



Guidelines for Calculating Emissions from Dairy and Poultry Operations

(Revised December 2022)

The dairy and poultry farms are required to report to the SCAQMD their emissions of Volatile Organic Compounds (VOC), Particulate Matter (PM) and Ammonia (NH₃) that result from the handling of livestock waste. For poultry operations, there are additional PM emissions from bird feed.

1. PROCEDURES

Facilities can estimate their VOC, PM, and NH₃ emissions using the equation:

$$E = Q * EF * (1 - CE)$$

Where,

E = VOC, PM or NH₃ emissions, expressed in pounds per year (lbs/yr)

Q = Throughput is the number of animals per reporting year by animal category. For poultry farms, the throughput is also expressed in tons of bird feed when estimating PM emissions from bird feed.

EF = Uncontrolled emission factors from Table 1 based on the animal categories and materials.

CE = Control effectiveness listed in Table 2 based on the types of manure disposal practices.

Table 1: Uncontrolled Emission Factors^a

Animals/Operations	VOC lbs/head	PM		NH ₃ lbs/head
		lbs/head	lbs/ton	
Dairy Farms:				
Milking Cows	12.8	3.56	---	74.0
Dry Cows	8.7	3.56	---	45.4
Heifers (4-24 months)	6.1	3.56	---	27.8
Heifers (4-24 months) ^b	4.4	3.56	---	27.8
Calf (under 3 months)	4.5	3.56	---	23.6
Mature Cows ^b	6.3	3.56	---	74.0
Poultry Farms:				
Birds Manure	0.02565	0.0308		0.192
Birds Feed	---	---	0.108	---
Swine Farms:				
Swine	4.64	---	---	20.3

a. The emission factors from Table 1 are from the Governing Board Meeting Agenda, October 7, 2011, Appendix I

b. Emission factors for dairy operations with flush lanes that are flushed with water to a holding pond.

c. Milking cow is a cow raised to produce milk

- d. Dry cow is a cow of approximately 2 weeks from calving and in between lactation, hence, is not giving milk and is usually kept separately for different feeding
- e. Heifer is a young female calf under 3 years old and has not borne a calf
- f. Calf is a young cow or bull in its first year
- g. Mature cow is a cow that has had one or two calves and which may be more than 3 years old

Table 2- Control Efficiency^a

Type of Disposal	(VOC & NH ₃) Control Efficiency	(PM) Control Efficiency
No Disposal	---	---
Best Management Practices ^c	---	0.20
Manure Sent out of Basin	0.50	---
Composting (open window)	0.385	---
Composting (enclosed)	0.475	---
Digester (plug & complete mix)	1.0	---
Land Application ^d	0.115	---

- a. The emission factors in Table 2 are from SCAQMD Final Staff Report for Proposed Rule 1127 dated August 6, 2004 unless otherwise noted.
- b. This emission factor is from SCAQMD Governing Board Meeting Agenda, October 7, 2011.
- c. Best Management Practices are Class One Mitigation Measures defined in Rule 223, Appendix A, Table 1, subsections E & F, and Table 2, subsections C & D.
- d. Land Application is the use of methods such as tilling, injecting, or plowing that covers animal waste in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10, Section 651.1102.

2. HOW TO REPORT

VOC, PM, NH₃ emissions must be reported separately for each animal category (i.e., milking cows, dry cows, heifers, birds, etc.). This can be done through the following steps:

1. Determine the annual average number of animals, (Throughput, Q):
 - For a dairy farm, take the annual average number of animals for each animal category from the annual report submitted to the Santa Ana Regional Water Quality Control Board (SARWQCB).
 - For a poultry farm, take the annual average number of birds using your annual recordkeeping report. In addition, the total amount of bird feed used during the same time period is also needed.
2. Select proper emission factors listed in Table 1, (EF):
 - Note that the VOC emission factors are different based on the animal category (e.g., milking cows versus dry cows) and whether the dairy farm has lanes that are flushed with water to a holding pond.
 - Note that the PM emission factors are different based on the source of emissions (bird's manure or feed). There are no VOC or NH₃ emissions associated with bird feed.
3. Select appropriate control efficiency (CE) from Table 2 based on the type of emissions (i.e., VOC, PM, or NH₃) and manure handling method.
4. Enter the information into the AER Reporting Tool.

In the following examples, the blue Navigation Menu on the left-hand side may look different depending on the type of AER you are submitting. The emissions estimation instructions will always be the same regardless of the type of Navigation Menu the reporter sees.

EXAMPLE 1:

Last year, a dairy farm facility has reported to the Santa Ana Regional Water Quality Control Board 900 milking cows, 300 heifers (17-14 months) and no calves. The manure is sent out of the basin. This dairy does not have any lanes that are flushed with water to a pond.

STEPS TO REPORT THE EMISSIONS

Image 1: Click “Emission Sources (ES)” on the Left Navigation Menu. The reporting tool displays existing permitted units (emission sources) as shown at bottom of the image below. If livestock waste handling is not listed, it must be added to the list by clicking “Add New Emission Source.” In this example, this farm operations are permitted. Click on the hyperlink “Profile” for Device ID ES58 which will take user to image 2 below.

Facility ID: 999001

Build Reporting Structure

Emission Sources (ES) Classification

Summary: 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.

Instruction: Add Devices (emissions sources) by clicking "Add New Emission Source". Edit devices by clicking "Profile" under the Emission Source (ES) Column. Add emission data by clicking "Open" under the Emissions column. Upload storage tank data by clicking on link "Click here" below.

Storage Tank Emissions Batch File Import - [Click here](#) for more instructions.

[Add New Emission Source](#)

Displaying 29 emission sources. You can search by:

A/N Permit NO
AER Device ID Permit Device ID

Search:

Emission Source (ES)	Emissions	A/N	Permit NO	Permit Device ID	Permit Equipment Description	AER Device ID	ES Name	ES Group Name	Source Category	Has Emissions	Equipment	PERP	ES Status
Profile	Open	445819	F86880			ES58	AGOPS Dairy		Other Processes	Y	Other process equipment	N	Work in progress

Image 2: Fill out relevant information for the Emission Source by identifying “ES Name” (example, Animal Waste Handling) and selecting the “Operating ES Status” (i.e., Normal Operation) from the drop-down menu. After selecting the appropriate Operating ES Status, the “Categorize Emission Source” button will appear. By clicking this button, the tool will take the user to the next screen (Image 3 below) for categorizing this emission source.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. Report Process/Emissions
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

Edit Emission Source

Instruction: Add new emissions sources using information found on permits, manufacturers specifications, or identifying placards. Select the Operating ES Status that best reflect the device's operation for this reporting period. All areas with a Red Asterisk (*) must be addressed. Note: Some devices have been pre-populated, verify that the information is correct

Permitted	<input checked="" type="checkbox"/>
A/N	445819
PERP Equipment(CARB's Portable Equipment Registration Program)	<input type="checkbox"/> Only CARB GHG MRR and Over 250 tons/yr (PTE) facilities must report PERP Emissions are not included when calculating emission fees i
Permit No	F86880
Permit Device ID	
Permit Equipment Description	
AER Device ID	ES58
ES Name	AGOPS Dairy *
Operating ES Status	Normal Operation
Comment	
Emission Source Category	Categorize Emission Source
Equipment	
Design Capacity	0.000000

or or or

Image 3: In this example, user selects No. 7 Other Processes by clicking on the click here link. Select the check box designated as “Other process equipment,” and click the “Save” button.

Permitted	A/N	Permit No	Permit Device ID	Permit Equipment Description	AER Device ID	ES Name
Yes	445819	F86880			ES58	AGOPS Dairy

1. External Combustion Equipment (e.g., boiler, dryer, oven, furnace, heater, afterburner, flare, kiln or incinerator) [click here](#) to select one the following Equipment:

2. Internal Combustion Equipment (e.g., internal combustion engine (excluding vehicles), turbine or micro turbine) [click here](#) to select one of the following Equipment:

3. Spray Coating/Spray Booth (e.g., coatings, solvents, adhesives, etc.) [click here](#) to select one of the following Equipment:

4. Other Use of Organics (e.g., coatings, solvents, inks, adhesives, etc.) except in Spray Coating/Spray Booth, [click here](#) to select one of the following Equipment:

5. Liquid Storage Tank (e.g. Underground, Aboveground, Small Tanks, Dispensing Systems) [click here](#) to select one of the following Equipment:

6. Fugitive Components (Emission Leaks from Process Components per Rule 462, 1173 and 1176), [click here](#) to select all applicable Equipment:

7. Other Processes (does not fit in any of the groups mentioned above), click [click here](#) to mark "Other Process Equipment":

Other process equipment

After saving, the program return user to Image 2. Click “Save and proceed to Process Reporting,” which will take the user to the screen shown in Image 4 for reporting emissions for this emission source.

Image 4: The reporting tool adds Process ID (P1) for every Device ID. Click the link “Open” for entering process information such as throughputs, emissions, emission factors, and TACs as shown in Image 5.

A/N	Permit No	Permit Device ID	Permit Device Description	AER Device ID	ES Name	ES Group Name	Source Category	Emissions?	Equipment	PERP	ES Status
Open	445819	F86880			ES58	AGOPS Dairy		Other Processes	Y	Other process equipment	N
Process ID		Source Group		Process/Material/Fuel Name			Status		Operation Type		
Open		P1		Other Process Emissions			Milking Cows		Work in progress		routine

Image 5: The below image is the Process page for Device ID 58, Process ID 1. Each step on this page has a designated data entry link or orange button. Click the “Open” link under “Step 1: Process” to enter process information.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES58		445819	P1		

Click here to [delete](#) this process.

Step 2: Throughput

Annual Throughput	
Open	

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

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

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

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

Image 6: The “Edit Emission Process - Other Processes” pop-up appears. Identify the Process Name for the first Process ID P1 and fill out the Activity Code by selecting the appropriate information from the drop-down menu from each box. This example shows correct sector, industry, operation, process, and rule for the milking cows. Click “Save” button.

Image 7: After saving, the program alerts the user to the fact that the AER Reporting Tool automatically populates default emission factors. Click the “OK” button.

Image 8: After saving, the program returns to Image 5. This time, click on the open link underneath “Step 2: Throughput” (see Image 5) to enter the Annual Throughput, Type and Comment for the Process, as shown below. Click the “Save” button.

Edit Throughput Information - Other Processes

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES58		445819	P1	1127	Manufacturing : Food and Agricultural : Dairy Farms / Waste Handling : Milking Cows

Annual Throughput

Annual Throughput: 900.00000000 * head *

Throughput Type: Existing *

Throughput Comment: As reported to SARWQC Board

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

Image 9: After saving, the program returns to Image 5. If you do not need to change the default emission factor or add any new pollutants, you have completed the reporting of Device ID ES58, Process ID P1: Milking Cows. If the user would like to replace the default emission factor with a site-specific emission factor continue to Image 10. If you are eligible for abbreviated reporting under CTR, not using default emission factors will prevent you from submitting an abbreviated report. In other words, only default emission factors are allowed for abbreviated reporting.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES58		445819	P1	1127	Manufacturing : Food and Agricultural : Dairy Farms / Waste Handling : Milking Cows

[Click here to delete this process.](#)

Step 2: Throughput

	Annual Throughput
Open	900.00000000 head

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

	Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	VOC	1.28000000e+1	lbs / head	No	AQMD default		1.15200000e+4
Open	PM	3.56000000e+0	lbs / head	No	AQMD default		3.20400000e+3

[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	7.40000000e+1	lbs / head	No	AQMD default		6.66000000e+4

[Add New](#)

Image 10: Click on the “Open” link next to the pollutant the user would like to change. For the below example let’s use VOC.

Facility ID: 999001

← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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

Step 1: Process

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity	
Open	ES58		445819	P1	1127	Manufacturing : Food and Agricultural : Dairy Farms / Waste Handling : Milking Cows

Click here to [delete](#) this process.

Step 2: Throughput

Annual Throughput	
Open	900.00000000 head

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	VOC	1.28000000e+1	lbs / head	No	AQMD default	1.15200000e+4
Open	PM	3.56000000e+0	lbs / head	No	AQMD default	3.20400000e+3

[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	7.40000000e+1	lbs / head	No	AQMD default	6.66000000e+4

[Add New](#)

← Back to Emission Source Process Reference

Image 11: Uncheck the check box next to “Use Default”. Enter the site-specific emission factor and/or control efficiency. Add detailed information about the development or source of the emission factor and/or control efficiency in the emission factor comment, and select the most appropriate the emission factor data Source for the Process. Click the “Save” button.

Open Criteria Emission Information - Other Processes

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES58		445819	P1	1127	Manufacturing : Food and Agricultural : Dairy Farms / Waste Handling : Milking Cows

Annual Throughput
900.00000000 head

Pollutant: VOC - null

Emission Factor (EF): 1.28000000e+1 * lbs/head

Use default

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

Overall Control Efficiency: ⓘ

Emission Factor Comment:

If not using **AQMD default** emission factor please provide detailed references in the Emission Factor Comment box above or upload file with the information. Processes without this information are subject to audit.

Emission Factor Data Source: AQMD default *

Emissions: 1.15200000e+4 lbs

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

You have now completed the reporting for Device ID ES 1, Process ID P1: Milking cows. To add the next process (Heifers), click on the orange “Back to Emission Source Process Reference” button circled in red in Image 10 and continue to the following steps.

STEPS TO REPORT THE NEXT PROCESS

Image 12:

To add the next Process (Heifers), click “Add Process/Material/Fuel” button as shown below. Name the Process (i.e. Heifers) in the box and click the “OK” button next to it.

The screenshot shows the 'Process References' dialog box. It contains a table with the following data:

A/N	Permit No	Permit Device ID	Permit Device Description	AER Device ID	ES Name	ES Group Name	Source Category	Emissions?	Equipment	PERP	ES Status
Open	445819	F86880			ES58	AGOPS Dairy		Other Processes	Y	Other process equipment	N

Below the table is a summary table:

Process ID	Source Group	Process/Material/Fuel Name	Status	Operation Type
Open P1	Other Process Emissions	Milking Cows	Work in progress	routine

At the bottom, there is a section for adding a new process:

Add Process/Material/Fuel ⓘ

Other Process Emissions ▼ Process name: Heifers **OK**

OK

REMINDER:

To report the VOC, PM, and NH₃ emissions from the 300 Heifers, repeat the procedures as illustrated in Image 5 and follow the steps leading to Image 11.

The screenshot shows the 'Process References' dialog box with the updated list of processes:

A/N	Permit No	Permit Device ID	Permit Device Description	AER Device ID	ES Name	ES Group Name	Source Category	Emissions?	Equipment	ES Status
445819	F86880		AGOPS DAIRY	ES1	Animal waste handling		Other Processes	Y	Other process equipment	Work in progress

Below the table is a summary table:

Process ID	Source Group	Process/Material/Fuel Name	Status	Operation Type
Open P1	Other Process Emissions	Milking cows	Work in progress	routine
Open P2	Other Process Emissions	Heifers	Work in progress	routine

At the bottom, there is a section for adding a new process:

Add Process/Material/Fuel

OK

EXAMPLE 2:

Last year, a poultry farm facility raised 5,000 chicken on 100 tons of feed. The manure is sent out of the basin. This poultry does not have any lanes that are flushed with water to a pond.

Image 14: Since this poultry farm does not possess an operating permit, the user must add this emission source by clicking on the link “Add New Emission Source” on the Emission Source page. Once you have followed the procedure illustrated in Images 1-5 you will see the below Emission Source (ES) page. Click on the blue “Open” link in the “Step 1: Process” header.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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

Step 1: Process [Open](#)

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P1		

[Click here to delete this process.](#)

Step 2: Throughput

Annual Throughput

[Open](#)

Step 3: Criteria Emissions (lbs) [Use Default Emission Factors if available.](#)

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

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

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

Image 15: Fill in the information for Chicken Manure as shown in the following image. Click the “Save” button.

Edit Emission Process - Other Processes

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

AER Device ID: ES59 AER Device Name: Chicken Manure

NON-PERMITTED Permit Device ID:

Process ID: P1 Process Name:

Process Comment:

Activity Code * Sector:

Industry:

Operation:

Process:

Rule #: * [Add Rule](#)

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

Image 16: After saving, you will see the below pop-up that states Default TAC and Criteria emission factors have been assigned and will be automatically populated. Click “Ok” to continue. If you would like to change the default emission factors after they have been automatically populated you can follow the steps under **Image 18**.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Created Default Emissions

Default TAC and Criteria emission factors have been assigned. To enter non-default emission factors, uncheck "Use Default" check-box and enter your specific emission factors.

OK

Optional: Mark as Completed

Step	Activity	Overall CE
Step 1	Manufacturing : Food and Agricultural : Poultry Farms :	SCC

Click here to [delete](#) this process.

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open VOC	2.56000000e-2	lbs /	No	AQMD default		
Open PM	3.08000000e-2	lbs /	No	AQMD default		

[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	1.92000000e-1	lbs /	No	AQMD default		

[Add New](#)

Image 17: Click the “Open” link under “Step 2: Throughput” to add the throughput values for this process.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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

Step 1: Process

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

Click here to [delete](#) this process.

Step 2: Throughput

Annual Throughput
Open

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open VOC	2.56000000e-2	lbs /	No	AQMD default		
Open PM	3.08000000e-2	lbs /	No	AQMD default		

[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	1.92000000e-1	lbs /	No	AQMD default		

[Add New](#)

Image 17: Add the throughput section as shown below. Click the “Save” button.

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

Annual Throughput

Annual Throughput: 5,000.00000000 * head *

Throughput Type: Existing *

Throughput Comment: From annual recordkeeping report

Save Cancel

Image 18: After saving, the program returns to Image 5 (the Emission Source ID ES59, Process P1 page). As you see below, since the default Criteria Pollutant and TAC emission factors (EF) were automatically added; the tool automatically calculates the Emissions for VOC, PM and Ammonia.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. Report Process/Emissions
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

Combustion
 External Combustion
 Internal Combustion
 Use of organics
 Spray Coating/Spray Booth
 Other Use of Organics
 Storage Tanks
 Fugitive Components
Other Processes
 Process Upset

6. Additional Toxic Substances Production and Usage

7. Perform Data Validation

8. Review Summaries

9. Print Facility Report

10. Report Submission

[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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

[Click here to delete this process.](#)

Step 2: Throughput

	Annual Throughput
Open	5,000.00000000 head

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

	Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	VOC	2.56000000e-2	lbs / head	No	AQMD default		1.28000000e+2
Open	PM	3.08000000e-2	lbs / head	No	AQMD default		1.54000000e+2

[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	1.92000000e-1	lbs / head	No	AQMD default		9.60000000e+2

[Add New](#)

Image 19: If you are eligible for abbreviated reporting under CTR, not using default emission factors will prevent you from submitting an abbreviated report. In other words, only default emission factors are allowed for abbreviated reporting. If you would like to use a facility specific emission factor in place of the the default emission factor that was automatically added by the tool click on the “Open” link next to the pollutant you want to edit. Through the pollutant (in this example is VOC) pop-up, uncheck the Use default checkbox. You can then replace the Emission Factor (EF) and add a control efficiency value by clicking the “Controlled EF value” check box

and entering the correct value in the field provided. Choose from the Emission Factor Data Source drop-down menu the option that best describes the origins of your emission factor. Click on the orange “Save” button. These steps can also be used to add or edit toxic emissions in “Step 4: Toxic (TAC/ODC) Emissions (lbs)”.

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity	SCC
ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling	

Annual Throughput

Pollutant: VOC - null

Emission Factor (EF): 2.56000000e-2 lbs/

Use default

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

Overall Control Efficiency: []

Emission Factor Comment: []

If not using **AQMD default** emission factor please provide detailed references in the Emission Factor Comment box above or upload file with the information.
Processes without this information are subject to audit.

Emission Factor Data Source: AQMD default

Emissions: lbs

Save Cancel

Image 20: To add additional criteria pollutants or Toxics, click the orange “Add New” button found at the bottom of section “Step 3: Criteria Emissions” or “Step 4: Toxics” depending on which type of pollutant you would like to add. You may add the pollutant type from the drop-down menu, add the “Emission Factor (EF)”, “Overall Control Efficiency” and “Emission Factor Comment” in the empty fields. Choose the correct “Emission Factor Data Source” from the drop-down menu and click the orange “Save” button.

Open Criteria Emission Information - Other Processes

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

Annual Throughput
5,000.00000000 head

Pollutant: *

Emission Factor (EF): * lbs/head

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

Overall Control Efficiency: ⓘ

Emission Factor Comment:

If not using **AQMD default** emission factor please provide detailed references in the Emission Factor Comment box above or upload file with the information.
Processes without this information are subject to audit.

Emission Factor Data Source: *

Emissions: lbs

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

Image 21: You have completed the Process page for Chicken Manure Handling. To add emissions for chicken feed click on the orange “Back to Emission Source Process Reference” to continue to the next image.

- Facility ID: 999001
1. Facility Information
 2. Status Update
 3. Combustion Fuels
 4. Emission Sources (ES)
 5. Report Process/Emissions
 6. Additional Toxic Substances Production and Usage
 7. Perform Data Validation
 8. Review Summaries
 9. Print Facility Report
 10. Report Submission
- Combustion
 - External Combustion
 - Internal Combustion
 - Use of organics
 - Spray Coating/Spray Booth
 - Other Use of Organics
 - Storage Tanks
 - Fugitive Components
 - Other Processes**
 - Process Upset

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES59			P1	1127	Manufacturing : Food and Agricultural : Poultry Farms : Manure Handling

[Click here to delete this process.](#)

Step 2: Throughput

	Annual Throughput
Open	5,000.00000000 head

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

	Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	VOC	2.56000000e-2	lbs / head	No	AQMD default		1.28000000e+2
Open	PM	3.08000000e-2	lbs / head	No	AQMD default		1.54000000e+2

[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	1.92000000e-1	lbs / head	No	AQMD default		9.60000000e+2

[Add New](#)

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

STEPS TO REPORT THE NEXT PROCESS FOR PM EMISSIONS FROM FEEDS.

Image 22: The below image is the Process Reference for the Chicken Manure Emission Source you added in Example 2 above. Click the orange “Add Process/Material/Fuel” button, name the process Chicken Feed, and click OK button next to it.



Image 24: After clicking OK, Process ID P2 is added for chicken feed operation as shown below. Click on “Open” next to Process ID P2 to start entering the information for that process.

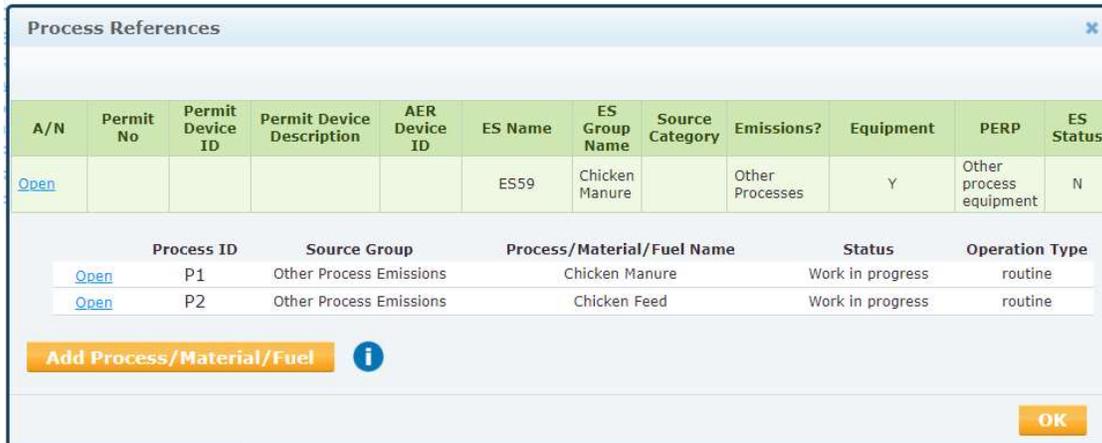


Image 25: After clicking Process ID P2, the tool will open the emission source page for Device ID ES59, Process ID P2 Chicken Feed process. Again, Click on the “Open” link next to “Step 1: Process.”

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[« 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process

Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES59			P2		

[Click here to delete](#) this process.

Step 2: Throughput

	Annual Throughput
Open	

Step 3: Criteria Emissions (lbs)

Use [Default Emission Factors](#) if available.

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

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

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

Image 26: The tool presents the user with the process data entry screen. Add the Chicken Feed to the empty “Process Name” field and a “Process Comment” if needed. Use the drop-down arrows at the right of each box to report information for this process as shown below. Click the “Save” button.

Edit Emission Process - Other Processes

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P2		

AER Device ID: ES59 AER Device Name: Chicken Manure
NON-PERMITTED Permit Device ID:
Process ID: P2 Process Name:
Process Comment:
Activity Code * Sector:
Industry:
Operation:
Process:
Rule #: * [Add Rule](#)

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

Image 27: After saving, the program returns to Image 25. Open the “Step 2: Throughput” section to enter the amount, as shown below. Click “Save” button.

Image 28: After saving, the program returns to the Device ID ES59 Process P1 page for Chicken Feed. As seen below, the Particulate Matter (PM) default emission factor has automatically populated. If you would like to change the default emission factor, click on the “Open” link under the Step 3: Criteria Emissions (lbs)” section and next to “PM”. If you are eligible for abbreviated reporting under CTR, not using default emission factors will prevent you from submitting an abbreviated report. In other words, only default emission factors are allowed for abbreviated reporting.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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
- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. **Please start with Step 1, edits to Step 1 may cause data in the following steps to reset.** Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	ES59			P2	1127	Manufacturing : Food and Agricultural : Poultry Farms : Feed Operation

[Click here to delete this process.](#)

Step 2: Throughput

	Annual Throughput
Open	100.00000000 tons

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

	Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	PM	1.08000000e-1	lbs / tons	No	AQMD default		1.08000000e+1

[Add New](#)

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

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

Image 29: Click on the selected check box next to “Use Default”. You can now edit the “Emission Factor (EF)” and add a “Overall Control Efficiency” if needed. Add the source you referenced for the emission factor in the “Emission Factor Comment” box. Make sure to select the correct source

for your emission factor on the drop-down menu next to “Emission Factor Data Source”. Click “Save.”

Image 30: To add a new criteria pollutant click on the orange “Add New” button under the “Step 3: Criteria Emissions (lbs)” section.

Facility ID: 999001

- 1. Facility Information
- 2. Status Update
- 3. Combustion Fuels
- 4. Emission Sources (ES)
- 5. 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

- 6. Additional Toxic Substances Production and Usage
- 7. Perform Data Validation
- 8. Review Summaries
- 9. Print Facility Report
- 10. Report Submission

[← 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. Please start with Step 1, edits to Step 1 may cause data in the following steps to reset. Combustion emissions need to be reported separately under external or internal combustion process categories. 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.

Step 1: Process Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
Open	E559			P2	1127	Manufacturing : Food and Agricultural : Poultry Farms : Feed Operation

[Click here to delete this process.](#)

Step 2: Throughput

	Annual Throughput
Open	100.00000000 tons

Step 3: Criteria Emissions (lbs) Use [Default Emission Factors](#) if available.

	Pollutant	EF	Unit	Controlled EF	EF Data Source	Overall CE	Emissions
Open	PM	1.08000000e-1	lbs / tons	No	AQMD default		1.08000000e+1

[Add New](#)

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

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

Image 31: Add the new “Pollutant” from the options in the drop-down menu. You can add your emission factor into the empty “Emission Factor (EF)” field. Check the controlled EF value

checkbox if needed, and you may add an “Overall Control Efficiency” in the empty field. Add the source you referenced for the emission factor and/or control efficiency in “Emission Factor Comment” box, and choose the correct option from the drop-down menu for the “Emission Factor Data Source”. Click “Save”.

AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Activity
ES59			P2	1127	Manufacturing : Food and Agricultural : Poultry Farms : Feed Operation

Annual Throughput
100.00000000 tons

Pollutant: [dropdown] *

Emission Factor (EF): [text input] * lbs/tons

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

Overall Control Efficiency: [text input] i

Emission Factor Comment: [text area]

If not using **AQMD default** emission factor please provide detailed references in the Emission Factor Comment box above or upload file with the information. Processes without this information are subject to audit.

Emission Factor Data Source: [dropdown] *

Emissions: lbs

Save Cancel

You have now successfully completed adding Process IDs P1 Chicken Manure and P2 Chicken Feed under Device ID ES59.