfer point will be used using a 70% adjustment (reduction) to account for the higher moisture content of composting feedstock, compared to the moisture content of crushed stone (similar to 70% control for water sprays). The emission factor a compost material transfer is then:

$EF_{Material\ Transfer}$= 0.0011 lb-PM/10/ton x (1-0.7)
$EF_{Material\ transfer}$ = 0.00033 lb-PM_{10}/wet ton (per transfer point)

Finished Compost Screening Operation (Permit-exempt)

PM10 emissions from the finished compost transfer and screening operation are conservatively based upon AP-42, Table 11.19.2-2, (6/03) for crushed stone, Truck Unloading- Conveyor, which has an emission factor of 0.0001 lb/ton (per emission point). According to the applicant, there is 4 emission points associated with the transfer and screening operation; therefore:

$EF_{Finished\ Compost\ Screening\ and\ transfer}$ = 0.0004 lb-PM_{10}/ton

Finished Composting Storage and Loadout (Permit-exempt)

The Environmental Protection Agency's AP-42, "Compilation of Air Pollution Emission Factors" does not include a factor for finished compost loadout, which is a transfer of compost material. To conservatively estimate emissions, the uncontrolled AP-42 emission factor of 0.0011 lb-PM10/ton of material for a crushed stone conveyor transfer point will be used using a 70% adjustment (reduction) to account for the higher moisture content of composting feedstock, compared to the moisture content of crushed stone (similar to 70% control for water sprays). The emission factor a finished compost loadout is then:

$EF_{Loadout}$= 0.0011 lb-PM/10/ton x (1-0.7)
$EF_{Loadout}$= 0.00033 lb-PM_{10}/wet ton (per transfer point)

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new facility, PE1 = 0 for all pollutants.

2. Post-Project Potential to Emit (PE2)

S-9813-1-0: Receiving, Storage and Mixing

The daily PM_{10}, VOC, and NH_3 emissions is calculated based on an daily receiving rate of 400 wet tons and a maximum stockpile storage time of 1 working days.

Daily $PE_{PM10\text{-}Receiving/Transfer}$ = # of Drop Points × Receiving/Transfer Rate (wet ton/day) × $EF_{Receiving/Transfer}$ (lb-PM_{10}/wet ton)

Daily PE_{VOC} = Daily Storage Weight (wet ton/day) × Stockpile Storage Time (days) × $EF_{VOC,\ organic\ material\ stockpile}$ (lb/wet ton/day)

Daily PE_{NH3} = Daily Storage Weight (wet ton/day) × Stockpile Storage Time (days) × $EF_{NH3,\ organic\ material\ stockpile}$ (lb/wet ton/day)

Daily Emissions for Permit Unit S-9813-1-0				
Pollutant	**Total Number of Drop Points**	**Processing Rate/ Storage Capacity (wet-ton/day)**	**EF**	**Daily PE (lb/day)**
PM_{10}	4 drop points (Receiving, Receiving to Sorting, Sorting to Storage, Storage to CASP)	400	0.00033 lb-PM_{10}/wet ton (per transfer point)	**0.5**
VOC		800	0.2 lb-VOC/wet ton/day	**160.0**
NH_3	--	800	0.02 lb-NH_3/wet ton/day	**16.0**

The annual PM_{10}, VOC, and NH_3 emissions is calculated based on an annual receiving rate of 100,000 wet tons and a maximum stockpile storage time of 1 day.

Therefore:

Annual $PE_{PM10\text{-}Receiving/Transfer}$ = # of Drop Points × Receiving/Transfer Rate (wet ton/yr) × $EF_{Receiving/Transfer}$ (lb-PM_{10}/wet ton)

Annual PE_{VOC} = Annual Storage Weight (wet ton/yr) × Stockpile Storage Time (days) × $EF_{VOC,\ organic\ material\ stockpile}$ (lb/wet ton/day)

Annual PE_{NH3} = Annual Storage Weight (wet ton/yr) × Stockpile Storage Time (days) × $EF_{NH3,\ organic\ material\ stockpile}$ (lb/wet ton/day)

Annual Emissions for Permit Unit S-9813-1-0				
Pollutant	**Total Number of Drop Points or Storage Days**	**Processing Rate/ Storage Weight (wet ton/year)**	**EF**	**Annual PE (lb/year)**
PM_{10}	4 drop points (Receiving, Receiving to Sorting, Sorting to Storage, Storage to CASP)	100,000	0.00033 lb-PM_{10}/wet ton	**132**
VOC	2 storage days	100,000	0.2 lb-VOC/wet ton/day	**40,000**
NH_3	2 storage days	100,000	0.02 lb-NH_3/wet ton/day	**4,000**

Feedstock Grinding Operation (Permit-exempt)

This operation encompasses the grinding of feedstock. A maximum of 180 tons/day will be processed by this operation. The following equation will be used to determine the PM_{10} emissions from this operation.

Daily PE_{PM10} = Throughput (wet-tons/day) × $EF_{PM\ Grinding}$ (lb-PM_{10}/ton)

Daily Emissions for Feedstock Grinder				
Pollutant	**Throughput (wet-tons/day)**	**EF PM10 (lb/ton)**	**PM/PM_{10} Ratio**	**Daily PE PM (lb/day)**
PM_{10}	180	0.003	2	**1.8**

S-9183-3-0: Feedstock Screening Operation

This operation encompasses the screening of feedstock. A maximum of 400 tons/day will be processed by this operation. The following equation will be used to determine the PM_{10} emissions from this operation.

Daily PE_{PM10} = Throughput (wet-tons/day) × $EF_{PM10\ Screening}$ (lb-PM_{10}/ton)

Daily Emissions for Permit Unit N-9813-3-0			
Pollutant	**Throughput (wet-tons/day)**	**EF PM10 (lb/ton)**	**Daily PE (lb/day)**
PM_{10}	400	0.003	**1.2**

Annual emissions will be based on a maximum throughput of 100,000 tons/year and the following equation.

Annual PE_{PM10} = Throughput (wet-tons/year) × $EF_{PM10\ Screening}$ (lb-PM_{10}/ton)

Annual Emissions for Permit Unit N-9813-3-0			
Pollutant	**Throughput (wet-tons/year)**	**EF PM10 (lb/ton)**	**Annual PE (lb/year)**
PM_{10}	100,000	0.003	**300**

S-9813-4-0: Co-composting Operation

This permit unit encompasses the formation of compositing piles, and active and curing phases of the composting operation. The maximum transfer rate of the mixed organic waste material from the storage piles into the active composting piles is 400 wet tons per day. The daily PM_{10}, VOC, and NH_3 emissions will be calculated as follows:

Daily PE_{PM10} = # of Drop Points × Transfer Rate (wet ton/day) × $EF_{PM10/Transfer}$ (lb-PM_{10}/ton)

Daily $PE_{VOC,}$ = Composting Weight (wet ton) × $EF_{VOC\ co\text{-}composting,\ uncontrolled}$ (lb/wet ton-day) x (100% - CE)

Daily PE_{NH3} = Composting Weight (wet ton) × $EF_{NH3\ co\text{-}composting,\ uncontrolled}$ (lb/wet ton-day) x (100% - CE)

Daily Emissions for Permit Unit N-9813-4-0					
Pollutant	**Total Number of Drop Points**	**Transfer/ Composting Rate (wet-tons/day)**	**EF (lb/wet-ton)**	**CE**	**Daily PE (lb/day)**
PM_{10}	2 (CASP to Maturing, Maturing to Curing)	400	0.00033	**N/A**	**0.3**
VOC	N/A	400	3.04	**90%**	**121.6**
NH_3	N/A	400	1.425	**90%**	**57.0**

The maximum transfer rate of the mixed organic waste material from the storage piles into the active composting piles is 100,000 wet tons per year. The annual PM_{10}, VOC, and NH_3 emissions will be calculated as follows:

Annual PE_{PM10} = # of Drop Points × Transfer Rate (wet ton/year) × $EF_{PM10/Transfer}$ (lb-PM_{10}/ton)

Annual PE_{VOC} = Composting Weight (wet ton) × $EF_{VOC\ co\text{-}composting,\ uncontrolled}$ (lb/wet ton-year) x (100% - CE)

Annual PE_{NH3} = Composting Weight (wet ton) × $EF_{NH3\ co\text{-}composting,\ uncontrolled}$ (lb/wet ton-year x (100% - CE)

Annual Emissions for Permit Unit N-9813-4-0					
Pollutant	**Total Number of Drop Points**	**Transfer/ Composting Rate (wet-tons/year)**	**EF (lb/wet-ton)**	**CE**	**Annual PE (lb/year)**
PM_{10}	2 (CASP to Maturing, Maturing to Curing)	100,000	0.00033	**N/A**	**66**
VOC	N/A	100,000	3.04	**90%**	**30,400**
NH_3	N/A	100,000	1.425	**90%**	**14,250**

Finished Compost Screening Operation (Permit-exempt)

This operation encompasses the screening of finished compost. The following equation will be used to determine the uncontrolled PM emissions from this operation.

Daily PE_{PM10} = Throughput Rate (tons/day) × $EF_{PM10/Transfer}$ (lb-PM_{10}/ton) x 2 lb-PM/lb-PM_{10}

Daily Emissions for Finished Compost Screening				
Pollutant	**Transfer/ Composting Rate (tons/day)**	**EF PM10 (lb/ton)**	**PM/PM10 Ratio**	**Daily PE (lb/day)**
PM	400	0.0004	**2**	**0.3**

Finished Composting Storage and Loadout (Permit-exempt)

This operation encompasses the transfer of finished compost to storage from the curing phase area, and for the loadout of the finished compost material. The following equation will be used to determine the uncontrolled PM emissions from this operation.

Daily PE_{PM10} = # of Drop Points × Transfer Rate (tons/day) × $EF_{PM10/Transfer}$ (lb-PM_{10}/ton) x 2 lb-PM/lb-PM_{10}

Daily Emissions for Finished Compost Storage and Loadout					
Pollutant	**Total Number of Drop Points**	**Transfer/ Composting Rate (wet-tons/day)**	**EF PM10 (lb/ton)**	**PM/PM10 Ratio**	**Daily PE (lb/day)**
PM	2 (Curing to Storage, Loadout)	400	0.00033	**2**	**0.5**

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

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

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

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

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

SSPE2 (lb/year)						
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**	**NH_3**
S-9813-1-0	0	0	132	0	40,000	4,000
S-9813-3-0	0	0	300	0	0	0
S-9813-4-0	0	0	66	0	30,400	14,250
SSPE2	**0**	**0**	**498**	**0**	**70,400**	**18,250**

5. Major Source Determination

Rule 2201 Major Source Determination:

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

- Any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 70.2

VOC emissions from the raw material stockpiles are considered to be fugitive emissions. Thus, the VOC emissions from S-9813-1-0 are not included in the Major Source determination.

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
SSPE1	0	0	0	0	0	0
SSPE2	0	0	498	498	0	30,400
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

Note: PM2.5 assumed to be equal to PM10

As seen in the table above, the facility is not an existing Major Source for any pollutant; however, is becoming a new Major Source for VOC emissions as a result of this project.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Estimated Facility PE before Project Increase	0	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

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

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

Otherwise,

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

This is a new facility; therefore, BE = 0 for all pollutants.

7. SB 288 Major Modification

40 CFR Part 51.165 defines a SB 288 Major Modification 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.

This facility is not an existing Major Source; therefore, this permitting action will not constitute a physical change in or change in method of operation of a major stationary source. Thus, an SB288 Modification is not triggered for this project.

8. Federal Major Modification / New Major Source

Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is 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. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

This facility is not an existing major source; therefore, this permitting action will not result in a physical change in or change in the method of operation of a major stationary source. Thus, a Federal Major Modification is not triggered.

New Major Source

Pursuant to 40 CFR 51.165 a(1)(iv)(A)(3), emission increases at a non-major source (or at new sources) constitute a New Major Source if the emission increase for a given pollutant is as large as the major source threshold for that pollutant, i.e. the project by itself would result in a net emission increase exceeding the major source threshold.

Since this facility is becoming Major Source for VOC as a result of this project, the project VOC emissions increase will be compared to the Federal Major Source threshold for VOC to determine whether the project results in a New Major Source according to 40 CFR 51.165 a(1)(iv)(A)(3). The proposed operation is not one of the 28 categories of sources where fugitives are included; therefore, fugitive VOC emissions are not included in the table below.

New Major Source Determination (lb/year)	
	VOC
Project Non-Fugitive Emissions Increase	30,400
Major Source Threshold	20,000
New Major Source?	Yes

Since the project emissions increase exceeds the Major Source threshold for VOC, this facility is a New Major Source pursuant to 40 CFR 51.165 a(1)(iv)(A)(3) for VOC. Consequently, as discussed below in the offset section of this evaluation, pursuant to Section 7.4.2.1 of District Rule 2201, VOC Emission Reduction Credits (ERCs) used to satisfy the offset quantity required under District Rule 2201 must be surplus of Federal requirements at the time of use (ATC issuance).

Federal Offset Quantity Calculation

The Federal Offset Quantity (FOQ) is only calculated for the pollutants for which a project is a Federal Major Modification or a New Major Source as determined above.

Pursuant to 40 CFR 51.165(a)(3)(ii)(J), the federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) for each emission unit times the applicable federal offset ratio.

FOQ = ∑(PE2 – AE) x Federal offset ratio

Actual Emissions

As described in 40 CFR 51.165(a)(1)(xii), actual emissions (AE), as of a particular date, shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

Since these are new units, AE = 0

Federal Offset Ratio

According the CAA 182(e), the federal offset ratio for VOC is 1.5 to 1 (due to the District's extreme non-attainment status for ozone).

Federal Offset Quantity (FOQ)

Since this project only includes new unit(s), the FOQ is calculated as follows:

FOQ = PE2 x Federal offset ratio

VOC **Federal Offset Ratio** **1.5**

Permit No.	Post-Project Potential to Emit (PE2) (lb/year)	Actual Emissions (lb/year)	Emissions Change (lb/yr)
S-9813-1-0	40,000	0	40,000
S-9813-3-0	0	0	0
S-9813-4-0	30,400	0	30,400
		∑(PE2 – AE) (lb/year):	**70,400**
		Federal Offset Quantity (lb/year): ∑(PE2 – AE) x 1.5	**105,600**
		Federal Offset Quantity (tons/year): ∑(PE2 – AE) x 1.5 ÷ 2,000	**52.8**

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

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

- PM
- PM10

I. Project Emissions Increase - New Major Source Determination

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

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

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	0	35.2	0	0	0.6	0.3
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

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

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance Determination

Rule 2020 Exemptions

Feedstock Grinding Operation (Permit-exempt)

This operation is not a type of operation listed in Section 6.1 through 6.18 of Rule 2020; therefore, it may be exempt as a low-emitting unit. Since uncontrolled PM emissions are less than 2.0 lb/day and this unit does not pose a significant health risk (see Appendix C), this operation is exempt as a low-emitting unit.

Finished Compost Screening Operation (Permit-exempt)

This operation is not a type of operation listed in Section 6.1 through 6.18 of Rule 2020; therefore, it may be exempt as a low-emitting unit. Since uncontrolled PM emissions are less than 2.0 lb/day and this unit does not pose a significant health risk (see Appendix C), this operation is exempt as a low-emitting unit.

Finished Composting Storage and Loadout (Permit-exempt)

This operation is not a type of operation listed in Section 6.1 through 6.18 of Rule 2020; therefore, it may be exempt as a low-emitting unit. Since uncontrolled PM emissions are less than 2.0 lb/day and this unit does not pose a significant health risk (see Appendix C), this operation is exempt as a low-emitting unit.

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

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 Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 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.

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

S-9813-1-0: Receiving, Storage and Mixing

VOC and NH_3 emissions from the stockpiles are greater than 2.0 lb/day; therefore, BACT is triggered for VOC and NH_3 from the stockpiles.

S-9183-3-0: Feedstock Screening Operation

Emissions from the screening operation are less than 2.0 lb/day; therefore, BACT is not triggered for this operation.

S-9813-4-0: Co-composting Operation

VOC and NH_3 emissions from both the active phase and curing phase of the co-composting operation are greater than 2.0 lb/day; therefore, BACT is triggered for these operations.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore BACT is not triggered for SB288/Federal Major Modification purposes.

2. BACT Guideline

A new BACT Guideline has been created for compost feedstock material receiving and stockpiling, and for co-composting (See Appendix B).

3. Top-Down BACT Analysis

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

S-9813-1-0: Receiving, Storage and Mixing

VOC: Process received composting materials within 48 hours of receipt.
NH3: Process received composting materials within 48 hours of receipt.

S-9813-4-0: Co-composting Operation

VOC and NH_3 emissions from both the active phase and curing phase of the co-composting operation are greater than 2.0 lb/day; therefore, BACT is triggered for these operations.

VOC: Positive Aerated Composting system with a Gore® cover for both active and curing phase (90% overall capture and control of both VOC and NH_3)
NH_3: Positive Aerated Composting system with a Gore® cover for both active and curing phase. (90% overall capture and control of both VOC and NH_3)

B. Offsets

1. District Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

District Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	0	0	498	0	70,400
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	No	No	No	No	Yes

2. District Offset Quantity (DOQ) Required

Quantity of District Offsets Required

Offsets are triggered for VOC emissions from this project. Since SSPE1 is less than the District offset threshold, the quantity of VOC offsets required for District NSR Rule purposes is calculated using the following formula:

District Offsets Required (lb/year) = [(SSPE2 – ROT + ICCE) x DOR]

Where,
SSPE2 = Post-Project Stationary Source Potential to Emit
ROT = Respective Offset Threshold, for the respective pollutant
ICCE = Increase in Cargo Carrier Emissions
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

This project does not include any cargo carrier emissions. Since this will be a New Major Source, the offset threshold for VOC emissions is 1.5. Thus,

District VOC Offsets Required = (70,400 lb-VOC/year – 20,000 lb-VOC/year) x 1.5
District VOC Offsets Required = 75,600 lb-VOC/year

Comparison of District Offsets Required (DOQ) and Federal Offsets Required (FOQ)

Since both District offsets and federal offsets are required, the facility must provide offset amounts equal to the greatest value between the District offset quantity and the federal offset quantity.

Comparison of District vs Federal VOC Offset Quantity			
	DOQ	FOQ	FOQ ≥ DOQ
VOC	75,600 lb	105,600 lb	**Yes**

As demonstrated above, the federal offset quantity required is greater than the District offset quantity required. Therefore, pursuant to Section 7.4.1.2 of District Rule 2201, the facility must comply with the required federal offset requirements for the project.

In addition, emission reduction credits used to satisfy Federal offset quantities for VOC must be creditable and surplus of Federal requirements at the time of use (ATC issuance).

Quarterly Quantity of Federal Offsets Required

As shown above, the quantity of Federal offsets required, with the 1.5 offset ratio factored in, is 105,600 lb-VOC.

Quarterly Federal offsets required (lb/qtr) = (105,600 lb-VOC/year) ÷ (4 quarters/year)
= 26,400 lb-VOC/quarter

Proposed ERC Certificates

The applicant has proposed to use the following emission reduction certificates:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-5287-1	3,025	5,522	5,660	0
ERC #S-5289-1	7	165	212	78
ERC #S-5290-1	53	22	40	51
ERC #S-5293-1	20,000	32,000	28,000	0
ERC #S-5304-1	1,000	1,000	1,000	1,000
ERC #S-5308-1	1,864	2,618	2,618	354
ERC #C-1553-1	0	83	83	0
ERC #C-1554-1	0	767	1,032	454
ERC #C-1555-1	1,055	1,415	1,403	1,447
ERC #C-1556-1	2,156	456	0	0
Total	29,160	44,048	40,048	3,384

Pursuant to Section 4.13.8 of Rule 2201, actual emission reductions that occur from April through November may be used to offset emission increases during any period of the year. The applicant is proposing to transfer 14,888 lb of VOC ERC credits from Quarter 2 to Quarter 4, and to transfer 10,888 lb-VOC ERC Credits from Quarter 3 to Quarter 4. After the transfers, the quantity of certificates available in each quarter is:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Total ERC's above	29,160	44,038	40,048	3,384
Transfer Q2 to Q4	0	-14,888	0	+14,888
Transfer Q3 to Q4	0	0	-10,888	+10,888
Revised Total	29,160	29,160	29,160	29,160

The quantity of ERC credits proposed is 29,160 lb/quarter, which is greater than the quantity of offsets required with the offset distance ratio; therefore, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

Surplus at the Time of Use Emission Reduction Credits

The applicant has stated that the facility plans to use the ERC certificates listed above to satisfy the Federal offset quantities for VOC required for this project. Pursuant to the ERC surplus analyses in Appendix D, the District has verified that the credits from the proposed ERC certificates provided by the applicant are 100% surplus and are therefore sufficient to satisfy the Federal offset quantities for VOC required for this project.

Proposed Rule 2201 Offset Permit Conditions

The following permit conditions will be added to the Authorities to Construct S-9183-1-0 and '-4-0:

- {GC# 4447 - edited} Prior to operating equipment under Authorities to Construct S-9183-1-0 and '-4-0, the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 26,400 lb, 2nd quarter – 26,400 lb, 3rd quarter – 26,400 lb, and fourth quarter – 26,400 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC certificates specified below. [District Rule 2201]

- {GC# 1983} ERC Certificate Numbers S-5287-1, S-5289-1, S-5290-1, S-5293-1, S-5304-1, S-5308-1, C-1553-1, C-1554-1, C-1555-1, and C-1556-1 (or certificates split from these certificates) 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]

3. ERC Withdrawal Calculations

The applicant has identified the ERC Certificates to be used to offset the increase of 105,600 lb-VOC emissions for the project. As indicated in previous section, the applicant is proposing to use ERC certificate #S-5287-1, S-5289-1, S-5290-1, S-5293-1, S-5304-1, S-5308-1, C-1553-1, C-1554-1, C-1555-1, and C-1556-1 to mitigate the increases of VOC emissions associated with this project. See Appendix G for detailed ERC Withdrawal Calculations.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed,

d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

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

A New Major Source is a new facility, which is also a Major Source or an existing minor source facility becoming a New Major Source as a result of the project (the project itself has an emission increase as large as a new major source). As shown in Section VII.C.5 above, the SSPE2 of this new facility is greater than the Major Source threshold for VOC emissions. Therefore, this new facility is a New Major Source and public noticing is required for this project for New Major Source purposes.

b. PE > 100 lb/day

VOC emissions from the co-composting operation (S-9183-4-0) are greater than 100 lb/day. Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	0	0	20,000 lb/year	No
SO_X	0	0	54,750 lb/year	No
PM_{10}	0	498	29,200 lb/year	No
CO	0	0	200,000 lb/year	No
VOC	0	70,400	20,000 lb/year	**Yes**

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	0	0	0	20,000 lb/year	No
SO_x	0	0	0	20,000 lb/year	No
PM_{10}	498	0	498	20,000 lb/year	No
CO	0	0	0	20,000 lb/year	No
VOC	70,400	0	70,400	20,000 lb/year	**Yes**
NH_3	18,250	0	18,250	20,000 lb/year	No

As demonstrated above, the SSIPE for VOC is greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

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

2. Public Notice Action

As discussed above, public noticing is required for this project since this project is a new Major Source, it results in VOC emissions in excess of 100 lb/day for one or more emission units, for surpassing the offset threshold for VOC emissions, and for an SSIPE greater than 20,000 lb/year for VOC emissions. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA), and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

- *Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. Leaves, tree and shrub trimmings, and plant remains that must be passed through a grinder prior to composting are considered to be the woody material portion of trees (Wood material as defined in this permit) and are not considered to be green materials. [District Rule 2201]*

- *Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]*

- *Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]*

- *Animal manure is defined as non-human animal excretions and waste, including, but not limited to, solids and urine from cows, cattle, or swine. [District Rules 2201 and 4565]*

- *Within 48 hours of the receipt of green material on site, the operator shall either (1) Remove the green material from the facility; or (2) Place the green material in an active-phase composting windrow and start active phase composting. Wood material, as defined below, is not subject to the 48 hour limitation. [District Rule 2201]*

- *Within 48 hours of the receipt of food material on site, the operator shall either (1) Remove the food material from the facility; or (2) Preprocess the material for use in the composting system. [District Rule 2201]*

- *Within 48 hours of the receipt of animal manure on site, the operator shall either (1) Remove the animal manure from the facility; or (2) Preprocess the animal manure for use in the composting system. [District Rule 2201]*

- *The combined quantity of green material, food material, animal manure, and wood material received shall not exceed either of the following limits: 400 wet-tons in any one day, 100,000 wet-tons in any rolling 12-month period. [District Rule 2201]*

- *VOC emissions from the storage and processing of the green material, food material, wood material, and animal manure shall not exceed 0.2 lb-VOC/wet-ton-day of material stored and processed. [District Rule 2201]*

- *Ammonia (NH3) emissions from the storage and processing of the green material, food material, wood material, and animal manure shall not exceed 0.02 lb-NH3/wet-ton-day of material stored and processed. [District Rule 2201]*

- *PM10 emissions from the receiving, sorting, storage, and mixing of materials shall not exceed 0.00132 lb-PM10/wet-ton of material received and processed. [District Rule 2201]*

S-9813-3-0: Feedstock Screening Operation

- *Feedstock materials are green material, wood material, food material, animal manure or any mixture of these materials. [District Rule 2201]*
- *Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. Leaves, tree and shrub trimmings, and plant remains that must be passed through a grinder prior to composting are considered to be the woody material portion of trees (Wood material as defined in this permit) and are not considered to be green materials. [District Rule 2201]*

- *Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]*

- *Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]*

- *Animal manure is defined as non-human animal excretions and waste, including, but not limited to, solids and urine from cows, cattle, or swine. [District Rules 2201 and 4565]*

- *The combined quantity of green material, food material, wood material, and animal manure processed by the feedstock screening operation shall not exceed 400 wet-tons in any one day and 100,000 wet tons in any rolling 12-month period. [District Rule 2201]*

- *PM10 emissions from the feedstock screening operation shall not exceed 0.003 lb-PM10/wet-ton of material screened. [District Rule 2201]*

- *Water sprays shall be used as needed to ensure visible emissions from the feedstock screening operation do not exceed 5% opacity for a period aggregating more than three (3) minutes in any one (1) hour. [District Rule 2201]*

S-9813-4-0: Co-composting Operation

- *Feedstock materials are green material, wood material, food material, animal manure or any mixture of these materials. [District Rule 2201]*

- *Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. Leaves, tree and shrub trimmings, and plant remains that must be passed through a grinder prior to composting are considered to be the woody material portion of trees (Wood material as defined in this permit) and are not considered to be green materials.[District Rule 2201]*

- *Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]*

- *Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]*

- *Animal manure is defined as non-human animal excretions and waste, including, but not limited to, dried solids and urine from cows, cattle, or swine. [District Rules 2201 and 4565]*

- *No more than 30% (by weight) animal manure may be introduced into active phase composting on an annual basis. [District Rules 2201 and 4565]*

- *All active-phase and curing-phase composting shall take place in concrete bunkers with engineered, under-pile aeration. [District Rules 2201 and 4565]*

- *Active phase and curing phase composting shall be performed utilizing Gore covers over positively-aerated static piles (+ASPs), with a VOC control efficiency of at least 90% by weight. [District Rules 2201 and 4565]*

- *The Gore Cover System shall be operated according to manufacturer's recommendations. [District Rules 2201 and 4565]*

- *The total combined quantity of green, wood, and food materials and manure added to the active phase compost piles shall not exceed 400 tons in any one day. [District Rules 2201 and 4565]*

- *The total combined quantity of green, wood, and food materials and manure co-composted shall not exceed 100,000 wet-tons in any rolling 12-month period. [District Rules 2201 and 4565]*

- *PM10 emissions from the transfer of material related to the co-composting operation shall not exceed 0.00066 lb-PM10/wet-ton. [District Rule 2201]*

- *VOC emissions from the active and curing phase of co-composting served by the Gore cover shall not exceed 0.304 lb-VOC/wet-ton. [District Rule 2201][4]*

- *Ammonia emissions from the active and curing phase of co-composting served by the Gore cover shall not exceed 0.1425 lb-NH3/wet-ton. [District Rules 2201][5]*

[4] EF Co-Composting VOC = 3.04 lb-VOC/wet-ton x (1-0.9) = 0.304 lb-VOC/wet-ton
[5] EF Co-Composting NH3 = 1.425 lb-NH3/wet-ton x (1-0.9) = 0.1425 lb-NH3/wet-ton

E. Compliance Assurance

1. Source Testing

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

Emissions from the receiving, storage, storing, and mixing operation are based upon generally accepted emission factors for each operation. Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

S-9813-3-0: Feedstock Screening Operation

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

S-9813-4-0: Co-composting Operation

Uncontrolled VOC and NH_3 emissions from the co-composting operation are based upon generally accepted emission factors. The source has proposed the use of positively aspirated bunkers served by a Gore® cover to reduce VOC and NH3 emissions during the active and curing phases of composting.

The following conditions specify the source test frequency for the co-composting operation:

- *Initial source testing for VOC and NH3 emissions from the active and curing phase of composting shall be performed no later than 270 days after composting commences in the new +ASP bunkers used in the active phase (i.e. after the first mixing of organic materials for introduction into active phase compost pile). Source testing will not be required during compost pile breakdowns. [District Rules 2201 and 4565]*

- *Periodic source testing for VOC shall be performed at least once every 27 months. [District Rules 2201 and 4565]*

The appropriate source test methods, procedures and analysis of the collected data are identified in South Coast AQMD Rule 1133.3, Emissions Reductions from Greenwaste Composting Operations, Attachment A. The following conditions specify the source test procedure and protocol for the co-composting operation:

- *District approved independent testing lab(s) shall perform the source testing. [District Rules 2201 and 4565]*

- *{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]*

- *All source testing shall take place under conditions representative of normal source operation, and, to the extent practicable, the emission measurements shall be representative of the emissions that occur over the active and curing phase (Phase I and Phase II) cycle. [District Rules 2201 and 4565]*

- *Source testing for the controlled VOC and NH3 emissions shall be performed above the cover for both active phase (Phase I) and curing phase (Phase II) piles. At least two active phase piles of different ages shall be tested. One of the active phase piles selected for testing shall be representative of the day when the expected maximum VOC emission rate occurs (as indicated by temperature or other process data). At least one curing phase pile shall be tested. The age of the curing phase pile tested shall be representative of the day when the expected maximum VOC emission rate occurs. Additional piles or days may be included to ensure emission measurements are representative for the compost cycle. [District Rules 2201 and 4565]*

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

- *The source test summary shall include the following for VOC and NH3 emissions: (1) The controlled emission rates (lb/wet-ton) for the active phase (Phase I) pile; (2) The controlled emission rates (lb/wet-ton) for the curing phase (Phase II) pile; and (3) The total controlled emission rates (lb/wet-ton) for the active and curing phases combined. [District Rules 2201 and 4565]*

2. Monitoring

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

Monitoring is not required to demonstrate compliance with Rule 2201 requirements for this permit unit.

S-9813-3-0: Feedstock Screening Operation

Monitoring is not required to demonstrate compliance with Rule 2201 requirements for this permit unit.

S-9813-4-0: Co-composting Operation

In addition to District Rule 2201, this unit is subject to the monitoring requirements of District Rule 4565 “Biosolids, Animal Manure, and Poultry Litter Operations”. The monitoring requirements for the co-composting operation and controls serving the active phase of composting is outlined in the District Rule 4565 section of this evaluation and also satisfy the District Rule 2201 requirement to monitor the co-composting operation.

3. Recordkeeping

S-9813-1-0: Receiving, Storage. Sorting, and Mixing

The following recordkeeping conditions will be included on the Authority to Construct:

- *A daily operations log shall be maintained and shall include the following: (a) The date, type, and weight (in wet tons) of each organic material received; (b) The date each stockpile was initially formed; (c) The date and action taken on each stockpile to satisfy the time for transferring materials from the stockpiles to active composting; (d) Total quantity and type of each organic material stored for composting (in wet tons); and (e) Total quantity and type of each organic material mixed for composing (in wet tons. [District Rule 2201]*

- *A rolling 12-month log shall be maintained of the total wet-tons of each material received by type. The records shall be updated at least monthly. [District Rule 2201]*

- *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 2201]*

S-9813-3-0: Feedstock Screening Operation

The following recordkeeping conditions will be included on the Authority to Construct:

- *Permittee shall keep a record of the daily and rolling 12-month combined quantity of green material, food material, wood material, and animal manure processed by the feedstock screening operation. [District Rule 2201]*

- *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 2201]*

S-9813-4-0: Co-composting Operation

The following recordkeeping conditions will be included on the Authority to Construct:

- *For materials that will be composted, the operator shall maintain daily records in compliance with CalRecycle reporting requirements of (1) the date when the material was received; (2) the type of material received; (3) the amount in tons received; and (4) the date when this material was moved into an active-phase composting pile and covered. [District Rules 2201 and 4565]*

- *The operator shall keep records of oxygen content test results for active and curing compost piles, moisture content test results of active and curing compost piles, and carbon to nitrogen ratio test results for material prepared for active composting. [District Rule 4565]*

- *The operator shall keep a record of (1) the date each compost cover and blower are inspected; (2) the cover and blower ID number; (3) the condition of the cover and blower; and (4) a description of the repairs made, if any. [District Rules 2201 and 4565]*

- *Each day that green, wood, and food materials and animal manure are introduced into active phase composting, the operator shall record (1) The combined total wet-tons of green, wood, and food materials and manure introduced into active phase composting that day. [District Rules 2201 and 4565]*

- *The operator shall record the cumulative wet-tons of green, wood, and food materials, and manure is introduced into active phase composting in any rolling 12-month period. [District Rules 2201 and 4565]*

- *The operator shall keep a record of the wet-tons of compost material introduced into curing phase and finished phase that day and the cumulative wet-tons of compost material introduced into the curing phase and finished phase in any rolling 12-month period. [District Rules 2201 and 4565]*

- *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 and 4565]*

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of District Rule 2201 requires that an AAQA be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix C of this document for the AAQA summary sheet.

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

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a New Major Source or a source undergoing a Federal Major Modification 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. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Federal Major Modification, therefore this requirement is applicable. Shafter-Wasco Composting Facility's compliance certification is included in Appendix F.

H. Alternate Siting Analysis

The applicant is proposing to install a new co-composting operation. The project will occur at a location adjacent to an existing landfill and the co-composting operation will be used to divert material that would have otherwise been landfilled.

Since the project will divert material from an existing landfill at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

As discussed above, this facility is a major source. Pursuant to Rule 2520 and as required by permit condition, the facility will have up to 12 months from the date of ATC issuance to either submit a Title V Application or comply with District Rule 2530 *Federally Enforceable Potential to Emit.*

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. However, no subparts of 40 CFR Part 60 apply to composting operations.

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. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to composting operations.

Rule 4101 Visible Emissions

Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity. The following condition will be included on each permit:

- *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 each permit to ensure compliance:

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

According to the Technical Services Memo and the RMR Facility Summary Table for this project, the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk for this project is shown below.

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
1-0	0.63	0.16	0.00	1.36E-07	No	No
Feedstock Grinding	0.00	0.00	0.00	0.00	No	No
3-0	0.00	0.00	0.00	0.00	No	No
4-0	0.62	0.03	0.00	5.05E-07	No	No
Finished Compost Screen	0.00	0.00	0.00	0.00	N/A	N/A
Finished Compost Storage/Loadout	0.00	0.00	0.00	0.00	N/A	N/A
Project Totals	1.24	0.20	0.00	6.41E-07		
Facility Totals	>1	0.20	0.00	6.41E-07		

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Attachment C: Health Risk Assessment Summary

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 cubic foot.

This requirement only applies to point-sources of PM10 emissions. This facility does not include any PM10 emission sources that are point sources of emissions; therefore, the requirements of District Rule 4201 are not applicable.

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 the IC engines. This rule will apply to the PM emissions associated with the trammel screen.

Section 4.0 of this rule, a person shall not discharge into the atmosphere PM emissions in excess of the maximum allowable limit (E Max), in lb/hr, determined by the following specified in this Rule:

E_{Max} = 3.59 $P^{0.62}$, for Process weight (P, tons/hr) less than or equal to 30 tons/hr
E_{Max} = 17.31 $P^{0.16}$, for Process weight (P, tons/hr) greater than 30 tons/hr

The operations at this site have a daily throughput of 400 tons/day. Assuming 24-hours of operation, the hourly throughput is 16.7 tons/hour.

Since P < 30 tons/hr

E_{Max} = 3.59 $P^{0.62}$
= 3.59 $(16.7)^{0.62}$
= 20.6 lb-PM/hr

Source Operation	P process weight (ton/hr)	E max emission rate (lb-PM/hr) under Rule 4202	E proposed (PM/hr)	E proposed < E max?
S-9813-1-0	16.7	20.6	0.04	Yes
S-9813-3-0	16.7	20.6	0.02	Yes
S-9813-4-0	16.7	20.6	0.03	Yes

Therefore, compliance with District Rule 4202 requirements is expected.

Rule 4565 Biosolids, Animal Manure, and Poultry Litter Operations

Section 5.1 of Rule 4565 lists requirements for facilities that landfills biosolids, animal manure, or poultry litter. Since this facility does not landfill these materials, these requirements are not applicable.

Section 5.2 lists land application requirements for facilities that land-apply materials containing biosolids, animal manure, or poultry litter. Since this facility does not land apply materials, these requirements are not applicable.

Section 5.3.3 states that co-composting operations with throughputs of at least 100,000 wet tons per year must meet either of the following:

1. Implement at least four Class One mitigation measures in addition to one Class Two mitigation measure for active composting, OR
2. Implement at least two Class One mitigation measures in addition to one Class Two mitigation measure for active composting and one Class Two mitigation measure for curing composting.

The facility has proposed the following mitigation measures:

1. Maintain a minimum oxygen concentration of at least five percent, by volume, in the free air space of every active and curing compost pile. (Class One Mitigation Measure)
2. Manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty to one. (Class One Mitigation Measure)

3. 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. (Class Two Mitigation Measure)
4. 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 (Class Two Mitigation Measure)

The following conditions will be included on Authority to Construct S-9813-4-0:

- *The operator shall maintain a minimum oxygen concentration of at least five percent, by volume, in the free air space of every active and curing compost pile. [District Rule 4565]*

- *The operator shall manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty to one. In order demonstrate compliance with the initial carbon to nitrogen ratio, the operator shall measure the carbon to nitrogen when material is prepared for active composting on each day that materials are mixed using TMECC Method 05.02-A (Carbon to Nitrogen Ratio). The samples tested must be representative of the initial composition of the active compost pile. [District Rule 4565]*

The facility is proposing to utilize Gore® covers for both the active and curing phase of composting, satisfying the Class 2 mitigation measures. The following will be included on the Authority to Construct permit:

- *Active and curing phase composting shall be performed utilizing Gore covers over positively-aerated static piles (+ASPs), with a VOC control efficiency of at least 90% by weight. [District Rules 2201 and 4565]*

Section 5.3.4 states that operators selecting oxygen concentration or moisture content as a mitigation measure must test each active compost pile and each curing compost pile at least once each week using the applicable test methods in Section 6.2.2, unless the APCO and EPA determine, based on weekly test results, that a different testing frequency is warranted to ensure compliance. Weekly moisture content testing would require the operator to remove the Gore® cover from the piles, which would result in additional emissions. The applicant has proposed to propose a more appropriate moisture content testing scheme in their emissions monitoring plan, which will be submitted for District approval. The following conditions will be included on Authority to Construct S-9813-4-0:

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

- *The operator shall manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty to one. In order demonstrate compliance with the initial carbon to nitrogen ratio, the operator shall measure the carbon to nitrogen when material is prepared for active composting on each day that materials are mixed using*

TMECC Method 05.02-A (Carbon to Nitrogen Ratio). The samples tested must be representative of the initial composition of the active compost pile. [District Rule 4565]

Section 5.3.5 states that for operators selecting initial carbon to nitrogen ratio as a mitigation measure must test the material when it is prepared for active composting using the applicable test method in Section 6.2.2. Testing must be done each day that materials are mixed. Samples must be representative of the initial composition of the active compost pile. The following condition will be included on Authority to Construct S-9813-4-0:

- *The operator shall manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty to one. In order demonstrate compliance with the initial carbon to nitrogen ratio, the operator shall measure the carbon to nitrogen when material is prepared for active composting on each day that materials are mixed using TMECC Method 05.02-A (Carbon to Nitrogen Ratio). The samples tested must be representative of the initial composition of the active compost pile. [District Rule 4565]*

Section 5.3.6 states that if a tested parameter is found to be outside the applicable limits specified in Table 2, the operator must take remedial action within 24 hours of discovery to bring pile characteristics within the specified limits. The following condition will be included on Authority to Construct S-9813-4-0:

- *If a tested parameter is found to be outside the applicable limits of the chosen facility mitigation measures, the operator must take remedial action within 24 hours of the discovery to bring pile characteristics within the specified limits. [District Rule 4565]*

Section 5.4.1 states that an aerated static pile shall have no measureable increase (< 0.45 ppmv increase) over background levels of hydrocarbons within three feet of any surface of the aerated static pile.

Some level of VOC above background above the cover is expected from the Gore® Cover System; therefore, it would not be an indication of the Gore® Cover System's compliance to monitor according to the standard in Section 5.4.1. As allowed by Section 5.4.4 below, and approved in Tulare Lake Compost project C-1111582, the "leak" standard consistent with the Gore® Cover System will be determined at the time of start-up testing. The portable analyzer readings will be conducted at the same time initial source testing is performed to determine the correlation between portable analyzer readings and the emission rates indicated by the flux chamber testing.

Section 5.4.3 states that the operator must test for VOCs once each calendar quarter as follows:

1. The location and number of test points for aerated static pile composting system must be determined using TMECC 0201-B (Selection of Sampling Locations for Windrows and Piles)

2. The hydrocarbon analyzer must meet the requirements specified in Section 6.2.3.2.

As noted previously in project C-6048, 1111582, Method TMECC 0201-B would not be appropriate for a Gore® Cover System because it requires removal of the cover to take core samples from the pile. Following such a procedure would alter the composting process and result in uncontrolled VOC and NH_3 emissions.

Section 5.4.4 states that 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.

Section 5.4.5 states that 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 an EPA, that the alternate analyzer is as indicative of system performance as the requirements of Section 5.4.3.

The following condition will be included on Authority to Construct S-9813-4-0 to enforce Section 5.4 requirements:

- *The operator 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 compromise the ability of the cover to act as an air pollution control device shall be repaired immediately, or the cover shall be replaced. [District Rules 2201 and 4565]*

- *The operator shall conduct an inspection of the blower and air distribution system in each bunker prior to building a compost pile in that bunker. Any abnormalities that adversely affect 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]*

- *Within 60 days after completing the initial source test, the operator shall submit an emissions monitoring plan for the covered compost piles to the District for approval and for incorporation into the permit. The plan shall include, but is not limited to: (1) the use of portable analyzer(s) for detecting VOC and ammonia leaks from the active and curing phase covered compost piles; (2) portable analyzer(s) specifications, operation, and calibration; (3) locations where VOC and NH3 emissions will be sampled and the frequency of monitoring with the portable analyzer(s), (4) a protocol to establish the background VOC and NH3 levels, (5) a protocol to establish the correlation between the portable analyzer measurements and the source test results, if possible; or (6) if no correlation between portable analyzer measurements and source test results for VOC and NH3 can be made, the operator shall provide an explanation and propose an alternative form of monitoring; and (7) a plan of action for preventing and repairing leaks. [District Rules 2201 and 4565]*

- *The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rule 4565]*

- *The operator shall measure the concentrations of VOC and NH3 emissions from the covered piles with a portable analyzer during the initial source test (to establish a correlation between the controlled VOC and NH3 emission rates and the portable analyzer measurements, if possible) and at least once every month thereafter according to the approved emissions monitoring plan. [District Rule 4565]*

- *If either the VOC or NH3 concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the operator 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 operator may fully comply with Rule 1100 in lieu of the performing the notification requirements of this condition. [District Rule 4565]*

Section 5.5 lists requirements for composting operations controlled by biofilters. The applicant is not proposing to utilize a biofilter; therefore, these requirements are not applicable.

Section 5.6 lists VOC emission control device requirements for non-biofilter systems. Section 5.6.1 requires the operator to 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, temperature, pressures, and flow rates. Section 5.6.2 states that the operator must operate and maintain the 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.

The Gore® Cover System monitors the oxygen concentration and temperature within the pile using sensors. Feedback from those sensors determines the operation of the blowers. The following conditions will be included on Authority to Construct N-9813-4-0:

- *The Gore Cover System shall be operated according to manufacturer's recommendations. [District Rule 4565]*

- *Active phase and curing phase composting shall be performed utilizing Gore covers over positively-aerated static piles (+ASPs), with a VOC control efficiency of at least 90% by weight. [District Rules 2201 and 4565]*

- *The Gore cover on the active and curing phase composting piles shall be sufficiently anchored around the perimeter to prevent leaks of VOC and ammonia vapors. A leak shall be defined according to the approved emissions monitoring plan. [District Rules 2080 and 4565]*

- *The operator 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 compromise the ability of the cover to act as an air pollution control device shall be repaired immediately, or the cover shall be replaced. [District Rules 2201 and 4565]*

- *The operator shall conduct an inspection of the blower and air distribution system in each bunker prior to building a compost pile in that bunker. Any abnormalities that adversely affect 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]*

- *The operator shall maintain aerobic conditions in active phase of composting at all times. Compliance with this requirement may be demonstrated by computer records of data obtained in the controlling software that demonstrate that the blowers are operating and pushing air in a positive direction into the composting bunkers in total duration for a minimum 100 minutes of operating time in a 24-hour period each day of active phase composting. [District Rules 2201 and 4565]*

Section 5.7.1 requires the VOC control device to be tested within 90 days of installation and every two years thereafter. Section 5.7.2 states that testing must be conducted under representative operating conditions with respect to seasonal conditions, compost composition, process throughput, processing of materials, and pile geometries. Section 5.7.3 allows operators of biofilters to request up to 6 months from installation to conduct the initial start-up test.

The appropriate test methods and protocol for the Gore® Cover System is similar to that used for a biofilter (Section 6.2.3.1). Therefore, the source test requirements that apply to a biofilter may be reasonably applied to the Gore® Cover System. The manufacturer (Gore®) and installer have requested that the operator be given a similar allowance as LACSD Gore® Cover System project (ATC C-6048-19-3), in which the District allowed up to 270 days from the time of commencement of operation before the initial testing was required.

In addition, Section 5.7.1 requires periodic testing for VOC (not NH_3) every two years, while Section 5.7.2 requires representative testing that also accounts for seasonal variation. To address the seasonality requirement, the District will require the operator to test every 21 months, ensuring that tests occur in all four seasons. The following conditions will be included on Authority to Construct S-9183-4-0:

- *Initial source testing for VOC and NH3 emissions from the active and curing phase of composting shall be performed no later than 270 days after composting commences in the new +ASP bunkers used in the active phase (i.e. after the first mixing of organic materials for introduction into active phase compost pile). Source testing will not be required during compost pile breakdowns. [District Rules 2201 and 4565]*

- *All source testing shall take place under conditions representative of normal source operation (e.g. normal compost composition, process throughput, processing of feedstock materials and additives, and pile geometries), and, to the extent practicable, the emission measurements shall be representative of the emissions that occur over the active phase (Phase I) and curing phase (Phase II) cycles. [District Rules 2201 and 4565]*

- *Periodic source testing for VOC emissions from the active and curing phase of composting shall be performed at least once every 27 months after the initial testing is completed. [District Rules 2201 and 4565]*

Section 6.1.4.1 requires the operator to keep daily records of the quantity of materials received that would be used in the co-composting operation. These materials may 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. The following condition will be included on Authority to Construct S-9813-4-0:

- *For materials that will be composted, the operator shall maintain daily records in compliance with CalRecycle reporting requirements of (1) the date when the material was received; (2) the type of material received; (3) the amount in tons received; and (4) the date when this material was moved into an active-phase composting pile and covered. [District Rules 1070 and 4565]*

Section 6.1.4.2 requires an operator to 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. The following condition will be included on Authority to Construct S-9813-4-0 to ensure compliance:

- *The operator shall keep records of oxygen content test results for active and curing compost pile, and carbon to nitrogen ratio test results for material prepared for active composting. [District Rule 4565]*

Section 6.1.4.3 requires composting operation subject to Class Two mitigation measures to keep records according to Section 6.1.5 through 6.1.7. Section 6.1.5 states that the operator must maintain an inspection logbook. The following must be contained in the logbook:

1. The date of the VOC inspection.
2. The reading of the hydrocarbon analyzer in ppmv for each inspection location
3. If an alternate parameter is monitored, list the parameter monitored and record the level of the operating parameter for each inspection location.

Section 6.1.6 list recordkeeping requirements for operators using biofilters. Since this operation isn't using a biofilter, these requirements are not applicable.

Section 6.1.7.1 requires an operator using a VOC emission control system that is not a biofilter to maintain daily records of key system operating parameters that will demonstrate compliance of the VOC emission control system during composting operation. These may include, but are not limited to, temperature, pressure, and flow rates.

Section 6.1.7.2 requires an operator using a VOC emission control system that is not a biofilter to keep records describing all maintenance work on the VOC emission control system.

The following conditions will be included on Authority to Construct S-9813-4-0:

- *The operator shall keep a record of all VOC and NH3 emissions monitoring conducted with the portable analyzer(s). The record shall include (1) The portable analyzer(s) used, including the date last calibrated and the concentrations of the calibration gases used; (2) The date and time the monitoring was conducted; (3) The locations of the measurements; (4) The VOC and NH3 concentrations measured, (5) Corrective action taken upon discovery of a leak; (6) Date and time the leak was repaired as evidenced by a re-check with a portable analyzer(s). [District Rule 4565]*

- *The operator shall keep a record of (1) the date each compost cover and blower are inspected; (2) the cover and blower ID number; (3) the condition of the cover and blower; and (4) a description of the repairs made, if any. [District Rules 2201 and 4565]*

- *The operator shall maintain aerobic conditions in active phase of composting at all times. Compliance with this requirement may be demonstrated by computer records of data obtained in the controlling software that demonstrate that the blowers are operating and pushing air in a positive direction into the composting bunkers in total duration for a minimum 100 minutes of operating time in a 24-hour period each day of active phase composting. [District Rules 2201 and 4565]*

Section 6.1.8 requires the operator to retain the applicable records on-site for a period of five years, and to make the records available to the APCO, ARB, or EPA upon request.

- *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 and 4565]*

Section 6.2 lists test methods for measurements required by Rule 4565. These test methods have been referenced in the conditions requiring testing to be conducted.

Rule 4566 Organic Material Composting Operations

Pursuant to Section 4.1.2, stockpiles used for composting operations that are subject to Rule 4565 are exempt from the stockpile requirements of this rule. Furthermore, composting operations that are subject to Rule 4565 are exempt from the requirements of this rule per Section 4.2.1.1. Thus, no requirements of Rule 4566 are applicable to the proposed co-composting operation.

Rule 8011 General Requirements

The definitions, exemptions, requirements, administrative requirements, record keeping requirements, and test methods set forth in this rule are applicable to all rules under Regulation VIII (Fugitive PM_{10} 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.

Since none of the activities are applicable to the activities proposed at this facility, this rule is not applicable to this project.

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 ATCs issued in this project to ensure compliance with the requirements of this rule.

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

Rule 8041 Carryout and Trackout

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

- *An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041, Section 5.0. [District Rules 8011 and 8041]*

Rule 8051 Open Areas

This rule applies to any open area having 0.5 acres or more within urban areas (i.e. city limits), or 3.0 acres or more within rural areas; and contains at least 1,000 square feet of disturbed surface area.

Rule 8011 defines *disturbed surface area* as an area in which naturally occurring soils, or soils or other materials placed thereon, have been physically moved, uncovered, destabilized, or otherwise modified by grading, land leveling, scraping, cut and fill activities, excavation, brush and timber clearing, or grubbing, and soils on which vehicle traffic and/or equipment operation

has occurred. An area is considered to be disturbed until the activity that caused the disturbance has been completed, and the disturbed area meets the stabilized surface conditions specified in this rule.

None of the composting operations proposed in this project are expected to involve disturbed open areas. Therefore, the requirements of this rule do not apply.

Rule 8061 Paved and Unpaved Roads

This rule applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.

None of the composting operations proposed in this project will involve paved road building or paved road modification. Therefore, Section 5.1, Paved Roads, does not apply.

The facility may have some segments of unpaved gravel roads where Section 5.2, Unpaved Road Segment, could apply.

- *On any unpaved road segment with 26 or more annual average daily vehicle trips (AADT), the owner/operator shall limit visible dust emissions (VDE) to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures: (1) Watering; (2) Uniform layer of washed gravel; (3) Chemical/organic dust stabilizers/suppressants; (4) Roadmix; (5) Paving; or (6) Any other Any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road. [District Rules 8011 and 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 issued in this project to ensure compliance with the requirements of this rule.

- *For unpaved vehicle or equipment traffic areas that have 50 or more annual average daily trips (AADT), or 150 or more vehicle daily trips (VDT) or 25 or more VDT with vehicles having 3 axles or more, the permittee shall apply water, washed gravel, road mix, chemical/ organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in District Rule 8011. [District Rules 8071 and 8011]*

- *Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8071 and 8011]*

California 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.

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

District is a Responsible Agency

It is determined that another agency has prepared an environmental review document for the project. 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 is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating greenhouse gas emissions. The District has determined that the applicant is responsible for implementing greenhouse gas mitigation measures, if any, imposed by the Lead Agency.

District CEQA Findings

The County of Kern (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 October 9, 2009, the County certified the Environmental Impact Report (EIR), finding that cumulative emissions of criteria air pollutants would have a significant, unavoidable impact on air quality. The County approved the project and adopted a Statement of Overriding Consideration (SOC).

Pursuant to CEQA Guidelines §15250, the District is a Responsible Agency for 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). The District has considered the Final EIR certified by the County.

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 the District would impose permit conditions requiring the applicant to surrender emission reduction credits (ERC). 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.

The County concluded that emissions from cumulative emissions of criteria air pollutants would have a significant impact on air quality. The District finds that impacts from mobile source emissions and greenhouse gases are within the jurisdiction of the California Air Resources Board. The District has no statutory authority over mobile source emissions and cannot impose additional mitigation measures to reduce emissions from those sources.

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. The District has required all feasible mitigation measures to lessen stationary source emissions impacts to air quality from this project. As a single purpose agency, the District lacks the Lead Agency's broader scope of authority over the project and does not believe that it should overrule the decisions made by the Lead Agency. Accordingly, after considering the Lead Agency's EIR, the SOC, and the substantial evidence the Lead Agency 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 Lead Agency's SOC by reference as its own.

Indemnification Agreement/Letter of Credit Determination

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

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC's S-9813-1-0, '-3-0, and '-4-0, subject to the permit conditions on the attached draft ATC in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-9813-1-0	3020-06	Miscellaneous	$128
S-9813-3-0	3020-01-A	20 Electric HP	$107
S-9813-4-0	3020-01-D	177 Electric HP	$379

Appendices

A: Draft ATCs
B: BACT Analyses
C: Risk Management Review and AAQA Summary
D: ERC Surplus Analyses
E: Quarterly Net Emissions Change
F: Compliance Certification
G: ERC Withdrawal Calculations

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-9813-1-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SHAFTER-WASCO COMPOSTING FACILITY
MAILING ADDRESS: 2700 M ST STE 500
BAKERSFIELD, CA 93301

LOCATION: 17621 SCOFIELD AVE
SHAFTER, CA

EQUIPMENT DESCRIPTION:
ORGANIC WASTE MATERIALS AND MANURE RECEIVING, STORAGE, AND MIXING OPERATION

CONDITIONS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. This prohibition shall not apply to odors emanating from composting operations, which are not under the jurisdiction of the San Joaquin Valley Air Pollution Control District. [District Rule 4102 and CH&SC 41705(a)(2)]
3. Prior to operating equipment under Authorities to Construct S-9183-1-0 and '-4-0, the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 26,400 lb, 2nd quarter - 26,400 lb, 3rd quarter - 26,400 lb, and fourth quarter - 26,400 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC certificates specified below. [District Rule 2201]
4. ERC Certificate Numbers S-5287-1, S-5289-1, S-5290-1, S-5293-1, S-5304-1, S-5308-1, C-1553-1, C-1554-1, C-1555-1, and C-1556-1 (or certificates split from these certificates) 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]
5. Within 48 hours of the receipt of green material on site, the operator shall either (1) Remove the green material from the facility; or (2) Place the green material in an active-phase composting windrow and start active phase composting. Wood material, as defined below, is not subject to the 48 hour limitation. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

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6. Within 48 hours of the receipt of food material on site, the operator shall either (1) Remove the food material from the facility; or (2) Preprocess the material for use in the composting system. [District Rule 2201]

7. Within 48 hours of the receipt of animal manure on site, the operator shall either (1) Remove the animal manure from the facility; or (2) Preprocess the animal manure for use in the composting system. [District Rule 2201]

8. Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. Leaves, tree and shrub trimmings, and plant remains that must be processed by a grinder prior to composting are considered to be the woody material portion of trees (Wood material as defined in this permit) and are not considered to be green materials. [District Rule 2201]

9. Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]

10. Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]

11. Animal manure is defined as non-human animal excretions and waste, including, but not limited to, solids and urine from cows, cattle, or swine. [District Rule 2201]

12. The combined quantity of green material, food material, animal manure, and wood material received shall not exceed either of the following limits: 400 wet-tons in any one day, 100,000 wet-tons in any rolling 12-month period. [District Rule 2201]

13. VOC emissions from the storage and processing of the green material, food material, wood material, and animal manure shall not exceed 0.2 lb-VOC/wet-ton of material stored and processed. [District Rule 2201]

14. Ammonia (NH3) emissions from the storage and processing of the green material, food material, wood material, and animal manure shall not exceed 0.02 lb-NH3/wet-ton of material stored and processed. [District Rule 2201]

15. PM10 emissions from the receiving, sorting, storage, and mixing of materials shall not exceed 0.00132 lb-PM10/wet-ton of material received and processed. [District Rule 2201]

16. The operator shall perform one of the following to organic material within 48 days of receipt at the facility to satisfy the stockpile requirements: (a) Remove the organic material from the facility; (b) Place the organic material in the active-phase composting windrow and start active phase composting; (c) Cover the organic material with a waterproof cover that have at least a six-feet overlap of adjacent sheets and be securely anchored. [District Rule 2201]

17. A daily operations log shall be maintained and shall include the following: (a) The date, type, and weight (in wet tons) of each organic material received; (b) The date each stockpile was initially formed; (c) The date and action taken on each stockpile to satisfy the time for transferring materials from the stockpiles to active composting; (d) Total quantity and type of each organic material stored for composting (in wet tons); and (e) Total quantity and type of each organic material mixed for composing (in wet tons. [District Rule 2201]

18. A rolling 12-month log shall be maintained of the total wet-tons of each material received by type. The records shall be updated at least monthly. [District Rule 2201]

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

20. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041, Section 5.0. [District Rules 8011 and 8041]

CONDITIONS CONTINUE ON NEXT PAGE

21. On any unpaved road segment with 26 or more annual average daily vehicle trips (AADT), the owner/operator shall limit visible dust emissions (VDE) to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures: (1) Watering; (2) Uniform layer of washed gravel; (3) Chemical/organic dust stabilizers/suppressants; (4) Roadmix; (5) Paving; or (6) Any other Any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road. [District Rules 8011 and 8061]
22. For unpaved vehicle or equipment traffic areas that have 50 or more annual average daily trips (AADT), or 150 or more vehicle daily trips (VDT) or 25 or more VDT with vehicles having 3 axles or more, the permittee shall apply water, washed gravel, road mix, 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 8011 and 8071]
23. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8011 and 8971]
24. 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 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-9813-3-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SHAFTER-WASCO COMPOSTING FACILITY
MAILING ADDRESS: 2700 M ST STE 500
BAKERSFIELD, CA 93301

LOCATION: 17621 SCOFIELD AVE
SHAFTER, CA

EQUIPMENT DESCRIPTION:
FEEDSTOCK SCREENING OPERATION WITH AN ELECTRIC-POWERED SCREENER

CONDITIONS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. This prohibition shall not apply to odors emanating from composting operations, which are not under the jurisdiction of the San Joaquin Valley Air Pollution Control District. [District Rule 4102 and CH&SC 41705(a)(2)]
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere [District Rule 2201]
4. Feedstock materials are green material, wood material, food material, animal manure or any mixture of these materials. [District Rule 2201]
5. Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. [District Rule 2201]
6. Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services
S-9813-3-0 : Apr 12 2023 6:50AM -- HARADERJ : Joint Inspection NOT Required

7. Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]
8. Animal manure is defined as non-human animal excretions and waste, including, but not limited to, solids and urine from cows, cattle, or swine. [District Rule 2201]
9. The combined quantity of green material, food material, wood material, and animal manure processed by the feedstock screening operation shall not exceed 400 wet-tons in any one day and 100,000 wet tons in any rolling 12-month period. [District Rule 2201]
10. PM10 emissions from the feedstock screening operation shall not exceed 0.003 lb-PM10/wet-ton of material screened. [District Rule 2201]
11. Water sprays shall be used as needed to ensure visible emissions from the feedstock screening operation do not exceed 5% opacity for a period aggregating more than three (3) minutes in any one (1) hour.. [District Rule 2201]
12. Permittee shall keep a record of the daily and rolling 12-month combined quantity of green material, food material, wood material, and animal manure processed by the feedstock screening operation. . [District Rule 2201]
13. 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]
14. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041, Section 5.0. [District Rules 8011 and 8041]
15. On any unpaved road segment with 26 or more annual average daily vehicle trips (AADT), the owner/operator shall limit visible dust emissions (VDE) to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures: (1) Watering; (2) Uniform layer of washed gravel; (3) Chemical/organic dust stabilizers/suppressants; (4) Roadmix; (5) Paving; or (6) Any other Any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road. [District Rules 8011 and 8061]
16. For unpaved vehicle or equipment traffic areas that have 50 or more annual average daily trips (AADT), or 150 or more vehicle daily trips (VDT) or 25 or more VDT with vehicles having 3 axles or more, the permittee shall apply water, washed gravel, road mix, 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 8011 and 8071]
17. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8011 and 8971]
18. 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 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-9813-4-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SHAFTER-WASCO COMPOSTING FACILITY
MAILING ADDRESS: 2700 M ST STE 500
BAKERSFIELD, CA 93301

LOCATION: 17621 SCOFIELD AVE
SHAFTER, CA

EQUIPMENT DESCRIPTION:
CO-COMPOSTING OPERATION (GREEN WASTE, FOOD WASTE, AND MANURE) UTILIZING POSITIVE AERATED STATIC PILES WITH GORE COVERS FOR THE ACTIVE AND CURING COMPOSTING PHASES

CONDITIONS

1. Within 12 months from startup of the co-composting opertion, the permittee shall either submit an application to comply with Rule 2520 (Federally Mandated Operating Permits) or shall comply with District Rule 2530 (Federally Enforceable Potential to Emit). If the facility chooses the option to comply with District Rule 2530, the facility shall notify the District by submitting a request to include the District Rule 2530 conditions on their permits to operate prior to the 12-month deadline. [District Rule 2520]
2. 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. No air contaminant shall be released into the atmosphere which causes a public nuisance. This prohibition shall not apply to odors emanating from composting operations, which are not under the jurisdiction of the San Joaquin Valley Air Pollution Control District. [District Rule 4102 and CH&SC 41705(a)(2)]
4. Prior to operating equipment under Authorities to Construct S-9183-1-0 and '-4-0, the permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 26,400 lb, 2nd quarter - 26,400 lb, 3rd quarter - 26,400 lb, and fourth quarter - 26,400 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC specified below. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

S-9813-4-0 : Apr 12 2023 6:50AM -- HARADERJ : Joint Inspection NOT Required

5. ERC Certificate Numbers S-5287-1, S-5289-1, S-5290-1, S-5293-1, S-5304-1, S-5308-1, C-1553-1, C-1554-1, C-1555-1, and C-1556-1 (or certificates split from these certificates) 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]

6. Feedstock materials are green material, wood material, food material, animal manure or any mixture of these materials. [District Rule 2201]

7. Green material is defined as vegetative material generated from gardening, agriculture, or landscaping activities including, but not limited to, a mixture of grass clippings, leaves, tree and shrub trimmings, and plant remains. Leaves, tree and shrub trimmings, and plant remains that must be processed by a grinder prior to composting are considered to be the woody material portion of trees (Wood material as defined in this permit) and are not considered to be green materials. [District Rule 2201]

8. Wood material is defined as untreated lumber and the woody-material portion of mixed demolition wastes and mixed-construction wastes. Wood material also includes overs, and the woody material portion of trees. Wood material or wood material chips to which other organic material has been added are not considered to be wood material. [District Rule 2201]

9. Food material is defined as food scraps collected from the food processing industry, food service industry, grocery stores, or residential food scrap collection. Food material also includes food material that is chipped or ground. [District Rule 2201]

10. Animal manure is defined as non-human animal excretions and waste, including, but not limited to, dried solids and urine from cows, cattle, or swine. [District Rule 2201]

11. All active-phase and curing-phase composting shall take place in concrete bunkers with engineered, under-pile aeration. [District Rules 2201 and 4565]

12. Active phase and curing phase composting shall be performed utilizing Gore covers over positively-aerated static piles (+ASPs), with a VOC and NH3 control efficiency of at least 90% by weight, each. To demonstrate compliance with the control efficiency requirement for VOC, the following formula may be used: % VOC Control = (3.04 lb-VOC/wet-ton - Measured VOC in lb-VOC/wet ton)/(3.04 lb-VOC/wet ton) x 100%. To demonstrate compliance for NH3, the following formula may be used: % NH3 Control = (1.425 lb-NH3/wet-ton - Measured NH3 in lb-NH3/wet ton)/(1.425 lb-NH3/wet ton) x 100%. [District Rules 2201 and 4565]

13. The Gore Cover System shall be operated according to manufacturer's recommendations. [District Rules 2201 and 4565]

14. No more than 30% (by weight) animal manure may be introduced into active phase composting on an annual basis. [District Rules 2201 and 4565]

15. The total combined quantity of green, wood, and food materials and manure added to the active phase compost piles shall not exceed 400 tons in any one day. [District Rules 2201 and 4565]

16. The total combined quantity of green, wood, and food materials and manure co-composted shall not exceed 100,000 wet-tons in any rolling 12-month period. [District Rules 2201 and 4565]

17. PM10 emissions from the transfer of material related to the co-composting operation shall not exceed 0.00066 lb-PM10/wet-ton. [District Rule 2201]

18. VOC emissions from the active and curing phase of co-composting served by the Gore cover shall not exceed 0.304 lb-VOC/wet-ton. [District Rule 2201]

19. Ammonia emissions from the active and curing phase of co-composting served by the Gore cover shall not exceed 0.1425 lb-NH3/wet-ton. [District Rule 2201]

20. Initial source testing for VOC and NH3 emissions from the active and curing phase of composting shall be performed no later than 270 days after composting commences in the new +ASP bunkers used in the active phase (i.e. after the first mixing of organic materials for introduction into active phase compost pile). Source testing will not be required during compost pile breakdowns. [District Rules 2201 and 4565]

CONDITIONS CONTINUE ON NEXT PAGE

21. Periodic source testing for VOC emissions from the active and curing phase of composting shall be performed at least once every 27 months after the initial testing is completed. [District Rules 2201 and 4565]

22. Source testing for the controlled VOC and NH3 emissions shall be performed above the cover for both active phase (Phase I) and curing phase (Phase II) piles. At least two active phase piles of different ages shall be tested. One of the active phase piles selected for testing shall be representative of the day when the expected maximum VOC emission rate occurs (as indicated by temperature or other process data). At least one curing phase pile shall be tested. The age of the curing phase pile tested shall be representative of the day when the expected maximum VOC emission rate occurs. Additional piles or days may be included to ensure emission measurements are representative for the compost cycle. [District Rules 2201 and 4565]

23. All source testing shall take place under conditions representative of normal source operation, and, to the extent practicable, the emission measurements shall be representative of the emissions that occur over the active and curing phase (Phase I and Phase II) cycle. [District Rules 2201 and 4565]

24. District approved independent testing lab(s) shall perform the source testing. [District Rules 2201 and 4565]

25. 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]

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

27. The source test summary shall include the following for VOC and NH3 emissions: (1) The controlled emission rates (lb/wet-ton) for the active phase (Phase I) pile; (2) The controlled emission rates (lb/wet-ton) for the curing phase (Phase II) pile; and (3) The total controlled emission rates (lb/wet-ton) for the active and curing phases combined. [District Rules 2201 and 4565]

28. At least quarterly, the operator shall demonstrate that the organic materials completing the active phase meet one of the following stability criteria: (1) The organic material respiration rate is no more than 20 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry using the TMECC Method 05-08-A - SOUR: Specific Oxygen Uptake Rate; or (2) The organic material emits no more than 7 mg CO2-C per gram of organic material per day, as measured using the TMECC Method 05-08-B - Carbon Dioxide Evolution Rate; or (3) The organic material has a Solvita® Maturity Index of 5 or greater, as measured using the TMECC Method 05-08-E - Solvita® Maturity Test. [District Rules 2201 and 4565]

29. At least quarterly, the operator shall demonstrate that the organic materials completing the curing phase meet one of the following stability criteria: (1) The organic material respiration rate is no more than 10 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry using the TMECC Method 05-08-A-SOUR: Specific Oxygen Uptake Rate; or (2) The organic material emits no more than 4 mg CO2-C per gram of organic material per day, as measured using the TMECC Method 05-08-B - Carbon Dioxide Evolution Rate; or (3) The organic material has a Solvita® Maturity Index of 7 or greater, as measured using the TMECC Method 05-08-E - Solvita® Maturity Test [District Rules 2201 and 4565]

30. The operator shall keep a record of the compost maturity test(s) conducted on active and curing phase piles consisting of (1) the pile ID or lot number; (2) the date the test was conducted; (3); the name of the test conducted; (4) the result of the compost maturity test. [District Rules 2201 and 4565]

31. The operator shall maintain a minimum oxygen concentration of at least five percent, by volume, in the free air space of every active and curing compost pile. [District Rule 4565]

32. The operator shall manage every active pile such that the initial carbon to nitrogen ratio of every pile is at least twenty to one. In order demonstrate compliance with the initial carbon to nitrogen ratio, the operator shall measure the carbon to nitrogen when material is prepared for active composting on each day that materials are mixed using TMECC Method 05.02-A (Carbon to Nitrogen Ratio). The samples tested must be representative of the initial composition of the active compost pile. [District Rule 4565]

33. If a tested parameter is found to be outside the applicable limits of the chosen facility mitigation measures, the operator must take remedial action within 24 hours of the discovery to bring pile characteristics within the specified limits. [District Rule 4565]

CONDITIONS CONTINUE ON NEXT PAGE

34. After completion of the active phase (Phase I) of composting, when transferring composting materials from the active phase bunker to a curing phase (Phase II) bunker (pile breakdown), the composting material shall only be uncovered to the extent necessary to access the face of the pile and avoid damage to the cover. The transfer of material from the active phase bunker to the curing phase bunker from the point of uncovering the active phase material to the point of covering the curing phase material shall be completed within 5 hours of first uncovering the active phase material. [District Rule 2201]

35. The operator 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 compromise the ability of the cover to act as an air pollution control device shall be repaired immediately, or the cover shall be replaced. [District Rule 4565]

36. The operator shall conduct an inspection of the blower and air distribution system in each bunker prior to building a compost pile in that bunker. Any abnormalities that adversely affect the ability of the air distribution system to provide air to the compost pile shall be repaired prior to constructing the pile. [District Rule 4565]

37. Within 60 days after completing the initial source test, the operator shall submit an emissions monitoring plan for the covered compost piles to the District for approval and for incorporation into the permit. The plan shall include, but is not limited to: (1) the use of portable analyzer(s) for detecting VOC and ammonia leaks from the active and curing phase covered compost piles; (2) portable analyzer(s) specifications, operation, and calibration; (3) locations where VOC and NH3 emissions will be sampled and the frequency of monitoring with the portable analyzer(s), (4) a protocol to establish the background VOC and NH3 levels, (5) a protocol to establish the correlation between the portable analyzer measurements and the source test results, if possible; or (6) if no correlation between portable analyzer measurements and source test results for VOC and NH3 can be made, the operator shall provide an explanation and propose an alternative form of monitoring; and (7) a plan of action for preventing and repairing leaks. [District Rules 2201 and 4565]

38. The portable analyzer(s) shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rules 2201 and 4565]

39. The operator shall measure the concentrations of VOC and NH3 emissions from the covered piles with a portable analyzer during the initial source test (to establish a correlation between the controlled VOC and NH3 emission rates and the portable analyzer measurements, if possible) and at least once every month thereafter according to the approved emissions monitoring plan. [District Rules 2201 and 4565]

40. If either the VOC or NH3 concentrations, as measured by the portable analyzer(s), exceed the allowable emission limits, the operator 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 operator may fully comply with Rule 1100 in lieu of the performing the notification requirements of this condition. [District Rules 2201 and 4565]

41. The operator shall keep a record of all VOC and NH3 emissions monitoring conducted with the portable analyzer(s). The record shall include (1) The portable analyzer(s) used, including the date last calibrated and the concentrations of the calibration gases used; (2) The date and time the monitoring was conducted; (3) The locations of the measurements; (4) The VOC and NH3 concentrations measured, (5) Corrective action taken upon discovery of a leak; (6) Date and time the leakwas repaired as evidenced by a re-check with a portable analyzer(s). [District Rules 2201 and 4565]

42. The Gore cover on the active and curing phase composting piles shall be sufficiently anchored around the perimeter to prevent leaks of VOC and ammonia vapors. A leak shall be defined according to the approved emissions monitoring plan. [District Rules 2201 and 4565]

43. The operator shall maintain aerobic conditions in active phase of composting at all times. Compliance with this requirement may be demonstrated by computer records of data obtained in the controlling software that demonstrate that the blowers are operating and pushing air in a positive direction into the composting bunkers in total duration for a minimum 100 minutes of operating time in a 24-hour period each day of active phase composting. [District Rules 2201 and 4565]

CONDITIONS CONTINUE ON NEXT PAGE

44. For materials that will be composted, the operator shall maintain daily records in compliance with CalRecycle reporting requirements of (1) the date when the material was received; (2) the type of material received; (3) the amount in tons received; and (4) the date when this material was moved into an active-phase composting pile and covered. [District Rules 2201 and 4565]

45. The operator shall keep records of oxygen content test results for active and curing compost piles and carbon to nitrogen ratio test results for material prepared for active composting. [District Rule 4565]

46. The operator shall keep a record of (1) the date each compost cover and blower are inspected; (2) the cover and blower ID number; (3) the condition of the cover and blower; and (4) a description of the repairs made, if any. [District Rules 2201 and 4565]

47. Each day that green, wood, and food materials and animal manure are introduced into active phase composting, the operator shall record (1) The combined total wet-tons of green, wood, and food materials and manure introduced into active phase composting that day. [District Rules 2201 and 4565]

48. The operator shall record the cumulative wet-tons of green, wood, and food materials and manure is introduced into active phase composting in any rolling 12-month period. [District Rules 2201 and 4565]

49. The operator shall keep a record of the wet-tons of compost material introduced into curing phase and finished phase that day and the cumulative wet-tons of compost material introduced into the curing phase and finished phase in any rolling 12-month period. [District Rules 2201 and 4565]

50. 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]

51. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041, Section 5.0. [District Rules 8011 and 8041]

52. On any unpaved road segment with 26 or more annual average daily vehicle trips (AADT), the owner/operator shall limit visible dust emissions (VDE) to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures: (1) Watering; (2) Uniform layer of washed gravel; (3) Chemical/organic dust stabilizers/suppressants; (4) Roadmix; (5) Paving; or (6) Any other Any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road. [District Rules 8011 and 8061]

53. For unpaved vehicle or equipment traffic areas that have 50 or more annual average daily trips (AADT), or 150 or more vehicle daily trips (VDT) or 25 or more VDT with vehicles having 3 axles or more, the permittee shall apply water, washed gravel, road mix, 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 8011 and 8071]

54. Whenever any portion of the site becomes inactive, the permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in District Rule 8011. [District Rules 8011 and 8971]

55. 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 and 4565]

APPENDIX B
BACT Analyses

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.XX*

Emissions Unit: Composting Feedstock Receiving, Mixing, and Stockpiles (Non-biosolids)

Industry Type: Commercial Composting

Equipment Rating: All

Last Update: TBD

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	For facilities with a throughput ≥ 100,000 tons/year, process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency) For facilities with a throughput < 100,000 tons/year, process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)	1. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a scrubber. (99% combined capture and control efficiency) 2. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a carbon adsorption system. (95% combined capture and control efficiency) 3. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a biofilter. (80% combined capture and control efficiency)	

NH_3	For facilities with a throughput ≥ 100,000 tons/year, process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency) For facilities with a throughput < 100,000 tons/year, process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)	1. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a scrubber. (99% combined capture and control efficiency) 2. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a carbon adsorption system. (95% combined capture and control efficiency) 3. Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a biofilter. (80% combined capture and control efficiency)	

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 - Permit Specific BACT**

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.XX

Emission Unit: Composting Material Receiving and Stockpiling

Facility: Shafter-Wasco Composting Facility

Location: 9999 S Austin Rd
Manteca, CA

Equipment Rating: All

References: S-9813-1-0

Date of Determination: March 9, 2023

Pollutant	BACT Requirements
VOC	Process received animal manure, poultry litter, and green waste within 72 hours of receipt, and process food waste within 48 hours of receipt; by incorporating these materials into an active compost pile or covering these materials with finished compost, an engineered cover, or equivalent (10% control efficiency)
NH3	Process received animal manure, poultry litter, and green waste within 72 hours of receipt, and process food waste within 48 hours of receipt; by incorporating these materials into an active compost pile or covering these materials with finished compost, an engineered cover, or equivalent (10% control efficiency)

BACT Status:

X Achieved in practice
Small Emitter
T-BACT
Technologically feasible BACT
Contained in EPA approved SIP
Alternate Basic Equipment
The following alternate basic equipment was not cost effective:

Mail to: CAPCOA BACT Clearinghouse Project Assessment Branch P.O. Box 2815 Sacramento, CA 95812	For CAPCOA use only Record No.: ;Form No.: ;BLIS District Code: Codes - EPA Source: ;SCAQMD: ;EPA ID No.: ARB Sc: ,Ctrl: ;BLIS Process: ;AIRS Facility No.:

SECTION A. Source Information

Company and Project Name: Shafter-Wasco Composting Facility

Facility Address: 17261 Scofield Ave, Shafter, CA SIC Code: 2875

Application No.: S-1211716 ; Authority to Construct No.: S-9813-1-0 Authority to Construct Issue Date: TBD

District: SJVUAPCD ; District Contact: Nick Peirce; Phone No.: (209) 557-6400

Est. Startup Date: TBD ; Today's Date: 3/9/23 ; Permit Unit Status: *New*

Basic Equip./Process (include make and model): Composting Feedstock Material Receiving and Stockpiling

Rated Capacity: All ; Output: N/A ; SCC Code:
Fuel Type: n/a ; Backup Fuel(s): N/A ; Project Cost: $

SECTION B. Control Data Pollutant: VOC and NH3

Control Equip: none

Emissions: Uncontrolled: 160 lb-VOC/day, 16 lb-NH_3/day Controlled Limit: N/A

Enforceable Permit Emissions Limit(s):
Emission Type: area; Cost of Control Equipment: N/A
Regulatory Requirement: *District-Defined BACT District-Defined LAER Other:* N/A

BACT/LAER Specification: Reference or Basis: SJVUAPCD

Mass Emission Rate: N/A ; Destruction efficiency (%): N/A

Normalized Mass Emission Rate: N/A lbm/MMBtu; N/A g/bhp-hr; N/A lbm per ton input

Other:

For facilities with a throughput ≥ 100,000 tons/year, process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)

For facilities with a throughput < 100,000 tons/year, process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)

BACT ANALYSIS

Composting Feedstock Receiving, Mixing, and Stockpiling Operations

Facility Name: Shafter-Wasco Composting Facility

Date: March 9, 2023

Mailing Address: 2700 M Street STE 500
Bakersfield, CA 93301

Contact Person: Tony Bonanno
Telephone: (661) 862-8971
Application #: S-9813-1-0
Project #: S-1211716
Deemed Complete: February 14, 2023

I. Proposal

Shafter Wasco Composting Facility has applied for an Authority to Construct (ATC) permit for a composting feedstock material receiving, mixing, and stockpiling operation. The BACT guideline developed from this analysis will be applicable to feedstock material receiving, mixing, and stockpiling operations at both co-composting and organic composting operations.

II. Process Description

Shafter-Wasco Landfill has proposed to receive, mix, and stockpile feedstock material for a proposed co-composting operation. The facility has proposed to receive, mix, and stockpile up to 400 tons of material per day and up to 100,000 tons of material per year. The facility will receive, mix, and stockpile animal manure and poultry litter, green waste, and food waste. This facility does not process biosolids. The applicant is proposing to stockpile these materials for a maximum of 48 hours, afterwhich they will either be composted or removed from the site.

III. EMISSION CONTROL TECHNOLOGY EVALUATION:

A. BACT Applicability

Since VOC and NH_3 emissions from the new stockpiles will exceed 2.0 lb/day, BACT is triggered for VOC and NH_3 from the proposed composting feedstock stockpiling operation.

B. BACT Policy

Since there is no BACT Guideline in the most recent District BACT Clearinghouse which governs this class and category of emissions unit, a new BACT Analysis shall be performed to determine BACT for composting feedstock stockpiling operations. This guideline will be applicable to both co-composting and organic waste composting operations, which use similar feedstocks.

C. BACT Analysis for VOC and NH3 Emissions

Step 1 - Identify All Possible Control Technologies

Step 1 - Identify All Possible Control Technologies

The following published BACT Guidelines were reviewed to determine potential control technologies for this class and category of operation:

- The U.S. Environmental Protection Agency (USEPA) RACT/BACT/LAER Clearinghouse,
- California Air Resources Board (CARB) BACT Clearinghouse,
- Bay Area Air Quality Management District (BAAQMD),
- Sacramento Metropolitan Air Quality Management District (SMAQMD),
- San Diego County Air Pollution Control District (SDCAPCD),
- Santa Barbara County Air Pollution Control District (SBCAPCD),
- South Coast Air Quality Management District (SCAQMD),
- Ventura County Air Pollution Control District (VCAPCD),
- Yolo-Solano Air Quality Management District (YSAQMD), and
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

In addition, Federal, State, and Air Pollution Control/Air Quality Management District Rules and Regulations were reviewed to determine applicable emission limits currently imposed on organic material receiving and stockpiling operations.

1. Survey of BACT Guidelines:

The USEPA RACT/BACT/LAER clearinghouse does not include general guidelines, only determinations made by individual agencies. This database was searched using SIC Code 2875 for fertilizers, mixing only (includes compost) and for “compost”. However, no applicable BACT guidelines were found for composting operations.

The CARB BACT clearinghouse does not include general guidelines, only determinations made by individual agencies. No applicable BACT guidelines were found for composting feedstock receiving, mixing, and stockpiling.

The SMAQMD, SDCAPCD, SBCAPCD, VCAPCD, YSAQMD, BAAQMD and SJVAPCD BACT clearinghouses were searched. No applicable BACT guidelines were found for composting feedstock receiving, mixing, and stockpiling.

The SCAQMD BACT clearinghouse was searched. SCAQMD does include a BACT Guideline for co-composting operations. The Guideline requires compliance with SCAQMD Rule 1133.2 requirements; however, SCAMD Rule 1133.2 does not include any requirements for receiving, mixing, and stockpiling of feedstock materials.

2. Survey of Applicable Rules and Regulations:

While South Coast AQMD Rule 1133.2 for co-composting does not list any requirements for receiving, mixing, and stockpiling feedstock materials, South Coast AQMD Rule 1133.3 for greenwaste composting includes the following guidelines:

South Coast AQMD Rule 1133.3 (Emission Reduction from Greenwaste Composting Operations) applies to new and existing composting operations that produce active or finished compost from greenwaste or greenwaste in combination with manure or food waste, unless exempted under subdivision (g) of this rule.

- The operator of greenwaste composting operations shall comply with the following requirements: (A) Chip or grind, as necessary, and use greenwaste for on-site composting as allowed by the Local Enforcement Agency.; (B) Use food waste for on-site composting within 48 hours of receipt or cover food waste with screened or unscreened finished compost until used, unless otherwise required by the Local Enforcement Agency.

SJVAPCD District Rule 4565, Biosolids, Animal Manure, and Poultry Litter Operations, does not include any requirements for feedstock receiving, mixing, and storage operations; However, District Rule 4566 (Organic Material Composting Operations) applies to composting facilities that compost and/or stockpile organic materials, which may be used in composting operations. District Rule 4566 requires facilities to comply with stockpile and composting requirements based on the facilities total annual organic material throughput.

- For the stockpiles at facilities with annual throughputs of < 100,000 wet tons/year, the operator is required to either remove the organic material, start the active phase of composting, or cover the stockpile with a waterproof cover within 10 days of receipt of the material. Instead of utilizing the above mitigation measures, the facility may utilize an APCO approved alternative mitigation measure.

- For the stockpiles at facilities with annual throughputs of ≥ 100,000 wet tons/year, the operator is required to either remove the organic material, start the active phase of composting, or cover the stockpile with a waterproof cover within 3 days of receipt of the material. Instead of utilizing the above mitigation measures, the facility may utilize an APCO approved alternative mitigation measure.

3. Survey of Permits Issued for Organic Material Composting:

The following are permits issued for organic material composting operations from air pollution control agencies located in the states of California and Washington.

A. SJVAPCD Permits:

Facility	Type	Receiving/Mixing/Stockpile Requirements
Synagro West (N-7410)	Co-Composting	None
Foster Poultry Farms – KOPRO (N-1248)	Co-Composting	None
City of Turlock – Water Control (N_3669	Co-Composting	None
SKS Enterprises (N-5602)	Co-Composting	None
Rainbow Farms (N-5526)	Co-Composting	None
Tulare Lake Compost (C-6048)	Co-Composting	None
Mid-Valley Disposal (C-8694)	Co-Composting	Process green material and animal manure within 7 days of receipt. Process food material within 48 hours of receipt. (< 100,000 tons/year)
Bakersfield City Wood Site (S-2843)	Green and Food Waste Composting	Process organic material within 3 days of receipt (if total throughput exceeds or equals 100,000 wet-tons/year); otherwise, process organic material within 10 days.
USA Waste (S-3594)	Green and Food Waste Composting	Process organic material within 3 days of receipt (if total throughput exceeds or equals 100,000 wet-tons/year); otherwise, process organic material within 10 days.
South Kern Industrial Center (S-4212)	Co-Composting (Biosolids)	Biosolids receiving, mixing, and storage in enclosed building served by a biofilter achieving 80% control of VOC and 80% control of NH_3 emissions.
Slover Bros Trucking Inc. (S-9134)	Manure Composting	None
Synagro (S-360)	Co-Composting	None
Sundance Feed Yard (S-9510)	Manure Composting	None
R&M Farm Services (S-8780)	Manure Composting	None
JDS Ranch (S-6819)	Manure Composting	None
Rankin Field Agricultural Composting (S-9033	Manure Composting	None

E&J Gallo (N-1237)	Green Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Tracy Material Recovery (N-3187)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Highway 59 Composting Facility (N-8533)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Forward Landfill Composting Facility (N-8534)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Hyponex (N-416)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Delicato Vineyards (N-266)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Gilton Resources (N-3332)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Recology Blossom Valley Organics (N-4912)	Green and Food Waste Composting	Process green materials within 3 days of receipt (≥ 100,000 tons/year)
Merced County Dept. of Public Works (N-9958)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Frank Coelho & Sons LP (N-8220)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
USA Waste of California Inc. (N-7617)	Green and Food Waste Composting	Process green materials within 3 days of receipt (≥ 100,000 tons/year)
City of Modesto Composting Facility (N-7827)	Green and Food Waste Composting	Process green materials within 3 days of receipt (≥ 100,000 tons/year)
E&J Gallo Winery C-447)	Green and Food Waste Composting	Process green materials within 10 days of receipt (< 100,000 tons/year)
Kochergen Farms Composting Inc. (C-8454)	Green and Food Waste Composting	Process green materials within 3 days of receipt (≥ 100,000 tons/year)
Wood Industries Co (S-7749)	Green and Food Waste Composting	Process organic material within 3 days of receipt (if total throughput exceeds or equals 100,000 wet-tons/year); otherwise, process organic material within 10 days.

B. SCAQMD Permits:

Facility Name Permit Number	Type and Processing Limits	Control Technology
Inland Empire Regional Composting Authority G10583 & G31016	Co-Composting (Biosolids)	Organic materials along with biosolids received and mixed within enclosed facility building, vented to a biofilter with a control efficiency of 80% for both VOC and NH_3
Las Virgenes Municipal Water District	Co-Composting (Biosolids)	None Listed
Agromin OC Chino Green Material Compost G47273	Green and Food Waste Composting	Use food waste for on-site composting within 48 hours of receipt or cover food waste with screened or unscreened finished compost until used.
Agua Mansa MRF, LLC G46480 & G46481	Green and Food Waste Composting	Food waste not designated for immediate mixing shall be stored within the MRT/Transfer building not longer than 48 hours.
West Valley MRF, LLC 559590 (Permit to Construct)	Green and Food Waste Composting	Food waste not designated for immediate mixing shall be stored within the MRF/Transfer building for not longer than 48 hours or covered with finished compost until used.

C. Puget Sound Clean Air Agency (PSCAA) Permits (Washington State):

Facility Name Permit Number	Type and Processing Limits	Control Technology
Misich Farms 18656	Co-Composting	Within 4 hours of receipt, the received yard debris, horse stall waste, dairy manure, land clearing debris, clean wood waste, pallets, bark, wood chips, sawdust, soil and sod are to be mixed with bulking agents until a Carbon to Nitrogen ratio of 30:1 is achieved, then, within 48 hours, added to the compost

		pile and covered with more mature compost.
Cedar Grove Composting Inc. 24934	Green and Food Waste Composting	1. Tipping building (with additional 100'×50' apron canopy) for receipt, grinding, and mixing of feedstock with 24,000 cfm rated biofilter. 2. Grinding building (625 ft^2) for grinding and mixing feedstock with a 900 ft^2 biofilter rated at 2,100 cfm exhaust flow.
Cedar Grove Composting Inc. 25994	Green and Food Waste Composting	1. Tipping building controlled by a 24,000 cfm rated biofilter. 2. Building for pre-processing, sorting, and grinding controlled by a 24,000 cfm rated biofilter.
Lenz Enterprises Inc. 28983	Green and Food Waste Composting	Tipping building controlled with a biofilter
Pacific Topsoils Inc. 18478	Green Waste Composting	Immediate processing of received yard waste to be mixed with bulking agents until a carbon to nitrogen ratio of 30:1 is achieved, then added to compost pile and covered with mature compost.

D. Olympic Region Clean Air Agency (ORCAA) Permits (Washington State):

Facility Name Permit Number	**Type and Processing Limits**	**Control Technology**
Silver Springs Organics, LLC 10NOC754	Green Waste, Food Waste, and Animal Manure Composting	1. 216,187 ft^2 cover roof area to provide shelter for feedstock receiving and composting processes. 2. Feedstock receiving and staging area equipped with positive aeration. 3. Feedstock to be pre-processed and placed in the Stage 1 composting area within 18 hours of receipt.
North Mason Fiber Co 12MOD911	Green Waste, Food Waste, and Biosolids Composting	1. Green waste and woody material mixed same day as received and covered with a biofilter layer at least 12-inches thick comprised of shredded woody material, fir branches, finished compost, or specialty bulking. 2. Fish received from totes are placed on a bed of bulking material and processed within 1 hour from arrival. Bulking material is mixed with the feedstock and is then placed on the aeration bed and covered with

		approximately 36-inches of biofilter material. 3. Hatchery pond slurry shall be poured onto a prepared absorption bed with built-up edges to prevent slurry material from escaping confinement. Additional bulking and ground woody feedstock will be blended and the feedstock mix will be placed on prepared aeration beds and covered with approximately 36-inches of biofilter material.
City of Port Angeles Composting Facility	Yard Waste and Biosolids Composting	1. 350 ft long by 70 ft wide composting building, which is open on three sides. 35,000 ft^2 of paved area including area within the composting building. Eight composting bays each equipped with its own aeration system with blowers rated at 300 cfm. 2. De-watered sludge shall be bulked and formed into composting windrows inside composting building within 24 hours from arrival at the facility.

E. BAAQMD Permits

Facility Name Permit Number	Type and Processing Limits	Control Technology
Redwood Landfill S-34	Green and Food Waste Composting	Yard waste material shall be processed within 72 hours of receipt. In the event of an equipment breakdown or other unforeseeable circumstance that would prevent the processing of yard waste within 72 hours, yard waste may be stored for no more than 7 days. (≥ 100,000 tons/year)
West Contra Costa Sanitary Landfill S-117	Green and Food Waste Composting	During normal operations, green waste shall be processed and incorporated into an active compost pile within 72 hours of receipt and food waste shall be incorporated into an active compost pile within 48 hours of receipt, so that these feedstock do not decompose in the storage piles and generate odors on-site. All received green waste feedstock shall be placed in open windrows.

International Disposal Corp of California Newby Island Landfill (Republic Services) S-15 & S-1003	Green and Food Waste Composting	1. Restricted green waste designated as compost feedstock, mixed green waste, and source-separated food waste must be ground, mixed, water-conditioned, and incorporated into the S-1003 compost operation within 48 hours from receipt at the facility. If there is no capacity at S-1003 to accept the compost feedstock within 48 hours of receipt, the material must be removed. 2. Non-restricted green waste must be disposed of within 5 days of receipt at the facility by incorporation into the S-1003 compost feedstock, used in some other manner at the site, disposed of in the landfill, or removed.

F. YSAQMD Permits

Facility Name Permit Number	Type and Processing Limits	Control Technology
Jepson Prairie Organics Compost Facility P-4-06(a3) & P-61-07(a5)	Green and Food Waste Composting	1. All received green waste (non-food waste) feedstock shall be placed under compost cover or windrows within 7 days of receipt. 2. All received food waste feedstock shall be placed under compost cover within 24 hours of receipt.
Northern Recycling Compost P-64-09(a2)	Green and Food Waste Composting	1. All received mixed waste feedstock (green & Food waste) shall be placed under synthetic cover or biocover within 24 hours of receipt. 2. All received green waste feedstock shall be placed in open windrows.

4. List of Control Options:

Based on the above surveys of the BACT guidelines, applicable rules and regulations, and permits issued for organic material receiving and stockpiling, the following are possible control technology options:

- Composting feedstock received, mixed, and stockpiled in an enclosed building vented to a biofilter.
- Process food waste within 48 hours of receipt.
- For composting operations with ≥ 100,000 tons/year throughput, process received green waste and food waste within 3 days of receipt.
- For composting operations with < 100,000 tons/year throughput, process received green waste and food waste within 10 days of receipt.
- Process green material and animal material within 7 days of receipt, process food waste within 48 hours of receipt.

In addition to the above options, it is technologically feasible to use a scrubber or activated carbon system to control emissions from an enclosed building, in lieu of a biofilter.

Step 2 - Eliminate Technologically Infeasible Options

None of the above items are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank	Control Option	% VOC Control	% NH_3 Control	Achieved in Practice
1.	Composting feedstock received mixed, and stockpiled in an enclosed building vented to a scrubber.	99	99	No
2.	Composting feedstock received mixed, and stockpiled in an enclosed building vented to an activated carbon system.	95	95	No
3.	Composting feedstock received mixed, and stockpiled in an enclosed building vented to a biofilter.	80	80	No*
4.	For facilities with a throughput ≥ 100,000 tons/year, process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. For facilities with a throughput < 100,000 tons/year, process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of	< 26	< 26	Yes

	adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure.			
5.	For facilities with a throughput ≥ 100,000 tons/year, process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. For facilities with a throughput < 100,000 tons/year, process green waste, animal manure, and poultry litter within 10 days of receipt and process food waste within 48 hours of receipt by removing the feedstock from the facility, starting the active phase of composting, covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure.	< 26	< 26	Yes

* Biofilters were only found to be utilized at facilities processing biosolids. The scope of this BACT has been limited to facilities that do not process biosolids; therefore, this option is not achieved in practice for the type of facilities subject to this BACT.

Step 4 - Cost Effectiveness Analysis

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

Control Option #1 – Enclosed building vented to a wet scrubber (99% control of VOC and NH_3)

An enclosed building that vent to a wet scrubber achieve 99% control for VOC and NH_3 emissions was determined to be technologically feasible. This type of unit will control both VOC and NH_3 emissions; therefore, a Multi-Pollutant Cost Effectiveness Threshold (MCET) will be performed to determine if this control option is cost effective.

The District does not have a cost effective threshold for NH_3 emissions; however, NH_3 forms ammonium nitrate in the atmosphere, which is a precursor for PM_{10}. Therefore, as established in District Project S-1032219, the PM_{10} cost effectiveness threshold ($11,900/ton-reduced) will be used as a surrogate value for the NH_3 cost effectiveness threshold.

Uncontrolled Emissions	
VOC	40,000 lb/yr ⇒ 20 ton/year
NH_3	4,000 lb/yr ⇒ 2 ton/year

Emissions Reduction (99% control)	
VOC	39,600 lb/yr ⇒ 19.8 ton/year
NH_3	3,960 lb/yr ⇒ 1.98 ton/year

Annual Operating Cost:

Compost Control Costs – Enclosed and vented to a wet scrubber

Capital recovery factor (4%, 10 yrs): 0.123

For the capital cost, the equivalent annual cost is calculated as shown below:

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1}$$

Where,

A = Equivalent annual control equipment capital cost
P = Present value of the control equipment, including installation cost
i = Interest rate (generally assumed to be 4%, unless the applicant demonstrates that a different rate is more representative of the specific operation)
n = Equipment life (generally assumed to be 10 years, unless the applicant demonstrates that a different rate is more representative of the specific operation)

Cost Estimate to Enclose Composting Operations

Capital Expenditure = $300/wet ton (2017 estimate from Brian Fuchs, GORE – project C-9196, 1171609)
Operational Expenditure = $25/wet ton (2017 estimate from Brian Fuchs, GORE – project C-9196, 1171609)

The capital and operational expenditure estimates were collected in 2017. Therefore, the current cost will be adjusted to account for inflation (21.96% inflation increase since 2017 as referenced from https://www.bls.gov/data/inflation_calculator.htm):

Adjusted Capital Expenditure = $365.88/wet ton
Adjusted Operational Expenditure = $55.49/wet ton

Thus,

Cost Estimate ($/wet-ton)		Annual Throughput (wet-ton/yr)	Capital Cost ($)*	Annualized Capital Cost ($/yr)	O&M ($/yr)	Total Cost ($/yr)
Capital	365.88	100,000	36,588,000	4,500,324	-	10,049,324
Operational	55.49		-	-	5,549,000	

MCET Calculation:

District BACT policy, APR 1305, was recently updated on June 1, 2022, which revised the cost effectiveness threshold ($/ton) for VOC and PM10/PM2.5 to $23,600/ton and $11,900/ton, respectively. The MCET is calculated according to the following equation:

$MCET = \sum(\text{ton emission reduction pollutant}_i) \times (\text{cost effectiveness threshold pollutant}_i)$

Pollutant	Controlled Emissions (ton/year)	Cost Threshold ($/ton-reduced)	MCET ($/year)
VOC	19.8	23,600	467,280
NH_3	1.98	11,900	23,562
Total			**$490,842**

The cost of a fully enclosed system vented to a wet scrubber ($10,049,324/yr) is far greater than the MCET threshold of $490,842/year. Therefore, fully enclosing the operation and venting to a wet scrubber is not cost effective.

Control Option #2 – Enclosed building vented to an activated carbon system (95% control of VOC and NH_3)

Like control option #1, this option requires that the stockpiles be fully enclosed and vented to an emissions control device. The cost to enclose the stockpiles will be the same as calculated for Option #1 ($10,049,324/yr), while the control efficiency and emission reductions will be less. Thus, this option will be even less cost effective than what was calculated for option #1 and is not cost effective.

Control Option #3 – Enclosed building vented to an biofilter (80% control of VOC and NH_3)

Like control option #1, this option requires that the stockpiles be fully enclosed and vented to an emissions control device. The cost to enclose the stockpiles will be the same as calculated for Option #1 ($10,049,324/yr), while the control efficiency and emission reductions will be less. Thus, this option will be even less cost effective than what was calculated for option #1 and is not cost effective.

Control Option #4 – Process green waste, animal manure, and poultry litter within 72 hours, and process food waste within 48 hours (10% control of VOC and NH_3)

This option has been achieved in practice; therefore, a cost effective analysis is not required.

Step 5 - Select BACT

BACT for the feedstock operation (≥ 100,000 tons/year) is processing green material, animal manure, and poultry litter within 72 hours of receipt, and processing food waste within 48 hours of receipt. The applicant has proposed to process these feedstock materials within 48 hours of receipt; therefore, BACT requirements are satisfied.

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.11

Emissions Unit: Co-Composting with Organic Material, Biosolids, Poultry Litter or Animal Manure ≥ 60,000 tons/yr

Industry Type: Commercial Co-Composting

Equipment Rating: All

Last Update: TBD

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	
NH_3	80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	

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 - Permit Specific BACT**

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.11.B

Emission Unit: Co-Composting with Organic Material, Biosolids, Poultry Litter or Animal Manure

Equipment Rating: ≥ 60,000 tons/year

References: N-9813-4-0

Date of Determination: March 9, 2023

Facility: Shafter-Wasco Composting Facility

Location: 17621 Scofield Ave
Shafter, CA

Pollutant	BACT Requirements
VOC	Positively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) during the active and curing compost phases.
NH3	Positively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) during the active and curing compost phases.

BACT Status:

X Achieved in practice
Small Emitter
T-BACT
Technologically feasible BACT
Contained in EPA approved SIP
Alternate Basic Equipment
The following alternate basic equipment was not cost effective:

Mail to: CAPCOA BACT Clearinghouse Project Assessment Branch P.O. Box 2815 Sacramento, CA 95812	For CAPCOA use only Record No.: ;Form No.: ;BLIS District Code: Codes - EPA Source: ;SCAQMD: ;EPA ID No.: ARB Sc: ,Ctrl: ;BLIS Process: ;AIRS Facility No.:

SECTION A. Source Information

Company and Project Name: Shafter-Wasco Composting Facility

Facility Address: 17621 Scofield Ave, Shafter, CA SIC Code: 2875

Application No.: S-1211716 ; Authority to Construct No.: N-9813-4-0 Authority to Construct Issue Date: TBD

District: SJVUAPCD ; District Contact: Nick Peirce; Phone No.: (209) 557-6400

Est. Startup Date: TBD ; Today's Date: 3/13/23 ; Permit Unit Status: *New*

Basic Equip./Process (include make and model): Co-Composting Operating with Positive Aerated Static Pile (ASP) System with Cover (Active and Curing Phases)

Rated Capacity: ≥ 60,000 tons/year ; Output: N/A ; SCC Code:
Fuel Type: n/a ; Backup Fuel(s): N/A ; Project Cost: $

SECTION B. Control Data Pollutant: VOC and NH3

Control Equip. Positively aspirated compost piles with Gore Cover (Active and Curing Phase)

Emissions: Uncontrolled: 1,216.0 lb-VOC/day and 570.0 lb-NH3/day Controlled Limit: 90% Control

Enforceable Permit Emissions Limit(s): 0.304 lb-VOC/ton and 0.1425 lb-NH3/ton
Emission Type: area; Cost of Control Equipment: N/A
Regulatory Requirement: *District-Defined BACT District-Defined LAER Other:* N/A

BACT/LAER Specification: Reference or Basis: SJVUAPCD

Mass Emission Rate: 121.6 lb-VOC/day and 57 lb-NH3/day; Destruction efficiency (%): 90%

Normalized Mass Emission Rate: 0.304 lb-VOC/wet-ton and 570 lb-NH3/wet-ton

Emission Concentration N/A *ppmvd or gr/dscf* at

Other: N/A
Method of Compliance Verification: Source Testing and Alternate Monitoring using portable Analyzers

Other Relevant Permit Limits: Time of Operation: N/A
Fuel use: N/A Percent Capacity/Use: N/A
Throughput: N/A
Other: N/A Remarks:

BACT ANALYSIS

Co-Composting Operation ≥ 60,000 Wet-Tons/Year

Facility Name:	Shafter-Wasco Composting Facility
Date:	March 9, 2023
Mailing Address:	2700 M Street STE 500 Bakersfield, CA 93301
Contact Person:	Tony Bonanno
Telephone:	(661) 862-8971
Application #:	S-9813-4-0
Project #:	S-1211716
Deemed Complete:	February 14, 2023

I. Proposal

Shafter-Wasco Composting Facility has requested an Authority to Construct for a co-composting operation with an annual throughput limit of 100,000 tons of material composted per year.

II. Process Description

Composting is the aerobic decomposition of organic materials by microorganisms under controlled conditions into a soil-like substance called compost. The applicant is not proposing windrow composting, where materials are placed into rows and turned regularly to aerate the materials. Rather, the facility is proposing to compost materials using covered aerated static piles (CASP). In this style of composting, incoming feedstock is used to create CASP composting rows within concrete bunkers to be composted. The CASP composting process takes approximately 6 to 12 weeks depending on variables such as types of material, time of year, and weather conditions. Water will be applied during compost pile production to help reduce fugitive dust and to prepare the materials for ideal composting conditions. The CASP system will consist of concrete bunkers with subgrade separation trenches to collect leachate and deliver air for the composting process. After the active composting phase, materials are moved to an adjacent bunker for curing for 4 to 6 weeks, followed by a finishing stage of 2 to 4 weeks. The curing stage of composting will also utilize positive aspiration in the bunkers and Gore® covers to control emissions. Approximately 70% of the feedstock is expected to be green waste and food waste, with manure and other animal byproducts comprising of the other 30%. The expected mixture ratio is based upon historical records of materials received at the landfill. This operation will emit PM_{10}, VOC, and NH_3.

The applicant is proposing to compost up to 400 wet-tons of added material/day and 100,000 wet-tons of material/year.

III. EMISSION CONTROL TECHNOLOGY EVALUATION:

A. BACT Applicability

District Rule 2201 Section 4.1 requires that BACT shall be applied, pollutant by pollutant, to any new unit with an increase in emissions greater than 2.0 lb/day. The proposed co-composting operation will emit more than 2.0 lb/day for both VOC and NH_3 emissions; therefore, BACT must be evaluated for both VOC and NH_3.

B. BACT Policy

Since there is no BACT Guideline in the most recent District BACT Clearinghouse which governs this class and category of emissions unit, a new BACT Analysis shall be performed.

The U.S. Environmental Protection Agency (USEPA) RACT/BACT/LAER Clearinghouse, the California Air Pollution Control Officers Association (CAPCOA) BACT Clearinghouse, and the Bay Area Air Quality Management District (BAAQMD) BACT Guidelines were reviewed to determine potential control technologies for this class and category of operation but no applicable guidelines were found.

In addition, Federal, State, and Air Pollution Control/Air Quality Management District Rules and Regulations were reviewed to determine applicable emission limits currently imposed on scrap metal shredding operations, but no applicable rules or regulations were found.

C. BACT Analysis for Permit Unit S-9813-4-0 VOC and NH_3 Emissions

Step 1 - Identify All Possible Control Technologies

The following published BACT Guidelines were reviewed to determine potential control technologies for this class and category of operation:

- The U.S. Environmental Protection Agency (USEPA) RACT/BACT/LAER Clearinghouse,
- California Air Resources Board (CARB) BACT Clearinghouse,
- Bay Area Air Quality Management District (BAAQMD),
- Sacramento Metropolitan Air Quality Management District (SMAQMD),
- San Diego County Air Pollution Control District (SDCAPCD),
- Santa Barbara County Air Pollution Control District (SBCAPCD),
- South Coast Air Quality Management District (SCAQMD),
- Ventura County Air Pollution Control District (VCAPCD),
- Yolo-Solano Air Quality Management District (YSAQMD), and
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

1. Survey of BACT Guidelines:

The USEPA RACT/BACT/LAER clearinghouse does not include general guidelines, only determinations made by individual agencies. This database was searched using SIC Code 2875 for fertilizers, mixing only (includes compost) and for "compost". However, no applicable BACT guidelines were found for composting operations.

The CARB BACT clearinghouse does not include general guidelines, only determinations made by individual agencies. This database was searched using SIC Code 2875 for fertilizers, mixing only (includes compost) and for source category "Compost: Co-Composting". However, no applicable BACT guidelines were found for composting operations.

The SMAQMD, SDCAPCD, SBCAPCD, VCAPCD, YSAQMD, and BAAQMD BACT clearinghouses were searched for co-composting and no applicable BACT guidelines were found.

The following BACT Guidelines for co-composting were found:

Agency	Guideline	Process and Range	Control Technology
SCAQMD	Non-Major Polluting Facilities	Co-composting	VOC and NH_3: Compliance with SCAQMD Rule 1133.2 (12/5/2003).
	6.4.11 (Rescinded)	Co-Composting with Green and Food Materials and Manure: > 20,000 ton/year throughput	VOC and NH_3 (Achieved in Practice): • Class One Mitigation Measures from Rule 4565. VOC and NH_3 (Technologically Feasible): • (1). positively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent). (Active and Curing Phase) (2a). Negatively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) venting to biofilter or equivalent. (Active and Curing Phase). (2b). In-vessel or container with forced aeration venting to biofilter or equivalent. (Active and Curing Phase) (3). Negatively aerated static piles venting to biofilter or equivalent. Active phase is covered by 12 inches of finished compost or equivalent, (4). Cover with 6 inches of finished compost upon initial windrow formation and within 3 hours of turning, and watering system. (5). Negatively aerated static piles venting to biofilter or equivalent. No cover.

2. Survey of Applicable Rules and Regulations:

South Coast AQMD Rule 1133.2, "Emission Reductions from Co-Composting Operations) requires the following:

- Conduct all active co-composting within the confines of an enclosure
- Conduct all curing using an aeration system that operates under negative pressure for no less than 90 percent of its blower(s) operating cycle
- Vent the exhaust of the enclosure and aeration system to an emissions control system with a control efficiency equal to or greater than 80 percent, by weight, for VOC emissions and 80 percent, by weight, for NH_3 emissions.

San Joaquin Valley APCD Rule 4565, "Biosolids, Animal Manure, and Poultry Litter Operations", requires co-composting operations to implement at least one of the following mitigation measures for active composting, in addition to the class one mitigation measures in the rule:

- 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; or
- 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.

3. Survey of Permits Issued for CO-Composting:

The following are permits issued for organic material composting operations from air pollution control agencies located in the states of California and Washington.

A. SJVAPCD Permits:

Facility Name Permit Number	Type	Control Technology
Synagro West (N-7410)	Co-Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
Foster Poultry Farms – KOPRO (N-1248)	Co-Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
City of Turlock – Water Control (N-3669)	Co-Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
SKS Enterprises (N-5602)	Co-Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
Rainbow Farms (N-5526)	Co-Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
Tulare Lake Compost (C-6048)	Co-Composting	Active and Curing Phase utilizing positive aerated compost piles with Gore Covers (1,351,351 wet tons/year)

Mid-Valley Disposal (C-8694)	Co-Composting	Active and Curing Phase utilizing positive aerated compost piles with Gore Covers (70, 694 wet tons/year)
South Kern Industrial Center (S-4212)	Co-Composting (Biosolids)	Positive aerated static piles, each with a maintained compost biofilter layer cap (670,000 wet tons/year)
Slover Bros Trucking Inc. (S-9134)	Manure Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
Synagro (S-360)	Co-Composting	Positive aerated static piles with EPTFE membrane (786,000 wet tons/year)
Sundance Feed Yard (S-9510)	Manure Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
R&M Farm Services (S-8780)	Manure Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
JDS Ranch (S-6819)	Manure Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)
Rankin Field Agricultural Composting (S-9033)	Manure Composting	Comply with Rule 4565 Mitigation measures (< 100,000 tons/year)

B. SCAQMD Permits:

Facility Name Permit Number	Type and Processing Limits	Control Technology
Inland Empire Regional Composting Authority G10583 & G31016	Co-Composting	Co-Composting operations conducted within the confines of a building vented to a biofilter with a minimum control efficiency of 80% or greater, by weight, for VOC and NH3. Active and curing composting is conducted on aerated static piles with aeration piping system located beneath the floor. (209,625 wet tons/year)
Las Virgenes Municipal Water District F82058	Co-Composting	Co-composting operations conducted within a compost building vented to a biofilter

C. Puget Sound Clean Air Agency (PSCAA) Permits (Washington State):

Facility Name Permit Number	Type and Processing Limits	Control Technology
Misich Farms 18656	Co-Composting	1. Odorous compost piles to be sealed with a bulking agent. If section of pile becomes anaerobic, the section shall be covered with a layer of mature compost or wood chips at least 2 feet in thickness to act as a biofilter.

D. Olympic Region Clean Air Agency (ORCAA) Permits (Washington State):

Facility Name Permit Number	Type and Processing Limits	Control Technology
Silver Springs Organics, LLC 10NOC754	Co-Composting .(120,000 wet-tons/year)	1. Stage 1 composting area contained under covered roof structure on aerated floor capable of positive and negative aeration, which consists of 14 separate zones and each zone served by its own dedicated fan and controlled independently using ECS CompTroller™. During negative aeration, blowers will exhaust through Stage 1 biofilter beds. 2. Stage 2 composting area contained under covered roof structure on at least two lengthwise aeration tunnels per windrow served by two dedicated blowers. The Stage 2 blowers will exhaust through Stage 2 biofilter beds. Stage 2 compost piles will be covered with an AC Composter© cover or 1-ft layer of stabilized material such as finished compost or woody biofilter material.
North Mason Fiber Co. 12MOD911	Co-Composting	1. Active composting and curing to take place on extended aerated static piles with forced aeration.
City of Port Angeles Compost Facility 95-NOC-681	Co-Composting	1. 350 ft long by 70 ft wide composting building, which is open on three sides. 35,000 ft^2 of paved area including area within the composting building. Eight composting bays each equipped with its own aeration system with blowers rated at 300 cfm. 2. Composting performed in composting building only. 3. Compost piles shall be aerated either by the forced air aeration system or by turning as necessary to avoid anaerobic conditions in the piles and odors.

4. List of Control Options:

Based on the above surveys of the BACT guidelines, applicable rules and regulations, and permits issued for organic material composting, the following are possible control technology options:

- Conduct all co-composting (active and curing phase) within an enclosure vented to a scrubber.
- Conduct all co-composting (active and curing phase) within an enclosure vented to a carbon adsorption unit.
- Conduct all co-composting (active and curing phase) within an enclosure vented to a biofilter.
- Positively aerated static piles (ASP) with cover (cover is engineered, 12 inches of finished compost, or equivalent) (active and curing phase).
- Conduct all active co-composting within the confines of an enclosure and curing co-composting with an aeration system under negative pressure all vented to an emission control system with a control efficiency ≥ 80% by weight for VOC and NH_3.
- Negatively aerated static piles (ASP) with cover (cover is engineered, 12 inches of finished compost, or equivalent) venting to biofilter or equivalent (active and curing phase).
- In-vessel or container with forced aeration venting to a biofilter or equivalent (active and curing phase).
- Positively aerated static piles (ASP) with cover (cover is engineered, 12 inches of finished compost, or equivalent) only for the active phase. Curing phase is uncovered and uncontrolled.
- Negatively aerated static piles (ASP) venting to biofilter or equivalent only for the active phase. Active phase is covered with 12 inches of finished compost or equivalent. Curing phase is uncovered and uncontrolled.
- Mitigation measures from District Rule 4566 (at least three turns of windrow during active phase and watering system).

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options.

Step 3 - Rank Remaining Control Technologies by Control effectiveness

Rank	Control Option	% VOC Control	% NH_3 Control	Achieved in Practice
1	Enclosed negatively aerated static piles vented to a wet scrubber (Active and Curing Phases).	99	99	No
2	Enclosed negatively aerated static piles vented to a carbon adsorption system (Active and Curing Phases).	95	95	No
3.	Enclosed negatively aerated static piles vented to a biofilter (Active and Curing Phases)	80	80	No
	Positively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) (Active and Curing Phase).	80	80	Yes
	Negatively aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) venting to biofilter or equivalent (Active and Curing Phases).	80	80	No
	Enclosed aerated static piles and vent to control device with ≥ 80% control efficiency (Active and Curing phase).	80	80	Yes
	In-vessel or container with forced aeration venting to a biofilter or equivalent (Active and Curing phase).	80	80	No
4.	Positive aerated static piles with cover (cover is engineered, 12 inches of finished compost, or equivalent) only for active phase. Curing phase is uncovered and uncontrolled.	74	64	Yes
5.	Negatively aerated static piles venting to biofilter or equivalent only for the active phase. Active phase is covered is covered with 12 inches of finished compost or equivalent. Curing phase is uncovered and uncontrolled.	74	64	Yes
6	Mitigation measures from District Rule 4565.	19	19	Yes (< 100,000 wet tons/yr)

Step 4 - Cost Effectiveness Analysis

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

Control Option #1 – Enclosed and vented to a wet scrubber (99% control of VOC and NH_3)

Negatively aerated static piles that vent to a wet scrubber achieve 99% control for VOC and NH_3 emissions. This type of unit will control both VOC and NH_3 emissions; therefore, a Multi-Pollutant Cost Effectiveness Threshold (MCET) will be performed to determine if this control option is cost effective.

The District does not have a cost effective threshold for NH_3 emissions; however, NH_3 forms ammonium nitrate in the atmosphere, which is a precursor for PM_{10}. Therefore, as established in District Project S-1032219, the PM_{10} cost effectiveness threshold ($11,900/ton-reduced) will be used as a surrogate value for the NH_3 cost effectiveness threshold.

Uncontrolled Emissions	
VOC	304,000 lb/yr ⇒ 152.0 ton/year
NH_3	142,500 lb/yr ⇒ 71.25 ton/year

Emissions Reduction (99% control)	
VOC	300,960 lb/yr ⇒ 150.5 ton/year
NH_3	141,075 lb/yr ⇒ 70.5 ton/year

Annual Operating Cost:

Compost Control Costs – Enclosed and vented to a wet scrubber

Capital recovery factor (4%, 10 yrs): 0.123

For the capital cost, the equivalent annual cost is calculated as shown below:

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1}$$

Where,

A = Equivalent annual control equipment capital cost
P = Present value of the control equipment, including installation cost
i = Interest rate (generally assumed to be 4%, unless the applicant demonstrates that a different rate is more representative of the specific operation)
n = Equipment life (generally assumed to be 10 years, unless the applicant demonstrates that a different rate is more representative of the specific operation)

Cost Estimate to Enclose Composting Operations

Capital Expenditure = $300/wet ton (2017 estimate from Brian Fuchs, GORE – project C-9196, 1171609)
Operational Expenditure = $25/wet ton (2017 estimate from Brian Fuchs, GORE – project C-9196, 1171609)

The capital and operational expenditure estimates were collected in 2017. Therefore, the current cost will be adjusted to account for inflation (21.96% inflation increases as referenced from https://www.bls.gov/data/inflation_calculator.htm):

Adjusted Capital Expenditure = $365.88/wet ton
Adjusted Operational Expenditure = $55.49/wet ton

Thus,

Cost Estimate ($/wet-ton)		Annual Throughput (wet-ton/yr)	Capital Cost ($)*	Annualized Capital Cost ($/yr)	O&M ($/yr)	Incremental Total Cost ($/yr)
Capital	365.88	100,000	36,588,000	4,500,324	-	10,049,324
Operational	55.49		-	-	5,549,000	

MCET Calculation:

District BACT policy, APR 1305, was recently updated on June 1, 2022, which revised the cost effectiveness threshold ($/ton) for VOC and PM10/PM2.5 to $23,600/ton and $11,900/ton, respectively. The MCET is calculated according to the following equation:

$MCET = \sum(\text{ton emission reduction pollutant}_i) \times (\text{cost effectiveness threshold pollutant}_i)$

Pollutant	Controlled Emissions (ton/year)	Cost Threshold ($/ton-reduced)	MCET ($/ton-reduced)
VOC	150.5	23,600	3,551,800
NH_3	70.5	11,900	838,950
Total			**4,390,750**

Since the cost to enclose the composting operation and the capture system operational costs alone ($10,049,324/year) are greater than the MCET threshold ($4,390,750/year), enclosing the operation and controlling emissions with a scrubber is not cost effective.

Control Option #2 – Enclosed and vented to a carbon adsorption unit (95% control of VOC and NH_3)

As shown in Control Option #1, an enclosed system vented to a wet scrubber is not cost effective based solely on the cost of an enclosure and operational costs for the capture system. Control Option #2 will also require an enclosure with the same operational costs, and has an even lower control efficiency compared to Control Option #1; therefore, this option will not be cost effective either.

Control Option #3 – 80% overall capture and control of both VOC and NH_3 from both the active and curing phase emissions (multiple control options for this level of control)

80% capture and control of active and curing is achieved in practice for composting operations with throughputs ≥ 60,000 tons/year. Thus, a cost effective analysis is not required for this control level.

Step 5 - Select BACT

BACT for the active and curing phases of the co-composting operation is 80% overall capture and control. The applicant is proposing to utilize positively aspirated piles with Gore® covers, with a proposed capture and control efficiency of 90% for VOC and NH_3 from both the active and curing phases of composting. Thus, BACT requirements are satisfied.

APPENDIX C
Risk Management Review and AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review and Ambient Air Quality Analysis

To:	John Yoshimura – Permit Services
From:	Will Worthley – Technical Services
Date:	August 18, 2022
Facility Name:	SHAFTER-WASCO LANDFILL
Location:	17621 SCOFIELD AVE, SHAFTER
Application #(s):	S-9813-1-0, -2-0, -3-0, '-4-0, '-5-0, and '-6-0
Project #:	S-1211716

1. Summary

1.1 Risk Management Review (RMR)

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
Organic Waste Stockpiling (1-0)	0.63	0.16	0.00	1.36E-07	No	No
Feedstock Grinding (2-0)	0.00	0.00	0.00	0.00	No	No
Feedstock Screening (3-0)	0.00	0.00	0.00	0.00	No	No
Co-Composting (4-0)	0.62	0.03	0.00	5.05E-07	No	No
Finished Compost Screening (5-0)	0.00	0.00	0.00	0.00	No	No
Finished Compost Loadout (6-0)	0.00	0.00	0.00	0.00	No	No
Project Totals	1.24	0.20	0.00	6.41E-07		
Facility Totals	>1	0.20	0.00	6.41E-07		

1.2 Ambient Air Quality Analysis (AAQA)

Pollutant	Air Quality Standard (State/Federal)				
	1 Hour	3 Hours	8 Hours	24 Hours	Annual
PM10				Pass[1]	Pass[1]
PM2.5				Pass[2]	Pass[2]

Notes:
1. Modeled PM10 concentrations were below the District SIL for fugitive sources of 10.4 µg/m^3 for the 24-hour average concentration and 2.08 µg/m^3 for the annual concentration.
2. Modeled PM2.5 concentrations were below the District SIL for fugitive sources of 2.5 µg/m^3 for the 24-hour average concentration and 0.63 µg/m^3 for the annual concentration.

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 1-0 through 6-0:

1. No special requirements.

2. Project Description

Technical Services received a request on August 1, 2022 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for the following:

- Unit -1-0: ORGANIC WASTE MATERIALS AND MANURE RECEIVING, STORAGE, AND MIXING OPERATION
- Unit -2-0: CO-COMPOSTING OPERATION (GREEN WASTE, FOOD WASTE, AND MANURE) UTILIZING POSITIVELY AERATED STATIC PILES WITH GORE COVERS FOR THE ACTIVE COMPOSTING PHASE

3. RMR Report

3.1 Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the units', the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required.

If a refined assessment is greater than one in a million but less than 20 in a million for carcinogenic impacts (cancer risk) and less than 1.0 for the acute and chronic hazard indices (non-carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less than significant. For units that exceed a cancer risk of one in a million, Toxic Best Available Control Technology (TBACT) must be implemented.

Toxic emissions for this project were calculated using the following methods:

- Volatile organic compound emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into toxic air contaminants using emission factors derived from a 1997 source test conducted on the Griffith Park Biosolids Composting Plant.
- Particulate matter emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into the toxic air contaminants using emission factors derived from source tests in 2000 at San Joaquin Composting.

- Particulate matter emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into the toxic air contaminants using emission factors derived from the 2011 report, Biosolids Co-Composting VOC and Ozone Formation Study.
- Particulate matter emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into the toxic air contaminants using emission factors derived from the 2010 report, Landfill-Based Anaerobic Digester-Compost Pilot Project at Yolo County Central Landfill.
- Volatile organic compound emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into toxic air contaminants using emission factors derived from a 2011 VOC profile, "Green Waste Composting" in the EPA's speciation program.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required.

The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Wasco (rural dispersion coefficient selected) to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Source Process Rates					
Unit ID	**Process ID**	**Process Material**	**Process Units**	**Hourly Process Rate**	**Annual Process Rate**
1	1	PM10	LBS	0.005	33
1	2	VOC	LBS	3.33	20,000
1	3	NH3	LBS	0.33	2,000
2	1	Active Phase PM10	LBS	0.016	99
2	2	Curing Phase PM10	LBS	0.016	99
2	3	Active Phase VOC	LBS	0.1625	27,360
2	4	Curing Phase VOC	LBS	0.3625	30,400
2	5	NH3	LBS	0.25	27,075

Area Source Parameters					
Unit ID	**Unit Description**	**Release Height (m)**	**X-Length (m)**	**Y -Length (m)**	**Area (m^2)**
1	Composting Receiving	1.00	53.76	56.24	3023.46
1	Composting Receiving	1.00	53.76	56.24	3023.46
2	Composting Green Waste Active Phase	1.00	172.85	129.02	22301.11

2	Composting Green Waste Curing Phase	1.00	172.85	129.02	22301.11
2	Composting Manure Active Phase	1.00	172.85	129.02	22301.11
2	Composting Manure Curing Phase	1.00	172.85	129.02	22301.11
2	Composting PM10	1.00	172.85	129.02	22301.11

4. AAQA Report

The District modeled the impact of the proposed project on the National Ambient Air Quality Standard (NAAQS) and/or California Ambient Air Quality Standard (CAAQS) in accordance with District Policy APR-1925 (Policy for District Rule 2201 AAQA Modeling) and EPA's Guideline for Air Quality Modeling (Appendix W of 40 CFR Part 51). The District uses a progressive three level approach to perform AAQAs. The first level (Level 1) uses a very conservative approach. If this analysis indicates a likely exceedance of an AAQS or Significant Impact Level (SIL), the analysis proceeds to the second level (Level 2) which implements a more refined approach. For the 1-hour NO_2 standard, there is also a third level that can be implemented if the Level 2 analysis indicates a likely exceedance of an AAQS or SIL.

The modeling analyses predicts the maximum air quality impacts using the appropriate emissions for each standard's averaging period. Required model inputs for a refined AAQA include background ambient air quality data, land characteristics, meteorological inputs, a receptor grid, and source parameters including emissions. These inputs are described in the sections that follow.

Ambient air concentrations of criteria pollutants are recorded at monitoring stations throughout the San Joaquin Valley. Monitoring stations may not measure all necessary pollutants, so background data may need to be collected from multiple sources. The following stations were used for this evaluation:

Monitoring Stations				
Pollutant	**Station Name**	**County**	**City**	**Measurement Year**
PM10	Bakersfield-California	Kern	Bakersfield	2018
PM2.5	Bakersfield-California	Kern	Bakersfield	2018

Technical Services performed modeling for directly emitted criteria pollutants with the emission rates below:

Emission Rates (lbs/hour)			
Unit ID	**Process**	**PM10**	**PM2.5**
1	1	0.01	0.01
2	1	0.03	0.03

Emission Rates (lbs/year)			
Unit ID	**Process**	**PM10**	**PM2.5**
1	1	33	33
2	1	198	198

The AERMOD model was used to determine if emissions from the project would cause or contribute to an exceedance of any state of federal air quality standard. The parameters outlined

below and meteorological data for 2007-2011 from Wasco (rural dispersion coefficient selected) were used for the analysis:

The following parameters were used for the review:

Area Source Parameters					
Unit ID	**Unit Description**	**Release Height (m)**	**X-Length (m)**	**Y -Length (m)**	**Area (m^2)**
1	Composting Receiving	1.00	53.76	56.24	3,023.46
2	Composting (Active and Curing Phases)	1.00	172.85	129.02	22,301.11

5. Conclusion

5.1 RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this 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).**

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.

5.2 AAQA

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

6. Attachments

A. Modeling request from the project engineer
B. Additional information from the applicant/project engineer
C. Prioritization score w/ toxic emissions summary
D. Facility Summary
E. AAQA results

APPENDIX D
ERC Surplus Analyses

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility: Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	C-1553-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate(s)

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
C-1553-1	VOC

This analysis establishes the surplus value of the ERC certificate(s) as of the date of this analysis. The current face value and surplus value of the ERC certificate(s) evaluated in this analysis is summarized in the following table(s):

Criteria Pollutant: VOC

ERC Certificate C-1553-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	0	83	83	0
Surplus Value	0	83	83	0

II. Individual ERC Certificate Analysis

ERC Certificate C-1553-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate C-1553-1 was split from parent ERC Certificate C-1015-1. ERC Certificate C-1015-1 is the original ERC certificate, which was issued to TVK Containers, Inc. on December 17, 2009 under project C-1074594. The ERCs were generated from the shutdown of a container manufacturing operation, facility C-2278. Specifically, the VOC emission reductions were generated from the natural gas-fired ovens and the adhesive application operation listed on the following permits:

C-2278-5:

58 HP AGRICULTURAL CONTAINER MANUFACTURING LINE (#1) WITH A NAURAL GAS-FIRED DRYING OVEN, GLUE SPEADER AND PRINTER SERVED BY TWO 5 FT AND ONE SHARED 7 FT CYCLONE

C-2278-6:

80 HP AGRICULTURAL CONTAINER MANUFACTURING LINE (#2) WITH A NAURAL GAS-FIRED DRYING OVEN, GLUE SPEADER AND PRINTER SERVED BY TWO 5 FT AND ONE SHARED 7 FT CYCLONE

C-2278-7

145 HP AGRICULTURAL CONTAINER MANUFACTURING LINE (#3) WITH A NAURAL GAS-FIRED DRYING OVEN, GLUE SPEADER AND PRINTER SERVED BY TWO 5 FT AND ONE SHARED 7 FT CYCLONE

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate C-1553-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate C-1015-1	0	83	83	0
Current Value of ERC Certificate C-1553-1	0	83	83	0

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 Emission Reduction Credit Banking (12/17/92)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

Rule 4301 Fuel Burning Equipment (12/17/92)

This rule limits SOx, NOx, and combustion contaminant (PM) emissions from fuel burning equipment.

This rule does not apply as it does not limit VOC emissions.

Rule 4653 Adhesives (9/20/07)

The purpose of this rule is to reduce VOC emissions from the application of adhesive products, the organic solvent cleaning, and the storage and disposal of solvents and waste solvent materials associated with such applications.

Per Section 5.1.2, adhesives used to bond wood to wood shall not have a VOC content that exceeds 30 g/l. The adhesive the facility was using had a VOC content of 3.9 g/l and therefore meets the rule limit. Additionally, the VOC emissions from the adhesives were calculated along with the VOC combustion emissions from the drying ovens. No adjustment of emissions factors is needed.

Rule 4307 Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr – *Not Applicable*

This rule does not apply as the natural gas-fired drying ovens are not any of the affected equipment (boiler, steam generator, or process heater).

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

Rule 4653 Adhesives (9/17/09)

Although this rule has been amended since the original banking action, the applicable VOC limit for adhesives used to bond wood to wood shall not have a VOC content remains at 30 g/l. The adhesive the facility was using has a VOC content of 3.9 g/l and therefore meets the rule limit. Additionally, the VOC emissions from the adhesives were calculated along with the VOC combustion emissions from the drying ovens. No adjustment of emissions factors is needed.

Therefore, the VOC emission reductions are still surplus of the requirements of these rules.

2. Federal Rules and Regulations:

There are no new or modified federal rules or regulations that would apply to the shutdown of the natural gas-fired ovens and the adhesive application operations in the original ERC banking project. Therefore, the original VOC emission reductions continue to be surplus of District Rule requirements.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, the emissions reductions from permit units in the original banking project continue to be surplus of all applicable District and Federal Rules and Regulations. Therefore, no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate C-1553-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	0	83	83	0
(B)	Percent Discount	**0%**	**0%**	**0%**	**0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	0	83	83	0

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	C-1554-1		
ERC Surplus Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate(s)

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
C-1554-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis are summarized in the following table(s):

Criteria Pollutant Summary: VOC

ERC Certificate C-1554-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	0	767	1,032	454
Surplus Value	0	767	1,032	454

II. Individual ERC Certificate Analysis

ERC Certificate C-1554-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate C-1554-1 is a certificate that was split out from parent ERC Certificate C-1112-1. Original ERC Certificate C-1112-1 was issued to Meyers Farming LLC on 8/31/08 under project C-1090909. The ERCs were generated from the shutdown of facility C-1179, consisting of a sugar beet processing operation, a 40 MMBtu/hr oil-fired lime kiln and a 311 MMBtu/hr natural gas-fired boiler. The following permits were involved in the ERC banking project:

C-1179-1-3:

BEET SUGAR MANUFACTURING PROCESS WITH FIRST CARBONATION, SETTLING AND FILTRATION; SECOND CARBONATION, SULFITATION, CARBON ABSORPTION, CRYSTALLINE SUGAR MELTING, SUGAR DRYING, AND CARBON REGENERATION WITH 2.4 MMBTU/HR CARBON KILN SERVED BY VENTRISLOT SCRUBBER AND CYCLONE

C-1179-2-3:

40 MMBTU/HR ROTARY DRUM LIME KILN DIRECT-FIRED COEN OIL BURNER USING #6 FUEL OIL OR NATURAL GAS, EXHAUSTING TO WATER SPRAY SCRUBBER, PEABODY TRAY SCRUBBER, AND TO CARBONATION

C-1179-6-8:

311 MMBTU/HR COMBUSTION ENGINEERING BOILER, MODEL VU60 NO.0516, EQUIPPED WITH FOUR COEN 4-DAF-30 LOW NOX GAS/OIL BURNERS AND A FLUE GAS RECIRCULATION SYSTEM

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District analysis:

ERC Certificate C-1554-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate C-1112-1	0	767	1,032	454
Current Value of ERC Certificate C-1554-1	0	767	1,032	454

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 - Emission Reduction Credit Banking (12/17/92)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3 (10/16/08)
Rule 4313 Lime Kilns (3/27/03)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters (10/16/08)

The application review for the original ERC banking project demonstrated that the kiln and boiler had VOC limits, however, there are no VOC limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4351 Boilers, Steam Generators, and Process Heaters – Phase 1 (8/21/03)
Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4313 Lime Kilns (3/27/03)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/2020)

The requirements of Rules 4305, 4351, and 4320 would have been applicable to the boilers in the original ERC banking project and Rule 4313 would have been applicable to the lime kiln in the original ERC banking project. However, none of the rules listed above

have VOC emission limits. Furthermore, District Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Therefore, the VOC emissions reductions continue to be surplus of these rule requirements.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, the VOC emissions reductions from permit units in the original banking project continue to be surplus of all applicable District and Federal Rules and Regulations. Therefore, no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The VOC emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate C-1554-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	0	767	1,032	454
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	0	767	1,032	454

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate #:	C-1555-1		
ERC Surplus Project #:	S1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate.

Proposed ERC Certificate	
Certificate #	**Criteria Pollutant**
C-1555-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis are summarized in the following table:

Criteria Pollutant: VOC

ERC Certificate C-1555-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	1,055	1,415	1,403	1,447
Surplus Value	1,055	1,415	1,403	1,447

II. Individual ERC Certificate Analysis

ERC Certificate C-1555-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate C-1555-1 is a certificate that was split out from parent ERC Certificate C-1173-1. Original ERC Certificate C-1173-1 was issued to SC Johnson Home Storage Inc on August 22, 2012 under project C-1113096. The ERC was generated from the shutdown of polyethylene extrusion lines listed on the permits below:

C-437-6-5:

TRAIN 55 POLYETHYLENE EXTRUSION, BAG CONVERSION PRODUCTION LINE. MAJOR EQUIPMENT INCLUDES: BAG SEALER, AND BAG RECYCLING SYSTEM WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST AND FLUFF CONVEYING BLOWER SHARED WITH TRAIN 11 (C-437-7) AND TRAIN 12 (C-437-8)

C-437-7-3:

TRAIN 11 POLYETHYLENE EXTRUSION, BAG CONVERSION AND BAG PRINTING PRODUCTION LINE. MAJOR EQUIPMENT INCLUDES: BAG SEALER WITH VACUUM SYSTEM; PERMIT EXEMPT ENERCON CORONA TREATER & OZONE DECOMPOSER; COMCO PRINTER; AND BAG RECYCLING SYSTEM WITH SUPPLEMENTAL GRANULATOR SHARED WITH TRAIN 55 (C-437-6) AND TRAIN 12 (C-437-8) WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST AND FLUFF CONVEYING BLOWER

C-437-8-3:

TRAIN 12 POLYETHYLENE EXTRUSION, BAG CONVERSION AND BAG PRINTING PRODUCTION LINE. MAJOR EQUIPMENT INCLUDES: BAG SEALER WITH VACUUM SYSTEM; PERMIT EXEMPT ENERCON CORONA TREATER & OZONE DECOMPOSER; COMCO PRINTER; AND BAG RECYCLING SYSTEM WITH SUPPLEMENTAL GRANULATOR SHARED WITH TRAIN 55 (C-437-6) AND TRAIN 11 (C-437-7) WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST AND FLUFF CONVEYING BLOWER

C-437-17-1:

TRAIN 57 POLYETHYLENE EXTRUSION, BAG CONVERSION AND BAG PRINTING PRODUCTION LINE. MAJOR EQUIPMENT INCLUDES: BAG SEALER WITH VACUUM SYSTEM; MICROPERFORATOR; PERMIT EXEMPT ENERCON CORONA TREATER & OZONE DECOMPOSER; COMCO PRINTER; AND BAG RECYCLING SYSTEM SHARED

WITH TRAIN 56 (C-437-21) AND TRAIN 58 (C-437-18) WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST, DUST COLLECTOR, AND FLUFF CONVEYING BLOWER

C-437-18-4:

TRAIN 58 POLYETHYLENE EXTRUSION, BAG CONVERSION AND BAG PRINTING PRODUCTION LINE. MAJOR EQUIPMENT INCLUDES: BAG SEALER WITH VACUUM SYSTEM; MICROPERFORATOR; PERMIT EXEMPT ENERCON CORONA TREATER & OZONE DECOMPOSER; COMCO PRINTER; AND BAG RECYCLING SYSTEM SHARED WITH TRAIN 56 (C-437-21) AND TRAIN 57 (C-437-17) WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST, DUST COLLECTOR AND FLUFF CONVEYING BLOWER

C-437-21-4:

TRAIN 56 POLYETHYLENE EXTRUSION, BAG CONVERSION PRODUCTION LINE INCLUDING: BAG SEALER AND BAG RECYCLING SYSTEM SHARED WITH TRAIN 57 (C-437-17) AND TRAIN 58 (C-437-18) WITH GRINDER AND GRINDER BLOWERS, FLUFF TANK EXHAUST, DUST COLLECTOR, AND FLUFF CONVEYING BLOWER

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District analysis:

ERC Certificate C-1173-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate C-1173-1	1,055	1,415	1,403	1,447
Current Value of ERC Certificate C-1173-1	1,055	1,415	1,403	1,447

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 - Emission Reduction Credit Banking (8/15/19)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

Rule 4201 - Particulate Matter Concentration (12/17/92)
Rule 4202 - Particulate Matter - Emission Rate (12/17/92)
Rule 4682 - Polystyrene, Polyethylene, and Polypropylene Products Manufacturing (12/15/11)

The application review for the original ERC banking project demonstrated that the six polyethylene extrusion lines had VOC limits that were below the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

There are no new or modified District rules that would apply to the polyethylene extrusion lines shut down in the original ERC banking project. Therefore, the original VOC emission reductions continue to be surplus of District Rule requirements.

2. Federal Rules and Regulations:

There are no new or modified federal rules or regulations that would apply to the polyethylene extrusion lines shutdown in the original ERC banking project. Therefore, the original VOC emission reductions continue to be surplus of District Rule requirements.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, the emissions reductions from permit units in the original banking project continue to be surplus of all applicable District and Federal Rules and Regulations. Therefore, no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate C-1555-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	1,055	1,415	1,403	1,447
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	1,055	1,415	1,403	1,447

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Requester/Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonnano		
Telephone:	(661) 862-8972		
ERC Certificate(s) #:	C-1556-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility is proposing the use of the following Emission Reduction Credit (ERC) certificate(s).

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
C-1556-1	VOC

This analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis is summarized in the following table:

Criteria Pollutant: VOC

ERC Certificate C-1556-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	2,156	456	0	0
Surplus Value	2,156	456	0	0

II. Individual ERC Certificate Analysis

ERC Certificate C-1556-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate C-1556-1 is a certificate that was split out from parent ERC Certificate C-1051-1. Original ERC Certificate C-1051-1 was issued to Martin Anderson (Facility C-2929) on April 19, 2010 under project C-1074595. The ERC was generated from the shutdown of polystyrene (EPS) foam box manufacturing facility, facility ID C-2929, which included the following permits that had associated VOC emissions:

C-2929-1-2:

EPS MOLD OPERATION SERVED BY 10.6 MMBTU/HR BOILER-OXIDIZER STEAM SYSTEM (B.O.S.S.) EQUIPPED WITH A LOW-NOX BURNER & FGR SYSTEM (COMMON TO C-2929-2)

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate C-1556-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate C-1051-1	8,699	12,348	6,585	90
Current Value of ERC Certificate C-1556-1	2,156	456	0	0

Please note: VOC emissions generated from the combustion of natural gas in the boiler/oxidizer system was accounted for in the VOC calculations for the expanded polystyrene foam processing operations.

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 - Emission Reduction Credit Banking (12/17/92)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

Rule 4301 - Fuel Burning Equipment (12/17/92)
Rule 4306 - Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08) –N/A not a VOC Rule
Rule 4320 - Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08) –N/A not a VOC Rule
Rule 4682-Polystyrene, Polyethylene and Polypropylene Products Manufacturing (9/20/07)

The application review for the original ERC banking project demonstrated that the equipment had VOC limits that were below the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/2020)

Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Additionally, Rules 4306, and 4320 do not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions from the boilers continue to be surplus of the requirements of these rules.

Rule 4682-Polystyrene, Polyethylene and Polypropylene Products Manufacturing (12/15/11)

District Rule 4682 was amended by the District on December 15, 2011 and added to the District's SIP on September 20, 2012. This rule is applicable to the polystyrene manufacturing operation that was shut down in the original banking project (unit C-2929-1).

The most stringent requirement of the 12/15/11 version of Rule 4682 is 2.4 lb-VOC emitted per 100 lb of material processed. The operation that the ERCs were generated from had a permitted emission limit of 1.34 lb-VOC/100 lb of material processed, which is lower than the Rule 4682 Rule limit; therefore, the changes to the Rule in 2011 will not affect the ERCs issued and the emission reduction are surplus of Rule 4682 requirements.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This subpart does not have any requirements for VOC emissions.

Therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 60 Subpart DDD—Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

This subpart applies to the manufacturing of basic polymers: polypropylene, polyethylene, polystyrene, and polyethylene terephthalate) (PET). Per the definition of process finishing in 60.561(c), "the shaping (such as fiber spinning, molding, or fabricating) or modification (such as fiber stretching and crimping) of the finished end

product" is not including in this subpart. Therefore, the requirements of this subpart are not applicable to the original operation, and no further analysis is required.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, the emissions reductions from permit units in the original banking project continue to be surplus of all applicable District and Federal Rules and Regulations. Therefore, no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

As shown in the previous section, the surplus at time of use value of this ERC certificate will be adjusted. The current face value of the ERC certificate, the percent the current value is discounted by based on the surplus analysis in the previous section, and the current calculated surplus value of the ERC certificate is shown in the table below:

ERC Certificate C-1556-1					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	2,156	456	0	0
(B)	Percent Discount	**0%**	**0%**	**0%**	**0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	2,156	456	0	0

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M Street Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	S-5287-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate:

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
S-5287-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The face value and current surplus value of the ERC certificate evaluated in this analysis are summarized in the following tables:

Criteria Pollutant Summary: VOC

ERC Certificate S-5287-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	3,025	5,522	5,660	0
Surplus Value	3,025	5,522	5,660	0

II. Individual ERC Certificate Analysis

ERC Certificate S-5287-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5287-1 is a certificate that was split out from parent ERC Certificate S-3493-1. The original ERC Certificate (S-3493-1) was issued to Agri-Cel Inc. (facility S-848) on April 4, 2011 under project S-1100008. The ERC was generated from the shutdown of an expanded polystyrene (EPS) box manufacturing facility. The facility shutdown included the following equipment:

S-848-2-13

POLYSTYRENE PRE-EXPANSION OPERATION #1 WITH DUMP PLATFORM, TWO AUGERS, RECEIVING HOPPER, ENCLOSED PRE-EXPANDER VESSEL WITH DUST COLLECTOR, STEAM AGITATOR, ASPIRATOR (TO AGING SILOS/BINS), VAPOR PIPING FROM STEAM AGITATORS, AGING SILOS/BINS, PROMASS PRESS, AND MOLDING PRESS VACUUM LINES TO 0.7 MMBTU/HR RETOX 4.0 RTO95 THERMAL OXIDIZER

S-848-3-11

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #1 WITH ENCLOSED AGING SILO WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS AND UP TO SIX 704 CUBIC FOOT MATERIAL AGING BINS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S) INCLUDED IN PTO S-848-2

S-848-4-10

EXPANDED POLYSTYRENE MOLDING OPERATION #1 WITH PNEUMATIC CONVEYING SYSTEM, 328 CU FT RESERVOIR BAG, AND TWO 22 CU FT AIRVEY TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-6-9

POLYSTYRENE PRE-EXPANSION OPERTION #2 W VAPOR PIPING FROM STEAM AGITATORS AND AGING SILOS/BINS TO PTO S-848-2 OXIDIZER(S). RECEIVING AND STAGING HOPPERS, SCREENING DEVICE WITH DUST COLLECTOR, ENCLOSED PRE-EXPANDER WITH DUST COLLECTOR, AND ASPIRATOR

S-848-7-8

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #2 WITH UP TO TWO ENCLOSED AGING SILOS, EACH WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S)INCLUDED IN PTO S-848-2

S-848-8-10

EXPANDED POLYSTYRENE MOLDING OPERATION #2 WITH PNEUMATIC CONVEYING SYSTEM, TWO 328 CU FT SURGE TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-9-2

7.5 MMBTU/HR NATURAL GAS-FIRED DIXON MODEL SK-10 BOILER WITH A POWER FLAME MODEL NVCR5-G-30 LOW NOX BURNER

S 848-12-0

10.5 MMBTU/HR NATURAL GAS-FIRED SUPERIOR SEMINOLE MARINE BOILER (MODEL NUMBER 6X-1250-S150-LNDG-145P) WITH INDUSTRIAL COMBUSTION MODEL LNDG-145-P-12 LOW NOX BURNER AND FGR

S-848-13-0

140 ACRE OUTDOOR STORAGE OPERATION FOR EXPANDED POLYSTYRENE PRODUCED ONSITE

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate S-5287-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original value of Parent ERC S-3493-1	71,653	86,926	80,406	9,672
Current Value of ERC Certificate S-5287-1	3,025	5,522	5,660	0

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the original banking project.

1. District Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2301	Emission Reduction Credit Banking (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4682	Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (09/20/07)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

The application review for the original ERC banking project demonstrated that the polystyrene production lines and boiler emissions reductions calculations accounted for the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements at the time of issuance.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

1. District Rules:

Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)

Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Additionally, Rules 4306, and 4320 do not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions from the boilers continue to be surplus of the requirements of these rules.

Rule 4682 Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (12/15/2011)

District Rule 4682 was amended by the District on December 15, 2011 and added to the District's SIP on September 20, 2012.

This Rule applies to the following Permit units:

Line 1
- S-848-2-13: polystyrene pre-expansion operation (#1)
- S-848-3-1: polystyrene aging/storage operations
- S-848-4-10: polystyrene molding operation

Line 2
- S-848-6-9: polystyrene pre-expansion operation (#2)
- and S-848-7-8: polystyrene aging/storage operation
- and S-848-8-10: polystyrene molding operations

Outdoor Storage Operation
- S-848-13-0: Outdoor Polystyrene storage operation

The rule requires the total emissions from the polystyrene beads processing operation to not exceed 2.4 lb-VOC/100 lb of material processed. Total VOC emissions from the polystyrene processes at this facility were determined to be 0.076 lb-VOC/100 lb of material processed. Therefore, the operation that was shutdown met the revised limit of 2.4 lb-VOC/100 lb of material processed and the ERCs issued are surplus of the modified Rule 4382 requirements adopted in December 2011.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60 Part 60 Subpart Dc would have been applicable to the boilers that were shut down in the original ERC banking project. However, this rule does not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions are still surplus of the requirements of this rule.

40 CFR Part 60 Subpart DDD—Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

The application review for the original ERC banking project did not address 40 CFR Part 60 Subpart DDD. This subpart only applies to the manufacturing of polymers, the manufacturing of usable products from polymers is not included. Therefore, this subpart does not apply.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart applies to boilers and process heaters located at a major source of Hazardous Air Pollutants (HAP). The facility was not a major source of HAP emissions as determined in Attachment 1.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The boilers at the facility meet the definition of "gas-fired boiler" in the subpart as they were required to use natural gas or LPG as fuel. Pursuant to §63.11195(e), "gas-fired boilers" are not subject to this subpart; therefore, the requirements of this subpart are not applicable.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5287-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	3,025	5,522	5,660	0
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	3,025	5,522	5,660	0

Attachment

1. Major Source of HAP Determination

ATTACHMENT 1
Major Source of HAP Determination

Emissions break down for Facility S-848

Pentane, a non-hazardous VOC, accounts for more than 99% of the facilities VOC emissions. The remaining 1% of VOCs (2,763 lb) are less than the HAP Major Source thresholds for individual pollutants and combined pollutants. Therefore, the facility was not a major source of HAP. The emission values were taken from the original banking project, S-1100008. Please see the following tables for a breakdown of the VOC emissions:

Facility Two Year Average Emissions (2005 and 2006)				
NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)
711	**276,285**	**277**	**150**	**400**

Average Facility EPS Pentane Emissions for the years 2005 and 2006					
Facility EPS Production Operations	**Average Process Rate**	**Adjusted Drop Point Process Emissions (AER)**			**Total Pentane Emissions** (lb-VOC/yr)
	EPS (Tons/yr)	Pre-Expansion (lb-VOC)	Ageing (lb-VOC)	Molding (lb-VOC)	
Line 1	1,898	1,169	691	1,009	2,869
Line 2	2,863	1,764	1,042	1,523	4,329
Outdoor Uncontrolled Storage	4,761				268,828
Total	**4,761**				**276,026**

Fuel Burning Operations	**Ave. Annual Heat (MMBtu/yr)**	**Emission Factor (lb-VOC/MMBtu)**	**Total VOC (lb/yr)**
S-848-12 (10.5 MMBtu/hr boiler)	30,486	0.0055	168
S-848-9 (7.5 MMBtu/hr boiler)	20,205	0.0040	81
Thermal Oxidizer (serves Line 1 and 2)	1,971	0.0055	11

Source of VOC Emissions	**VOC (lb/yr)**
Pentane from EPS Production	276,026
Other Sources of VOC emissions	259
Total VOC Emissions	**276,285**

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Requester/Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate #:	S-5289-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate.

Proposed ERC Certificate	
Certificate #	**Criteria Pollutant**
S-5289-1	VOC

This analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis is summarized in the following table:

Criteria Pollutant: VOC

ERC Certificate S-5289-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	7	165	212	78
Surplus Value	7	165	212	78

II. Individual ERC Certificate Analysis

ERC Certificate S-5289-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5289-2 is a certificate that was split out from parent ERC Certificate S-S-4617-1. The original ERC Certificate S-4617-1 was issued to Rio Bravo Poso on August 6, 2015 under project S-1153416. The ERCs were generated from the shutdown of a solid fuel-fired cogeneration unit (permit S-883-3, fired on coal, coke and/or biomass).

S-883-3-20

36.0 MW SOLID FUEL FIRED CIRCULATING BED COMBUSTOR COGENERATION UNIT INCLUDING 389 MMBTU/HR COMBUSTOR WITH LOW-TEMPERATURE STAGED COMBUSTION, AMMONIA INJECTION, AND PULVERIZED LIMESTONE INJECTION - POSO CREEK

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate S-5289-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate S-4617-1	191	330	414	274
Current Value of ERC Certificate S-5289-1	7	165	212	78

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 Emission Reduction Credit Banking (12/17/92)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

Rule 4352 Solid Fuel Fired Boilers Steam Generators and Process Heaters (12/16/21)

This rule does not have any requirements for VOC emissions. Therefore, this rule was not applicable and the emission reductions continue to be surplus of this rule.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators

This subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units

The boiler in this project may be applicable to this subpart. However, this subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

This subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

According to § 63.7491, an electric utility steam generating unit covered by subpart UUUUU of this part is not subject to this subpart. Therefore, the unit is not subject to this subpart.

40 CFR Part 63 Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This unit is an electric utility steam generating unit as defined in § 63.11237; therefore the unit is not subject to this subpart.

40 CFR Part 63 Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units

Subpart UUUUU does not include any requirements for VOC emissions. Therefore, the emission reductions continue to be surplus of this subpart.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5289-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	7	165	212	78
(B)	Percent Discount	**0%**	**0%**	**0%**	**0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	7	165	212	78

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M ST Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate #:	S-5290-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate.

Proposed ERC Certificate	
Certificate #	**Criteria Pollutant**
S-5290-1	VOC

This analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis is summarized in the following table:

Criteria Pollutant: VOC

ERC Certificate S-5290-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	53	22	40	51
Surplus Value	53	22	40	51

II. Individual ERC Certificate Analysis

ERC Certificate S-5290-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5290-1 is a certificate that was split out from parent ERC Certificate S-4620-1. Original ERC Certificate S-4620-1 was issued to Rio Bravo Jasmin on September 1, 2015 under project S-1153637. The ERCs were generated from the shutdown of a solid fuel-fired cogeneration unit (permit unit S-1751-3 fired on coal, coke, and biomass).

S-1751-3-19

36 MW SOLID FUEL FIRED, CIRCULATING BED COMBUSTOR COGENERATION UNIT INCLUDING 389 MMBTU/HR COMBUSTOR WITH LOW-TEMPERATURE STAGED COMBUSTION, AMMONIA INJECTION, AND PULVERIZED LIMESTONE INJECTION - JASMIN FIELD

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District analysis:

ERC Certificate S-5290-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate S-4620-1	237	187	242	247
Current Value of ERC Certificate S-5290-1	53	22	40	51

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the reduction project.

1. District Rules

Rule 2301 - Emission Reduction Credit Banking (12/17/92)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

Rule 4352 Solid Fuel Fired Boilers Steam Generators and Process Heaters (12/16/21)

This rule does not have any requirements for VOC emissions. Therefore, the emission reductions continue to be surplus of this rule.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators

This subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units

The boiler in this project may be applicable to this subpart. However, this subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

This subpart does not have any requirements for VOC emissions; therefore, the emission reductions continue to be surplus of this subpart.

40 CFR Part 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

According to § 63.7491, an electric utility steam generating unit covered by subpart UUUUU of this part is not subject to this subpart. Therefore, the unit is not subject to this subpart.

40 CFR Part 63 Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This unit is an electric utility steam generating unit as defined in § 63.11237; therefore the unit is not subject to this subpart.

40 CFR Part 63 Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units

Subpart UUUUU does not have any requirements for VOC emissions. Therefore, the emission reductions continue to be surplus of this subpart.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5290-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	53	22	40	51
(B)	Percent Discount	**0%**	**0%**	**0%**	**0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	53	22	40	51

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M Street Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	S-5293-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate:

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
S-5293-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The face value and current surplus value of the ERC certificate evaluated in this analysis are summarized in the following tables:

Criteria Pollutant Summary: VOC

ERC Certificate S-5293-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	20,000	32,000	28,000	0
Surplus Value	20,000	32,000	28,000	0

II. Individual ERC Certificate Analysis

ERC Certificate S-5293-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5293-1 is a certificate that was split out from parent ERC Certificate S-3493-1. The original ERC Certificate (S-3493-1) was issued to Agri-Cel Inc. (facility S-848) on April 4, 2011 under project S-1100008. The ERC was generated from the shutdown of an expanded polystyrene (EPS) box manufacturing facility. The facility shutdown included the following equipment for which ERCs were banked:

S-848-2-13

POLYSTYRENE PRE-EXPANSION OPERATION #1 WITH DUMP PLATFORM, TWO AUGERS, RECEIVING HOPPER, ENCLOSED PRE-EXPANDER VESSEL WITH DUST COLLECTOR, STEAM AGITATOR, ASPIRATOR (TO AGING SILOS/BINS), VAPOR PIPING FROM STEAM AGITATORS, AGING SILOS/BINS, PROMASS PRESS, AND MOLDING PRESS VACUUM LINES TO 0.7 MMBTU/HR RETOX 4.0 RTO95 THERMAL OXIDIZER

S-848-3-11

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #1 WITH ENCLOSED AGING SILO WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS AND UP TO SIX 704 CUBIC FOOT MATERIAL AGING BINS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S) INCLUDED IN PTO S-848-2

S-848-4-10

EXPANDED POLYSTYRENE MOLDING OPERATION #1 WITH PNEUMATIC CONVEYING SYSTEM, 328 CU FT RESERVOIR BAG, AND TWO 22 CU FT AIRVEY TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-6-9

POLYSTYRENE PRE-EXPANSION OPERTION #2 W VAPOR PIPING FROM STEAM AGITATORS AND AGING SILOS/BINS TO PTO S-848-2 OXIDIZER(S). RECEIVING AND STAGING HOPPERS, SCREENING DEVICE WITH DUST COLLECTOR, ENCLOSED PRE-EXPANDER WITH DUST COLLECTOR, AND ASPIRATOR

S-848-7-8

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #2 WITH UP TO TWO ENCLOSED AGING SILOS, EACH WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S)INCLUDED IN PTO S-848-2

S-848-8-10

EXPANDED POLYSTYRENE MOLDING OPERATION #2 WITH PNEUMATIC CONVEYING SYSTEM, TWO 328 CU FT SURGE TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-9-2

7.5 MMBTU/HR NATURAL GAS-FIRED DIXON MODEL SK-10 BOILER WITH A POWER FLAME MODEL NVCR5-G-30 LOW NOX BURNER

S 848-12-0

10.5 MMBTU/HR NATURAL GAS-FIRED SUPERIOR SEMINOLE MARINE BOILER (MODEL NUMBER 6X-1250-S150-LNDG-145P) WITH INDUSTRIAL COMBUSTION MODEL LNDG-145-P-12 LOW NOX BURNER AND FGR

S-848-13-0

140 ACRE OUTDOOR STORAGE OPERATION FOR EXPANDED POLYSTYRENE PRODUCED ONSITE

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate S-5293-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original value of Parent ERC S-3493-1	71,653	86,926	80,406	9,672
Current Value of ERC Certificate S-5293-1	20,000	32,000	28,000	0

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the original banking project.

1. District Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2301	Emission Reduction Credit Banking (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4682	Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (09/20/07)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

The application review for the original ERC banking project demonstrated that the polystyrene production lines and boiler emissions reductions calculations accounted for the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements at the time of issuance.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

1. District Rules:

Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)

Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Additionally, Rules 4306, and 4320 do not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions from the boilers continue to be surplus of the requirements of these rules.

Rule 4682 Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (12/15/2011)

District Rule 4682 was amended by the District on December 15, 2011 and added to the District's SIP on September 20, 2012.

This Rule applies to the following Permit units:

Line 1
- S-848-2-13: polystyrene pre-expansion operation (#1)
- S-848-3-1: polystyrene aging/storage operations
- S-848-4-10: polystyrene molding operation

Line 2
- S-848-6-9: polystyrene pre-expansion operation (#2)
- and S-848-7-8: polystyrene aging/storage operation
- and S-848-8-10: polystyrene molding operations

Outdoor Storage Operation
- S-848-13-0: Outdoor Polystyrene storage operation

The rule requires the total emissions from the polystyrene beads processing operation to not exceed 2.4 lb-VOC/100 lb of material processed. Total VOC emissions from the polystyrene processes at this facility were determined to be 0.076 lb-VOC/100 lb of material processed. Therefore, the operation that was shutdown met the revised limit of 2.4 lb-VOC/100 lb of material processed and the ERCs issued are surplus of the modified Rule 4382 requirements adopted in December 2011.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60 Part 60 Subpart Dc would have been applicable to the boilers that were shut down in the original ERC banking project. However, this rule does not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions are still surplus of the requirements of this rule.

40 CFR Part 60 Subpart DDD—Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

The application review for the original ERC banking project did not address 40 CFR Part 60 Subpart DDD. This subpart only applies to the manufacturing of polymers, the manufacturing of usable products from polymers is not included. Therefore, this subpart does not apply.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart applies to boilers and process heaters located at a major source of Hazardous Air Pollutants (HAP). The facility was not a major source of HAP emissions as determined in Attachment 1.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The boilers at the facility meet the definition of "gas-fired boiler" in the subpart as they were required to use natural gas or LPG as fuel. Pursuant to §63.11195(e), "gas-fired boilers" are not subject to this subpart; therefore, the requirements of this subpart are not applicable.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5293-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	20,000	32,000	28,000	0
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	20,000	32,000	28,000	0

Attachment

1. Major Source of HAP Determination

ATTACHMENT 1
Major Source of HAP Determination

Emissions break down for Facility S-848

Pentane, a non-hazardous VOC, accounts for more than 99% of the facilities VOC emissions. The remaining 1% of VOCs (2,763 lb) are less than the HAP Major Source thresholds for individual pollutants and combined pollutants. Therefore, the facility was not a major source of HAP. The emission values were taken from the original banking project, S-1100008. Please see the following tables for a breakdown of the VOC emissions:

Facility Two Year Average Emissions (2005 and 2006)				
NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)
711	**276,285**	**277**	**150**	**400**

Average Facility EPS Pentane Emissions for the years 2005 and 2006					
Facility EPS Production Operations	**Average Process Rate**	**Adjusted Drop Point Process Emissions (AER)**			**Total Pentane Emissions** (lb-VOC/yr)
	EPS (Tons/yr)	Pre-Expansion (lb-VOC)	Ageing (lb-VOC)	Molding (lb-VOC)	
Line 1	1,898	1,169	691	1,009	2,869
Line 2	2,863	1,764	1,042	1,523	4,329
Outdoor Uncontrolled Storage	4,761				268,828
Total	**4,761**				**276,026**

Fuel Burning Operations	**Ave. Annual Heat (MMBtu/yr)**	**Emission Factor (lb-VOC/MMBtu)**	**Total VOC (lb/yr)**
S-848-12 (10.5 MMBtu/hr boiler)	30,486	0.0055	168
S-848-9 (7.5 MMBtu/hr boiler)	20,205	0.0040	81
Thermal Oxidizer (serves Line 1 and 2)	1,971	0.0055	11

Source of VOC Emissions	**VOC (lb/yr)**
Pentane from EPS Production	276,026
Other Sources of VOC emissions	259
Total VOC Emissions	**276,285**

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M Street Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	S-5304-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate:

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
S-5304-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The face value and current surplus value of the ERC certificate evaluated in this analysis are summarized in the following tables:

Criteria Pollutant Summary: VOC

ERC Certificate S-5304-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	1,000	1,000	1,000	1,000
Surplus Value	1,000	1,000	1,000	1,000

II. Individual ERC Certificate Analysis

ERC Certificate S-5304-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5304-1 is a certificate that was split out from parent ERC Certificate S-3493-1. The original ERC Certificate (S-3493-1) was issued to Agri-Cel Inc. (facility S-848) on April 4, 2011 under project S-1100008. The ERC was generated from the shutdown of an expanded polystyrene (EPS) box manufacturing facility. The facility shutdown included the following equipment:

S-848-2-13

POLYSTYRENE PRE-EXPANSION OPERATION #1 WITH DUMP PLATFORM, TWO AUGERS, RECEIVING HOPPER, ENCLOSED PRE-EXPANDER VESSEL WITH DUST COLLECTOR, STEAM AGITATOR, ASPIRATOR (TO AGING SILOS/BINS), VAPOR PIPING FROM STEAM AGITATORS, AGING SILOS/BINS, PROMASS PRESS, AND MOLDING PRESS VACUUM LINES TO 0.7 MMBTU/HR RETOX 4.0 RTO95 THERMAL OXIDIZER

S-848-3-11

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #1 WITH ENCLOSED AGING SILO WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS AND UP TO SIX 704 CUBIC FOOT MATERIAL AGING BINS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S) INCLUDED IN PTO S-848-2

S-848-4-10

EXPANDED POLYSTYRENE MOLDING OPERATION #1 WITH PNEUMATIC CONVEYING SYSTEM, 328 CU FT RESERVOIR BAG, AND TWO 22 CU FT AIRVEY TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-6-9

POLYSTYRENE PRE-EXPANSION OPERTION #2 W VAPOR PIPING FROM STEAM AGITATORS AND AGING SILOS/BINS TO PTO S-848-2 OXIDIZER(S). RECEIVING AND STAGING HOPPERS, SCREENING DEVICE WITH DUST COLLECTOR, ENCLOSED PRE-EXPANDER WITH DUST COLLECTOR, AND ASPIRATOR

S-848-7-8

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #2 WITH UP TO TWO ENCLOSED AGING SILOS, EACH WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S)INCLUDED IN PTO S-848-2

S-848-8-10

EXPANDED POLYSTYRENE MOLDING OPERATION #2 WITH PNEUMATIC CONVEYING SYSTEM, TWO 328 CU FT SURGE TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-9-2

7.5 MMBTU/HR NATURAL GAS-FIRED DIXON MODEL SK-10 BOILER WITH A POWER FLAME MODEL NVCR5-G-30 LOW NOX BURNER

S 848-12-0

10.5 MMBTU/HR NATURAL GAS-FIRED SUPERIOR SEMINOLE MARINE BOILER (MODEL NUMBER 6X-1250-S150-LNDG-145P) WITH INDUSTRIAL COMBUSTION MODEL LNDG-145-P-12 LOW NOX BURNER AND FGR

S-848-13-0

140 ACRE OUTDOOR STORAGE OPERATION FOR EXPANDED POLYSTYRENE PRODUCED ONSITE

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate S-5304-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original value of Parent ERC S-3493-1	71,653	86,926	80,406	9,672
Current Value of ERC Certificate S-5304-1	1,000	1,000	1,000	1,000

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the original banking project.

1. District Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2301	Emission Reduction Credit Banking (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4682	Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (09/20/07)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

The application review for the original ERC banking project demonstrated that the polystyrene production lines and boiler emissions reductions calculations accounted for the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements at the time of issuance.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

1. District Rules:

Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)

Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Additionally, Rules 4306, and 4320 do not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions from the boilers continue to be surplus of the requirements of these rules.

Rule 4682 Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (12/15/2011)

District Rule 4682 was amended by the District on December 15, 2011 and added to the District's SIP on September 20, 2012.

This Rule applies to the following Permit units:

Line 1
- S-848-2-13: polystyrene pre-expansion operation (#1)
- S-848-3-1: polystyrene aging/storage operations
- S-848-4-10: polystyrene molding operation

Line 2
- S-848-6-9: polystyrene pre-expansion operation (#2)
- and S-848-7-8: polystyrene aging/storage operation
- and S-848-8-10: polystyrene molding operations

Outdoor Storage Operation
- S-848-13-0: Outdoor Polystyrene storage operation

The rule requires the total emissions from the polystyrene beads processing operation to not exceed 2.4 lb-VOC/100 lb of material processed. Total VOC emissions from the polystyrene processes at this facility were determined to be 0.076 lb-VOC/100 lb of material processed. Therefore, the operation that was shutdown met the revised limit of 2.4 lb-VOC/100 lb of material processed and the ERCs issued are surplus of the modified Rule 4382 requirements adopted in December 2011.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60 Part 60 Subpart Dc would have been applicable to the boilers that were shut down in the original ERC banking project. However, this rule does not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions are still surplus of the requirements of this rule.

40 CFR Part 60 Subpart DDD—Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

The application review for the original ERC banking project did not address 40 CFR Part 60 Subpart DDD. This subpart only applies to the manufacturing of polymers, the manufacturing of usable products from polymers is not included. Therefore, this subpart does not apply.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart applies to boilers and process heaters located at a major source of Hazardous Air Pollutants (HAP). The facility was not a major source of HAP emissions as determined in Attachment 1.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The boilers at the facility meet the definition of "gas-fired boiler" in the subpart as they were required to use natural gas or LPG as fuel. Pursuant to §63.11195(e), "gas-fired boilers" are not subject to this subpart; therefore, the requirements of this subpart are not applicable.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5304-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	1,000	1,000	1,000	1,000
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	1,000	1,000	1,000	1,000

Attachment

1. Major Source of HAP Determination

ATTACHMENT 1
Major Source of HAP Determination

Emissions break down for Facility S-848

Pentane, a non-hazardous VOC, accounts for more than 99% of the facilities VOC emissions. The remaining 1% of VOCs (2,763 lb) are less than the HAP Major Source thresholds for individual pollutants and combined pollutants. Therefore, the facility was not a major source of HAP. The emission values were taken from the original banking project, S-1100008. Please see the following tables for a breakdown of the VOC emissions:

Facility Two Year Average Emissions (2005 and 2006)				
NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)
711	**276,285**	**277**	**150**	**400**

Average Facility EPS Pentane Emissions for the years 2005 and 2006					
Facility EPS Production Operations	**Average Process Rate**	**Adjusted Drop Point Process Emissions (AER)**			**Total Pentane Emissions** (lb-VOC/yr)
	EPS (Tons/yr)	Pre-Expansion (lb-VOC)	Ageing (lb-VOC)	Molding (lb-VOC)	
Line 1	1,898	1,169	691	1,009	2,869
Line 2	2,863	1,764	1,042	1,523	4,329
Outdoor Uncontrolled Storage	4,761				268,828
Total	**4,761**				**276,026**

Fuel Burning Operations	**Ave. Annual Heat (MMBtu/yr)**	**Emission Factor (lb-VOC/MMBtu)**	**Total VOC (lb/yr)**
S-848-12 (10.5 MMBtu/hr boiler)	30,486	0.0055	168
S-848-9 (7.5 MMBtu/hr boiler)	20,205	0.0040	81
Thermal Oxidizer (serves Line 1 and 2)	1,971	0.0055	11

Source of VOC Emissions	**VOC (lb/yr)**
Pentane from EPS Production	276,026
Other Sources of VOC emissions	259
Total VOC Emissions	**276,285**

San Joaquin Valley Air Pollution Control District
Surplus ERC Analysis

Facility Name:	Shafter-Wasco Composting Facility	**Date:**	April 5, 2023
Mailing Address:	2700 M Street Suite 500 Bakersfield, CA 93301	**Engineer:**	James Harader
		Lead Engineer:	Nick Peirce
Contact Person:	Tony Bonanno		
Telephone:	(661) 862-8971		
ERC Certificate(s) #:	S-5308-1		
Project #:	S-1211716		

I. Proposal

Shafter-Wasco Composting Facility has requested the District perform an analysis of the current surplus value of the following Emission Reduction Credit (ERC) certificate:

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
S-5308-1	VOC

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The face value and current surplus value of the ERC certificate evaluated in this analysis are summarized in the following tables:

Criteria Pollutant Summary: VOC

ERC Certificate S-5308-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	1,864	2,618	2,618	354
Surplus Value	1,864	2,618	2,618	354

II. Individual ERC Certificate Analysis

ERC Certificate S-5308-1

A. ERC Background

Criteria Pollutant: VOC

ERC Certificate S-5308-1 is a certificate that was split out from parent ERC Certificate S-3493-1. The original ERC Certificate (S-3493-1) was issued to Agri-Cel Inc (facility S-848) on April 4, 2011 under project S-1100008. The ERC was generated from the shutdown of an expanded polystyrene (EPS) box manufacturing facility. The facility shutdown included the following equipment:

S-848-2-13

POLYSTYRENE PRE-EXPANSION OPERATION #1 WITH DUMP PLATFORM, TWO AUGERS, RECEIVING HOPPER, ENCLOSED PRE-EXPANDER VESSEL WITH DUST COLLECTOR, STEAM AGITATOR, ASPIRATOR (TO AGING SILOS/BINS), VAPOR PIPING FROM STEAM AGITATORS, AGING SILOS/BINS, PROMASS PRESS, AND MOLDING PRESS VACUUM LINES TO 0.7 MMBTU/HR RETOX 4.0 RTO95 THERMAL OXIDIZER

S-848-3-11

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #1 WITH ENCLOSED AGING SILO WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS AND UP TO SIX 704 CUBIC FOOT MATERIAL AGING BINS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S) INCLUDED IN PTO S-848-2

S-848-4-10

EXPANDED POLYSTYRENE MOLDING OPERATION #1 WITH PNEUMATIC CONVEYING SYSTEM, 328 CU FT RESERVOIR BAG, AND TWO 22 CU FT AIRVEY TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-6-9

POLYSTYRENE PRE-EXPANSION OPERTION #2 W VAPOR PIPING FROM STEAM AGITATORS AND AGING SILOS/BINS TO PTO S-848-2 OXIDIZER(S). RECEIVING AND STAGING HOPPERS, SCREENING DEVICE WITH DUST COLLECTOR, ENCLOSED PRE-EXPANDER WITH DUST COLLECTOR, AND ASPIRATOR

S-848-7-8

EXPANDED POLYSTYRENE AGING/STORAGE OPERATION #2 WITH UP TO TWO ENCLOSED AGING SILOS, EACH WITH FOUR 3,273 CUBIC FOOT COMPARTMENTS; WITH VAPOR PIPING TO THERMAL OXIDIZER(S)INCLUDED IN PTO S-848-2

S-848-8-10

EXPANDED POLYSTYRENE MOLDING OPERATION #2 WITH PNEUMATIC CONVEYING SYSTEM, TWO 328 CU FT SURGE TANKS, ALONG WITH TWELVE 22 CU FT FEED HOPPERS, AND 24 MOLDING PRESSES WITH VACUUM LINES VENTED TO PTO S-848-2 OXIDIZER(S)

S-848-9-2

7.5 MMBTU/HR NATURAL GAS-FIRED DIXON MODEL SK-10 BOILER WITH A POWER FLAME MODEL NVCR5-G-30 LOW NOX BURNER

S 848-12-0

10.5 MMBTU/HR NATURAL GAS-FIRED SUPERIOR SEMINOLE MARINE BOILER (MODEL NUMBER 6X-1250-S150-LNDG-145P) WITH INDUSTRIAL COMBUSTION MODEL LNDG-145-P-12 LOW NOX BURNER AND FGR

S-848-13-0

140 ACRE OUTDOOR STORAGE OPERATION FOR EXPANDED POLYSTYRENE PRODUCED ONSITE

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District project:

ERC Certificate S-5308-1				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original value of Parent ERC S-3493-1	71,653	86,926	80,406	9,672
Current Value of ERC Certificate S-5308-1	1,864	2,618	2,618	354

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of VOCs generated by the original banking project.

1. District Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2301	Emission Reduction Credit Banking (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4682	Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (09/20/07)

The application review for the original ERC banking project demonstrated that the ERC credit complied with District Rule 2301 requirements at the time it was issued.

The application review for the original ERC banking project demonstrated that the polystyrene production lines and boiler emissions reductions calculations accounted for the limits in the Rules listed above. Therefore, the original VOC emission reductions were surplus of all applicable District Rule requirements at the time of issuance.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

1. District Rules:

Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)

Rules 4306 and 4320 were amended on December 17, 2020 to reduce emissions as part of a control measure, but have not been approved into the State Implementation Plan (SIP). Discounting at time of use is not performed for non-federal requirements such as District rules that are not in the SIP. Additionally, Rules 4306, and 4320 do not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions from the boilers continue to be surplus of the requirements of these rules.

Rule 4682 Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing (12/15/2011)

District Rule 4682 was amended by the District on December 15, 2011 and added to the District's SIP on September 20, 2012.

This Rule applies to the following Permit units:

Line 1
- S-848-2-13: polystyrene pre-expansion operation (#1)
- S-848-3-1: polystyrene aging/storage operations
- S-848-4-10: polystyrene molding operation

Line 2
- S-848-6-9: polystyrene pre-expansion operation (#2)
- and S-848-7-8: polystyrene aging/storage operation
- and S-848-8-10: polystyrene molding operations

Outdoor Storage Operation
- S-848-13-0: Outdoor Polystyrene storage operation

The rule requires the total emissions from the polystyrene beads processing operation to not exceed 2.4 lb-VOC/100 lb of material processed. Total VOC emissions from the polystyrene processes at this facility were determined to be 0.076 lb-VOC/100 lb of material processed. Therefore, the operation that was shutdown met the revised limit of 2.4 lb-VOC/100 lb of material processed and the ERCs issued are surplus of the modified Rule 4382 requirements adopted in December 2011.

2. Federal Rules and Regulations:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60 Part 60 Subpart Dc would have been applicable to the boilers that were shut down in the original ERC banking project. However, this rule does not contain any operational requirements or emission limits for VOC emissions. Therefore, the VOC emission reductions are still surplus of the requirements of this rule.

40 CFR Part 60 Subpart DDD—Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

The application review for the original ERC banking project did not address 40 CFR Part 60 Subpart DDD. This subpart only applies to the manufacturing of polymers, the manufacturing of usable products from polymers is not included. Therefore, this subpart does not apply.

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart applies to boilers and process heaters located at a major source of Hazardous Air Pollutants (HAP). The facility was not a major source of HAP emissions as determined in Attachment 1.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The boilers at the facility meet the definition of "gas-fired boiler" in the subpart as they were required to use natural gas or LPG as fuel. Pursuant to §63.11195(e), "gas-fired boilers" are not subject to this subpart; therefore, the requirements of this subpart are not applicable.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, no rules and regulations applicable to this permit unit in the original banking project have been amended or adopted since the date on which the original banking project was finalized that would impact the surplus value of this ERC. Therefore, the original VOC emission reductions continue to be surplus of all applicable District and Federal Rules and Regulations, and therefore no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-5308-1 – Criteria Pollutant VOC					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	1,864	2,618	2,618	354
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	1,864	2,618	2,618	354

Attachment

1. Major Source of HAP Determination

ATTACHMENT 1
Major Source of HAP Determination

Emissions break down for Facility S-848

Pentane, a non-hazardous VOC, accounts for more than 99% of the facilities VOC emissions. The remaining 1% of VOCs (2,763 lb) are less than the HAP Major Source thresholds for individual pollutants and combined pollutants. Therefore, the facility was not a major source of HAP. The emission values were taken from the original banking project, S-1100008. Please see the following tables for a breakdown of the VOC emissions:

Facility Two Year Average Emissions (2005 and 2006)				
NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)
711	**276,285**	**277**	**150**	**400**

Average Facility EPS Pentane Emissions for the years 2005 and 2006					
Facility EPS Production Operations	**Average Process Rate**	**Adjusted Drop Point Process Emissions (AER)**			**Total Pentane Emissions** (lb-VOC/yr)
	EPS (Tons/yr)	Pre-Expansion (lb-VOC)	Ageing (lb-VOC)	Molding (lb-VOC)	
Line 1	1,898	1,169	691	1,009	2,869
Line 2	2,863	1,764	1,042	1,523	4,329
Outdoor Uncontrolled Storage	4,761				268,828
Total	**4,761**				**276,026**

Fuel Burning Operations	**Ave. Annual Heat (MMBtu/yr)**	**Emission Factor (lb-VOC/MMBtu)**	**Total VOC (lb/yr)**
S-848-12 (10.5 MMBtu/hr boiler)	30,486	0.0055	168
S-848-9 (7.5 MMBtu/hr boiler)	20,205	0.0040	81
Thermal Oxidizer (serves Line 1 and 2)	1,971	0.0055	11

Source of VOC Emissions	**VOC (lb/yr)**
Pentane from EPS Production	276,026
Other Sources of VOC emissions	259
Total VOC Emissions	**276,285**

APPENDIX E
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly} = PE2_{annual} \div 4$ quarters/year

$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year

Quarterly NEC [QNEC] S-9813-1-0			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
PM_{10}	33	0	33
VOC	10,000	0	10,000

Quarterly NEC [QNEC] S-9813-3-0			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
PM_{10}	75.0	0	75.0
VOC	0	0	0

Quarterly NEC [QNEC] S-9813-4-0			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
PM_{10}	16.5	0	16.5
VOC	7,600	0	7,600

APPENDIX F
Compliance Certification

San Joaquin Valley Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ ADMINISTRATIVE AMENDMENT ☒ MINOR MODIFICATION ☐ SIGNIFICANT MODIFICATION

COMPANY NAME: Kern County Public Works Department	FACILITY ID: S-3431
1. Type of Organization: ☐ Corporation ☐ Sole Ownership ☒ Government ☐ Partnership ☐ Utility	
2. Owner's Name: Kern County	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial **applicable** circles for confirmation):

JD Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

JD Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

JD Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

JD Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate, and complete.

JD For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Jeff Davis
Signature of Responsible Official

6/28/22
Date

Jeff Davis, P.E
Name of Responsible Official (please print)

Engineering Manager
Title of Responsible Official (please print)

APPENDIX F
ERC Withdrawal Calculations

VOC	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC S-5287-1	3,025	5,522	5,660	0
ERC S-5289-1	7	165	212	78
ERC S-5290-1	53	22	40	51
ERC S-5293-1	20,000	32,000	28,000	0
ERC S-5304-1	1,000	1,000	1,000	1,000
ERC S-5308-1	1,864	2,618	2,618	354
ERC C-1553-1	0	83	83	0
ERC C-1554-1	0	767	1,032	454
ERC C-1555-1	1,055	1,415	1,403	1,447
ERC C-1556-1	2,156	456	0	0
Total of ERCs	29,160	44,048	40,048	3,384
Transfer 2nd and 3rd quarter ERCs to 4th Quarter	0	-11,508	-11,508	+23,016
Total of ERC's Available after Transfer between Quarters	29,160	32,540	28,540	26,400
Offsets Required (Includes distance offset ratio)	26,400	26,400	26,400	26,400
Amount Remaining	2,760	6,140	2,140	0
Credits reissued under ERC S-YYYY-1	2,760	6,140	2,140	0