

Guidelines for Calculating Emissions from Greenwaste Composting and Co-Composting Operations

February 2015

DESCRIPTION:

Composting refers to the active phase biodegradation and subsequent curing phase of organic waste materials. Greenwaste composting is microbiological decomposition of greenwaste by itself, or in combination with foodwaste, or up to 20 percent manure, per pile volume basis. Co-Composting is composting of biosolids and/or manure with a bulking agent. Composting of greenwaste combined with manure greater than 20 percent, per pile volume basis, is considered as co-composting. Specific to greenwaste composting and co-composting, Rule 301 requires that the total weight of emissions of organic gases (VOC) and ammonia (NH₃) be annually reported, even those which continue to passively emit air contaminants after they are processed by permitted or unpermitted equipment or operations.

1. EMISSION CALCULATION PROCEDURES

- a) Facilities can estimate their VOC and NH₃ emissions using equation (1) when the emissions are not being controlled or equation (2) when the emissions are being controlled prior to be released to the atmosphere.

$$\text{EMISSION} = \text{Throughput} * \text{Uncontrolled Emission Factor} \quad (1)$$

$$\text{EMISSION} = \text{Throughput} * \text{Controlled Emission Factor} \quad (2)$$

Where,

EMISSION: VOC or NH₃ emissions expressed in pounds per year (lb/yr)

Throughput: Mass of foodwaste, manure, biosolids, and greenwaste in tons per year as received by a facility and processed through composting excluding recycled materials.

Uncontrolled Emission Factor (EF_u): SCAQMD default factors that are taken from the Rule 1133.2 and Rule 1133.3 staff reports and are available to estimate the emissions from co-composting and greenwaste composting operations.

Controlled Emission Factors (EF_c): These are the factors determined based on the types of emissions control exist at the facility such as best management practices or additional SCAQMD approved control system as described below.

If controlled emission factors are used to estimate emissions, you must provide the District with documentation that demonstrates compliance.

- i. **Best Management Practices:** The best management practices are defined as when greenwaste composting piles are covered with at least six inches of finished

compost within 24 hours of initial pile formation, and not turned for the first seven days of active phase composting, and

For the first fifteen days of initial pile formation, and within six hours before turning, the top half of the pile is kept wet to a depth of at least three inches.

- ii. **Add-on Control:** SCAQMD approved emission control system is used for greenwaste composting and co-composting piles (i.e., Thermal Oxidizer (T/O), Bio-filtration, etc.)

b) Uncontrolled and Controlled Emission Factors for Greenwaste Composting & Co-Composting Operations

The uncontrolled emission factors for VOC & NH₃ are provided in Table 1 and the controlled emission factors are listed under Table 2a for housekeeping practices and Table 2b for add-on control.

Table 1: Uncontrolled Emission Factors

| Operation | VOC (lbs/ton of throughput) | NH ₃ (lbs/ton of throughput) |
|-----------------------|--------------------------------|--|
| Greenwaste Composting | 4.67 | 0.66 |
| Co-Composting | 1.78 | 2.93 |

Table 2a: Controlled Emission Factors (Best Management Practices)

| Operation | VOC (lbs/ton of throughput) | NH ₃ (lbs/ton of throughput) |
|-----------------------|--------------------------------|--|
| Greenwaste Composting | 2.97 [*] | 0.57 ^{**} |

^{*}This value assumes 40% control applied to the active phase only

^{**}This value assumes 20% control applied to the active phase only

Table 2b: Controlled Emission Factors (Add-On Control)

| Operation | VOC (lbs/ton of throughput) | NH ₃ (lbs/ton of throughput) |
|------------------------------------|---|---|
| Greenwaste Composting [*] | $4.25 \times (1 - CE_{A,VOC}) + 0.42 \times (1 - CE_{C,VOC})$ | $0.46 \times (1 - CE_{A,NH_3}) + 0.20 \times (1 - CE_{C,NH_3})$ |
| Co-Composting | $1.78 \times (1 - CE_{VOC})$ | $2.93 \times (1 - CE_{NH_3})$ |

Where, CE_{VOC} or CE_{NH_3} is a control efficiency of the Add-on control and expressed as a decimal fraction. ^{*}The subscript A for greenwaste composting refers to the control efficiency during the active phase, and the subscript C refers to the control efficiency (if any) during the curing phase.

c) VOC and NH₃ Emissions Calculations

To estimate the total VOC and NH₃ emissions from greenwaste composting or co-composting operations,

1. Take the total weight of foodwaste, manure, biosolids, and greenwaste in tons per year as received by a facility and processed through composting excluding recycled materials.
2. Take the uncontrolled emission factor from Table 1 when there is no control at the facility or controlled emission factors from Tables 2a or 2b when best management practices or SCAQMD approved control system are used, based on the type of emissions (i.e., VOC, NH₃).
3. Enter the values obtained in steps 1 and 2 in equations (1) or (2), whichever applicable, to estimate the VOC & NH₃ emissions for greenwaste composting and/or co-composting operations.

2. EXAMPLES:

The following examples show how data are entered into the AER Web Tool and emissions are reported. A facility reports emissions from three distinct greenwaste composting and co-composting operations as follows:

Operation 1: Co-composted 8,000 tons of materials with no add-on control. The VOC and NH₃ emissions are estimated as shown in screenshots 1 - 7 below with emission factors from row 2 of Table 1.

Operation 2: Composted 10,000 tons of combined greenwaste composting materials with good housekeeping practices. The VOC and NH₃ emissions are estimated as shown in screenshots 8 - 13 below with emission factors from Table 2a.

Operation 3: Co-composted 18,000 tons of materials with add-on control system: thermal oxidizer (T/O) controlling VOC at 99.2% efficient and bio-filter controlling NH₃ at 75% efficient. The VOC and NH₃ emissions are estimated as shown in screenshots 14 - 20 below with emission factors from row 2 of Table 2b.

Screenshot #21 shows emissions from composting and co-composting processes are added.

Operation 1: Screenshot #1: Add Emission Source for Uncontrolled Co-Composting Operation

Edit Emission Source (1.0.0.211) - Windows Internet Explorer provided by South Coast A.Q.M.D.

http://aerdev.aqmd.gov/Facility/999111/2013/EmissionSourceEdit

AQMD Air Quality Management District

AER Home Access Facility Facility Home

Facility ID: 999111 ABC Reporting period: 2013

Edit Emission Source

Providing correct information and proper selection categories would help to classify emission source.

Permitted ☐

A/N

Permit No

Permit Device ID

AER Device ID will be assigned upon saving

ES Name

Operating ES Status Normal Operation *

Comment Co-Composting Operations

Emission Source Group Other Processes Determine Emission Source Group Type *

Design Capacity

Save and return to List of Emission Sources or Save and proceed to Process Reporting or Cancel

Optional: Save and Mark as Completed

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 1: Screenshot #2: Select Process ID P1

Emission Sources (ES) Classification (2.0.0.300) - Windows Internet Explorer provided by South Coast A.Q.M.D.

https://aerreportingtoolpro.aqmd.gov/Facility/999111/2013/EmissionSourceEdit

South Coast Air Quality Management District

AER Home Access Facility Facility Home

test 2014 Logout | Edit Profile

Process References

| A/N | Permit NO | Permit Device ID | Permit Device Description | AER Device ID | ES Name | Source Group | Emissions? | Equipment | ES Status |
|-----|-----------|------------------|---------------------------|---------------|---------|-----------------|------------|-------------------------|------------------|
| | | | | ES37 | | Other Processes | Y | Other process equipment | Work in progress |

| Process ID | Source Group | Process Name | Process Status | Operation Type |
|------------|-------------------------|--------------|------------------|----------------|
| P1 | Other Process Emissions | | Work in progress | routine |

Add Process

OK

Displaying 37 emission sources. You can use filter to narrow down selection.

A/N Permit NO Permit Device ID

Search Emission Sources

Add New Emission Source

Operation 1: Screenshot #3: Assign Activity Code and Rule Number

South Coast AQMD Air Quality Management District

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Annual Throughput

Criteria Emissions (lbs)

Pollutant EF Unit Controlled EF EF Data Source Overall CE Emissions

Done

Local intranet | Protected Mode: Off

7:53 AM

Operation 1: Screenshot #4: Input Throughput

South Coast AQMD Air Quality Management District

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Annual Throughput

Criteria Emissions (lbs)

Pollutant EF Unit Controlled EF EF Data Source Overall CE Emissions

Done

Local intranet | Protected Mode: Off

7:55 AM

Operation 1: Screenshot #5: Enter VOC Information

Facility ID: 999111 [Back to Emission Source Process Reference](#)

Facility ID: 999111 · ABC · Reporting period: 2013

Other Processes

Open Criteria Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES37 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Annual Throughput: 8,000.0 tons

Pollutant: **VOC** *

Emission Factor (EF): 1.7800 * lbs/tons

☐ Controlled EF value (mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency: 0.00000

Emission Factor Comment: Uncontrolled Co-Composting VOC Emissions

Emission Factor Data Source: AQMD default *

Emissions: 14,240.00 lbs

[Save](#) [Cancel](#)

Criteria Emissions (lbs)

| Pollutant | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|-------------------------|----|------|---------------|----------------|------------|-----------|
| Add New | | | | | | |

Toxic (TAC/ODC) Emissions (lbs)

Operation1: Screenshot #6: Enter Ammonia Information

Facility ID: 999111 [Back to Emission Source Process Reference](#)

Facility ID: 999111 · ABC · Reporting period: 2013

Other Processes

Open Toxic (TAC/ODC) Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES37 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Annual Throughput: 8,000.0 tons

TAC/ODC Toxic Pollutants / Ozone Depleting Compounds

Pollutant: **32 - Ammonia** *

TAC Group: 32 - Ammonia

CAS # (Pollutant): 7664417 - Ammonia

Emission Factor (EF): 2.93000e+0 * lbs/tons

☐ Controlled EF value (mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency: 0.00000

Emission Factor Comment: Co-Composting Uncontrolled Ammonia Emissions

Emission Factor Data Source: AQMD default *

Emissions: 2.344e+4 lbs

[Save](#) [Cancel](#)

[Back to Emission Source Process Reference](#)

Operation1: Screenshot #7: Data Entry Complete

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (E5)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Data Validation

Report Submission

This reporting screen is for reporting activity data for other processes used in your facility which were not covered in previous reporting screens. Please provide specific information for every associated emission source. You must select Activity and throughput units before reporting emissions. If the operation of such sources involves burning fuels, make sure emissions generated from burning fuels are reported separately. Combined emissions can also be reported here; however, it must be substantiated to avoid double reporting. Detailed instructions are available by clicking on Help icon in the tool bar.

Process [Return to Work in Progress](#)

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|----------------------|------------------|-----|------------|--------|--|
| View | E537 | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Throughput

| Annual Throughput |
|----------------------|
| View |
| 8,000.0 tons |

Criteria Emissions (lbs)

| Pollutant | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|----------------------|-----|-------------------|---------------|----------------|------------|-----------|
| View | VOC | 1.7800 lbs / tons | No | AQMD default | 0.00000 | 14,240.00 |

Toxic (TAC/ODC) Emissions (lbs)

| TAC/ODC Group | CAS # | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|----------------------|---------|---------|-----------------------|---------------|----------------|------------|-----------|
| View | Ammonia | 7664417 | 2.93000e+0 lbs / tons | No | AQMD default | 0.00000 | 2.344e+4 |

[Back to Emission Source Process Reference](#)

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Operation 2: Screenshot #8: Add Emission Source for Composting with Best Management Practices

AQMD Air Quality Management District

AER Home Access Facility Facility Home

Facility ID: 999111 · ABC · Reporting period: 2013

Edit Emission Source

Providing correct information and proper selection categories would help to classify emission source.

Permitted ☐

A/N

Permit No

Permit Device ID

AER Device ID will be assigned upon saving

ES Name

Operating ES Status **Normal Operation**

Comment **Greenwaste Composting**

Other Processes

Emission Source Group **Determine Emission Source Group Type**

Design Capacity

[Save and return to List of Emission Sources](#) or [Save and proceed to Process Reporting](#) or [Cancel](#)

Optional: [Save and Mark as Completed](#)

[AQMD web site Home](#) | [AER Web Site](#) | [Submit question/comment](#) | [Ecotek Web Site](#) | [Report a Bug](#)

Operation 2: Screenshot #9: Assign Activity Code and Rule Number

South Coast AQMD Air Quality Management District

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Annual Throughput

Criteria Emissions (lbs)

Pollutant EF Unit Controlled EF EF Data Source Overall CE Emissions

Start Edit (1.0.0.211) - Win... Document1 [Compatibl...

Operation 2: Screenshot #10: Input Throughput

South Coast AQMD Air Quality Management District

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Annual Throughput

Criteria Emissions (lbs)

Pollutant EF Unit Controlled EF EF Data Source Overall CE Emissions

Start Edit (1.0.0.211) - Win... Document1 [Compatibl...

Operation 2: Screenshot #11: Input VOC Information

Facility ID: 999111

« Back to Emission Source Process Reference

Other Processes

This reporting screen is for reporting activity data for other processes used in your facility which were not covered in previous reporting screens. Please provide specific information for every associated emission source. You must select Activity and throughput units before reporting emissions. If the operation of the process is completed, mark as completed.

Open Criteria Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES37 | | | P1 | 1133.3 | Miscellaneous Operations and Services : Greenwaste Reclamation : Operations & Maintenance : Composting |

Annual Throughput
10,000.00 tons

Pollutant: VOC

Emission Factor (EF): 2.9700 lbs/tons

☒ Controlled EF value
(mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency:

Emission Factor Comment: Greenwaste Composting VOC Emissions Using Best Management Practices

Emission Factor Data Source: AQMD default

Emissions: 29,700.00 lbs

Save Cancel

Step 4: Toxic (TAC/ODC) Emissions (lbs)

| TAC/ODC Group | CAS # | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|---------------|-------|----|------|---------------|----------------|------------|-----------|
| Add New | | | | | | | |

Operation 2: Screenshot #12: Input Ammonia Information

Facility ID: 999111

double reporting. Detailed instructions are available by clicking on Help icon in the tool bar.

Open Toxic (TAC/ODC) Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES37 | | | P1 | 1133.3 | Miscellaneous Operations and Services : Greenwaste Reclamation : Operations & Maintenance : Composting |

Annual Throughput
10,000.00 tons

TAC/ODC Toxic Pollutants / Ozone Depleting Compounds

Pollutant: 32 - Ammonia

TAC Group: 32 - Ammonia

CAS # (Pollutant): 7664417 - Ammonia

Emission Factor (EF): 5.70000e-1 lbs/tons

☒ Controlled EF value
(mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency:

Emission Factor Comment: Greenwaste Ammonia Emissions Using Best Management Practices

Emission Factor Data Source: AQMD default

Emissions: 5.700e+3 lbs

Save Cancel

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 2: Screenshot #13: Data Entry Complete

Windows Internet Explorer provided by South Coast A.Q.M.D.
 https://aerreportingtoolpro.aqmd.gov/Report Edit (2.0.0.300)

Annual Emission Reporting

Facility ID: 999111

Facility Information
 Build Reporting Structure
 Combustion Fuels
 Emission Sources (ES)
Report Process/Emissions
 Combustion
 External Combustion
 Internal Combustion
 Use of organics
 Spray Coating/Spray Booth
 Other Use of Organics
 Storage Tanks
 Fugitive Components
Other Processes
 Process Upset
 Summaries
 Data Validation
 Print Facility Report
 Excel Reports
 Report Submission

Step 1: Process Optional: Mark as Completed

| | AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|----------------------|---------------|------------------|-----|------------|--------|--|
| Open | E537 | | | P1 | 1133.3 | Miscellaneous Operations and Services : Greenwaste Reclamation : Operations & Maintenance : Composting Click here to delete this process. |

Step 2: Throughput

| | Annual Throughput |
|----------------------|-------------------|
| Open | 10,000.00 tons |

Step 3: Criteria Emissions (lbs)

| | Pollutant | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|----------------------|-----------|--------|------------|---------------|----------------|------------|-----------|
| Open | VOC | 2.9700 | lbs / tons | Yes | AQMD default | | 29,700.00 |

[Add New](#)

Step 4: Toxic (TAC/ODC) Emissions (lbs)

| | TAC/ODC Group | CAS # | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|----------------------|---------------|---------|------------|------------|---------------|----------------|------------|-----------|
| Open | Ammonia | 7664417 | 5.70000e-1 | lbs / tons | Yes | AQMD default | | 5.700e+3 |

[Add New](#)

[« Back to Emission Source Process Reference](#)

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 3: Screenshot#14: Add Emission Source for Co-Composting With Add-on Control

Windows Internet Explorer provided by South Coast A.Q.M.D.
 http://aerdev.aqmd.gov/Facility/999111/2013/EmissionSourceEdit

AQMD Air Quality Management District

AER Home Access Facility Facility Home

Facility ID: 999111 - ABC - Reporting period: 2013

Facility ID: 999111

Facility Information
 Build Reporting Structure
 Combustion Fuels
 Emission Sources (ES)
Report Process/Emissions
 Summaries
 Data Validation
 Report Submission

Edit Emission Source

Providing correct information and proper selection categories would help to classify emission source.

Permitted ☐
 A/N
 Permit No
 Permit Device ID
 AER Device ID will be assigned upon saving
 ES Name
 Operating ES Status Normal Operation
 Comment
 Other Processes
 Emission Source Group Determine Emission Source Group Type
 Design Capacity

[Save and return to List of Emission Sources](#) or [Save and proceed to Process Reporting](#) or [Cancel](#)

Optional: Save and Mark as Completed

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 3: Screenshot #15: Select Process ID P1

South Coast Air Quality Management District

AER Home Access Facility Facility Home

test 2014
Logout | Edit Profile

Process References

| A/N | Permit NO | Permit Device ID | Permit Device Description | AER Device ID | ES Name | Source Group | Emissions? | Equipment | ES Status |
|-----|-----------|------------------|---------------------------|---------------|---------|-----------------|------------|-------------------------|------------------|
| | | | | ES37 | | Other Processes | Y | Other process equipment | Work in progress |

Process ID: P1
Source Group: Other Process Emissions
Process Name:
Process Status: Work in progress
Operation Type: routine

Add Process

OK

Displaying 37 emission sources. You can use filter to narrow down selection.

A/N:
Permit NO:
AER Device ID:
Permit Device ID:
Search Emission Sources

Operation 3: Screenshot #16: Assign Activity Code and Rule Number

South Coast Air Quality Management District

AER Home Access Facility Facility Home

Bill Milner
Logout | Edit Profile

Edit Emission Process - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|----------|
| ES39 | | | P1 | | |

AER Device ID: ES39
AER Device Name:
Permit Device ID:
Permit Device Name:
Process ID: P1
Process Name: Co-Composting
Process Comment:
Activity Code:
Sector:
Industry:
Operation:
Process:
Rule #: 1133.2
Add Rule

Save Cancel

Annual Throughput

Criteria Emissions (lbs)

| Pollutant | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|-----------|----|------|---------------|----------------|------------|-----------|
| | | | | | | |

Operation 3: Screenshot #17: Input Throughput

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organic materials

Spray Coatings

Other Uses

Storage Tanks

Fugitive Combustion

Other Processes

Process Upset

Summaries

Data Validation

Report Submission

Process

Optional: Mark as Completed

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES39 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Click here to delete this process.

Annual Throughput Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES39 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Annual Throughput

18,000.0 tons

Throughput Type

Input

Throughput Comment

Controlled by TO with 99.2% Efficiency

Save Cancel

Toxic (TAC/ODC) Emissions (lbs)

| TAC/ODC Group | CAS # | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|---------------|-------|----|------|---------------|----------------|------------|-----------|
| Add New | | | | | | | |

Back to Emission Source Process Reference

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 3: Screenshot #18: Input VOC Information

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organic materials

Spray Coatings

Other Uses

Storage Tanks

Fugitive Combustion

Other Processes

Process Upset

Summaries

Data Validation

Report Submission

Process

Optional: Mark as Completed

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES39 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Click here to delete this process.

Open Criteria Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES39 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Annual Throughput

18,000.0 tons

Pollutant

VOC - Volatile Organic Compounds

Emission Factor (EF)

1.7800 lbs/tons

Controlled EF value

(mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency

0.99200

Emission Factor Comment

Co-Composting Controlled with Thermal Oxidizer

Emission Factor Data Source

Source Test

Emissions

256.32 lbs

Click here to delete this Emission.

Save Cancel

Back to Emission Source Process Reference

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 3: Screenshot #19: Input Ammonia Information

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Data Validation

Report Submission

such sources involves burning fuels, make sure emissions generated from burning fuels are reported separately. Combined emissions can also be reported here; however, it must be substantiated to avoid double reporting. Detailed instructions are available by clicking on Help icon in the tool bar.

Optional: Mark as Completed

Open Toxic (TAC/ODC) Emission Information - Other Processes

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| ES39 | | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Annual Throughput

18,000.0 tons

TAC/ODC Toxic Pollutants / Ozone Depleting Compounds

Pollutant: 32 - Ammonia

TAC Group: 32 - Ammonia

CAS # (Pollutant): 7664417 - Ammonia

Emission Factor (EF): 2.93000e+0 lbs/tons

Controlled EF value (mark checkbox if EF listed represents EF determined after control)

Overall Control Efficiency: 0.75000

Emission Factor Comment: Co-Composting Ammonia Emissions After Add-on Control

Emission Factor Data Source: Source Test

Emissions: 1.319e+4 lbs

Save Cancel

Back to Emission Source Process Reference

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operation 3: Screenshot #20: Data Entry Complete

Facility ID: 999111

Facility Information

Build Reporting Structure

Combustion Fuels

Emission Sources (ES)

Report Process/Emissions

Combustion

External Combustion

Internal Combustion

Use of organics

Spray Coating/Spray Booth

Other Use of Organics

Storage Tanks

Fugitive Components

Other Processes

Process Upset

Summaries

Data Validation

Report Submission

double reporting. Detailed instructions are available by clicking on Help icon in the tool bar.

Optional: Mark as Completed

Process

| AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Activity |
|---------------|------------------|-----|------------|--------|--|
| Open | ES39 | | P1 | 1133.2 | Miscellaneous Operations and Services : Others - Not Classified : Operations & Maintenance |

Click here to delete this process.

Throughput

Annual Throughput

18,000.0 tons

Criteria Emissions (lbs)

| Pollutant | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|-----------|-----|-------------------|---------------|----------------|------------|-----------|
| Open | VOC | 1.7800 lbs / tons | No | Source Test | 0.99200 | 256.32 |

Add New

Toxic (TAC/ODC) Emissions (lbs)

| TAC/ODC Group | CAS # | EF | Unit | Controlled EF | EF Data Source | Overall CE | Emissions |
|---------------|---------|---------|-----------------------|---------------|----------------|------------|-----------|
| Open | Ammonia | 7664417 | 2.93000e+0 lbs / tons | No | Source Test | 0.75000 | 1.319e+4 |

Add New

Back to Emission Source Process Reference

AQMD web site Home | AER Web Site | Submit question/comment | Ecotek Web Site | Report a Bug

Operations 1, 2 and 3: Screenshot #21: All Sources Are Added

Emission Sources (ES) Classification (1.0.0.211) - Windows Internet Explorer provided by South Coast A.Q.M.D.

File Edit View Favorites Tools Help

http://aerdev.aqmd.gov/Facility/999111/2013/EmissionSources

Live Search

Favorites AER Device Management AIRNet

Emission Sources (ES) Classification (1.0....

Page Safety Tools

Facility ID: 999111 ABC Reporting period: 2013

Build Reporting Structure

Emission Sources (ES) Classification

This section contains facility permit profile. Please make sure that every device has a specified Emission Source (ES). New emission sources can also be added.

EPA TANKS Software DATA IMPORT - [Click here](#) for more instructions.

Displaying 39 emission sources. You can use filter to narrow down selection.

A/N Permit NO
AER Device ID Permit Device ID

[Add New Emission Source](#)

Search:

| Action | A/N | Permit NO | Permit Device ID | Permit Equipment Description | AER Device ID | ES Name | Source Group | Has Emissions | Equipment | ES Status | Process Reference |
|----------------------|-----|-----------|------------------|------------------------------|---------------|-----------------|--------------|---------------|-------------------------|------------------|---------------------------|
| Open | | | | | ES39 | Other Processes | | Y | Other process equipment | Work in progress | Reference |
| Open | | | | | ES38 | Other Processes | | Y | Other process equipment | Work in progress | Reference |
| Open | | | | | ES37 | Other Processes | | Y | Other process equipment | Work in progress | Reference |

Done

Local intranet | Protected Mode: Off

125%

8:38 AM