



Reporting 2019 Annual Emissions

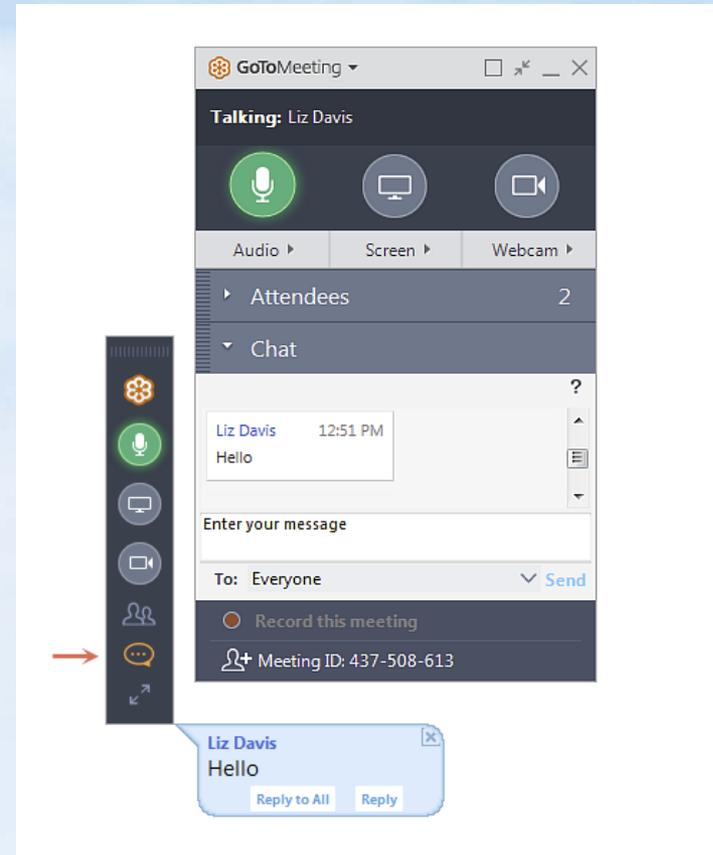
Joshua Uebelherr, Senior Planner

Eric Raisanen, Planner

Kristi Beck, Planning Supervisor

Webinar Info

- All calls are muted to prevent background noise
- If you have questions for the presenter, type your questions in the chat box in the lower right-hand corner of the Go to Meeting control panel
- We will answer questions at the end of the presentation



Mission

To improve the air of Maricopa County, so customers, residents and visitors can live, work and play in a healthy environment.



Agenda

- General information
- What's new?
- What to report
- Calculation methods
- Confidential data
- What not to report
- How to report

What is an emissions inventory (EI) ?

A submission by a permitted facility that:

- Lists all processes emitting reportable air pollutants, and
- Provides details about each of those processes.

Submitting the emissions inventory is required as a condition of your Maricopa County Air Quality Permit. A separate emissions inventory is required for each business location with its own air quality permit.

How are emissions inventories used?

- Clean Air Act requirements for State Implementation Plans (SIPs)
- National Ambient Air Quality Standards (NAAQS) attainment
- Determining compliance with regulations and permit conditions
- Identifying sources and general emission levels, patterns, and trends to develop control strategies and new regulations
- Emission Reduction Credit (ERC) Program

Emission Reduction Credits

- Credits are generated when a facility reduces emissions of VOC, NO_x, PM, CO, or SO₂ beyond what is required by their permit and applicable rules.
- Credits can be generated by:
 - Installing emission control systems
 - Replacing equipment
 - Changing fuels
 - Closing a facility
- <https://www.maricopa.gov/4562>

What's New for 2019?

- Annual Emission Fees
 - Title V sources: \$45.50 per ton
 - No fees for Non-Title V sources
- Online Reporting using the AQD Online Portal (IMPACT)
 - Emissions Inventories
 - Facility inventory and contact changes
 - Permit applications and forms
 - Compliance Reports

AQD Online Portal Resources

www.maricopa.gov/1820

Instructions

Help Sheets

Online Tutorial

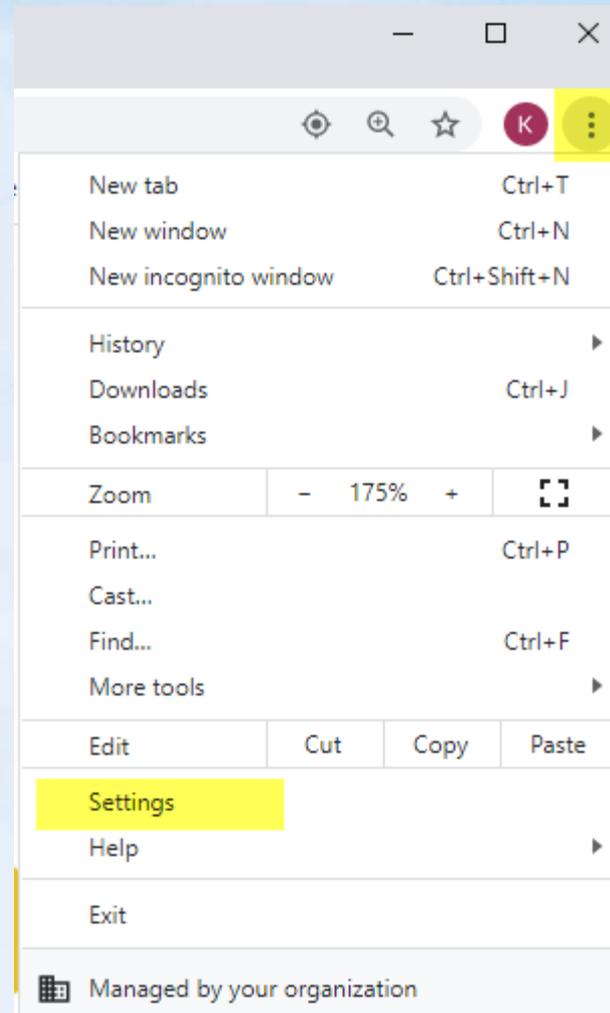
Helpful Hints

- Chrome is the recommended browser
- Back button will not work
- Click Save on each screen



Helpful Hints

- Enable Popups



Settings

Search settings

-  You and Google
-  Autofill
-  Privacy and security
-  Appearance
-  Search engine
-  Default browser
-  On startup

Advanced

-  Languages
-  Downloads
-  Printing
-  Accessibility
-  System
-  Reset and clean up

Extensions



About Chrome

Site Settings



All sites

View permissions and data stored across sites

Permissions

 Cookies and site data
Allow sites to save and read cookie data

 Location
Ask before accessing

 Camera
Ask before accessing

 Microphone
Ask before accessing

 Motion sensors
Allow sites to use motion sensors

 Notifications
Ask before sending

 JavaScript
Allowed

 Flash
Block sites from running Flash

 Images
Show all

 Pop-ups and redirects
Blocked

 Ads

AQD Online Portal Access

- Create an Shared CROMERR Services (SCS) account
 - Consultants must submit a registration form first
- No Sharing Allowed
 - Each person who will access the AQD Online Portal must have their own SCS account
 - This is required by federal law
 - Shared accounts will be deactivated by EPA

<https://encromerr.epa.gov/>

SCS Account Types

- Preparers & Certifiers
 - Can create, prepare, and validate emissions inventories, applications, and compliance reports
- Certifiers
 - Can sign and submit emissions inventories, applications, and compliance reports
 - Each facility must have at least one certifier

Dashboard

Program Services

[Services](#) | [Profile](#) | [Mail](#) | [Submission History](#) | [E-Enterprise Portal](#)

Partner	Program Service	Role	Org	Action
MARICOPA	IMPACT-MARICOPA-STAGING	Certifier	Maricopa County Air Quality Department	Visit

Showing 1 to 1 of 1 rows

Notifications

[\(More\)](#)

No notifications



Facility Selection

Account Information

Name: kristibeck **Company Name:** Maricopa County Air Quality Department
CROMERR Company Id: 144430 **Access:** Certifier

▼ Choose Facility

To manage a facility, select its Facility ID from the following list of authorized facilities. To return to the facility selector from another page, press the Facility Selector link in the top right corner.

Facility ID	Facility Name	Operating	Facility Class	Facility Type	County	Lat/Long
F000204	Tom's Bird Rescue	Operating	Minor	Plastics, Polymers, Fiberglass, Foam	Maricopa	33.44859/-112.15594
F006625	AQD Title V Facility	Operating	Title V	Wood Furniture Manufacture	Maricopa	33.49204/-112.07419
F006626	Tardis Engines Inc	Operating	Title V	Bakery	Maricopa	33.49204/-112.07419

[Printable view](#) [Export to excel](#)

▼ Facility Creation Requests

Request ID	Facility Name	Memo	Requester			Operating	Facility Type	County	Date Submitted	Request State
			Last Name	First Name	CROMERR Username					

[Printable view](#) [Export to excel](#)

[Request creation of a new facility](#)

[Show Offset Tracking Information](#)

Facility Information

Facility Information

Facility ID: F000204 **Facility Name:** Tom's Bird Rescue **County:** Maricopa
Facility Type: Plastics, Polymers, Fiberglass, Foam **Company Name:** Maricopa County Air Quality Department
Physical Address: 77 N 45th Ave **City:** Phoenix
Lat/Long: [33.44859/-112.15594](#) **PLSS:** S9-T1N-R2E

▼ In Progress Tasks

Select Task Type	Task Description	Dependent on Task	Created Date	User Name
Delete selected task(s) Printable view Export to excel				

New Tasks

Select from the lists below to create a new task

Facility Management

- [Make a change to the Facility Inventory](#)
- [Make a change to the Facility Inventory - clone another facility](#)
- [Make a change to the Facility Contact\(s\)](#)

Emissions Reporting

- [Create an Emissions Inventory](#)

Permitting

- [Create a NTV / ATO Permit Application](#)
- [Create a Title V Permit Application](#)

Compliance Reporting

- [Create a Compliance Report](#)

Create an Emissions Inventory

Version 11.0 | Build ID: 24.8.0

Welcome HMilosevic

Facility Selector

IMPACT Home

Task - Facility Co

[Tasks](#) | [Current Facility Inventory](#) | [Current Owner](#) | [Contacts](#) | [Applications](#) | [Emissions Inventories](#) | [Permits](#) | [Stack Tests](#) | [Compliance Reports](#) | [Inspection Reports](#) | [External References](#) | [Spatial](#)

[IMPACT Home](#) >

IMPACT Home

Facility Information

Facility ID: F006335 **Facility Name:** AQ Test **County:** Maricopa
Facility Type: Composite Materials Manufacturing **Company Name:** Maricopa County Air Quality Department
Physical Address: 3850 N Central Ave **City:** Phoenix
Lat/Long: [33.41190/-112.07345](#) **PLSS:** S20-T1N-R3E

▼ In Progress Tasks

Select	Task Type	Task Description	Dependent on Task	Created Date	User Name
<input type="radio"/>	Facility Contact Change	Facility Contact Change	N/A	10/2/2019	lucinda.swann

[Delete selected task\(s\)](#) [Printable view](#) [Export to excel](#)

New Tasks

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Facility Management

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- [Make a change to the Facility Contact\(s\)](#)

Permitting

- [Create a NTV / ATO Permit Application](#)
- [Create a Title V Permit Application](#)

Emissions Reporting

- [Create an Emissions Inventory](#)

Compliance Reporting

- [Create a Compliance Report](#)

Create an Emissions Inventory

airimpact.stage.maricopa.gov/_ADFv_.jsf?_afPfm=1&t=fred&vir=/reports/createReport.jsp&loc=en&_minWidth=900&_minHeight=...

For reporting year: 2019 ▼

For content type: Annual ▼

You are creating the first Annual emissions inventory for the year 2019. This emissions inventory will be associated with the current facility inventory.

Important: To create an accurate emissions inventory with minimal errors, you must first update and reconcile all information within your facility inventory. All emissions inventories directly refer to information in your facility inventory. If you have not yet updated your facility inventory and ensured that the information contained within it is correct, do not proceed with creating an emissions inventory. Instead, review and correct your facility inventory information first.

Create

Cancel

Task 1

- Facility Contact Change

Contacts

Task - Facility Contact Change >

Contacts

Facility ID: F006335

Facility Name: AQ Test

County: Maricopa

Version Start Date: 10/2/2019

Facility Type: Composite Materials Manufacturing Company Name: Maricopa County Air Quality Department

Version End Date: Current

▼ Contact Types

Contact Type	Contact ID	Contact Name	Phone Number	Email	Start Date	End Date
Billing Contact	CNT008899	Valenzuela, Hanna	(602)506-6867	Hanna.Valenzuela@maricopa.gov	1/1/2018	
Billing Contact	CNT008899	Valenzuela, Hanna	(602)506-6867	Hanna.Valenzuela@maricopa.gov	1/1/2019	
Asbestos Contact	CNT008881	Whitney, Stephanie	(602)506-6014	Stephanie.Whitney@maricopa.gov	10/2/2019	

Printable view Export to excel

Assign Contact Type

▼ Contacts

Contact ID	Last Name	First Name	Preferred Name	Phone	Email	Company ID	Company Name
CNT008887	Barnes	Brenda		(602)527-5849	brenda.barnes@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008897	Kovacs	Courtney		(602)506-6016	Courtney.Kovacs@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008891	Raisanen	Eric		(602)506-6898	Eric.Raisanen@Maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008896	Tallini	Scott		(602)372-2041	scott.tallini@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008900	Uebelherr	Joshua		(602)506-6627	Joshua.Uebelherr@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008899	Valenzuela	Hanna		(602)506-6867	Hanna.Valenzuela@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008881	Whitney	Stephanie		(602)506-6014	Stephanie.Whitney@maricopa.gov	CMP004066	Maricopa County Air Quality Department
CNT008888	barnes	Brenda		(602)527-5849	brenda.barnes@maricopa.gov	CMP004066	Maricopa County Air Quality Department

Printable view Export to excel

Create Contact Person

(Submit)

Task 2 - Facility Inventory Change

- Emission Units (EU)
 - 49 Types
- Emission Processes
 - Description
 - Source Classification Code (SCC)
- Control Devices
 - Capture Efficiency
 - Control Efficiency
- Release Points
 - Stack Information

Emission Unit Type Selection:

Abbreviation	Select This	If you have one of these
ABS	Abrasive Blasting	Abrasive Blasting
ACB	Air Curtain Burner	Air Curtain Burner, Air Curtain Destructor
BAK	Bakery	Bakery
BGM	Bagging Machine	Bagging Machine
BOL	Boiler	Boilers (Not used for electrical generation)
CKD	Calciner/Kiln/Dryer/Smelter/Foundry Furnace	Calciner, Kiln, Dryer, Smelter/Foundry Furnace, Fluid Bed Dryer
CMX	Concrete Batch/Cement Mixer	Concrete Batch/Cement Mixers
COT	Spray Booth or Coating Line	Bay, Booth, Coating System, Spray Booth, Spray Enclosure, Spray Gun, Spray System, Spray/Bake Booth, Enclosure, Roll Coating Paint Station, Gel Coating, Resin Applications, Adhesives
CSH	Crushing/Screening/Handling	Crusher, Screener, Grinder, Material Handling Unit, Conveyor Transfer Point, Mill, Pulverizer
CTW	Cooling Tower	Cooling Tower
DIS	Distillation Unit	Distillation Unit
DRY	Dry Cleaning	Dry Cleaner Vapor Control Unit, Dry to Dry Cleaning Machine
EGU	Electric Generating Unit	Generators (Used for electrical generation sale), Engines (Used for electrical generation sale), Turbines (Used for electrical generation sale), Boilers (Used for electrical generation sale)
ENG	Engine	Generators (Not used for selling electrical generation), Engines (Not used for selling electrical generation), Turbines (Not used for selling electrical generation)

Process Information

Process ID: PRC014
Process Name: Aggregate transfer to conveyor
Company Process Description: Conveyor transfer of rock aggregate
Source Classification Code (SCC): 3-05-011-23
SCC Level 1 Description: 3:Industrial Processes
SCC Level 2 Description: 05:Mineral Products
SCC Level 3 Description: 011:Concrete Batching
SCC Level 4 Description: 23:Aggregate Transfer to Conveyor

SCC reference information

Task 2 - Facility Inventory Change

- Emission Units (EU)
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Control Equipment Information

AQD ID: FDS014

* Control Equipment Type: Fugitive Dust Suppression

AQD Description:

* Company Control Equipment ID: 99999

* Company Control Equipment Description: Water spraying

* Operating Status: Operating

Initial Installation Date: 3/24/2020

Manufacturer Name: Manufacturer Model Name and Number: Model 99999

Control Equipment Type Specific Information

Suppressant Agent Type: Water

Method of Application: Spraying

Application Rate - specify units:

Application Frequency - specify units:

Pollutants Controlled

Explanation

*You must specify at least one pollutant in the Pollutants Controlled table

Select All | Select None

Select	Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
<input type="checkbox"/>	PM Primary (includes filterables > 10 microns + condensibles)	90	90	100	90
<input type="checkbox"/>	PM2.5 Primary (includes filterables + condensibles)	90	90	100	90
<input type="checkbox"/>	PM10 Primary (includes filterables + condensibles)	90	90	100	90

Add Pollutant Delete Selected Pollutants Printable view Export to excel

Save Cancel

Task 2 - Facility Inventory Change

- Emission Units (EU)
 - 49 Types
- Emission Processes
 - Description
 - Source Classification Code (SCC)
- Control Devices
 - Capture Efficiency
 - Control Efficiency
- Release Points
 - Stack Information

Release Point Information

AQD ID: _____

* Release Point Type: Vertical

* AQD Description: _____

* Company Release Point ID: _____

* Company Release Point Description: _____

* Operating status: Operating

* Release Point Latitude: _____ Facility Latitude: 32.97292

* Release Point Longitude: _____ Facility Longitude: -112.69505

Release Point Type Specific Information

* Base Elevation (ft): _____
Feet above sea level

* Stack Height (ft): _____

* Stack Diameter (ft): _____

* Exit Gas Velocity (ft/s): _____

* Exit Gas Temp (F): _____

Exit Gas Flow Rate (acfm): _____

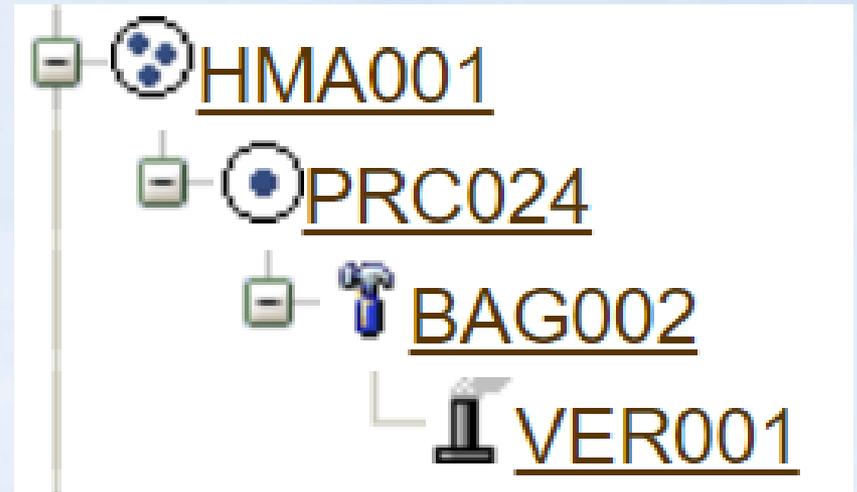
Flow rate is calculated by IMPACT:
 $3.1415927 * \text{Velocity} * 60 * (\text{Diameter} / 2)^2$

Save Cancel

Task 2 - Facility Inventory Change

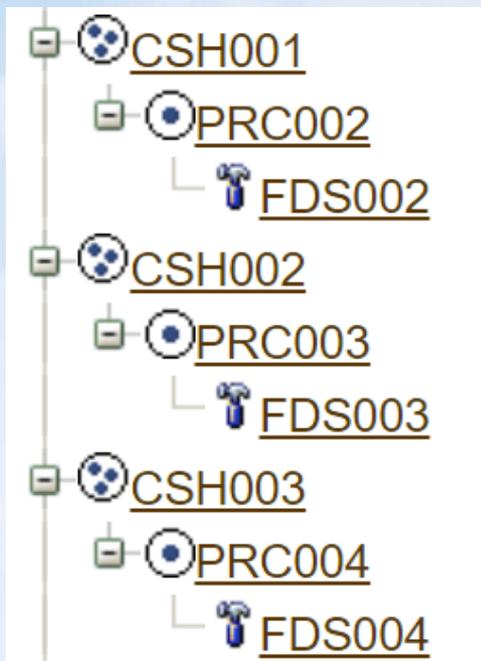
- Emission Units (EU)
 - 49 Types
- Emission Processes
 - Description
 - Source Classification Code (SCC)
- Control Devices
 - Capture Efficiency
 - Control Efficiency

Asphalt Plan Drum Dryer

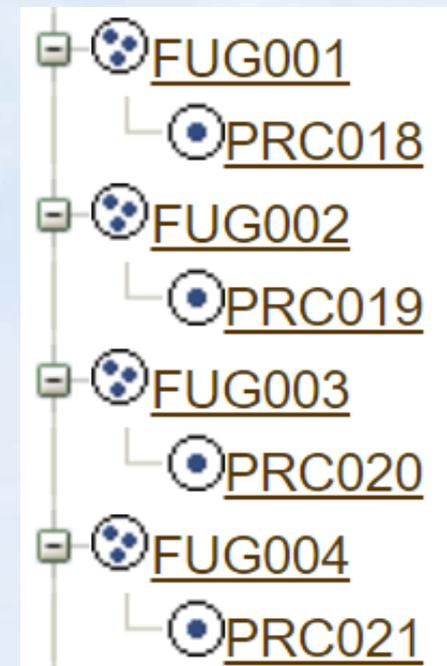


Facility Tree Examples

Sand and Gravel Plant

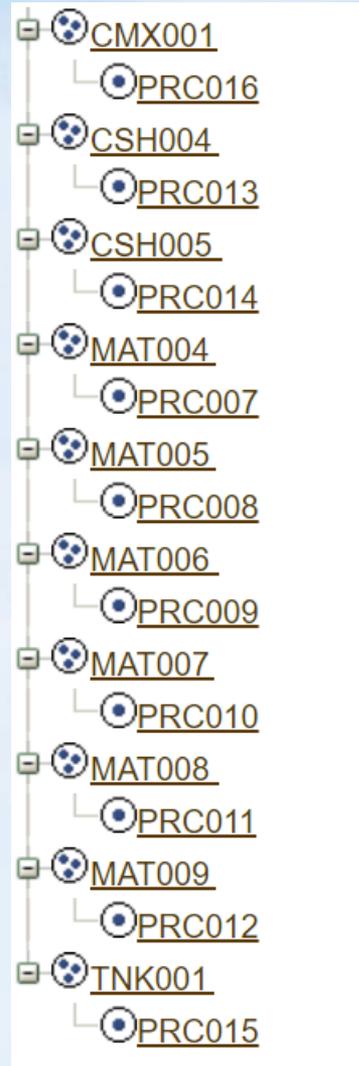


Fugitive Emissions



Facility Tree Examples

Concrete Batch Plant



Emission Unit List

Version 11.0 | Build ID: 24.25.0
 Welcome kristibeck

IMPACT Home

Tasks | **Current Facility Inventory** | Current Owner | Contacts | Applications | Emissions Inventories | Permits | Stack Tests | Compliance Reports | Inspection Reports | External References | Spatial Data | Invoices

- Applications
- CEM/COM/CMS Limits
- CEM/COM/CMS Monitors
- Compliance Reports
- Contacts
- Control Equipment
- **Emission Units**
- Emissions Inventories
- Facility Inventory History
- Inspection Reports
- Invoices
- Owners
- Permits
- Release Points
- Rules & Regs
- Stack Tests

IMPACT Home > Current Facility Inventory >

Emission Units

Facility ID: F006628 Facility Name: Rock Products Demonstration County: Maricopa Version Start Date: 3/25/2020
 Facility Type: Asphalt Plant, Stationary Company Name: Maricopa County Air Quality Department Version End Date: Current

AQD ID	AQD Description	Company Equipment ID	Company Equipment Description	Emissions Unit Type	Operating Status	Completion of Initial Installation Date
CMX001		99999	Concrete batch truck loading (concrete batch plant)	Concrete Batch/Cement Mixer	Operating	3/24/2020
CSH001		99999	Cone crushers (sand and gravel plant): Aggregate combined emissions from 4 co...	Crushing/Screening/Handling	Operating	3/24/2020
CSH002		99999	Material filtering screen (sand and gravel plant)	Crushing/Screening/Handling	Operating	3/24/2020
CSH003		99999	6 conveyor transfer points (sand and gravel plant)	Crushing/Screening/Handling	Operating	3/24/2020
CSH004		99999	Sand transfer to conveyor (concrete batch plant)	Crushing/Screening/Handling	Operating	3/24/2020
CSH005		99999	Aggregate transfer to conveyor (concrete batch plant)	Crushing/Screening/Handling	Operating	3/24/2020
CSH006		99999	2 conveyor transfer point (asphalt batch plant)	Crushing/Screening/Handling	Operating	3/24/2020
CSH007		99999	asphalt plant screen (asphalt batch plant)	Crushing/Screening/Handling	Operating	3/24/2020
FUG001		99999	Stockpile and associated acreage (any facility)	Open Air Fugitive Source	Operating	3/24/2020
FUG002		99999	Light duty vehicle fugitive emissions	Open Air Fugitive Source	Operating	3/24/2020
FUG003		99999	Medium duty vehicles fugitive emissions	Open Air Fugitive Source	Operating	3/24/2020
FUG004		99999	Heavy duty vehicle fugitive emissions	Open Air Fugitive Source	Operating	3/24/2020
HET001		99999	Asphalt heater (asphalt plant)	Heater/Chiller/Oven	Operating	3/24/2020
HMA001		99999	Drum dryer with used oil (asphalt plant)	Hot Mix Asphalt Mixer	Operating	3/25/2020
HMA002		99999	Drum mix loadout	Hot Mix Asphalt Mixer	Operating	3/24/2020
MAT001		99999	Mining plant feed (sand and gravel plant)	Material Handling	Operating	3/24/2020
MAT002		99999	Pile formation of rock material (sand and gravel plant)	Material Handling	Operating	3/24/2020
MAT003		99999	Loadout and handling (sand and gravel plant)	Material Handling	Operating	3/24/2020
MAT004		99999	Aggregate delivery to ground storage (concrete batch plant)	Material Handling	Operating	3/24/2020
MAT005		99999	Sand delivery to ground storage (concrete batch plant)	Material Handling	Operating	3/24/2020
MAT006		99999	Sand transfer to elevated storage bin (concrete batch plant)	Material Handling	Operating	3/24/2020
MAT007		99999	Aggregate transfer to elevated storage bin (concrete batch plant)	Material Handling	Operating	3/24/2020
MAT008		99999	Aggregate weigh hopper loading (concrete batch plant)	Material Handling	Operating	3/24/2020
MAT009		99999	Aggregate weigh hopper loading (concrete batch plant)	Material Handling	Operating	3/24/2020
TNK001		99999	Cement transfer to elevated silo (concrete batch plant)	Storage Tank/Silo	Operating	3/24/2020

Printable view Export to excel

Hide Invalid EUs



Facility Migration

- Equipment lists were migrated from the legacy database
- Verify the facility inventory matches current operations
- Update facility inventory as necessary

When to Aggregate EUs

- Aggregate when specific throughput is not known for each EU
 - Boilers and water heaters
 - Silos storing the same material
 - Multiple gasoline storage tanks
 - Underground storage tanks
 - Aboveground storage tanks
- Aggregate when there are many identical EUs
 - Conveyors, crushers, screens,

How to Aggregate EUs

- Emissions reporting is by process
 - Processes must have same SCC to aggregate emissions
- Keep EUs in the facility tree
 - Remove processes from the EUs
- Create one EU
 - Named: “Emissions reporting – describe/list aggregated EUs”
 - Add a process to that EU

Aggregation Example 1

- List each crusher and screen as an EU
 - Attach an emissions process to each EU
 - Report throughput and emissions from each crusher and each screen separately
 - Attach an emissions process to one crusher and one screen
 - Report throughput for all crushers and all screens
 - 4 crushers = 4 x throughput
 - 4 screens = 4 x throughput
 - 16 transfer points = 16 x throughput

Aggregation Example 1

Emissions Unit Information

AQD ID: CSH001

Emission Unit Type: Crushing/Screening/Handling

[Help me select the Emission Unit Type](#)

AQD Description:

Company Equipment ID: 99999

Company Equipment Description:

Cone crushers (sand and gravel plant): Aggregate combined emissions from 4 cone crushers.

Operating Status: Operating

Initial Construction Commencement Date: 3/24/2020

Initial Operation Commencement Date: 3/24/2020

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

▼ Emission Unit Type Specific Information

Type of Unit: Crushing

Maximum Annual Throughput: 10000

Units: tons/yr

Model Name and Number: Model 99999

Aggregation Example 2

- List each boiler as an emission unit
 - Attach an emissions process to the largest boiler using the SCC appropriate to that boiler
 - Report total amount of natural gas combusted in all boilers under that emissions process
- Example:
 - 3 boilers: 5, 12, and 72 MMBtu/hr
 - 3 emission units
 - Attach emission process to 72 MMBtu/hr boiler

Facility Inventory Change

- Arrange the emission units and processes to reflect the operations at your facility
- Do not submit changes until you have completed and validated your emissions inventory

2019 Emissions Inventory

Version 11.0 | Build ID: 24.8.0

Welcome Uebelherr

[Facility Selecto](#)

[IMPACT Home](#)

[Task - Facility Contact Change](#)

[Task - Facility Inventory Change](#)

[Task - Emissions Inventory for 2019](#)

Emissions Inventory Detail

[Task - Emissions Inventory for 2019 \(EI0000025\)](#) >

Emissions Inventory Detail

Facility ID: F006335
 Facility Name: AQ Test
 Content Type: Annual

Emissions Inventory ID: EI0000025
 Submitted: No
 Reporting Year: 2019

Completed Date:
 Reporting State: Not Filed
 Generated From Imported File: No

- ⚠ EI0000025
 - ⊖ BOL001 - 0Ton
 - ⊖ ENG001 - 0Ton

Emissions Inventory Summary

Explanation

- Use the Exclude/Include Emissions Units button to indicate which emissions units:
 - Did not operate at all during the year
 - Emitted less than the reporting requirement
 - Do require detailed emissions inventory reporting
- For each Emissions Process that requires detailed emissions inventory reporting, navigate to that Process and provide the necessary information
- Attach any files needed to support the reported emissions

Regulatory Requirement(s): Triennial Non-Title V Program

Facility Emissions

Pollutant	Criteria Air Pollutants/Other	Emissions Reported		
		Fugitive Amount	Stack Amount	Total Units
Printable view Export to excel				

The following information was developed using {Arizona} DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the {Arizona} DEQ. You may modify these {Arizona} DEQ-generated emission calculations if you have more accurate information.

Pollutant	Hazardous Air Pollutants/Greenhouse Gases/Other	Emissions Reported		
		Fugitive Amount	Stack Amount	Total Units
Printable view Export to excel				

Attachments

Attachment ID	Attachment Type	Description	Trade Secret Document	Trade Secret Justification	Uploaded By	Upload Date
Add Printable view Export to excel						

To Delete the attachment, or to Edit attachment description, click in the Attachment ID column.

[Data Entry Wizard](#) [Exclude/Include Emissions Units](#) [Validate](#)

[Associate with Different Facility Inventory](#) [Download/Print](#)

2019 Emissions Inventory

- Exclude emission units
 - Less than reporting requirements
 - Did not operate

Excluding & Including Emissions Units from Detailed Reporting

The **Detailed Emissions** column should be checked and process level emissions reporting is required unless the emission unit did not operate (had zero emissions) or emitted less than its reporting requirement. If either of these two conditions are true, click the appropriate reason in the last column to exclude the unit from the reporting requirements for this emissions inventory.

Caution: If the detailed emission reporting is specified for an emissions unit you are now choosing to exclude, any emissions information you have already entered for the unit will be lost.

Mark All 'Detailed Emissions Reporting'		Mark All 'Less Than Reporting Requirement'		Mark All 'Did Not Operate'	
Emission Unit	Company Equipment ID	Detailed Emissions	Exclude Detailed Emissions Reporting		
BOL001	2	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement	<input checked="" type="radio"/> Did Not Operate	
ENG001	1	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement	<input checked="" type="radio"/> Did Not Operate	
		Printable view	Export to excel		

Save Cancel

What NOT to Report

- Welding
- Soil remediation
- Acetone use
- Motor vehicle emissions
- Emissions from storage of diesel fuel or Jet A fuel
 - In underground storage tanks (any size)
 - In above ground storage tanks (if throughput is less than 4,000,000 gallons/year)
- Routine pesticide usage, housekeeping cleaners, and routine maintenance painting at your facility

What NOT to Report

- Materials with usage less than 15 gallons per year (or emissions less than 100 pounds per year)
 - Group all similar materials together before determining if material usage reporting is required

What to Report

Emissions from processes that emit:	
PM Primary	Particulate matter
PM ₁₀	Particulate matter less than 10 microns in diameter
PM _{2.5}	Particulate matter less than 2.5 microns in diameter
CO	Carbon monoxide
NO _x	Nitrogen oxides
SO _x	Sulfur oxides
VOC	Volatile organic compounds
NH _x	Ammonia
HAPs	Hazardous air pollutants

Criteria Pollutants and Precursors

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Pollutant	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Fugitive Amount	Stack Amount	Total	Units	Explanation
PM Primary (includes filterables > 10 microns + condensibles)	Throughput-based factor	0	pending					TONS	
PM10 Primary (includes filterables + condensibles)	Throughput-based factor	0	pending					TONS	
PM2.5 Primary (includes filterables + condensibles)	Throughput-based factor	0	pending					TONS	
CO - Carbon Monoxide	Throughput-based factor Available factors: 1	0	130					TONS	
NOx - Nitrogen Oxides	Throughput-based factor Available factors: 1	0	604					TONS	
SO2 - Sulfur Dioxide	Throughput-based factor Available factors: 1	0	39.7					TONS	
VOC - Volatile Organic Compounds	Throughput-based factor Available factors: 1	0	49.3					TONS	
Ammonia	Throughput-based factor	0	pending					TONS	

[Printable view](#)

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Hazardous Air Pollutants

Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Pollutant	Method Used								
Carbon Dioxide	<u>Throughput-based factor</u> Available factors: 1	0	22,600					TONS	
Acenaphthene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Acenaphthylene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Acetaldehyde	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Acrolein	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Anthracene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benz[A]Anthracene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benzene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benzo[A]Pyrene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benzo[B]Fluoranthene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benzo[G,H,I,]Perylene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Benzo[K]Fluoranthene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Butadiene, 1,3-	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Chrysene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Dibenzo[A,H]Anthracene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Ethyl Benzene	<u>Throughput-based factor</u> Available factors: 1	0	0.00307					TONS	
Fluoranthene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Fluorene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Formaldehyde	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Indeno[1,2,3-C,D]Pyrene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Naphthalene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
PAH, 16-	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Phenanthrene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Pyrene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Toluene	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	
Xylenes (Isomers and Mixture)	<u>Throughput-based factor</u> Available factors: 1	0	pending variable amount					TONS	

Common HAPs

- Methylene chloride (dichloromethane)
- Perchloroethylene
- 111-Trichloroethane (111-TCA or methyl chloroform)
- Hydrochloric acid
- Hydrofluoric acid

Reporting Emissions

Process & Emissions Detail

▶ PRC001: Source Classification Code (SCC) is 3-85-001-01

▼ **Material Information, Annual Average Operating Schedule & Throughput Percent**

Maximum Hours Per Day: 24
Maximum Days Per Week: 7
Maximum Weeks Per Year: 52
Actual Hours:

Material	Action	Throughput	Confidential	Units
Cooling Water	Throughput	pending	<input type="checkbox"/>	MILLION GALLONS

▼ **Explanation**

To complete emissions reporting for this process, you have to provide values above for **Schedule**, **Season Percents** and **Material Throughput** in the units specified by **Units**. If there is a choice of more than one **Material**, you must select which is most appropriate, otherwise no action is needed on your part. The word pending appears each place a value is needed.

[Edit Material/Schedule/Seasons](#)

- Select process
- Click **Edit Material/Schedule/Seasons**

Reporting Emissions

Process & Emissions Detail

▶ PRC001: Source Classification Code (SCC) is 3-85-001-01

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day:
Maximum Days Per Week:
Maximum Weeks Per Year:
* Actual Hours:

* Winter (Jan-Feb, Dec)%:
* Spring (Mar-May)%:
* Summer (Jun-Aug)%:
* Fall (Sep-Nov)%:

Material	Action	Throughput	Confidential	Units
Cooling Water	Throughput	<input type="text" value="521"/>	<input type="checkbox"/>	MILLION GALLONS

Variable Amount in Cooling Water Units & Meaning

The variables table is empty because there are no variables in the formula as

▼ Explanation

To complete emissions reporting for this process, you have to provide values above for **Schedule**, **Season Percents** and **Material Throughput** in the units specified by **Units**. If there is a choice of more than one **Material**, you must select which is most appropriate, otherwise no action is needed on your part. The word pending appears each place a value is needed.

▶ Explanation

- Don't forget to click "Save"

Reporting Emissions

- Click **Edit Emissions**
- Select calculation method for each pollutant

Process Emissions

Criteria Air Pollutants/Other			Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported				
Pollutant	Method Used	Hours Uncontrolled			Fugitive Amount	Stack Amount	Total	Units	Explanation
PM Primary (includes filterables > 10 microns + condensibles)	pending							TONS	
PM10 Primary (includes filterables + condensibles)	pending							TONS	
PM2.5 Primary (includes filterables + condensibles)	pending							TONS	
CO - Carbon Monoxide	pending							TONS	
NOx - Nitrogen Oxides	pending							TONS	
SO2 - Sulfur Dioxide	pending							TONS	
VOC - Volatile Organic Compounds	pending							TONS	
Ammonia	pending							TONS	

The following information was developed using (Arizona) DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the (Arizona) DEQ. You may modify these (Arizona) DEQ-generated emission calculations if you have more accurate information.

Hazardous Air Pollutants/Greenhouse Gases/Other			Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported				
Pollutant	Method Used	Hours Uncontrolled			Fugitive Amount	Stack Amount	Total	Units	Explanation

Hierarchy of Preferred Emission Calculation Methods...

To develop your annual emissions inventory, the most accurate method for calculating actual emissions must be used. The "hierarchy of preferred methods" on the following slides describes, in order, the preferred methods for calculating emission estimates.

(Rule 280, Section 304.1)

Hierarchy of Preferred Emission Calculation Methods...

1. Whenever available, emissions estimates should be calculated from Continuous Emissions Monitoring Systems (CEMS) certified under 40 CFR Part 75, Subpart C, or data that has been quality-assured pursuant to Appendix F of 40 CFR, Part 60.

Reporting CEMS Emissions

- Calculate Time Based Emission Factor
- Example – EGU001
 - CEMS measured 50,839 pounds of NO_x emissions during 2019
 - Total operating hours = 4,131
 - $50,839 / 4,131 = 12.31$ pounds/hour

Reporting CEMS Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported				Explanation
					Fugitive Amount	Stack Amount	Total	Units	
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	<input type="text"/>							TONS	add
PM10 Primary (includes filterables + condensibles)	<input type="text"/>							TONS	add
PM2.5 Primary (includes filterables + condensibles)	<input type="text"/>							TONS	add
CO - Carbon Monoxide	<input type="text"/>							TONS	add
NOx - Nitrogen Oxides	Time-based factor - CEM	0	326.4	12.31				TONS	add
SO2 - Sulfur Dioxide	<input type="text"/>							TONS	add
VOC - Volatile Organic Compounds	<input type="text"/>							TONS	add
Ammonia	<input type="text"/>							TONS	add

[Printable view](#) [Export to excel](#)

Information was developed using (Arizona) DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the (Arizona) DEQ. You may modify these (Arizona) DEQ-generated emission calculations if you have more accurate data.

Select Pollutant	Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported				Explanation
						Fugitive Amount	Stack Amount	Total	Units	
Carbon Dioxide		Throughput-based factor	0						TONS	add
Methane		Throughput-based factor	0						TONS	add
Acetaldehyde		Throughput-based factor	0						TONS	add
Acrolein		Throughput-based factor	0						TONS	add
Benz[A]Anthracene		Throughput-based factor	0						TONS	add
Benzene		Throughput-based factor	0						TONS	add
Butadiene, 1,3-		Throughput-based factor	0						TONS	add
Cadmium		Throughput-based factor	0						TONS	add
Chromium		Throughput-based factor	0						TONS	add
Ethyl Benzene		Throughput-based factor	0						TONS	add
Fluoranthene		Throughput-based factor	0						TONS	add
Formaldehyde		Throughput-based factor	0						TONS	add
MN - Manganese		Throughput-based factor	0						TONS	add
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms		Throughput-based factor	0						TONS	add
Naphthalene		Throughput-based factor	0						TONS	add
Nickel		Throughput-based factor	0						TONS	add
PAH, 16-		Throughput-based factor	0						TONS	add
Phenol		Throughput-based factor	0						TONS	add
Propylene Oxide		Throughput-based factor	0						TONS	add
Toluene		Throughput-based factor	0						TONS	add
Xylenes (Isomers and Mixture)		Throughput-based factor	0						TONS	add

[Add Emission](#) [Delete Selected Emission\(s\)](#) [Printable view](#) [Export to excel](#)

Reporting CEMS Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	pending							TONS	
PM10 Primary (includes filterables + condensibles)	pending							TONS	
PM2.5 Primary (includes filterables + condensibles)	pending							TONS	
CO - Carbon Monoxide	pending							TONS	
NOx - Nitrogen Oxides	Available factors: 1 Time-based factor - CEM Uncontrolled factor input by user. Available factors: 1	0	326.4	12.31	0	25.4263	25.4263	TONS	
SO2 - Sulfur Dioxide	pending Available factors: 1							TONS	
VOC - Volatile Organic Compounds	pending Available factors: 2							TONS	
Ammonia	pending							TONS	

[Printable view](#)

[Export to excel](#)

Hierarchy of Preferred Emission Calculation Methods...

1. CEMS Data
2. When sufficient data obtained using the methods described in (1) is not available, emissions estimates should be calculated from source performance tests conducted in accordance with Maricopa County Rule 270 (Performance Tests).

Stack Test Emission Factors

- Calculate Time Based Emission Factor
- Example – EGU001
 - Stack Test Results
 - $PM_{10} = 2.0349 \text{ lb/MMCF}$
 - Total operating hours = 4,131
 - Total fuel combustion = 6,781 MMCF
 - $(2.0349 \times 6,781) / 4,131 = 3.34 \text{ lb/hour}$

Reporting Emissions

Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
PM Primary (includes filterables > 10 microns + condensibles)								TONS	add
PM10 Primary (includes filterables + condensibles)	Time-based factor - Stack Test	0	6.73	3.34				TONS	add
PM2.5 Primary (includes filterables + condensibles)								TONS	add
CO - Carbon Monoxide			83.64					TONS	add
NOx - Nitrogen Oxides	Time-based factor - CEM	0	326.4	12.31	25.4263	0		TONS	add
SO2 - Sulfur Dioxide			0.09588					TONS	add
VOC - Volatile Organic Compounds								TONS	add
Ammonia								TONS	add

Printable view

Export to excel

Reporting Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	pending							TONS	
PM10 Primary (includes filterables + condensibles)	<u>Time-based factor - Stack Test</u> Uncontrolled factor input by user.	0	6.73	3.34	6.89877	0	6.89877	TONS	
PM2.5 Primary (includes filterables + condensibles)	pending							TONS	
CO - Carbon Monoxide	pending Available factors: 1		83.64					TONS	
NOx - Nitrogen Oxides	<u>Time-based factor - CEM</u> Available factors: 1	0	326.4	12.31	25.4263	0	25.4263	TONS	
SO2 - Sulfur Dioxide	pending Available factors: 1		0.09588					TONS	
VOC - Volatile Organic Compounds	pending Available factors: 2							TONS	
Ammonia	pending							TONS	

Printable view

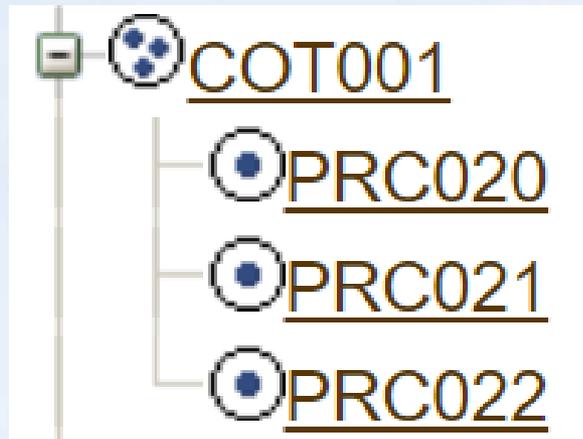
Export to excel

Hierarchy of Preferred Emission Calculation Methods...

1. CEMS Data
2. Performance Tests
3. When sufficient data obtained using the methods described in (1) or (2) is not available, emissions estimates should be calculated by a material mass balance using engineering knowledge of the process.

Material Mass Balance

- Frequently used for solvents, paints, and other evaporative processes
- Facility Tree
 - One process for each SCC



Material Mass Balance

- Frequently used for solvents, paints, and other evaporative processes
- Facility Tree
 - One process for each SCC



Process Information

Process ID: PRC020
Process Name: Paints
Company Process Description:
Source Classification Code (SCC): 4-02-002-01
SCC Level 1 Description: 4:Petroleum and Solvent Evaporation
SCC Level 2 Description: 02:Surface Coating Operations
SCC Level 3 Description: 002:Surface Coating Application - General
SCC Level 4 Description: 01:Paint: Water-base

[SCC reference information](#)

Process Information

Process ID: PRC021
Process Name:
Company Process Description:
Source Classification Code (SCC): 4-02-007-10
SCC Level 1 Description: 4:Petroleum and Solvent Evaporation
SCC Level 2 Description: 02:Surface Coating Operations
SCC Level 3 Description: 007:Surface Coating Application - General
SCC Level 4 Description: 10:Adhesive: General

[SCC reference information](#)

Process Information

Process ID: PRC022
Process Name:
Company Process Description:
Source Classification Code (SCC): 4-02-025-99
SCC Level 1 Description: 4:Petroleum and Solvent Evaporation
SCC Level 2 Description: 02:Surface Coating Operations
SCC Level 3 Description: 025:Miscellaneous Metal Parts
SCC Level 4 Description: 99:Other Not Classified

[SCC reference information](#)

Material Usage Calculation Tool

Year:	2018																
Process ID	Name/ Description	Material type	Units	Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec/Year	Annual Total
PRC020	Water based primer	Paint	gal	VOC			50.0					50.0					100.0
PRC020	Water based topcoat	Paint	gal	VOC				50.0									50.0
PRC021	Adhesive A225	Adhesive	gal	VOC		50.0											50.0
PRC021	Adhesive A226	Adhesive	gal	VOC		50.0											50.0
PRC022	Adhesive Primer	Adhesive Prim	gal	VOC		50.0											50.0
PRC022	Metal Primer	Primer	gal	VOC	100.0		50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	600.0
PRC022	Metal topcoat	Paint	gal	VOC	100.0	100.0		50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	600.0



Material Usage Calculation Tool

	A	C	D	E	F	G	H	I	J	K	L
1	Process ID	Material type	Annual Amount of Material Used	Units	Pollutant	EF	Units	Capture Efficiency	Control Efficiency	Fugitive Amount (lb)	Stack Amount (lb)
2	PRC020	Paint	100.0	gal	VOC	1.2	lb/gal	0.0%	0.0%	120.0	0.0
3	PRC020	Paint	50.0	gal	VOC	2.1	lb/gal	0.0%	0.0%	105.0	0.0
4	PRC021	Adhesive	50.0	gal	VOC	1.6	lb/gal	0.0%	0.0%	80.0	0.0
5	PRC021	Adhesive	50.0	gal	VOC	1.1	lb/gal	0.0%	0.0%	55.0	0.0
6	PRC022	Adhesive Prim	50.0	gal	VOC	0.8	lb/gal	0.0%	0.0%	40.0	0.0
7	PRC022	Primer	600.0	gal	VOC	1.8	lb/gal	0.0%	0.0%	1080.0	0.0
8	PRC022	Paint	600.0	gal	VOC	1.5	lb/gal	0.0%	0.0%	900.0	0.0

◀ ▶	README	1) Usage Records	2) Emission Calcs	3) Facility Info	Reference sheet	⊕
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Material Usage Calculation Tool

	A	B	C	D	E	F	G
1	INSTRUCTIONS: Right click within the table below and select Refresh from the menu to update data.						
2							
3	Sum of Actual Emissions (lbs)	Pollutants (lbs)					
4	Process ID	VOC					
5	PRC020	225					
6	PRC021	135					
7	PRC022	2020					

Navigation: < > | README | 1) Usage Records | 2) Emission Calcs | **3) Facility Info** | Reference sheet

Reporting Emissions

- Enter Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
PM Primary (includes filterables > 10 microns + condensibles)	Throughput-based factor	0	0					TONS	add
PM10 Primary (includes filterables + condensibles)	Throughput-based factor	0	0					TONS	add
PM2.5 Primary (includes filterables + condensibles)	Throughput-based factor	0	0					TONS	add
CO - Carbon Monoxide	Throughput-based factor	0	0					TONS	add
NOx - Nitrogen Oxides	Throughput-based factor	0	0					TONS	add
SO2 - Sulfur Dioxide	Throughput-based factor	0	0					TONS	add
VOC - Volatile Organic Compounds	Emissions				225	0		TONS	add
Ammonia	Throughput-based factor	0	0					TONS	add

Information was developed using {Arizona} DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the {Arizona} DEQ. You may modify these {Arizona} DEQ-generated emission calculations if you have more accurate information.

Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Select Pollutant									

- Upload Material Usage Calculation Tool (later in submission process)

Hierarchy of Preferred Emission Calculation Methods...

1. CEMS Data
2. Performance Tests
3. Material Mass Balance
4. Emissions estimates shall be calculated using emissions factors from EPA Publication No. AP-42 "Compilation of Air Pollutant Emission Factors", Volume I: Stationary Point and Area Sources.

AP-42 Emission Factors

- Select throughput-based emission factor
- Use emission factors recommended by the AQD Online Portal
- Use emission factors from the help sheet

Industry Category	SCC Description	SCC Code	Emission Factor					Emission Factor Unit
			CO	NOx	PM10	SOx	VOC	
Industrial	Natural Gas Turbine	20200201	83.64	326.4	6.73	0.6	11.2	lb/MM cu ft
Industrial	Natural Gas Reciprocating Engine	20200202	399	2840	10	0.6	116	lb/MM cu ft
Industrial	Natural Gas Turbine: Cogeneration	20200203	83.64	326.4	6.73	0.6	2.14	lb/MM cu ft
Industrial	Natural Gas Reciprocating : Cogeneration	20200204	399	2840	10	0.6	116	lb/MM cu ft
Industrial	Natural Gas 4 Cycle Reciprocating Rich Burn	20200253	3794	2254	9.69	0.6	30.2	lb/MM cu ft
Industrial	Natural Gas 4 Cycle Reciprocating Lean Burn	20200254	323	4161	0.079	0.6	120	lb/MM cu ft
Industrial	Gasoline Reciprocating Engine	20201702	128.7	205	12.6	10.6	382	lb/1000 gal
Commercial/Institutional	Diesel Large Bore Engine	20200401	116	438	7.85	138(S)	11.2	lb/1000 gal
Commercial/Institutional	Diesel Reciprocating Engine	20300101	130	604	42.5	39.7	49.3	lb/1000 gal
Commercial/Institutional	Diesel Turbine	20300102	0.46	122.3	1.67	140(S)	0.057	lb/1000 gal
Commercial/Institutional	Natural Gas Reciprocating Engine	20300201	399	2840	10	0.6	116	lb/MM cu ft
Commercial/Institutional	Natural Gas Turbine	20300202	83.64	326.4	6.73	0.6	2.14	lb/MM cu ft
Commercial/Institutional	Natural Gas Reciprocating: Cogeneration	20300204	399	2840	10	0.6	116	lb/MM cu ft

AP-42 Emission Factors

Process & Emissions Detail

▼ PRC014: Source Classification Code (SCC) is 3-05-011-23

SCC Level 1: 3:Industrial Processes

SCC Level 2: 05:Mineral Products

SCC Level 3: 011:Concrete Batching

SCC Level 4: 23:Aggregate Transfer to Conveyor

Process Name: Aggregate transfer to conveyor

Company Process Description: Conveyor transfer of rock aggregate

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24

Maximum Days Per Week: 7

Maximum Weeks Per Year: 52

Actual Hours: 2,000.00

Winter (Jan-Feb, Dec)%: 25

Spring (Mar-May)%: 25

Summer (Jun-Aug)%: 25

Fall (Sep-Nov)%: 25

Material	Action	Throughput	Confidential	Units
Material	Processed	160000	<input type="checkbox"/>	TONS

Variable Amount in Material Units & Meaning

The variables table is empty because there are no variables in the formula associated with the FIRE rows for this process.

▼ Explanation

▼ Explanation

Edit Material/Schedule/Seasons

AP-42 Emission Factors

Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
PM Primary (includes filterables > 10 microns + condensibles)	Throughput-based factor ▼	0	0.0069				TONS ▼	add	
PM10 Primary (includes filterables + condensibles)	Throughput-based factor ▼	0	0.0033				TONS ▼	add	
PM2.5 Primary (includes filterables + condensibles)	Throughput-based factor ▼	0	0.0011				TONS ▼	add	
CO - Carbon Monoxide	Throughput-based factor ▼	0	0				TONS ▼	add	
NOx - Nitrogen Oxides	Throughput-based factor ▼	0	0				TONS ▼	add	
SO2 - Sulfur Dioxide	Throughput-based factor ▼	0	0				TONS ▼	add	
VOC - Volatile Organic Compounds	Throughput-based factor ▼	0	0				TONS ▼	add	
Ammonia	Throughput-based factor ▼	0	0				TONS ▼	add	

Printable view Export to excel

The following information was developed using (Arizona) DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the (Arizona) DEQ. You may modify these (Arizona) DEQ-generated emission calculations if you have more accurate information.

Select Pollutant	Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Total Units	Explanation
						Fugitive Amount	Stack Amount	Total		
<p>Add Emission Delete Selected Emission(s) Printable view Export to excel</p>										

Save Cancel

AP-42 Emission Factors

Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported				Explanation
					Fugitive Amount	Stack Amount	Total	Units	
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0.0069		0.0552	0	0.0552	TONS	
PM10 Primary (includes filterables + condensibles)	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0.0033		0.0264	0	0.0264	TONS	
PM2.5 Primary (includes filterables + condensibles)	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0.0011		0.0088	0	0.0088	TONS	
CO - Carbon Monoxide	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0		0	0	0	TONS	
NOx - Nitrogen Oxides	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0		0	0	0	TONS	
SO2 - Sulfur Dioxide	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0		0	0	0	TONS	
VOC - Volatile Organic Compounds	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0		0	0	0	TONS	
Ammonia	<u>Throughput-based factor</u> Uncontrolled factor input by user.	0	0		0	0	0	TONS	

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AP-42 Emission Factors

▶ PRC023: Source Classification Code (SCC) is 1-01-006-02

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24
 Maximum Days Per Week: 7
 Maximum Weeks Per Year: 52
 Actual Hours: 4,000.00

Winter (Jan-Feb, Dec)%: 25
 Spring (Mar-May)%: 25
 Summer (Jun-Aug)%: 25
 Fall (Sep-Nov)%: 25

Material	Action	Throughput	Confidential	Units
Natural Gas Burned		117.65	<input type="checkbox"/>	MILLION CUBIC FEET

Variable Amount in Natural Gas Units & Meaning	
HCg	1020 Gas Heat Content (Btu/Cubic Feet)

▶ Explanation

▶ Explanation

[Edit Material/Schedule/Seasons](#)

▼ Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Units	Explanation
					Fugitive Amount	Stack Amount	Total		
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	pending Available factors: 1		7.6					TONS	
PM10 Primary (includes filterables + condensibles)	pending Available factors: 1		7.6					TONS	
PM2.5 Primary (includes filterables + condensibles)	pending Available factors: 1		7.6					TONS	
CO - Carbon Monoxide	pending Available factors: 1		84					TONS	
NOx - Nitrogen Oxides	pending Available factors: 1		100					TONS	
SO2 - Sulfur Dioxide	pending Available factors: 1		0.6					TONS	
VOC - Volatile Organic Compounds	pending Available factors: 2							TONS	
Ammonia	pending Available factors: 1		3.2					TONS	

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AP-42 Emission Factors

Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24
Maximum Days Per Week: 7
Maximum Weeks Per Year: 52
Actual Hours: 4,000.00

Winter (Jan-Feb, Dec)%: 25
Spring (Mar-May)%: 25
Summer (Jun-Aug)%: 25
Fall (Sep-Nov)%: 25

Material	Action	Throughput	Confidential	Units
Natural Gas	Burned	117.65	<input type="checkbox"/>	MILLION CUBIC FEET

Variable Amount in Natural Gas Units & Meaning	
HcG	1020 Gas Heat Content (Btu/Cubic Feet)

[▶ Explanation](#)

[▶ Explanation](#)

[Edit Material/Schedule/Seasons](#)

Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Explanation
					Fugitive Amount	Stack Amount	Total Units	
PM Primary (includes filterables > 10 microns + condensibles)	Throughput-based factor Available factors: 1	4000	7.6		0	0.44707	0.44707 TONS	
PM10 Primary (includes filterables + condensibles)	Throughput-based factor Available factors: 1	4000	7.6		0	0.44707	0.44707 TONS	
PM2.5 Primary (includes filterables + condensibles)	Throughput-based factor Available factors: 1	4000	7.6		0	0.44707	0.44707 TONS	
CO - Carbon Monoxide	Throughput-based factor Available factors: 1	4000	84		0	4.9413	4.9413 TONS	
NOx - Nitrogen Oxides	Throughput-based factor Available factors: 1	4000	100		0	5.8825	5.8825 TONS	
SO2 - Sulfur Dioxide	Throughput-based factor Available factors: 1	4000	0.6		0	0.035295	0.035295 TONS	
VOC - Volatile Organic Compounds	Throughput-based factor Uncontrolled factor input by user. Available factors: 2	4000	5.5		0	0.323538	0.323538 TONS	
Ammonia	Throughput-based factor Available factors: 1	4000	3.2		0	0.18824	0.18824 TONS	

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Hierarchy of Preferred Emission Calculation Methods...

1. CEMS Data
2. Performance Tests
3. Material Mass Balance
4. AP-42 Emission Factors
5. Emissions estimates should be calculated by equivalent methods supported by back-up documentation that will substantiate the chosen method.

Confidential Data

- Information submitted in annual emissions reports must be made available to the public ... unless a person
 - Precisely identifies the information which is considered confidential, and
 - Provides sufficient documentation allowing the Control Officer to determine if the information is a trade secret.
- Trade secret means
 - Reasonable measures have been taken to prevent disclosure
 - The information is not reasonable obtainable without consent
 - No statute requires disclosure of the information to the public
 - The person has shown that disclosure is likely to cause substantial harm to the business's competitive position.

Confidential Data

- To identify data as confidential, select confidential (next to throughput) and add a justification

Process & Emissions Detail

▶ PRC010: Source Classification Code (SCC) is 4-02-999-98

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24
Maximum Days Per Week: 7
Maximum Weeks Per Year: 52
Actual Hours: 8,760.00

Winter (Jan-Feb, Dec)%: 25
Spring (Mar-May)%: 25
Summer (Jun-Aug)%: 25
Fall (Sep-Nov)%: 25

Select Only One	Material	Action	Throughput	Confidential	Units
	Coating	Processed		<input type="checkbox"/>	TONS
selected	Material	Processed	50000	<input checked="" type="checkbox"/> Justification	GALLONS
	Solvent	Used		<input type="checkbox"/>	TONS

Variable Amount in Material Units & Meaning

The variables table is empty because there are no variables in the formula associated with the FIRE rows for this process.

▶ Explanation

▶ Explanation

Confidential Data

- Select “Emissions”
- Enter fugitive and stack emissions
- Add an explanation

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Explanation
					Fugitive Amount	Stack Amount	Total	
PM Primary (includes filterables > 10 microns + condensibles)	Emissions				0	0		TONS add
PM10 Primary (includes filterables + condensibles)	Emissions				0	0		TONS add
PM2.5 Primary (includes filterables + condensibles)	Emissions				0	0		TONS add
CO - Carbon Monoxide	Emissions				0	0		TONS add
NOx - Nitrogen Oxides	Emissions				0	0		TONS add
SO2 - Sulfur Dioxide	Emissions				0	0		TONS add
VOC - Volatile Organic Compounds	Emissions				0	67.5		TONS trade secret
Ammonia	Emissions				0	0		TONS add

The following information was developed using (Arizona) DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the (Arizona) DEQ. You may modify these (Arizona) DEQ-generated emission calculations if you have more accurate information.

Select	Pollutant	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Explanation
						Fugitive Amount	Stack Amount	Total	
<input type="checkbox"/>	Toluene	Emissions					67.5		TONS trade secret

Confidential Data

- Upload two emission calculation documents
 - Trade Secret (contains confidential data)
 - Public Document (confidential data must be redacted)
- Upload a letter
 - Justify that confidential data is a trade secret (as defined in A.R.S.)

Final Steps

- Review the emissions inventory summary

Emissions Inventory Summary

▼ Explanation

- Use the Exclude/Include Emissions Units button to indicate which emissions units:
 - Did not operate at all during the year
 - Emitted less than the reporting requirement
 - Do require detailed emissions inventory reporting
- For each Emissions Process that requires detailed emissions inventory reporting, navigate to that Process and provide the necessary information
- Attach any files needed to support the reported emissions

Regulatory Requirement(s): Non-Title V Program
Date inventory received:

Final Steps

- Add notes
- Attach calculation spreadsheets, trade secret documents, public documents, and supporting information

Attachments

Attachment ID	Attachment Type	Description	Trade Secret Document	Trade Secret Justification	Uploaded By	Upload Date
4	Calculations	VOC	None Provided	N/A	Beck, Kristi	3/2/2020

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To Delete the attachment, or to Edit attachment description, click in the Attachment ID column.

Reason/Explanation for Emissions Inventory Revision

Showing how to validate

Notes

Note ID	Note	User Name	Date
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[Data Entry Wizard](#) [Edit](#) [Exclude/Include Emissions Units](#) [Validate](#) [Delete Inventory](#) [Create Revised Emissions Inventory](#) [OnBase Documents](#)

[Show Associated Facility Inventory](#) [Associate with Different Facility Inventory](#) [Compare Emissions Inventories](#) [Download/Print](#) [Show Fee Details](#)

- Validate

Correct Errors

- Click message to go to error location

Severity	EU ID	Message
ERROR	ABS001	P:PRC001:Emissions values missing for PM10 Primary (includes filterables + condensibles)
ERROR	ABS001	P:PRC001:Emissions values missing for CO - Carbon Monoxide
ERROR	ABS001	Attribute: P:PRC001:Schedule: Actual Hours is not set.
ERROR	ABS001	P:PRC001:No Material Selected
ERROR	ABS001	P:PRC001:Emissions values missing for SO2 - Sulfur Dioxide
ERROR	ABS001	P:PRC001:Emissions values missing for PM2.5 Primary (includes filterables + condensibles)
ERROR	ABS001	P:PRC001:Emissions values missing for NOx - Nitrogen Oxides
ERROR	ABS001	P:PRC001:Emissions values missing for PM Primary (includes filterables > 10 microns + condensibles)
ERROR	ABS001	P:PRC001:Emissions values missing for VOC - Volatile Organic Compounds
ERROR	ABS001	P:PRC001:Emissions values missing for Ammonia

▶ PRC001: Source Classification Code (SCC) is 3-09-002-01

▼ Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 24
 Maximum Days Per Week: 7
 Maximum Weeks Per Year: 52
 Actual Hours:

Winter (Jan-Feb, Dec)%: 25
 Spring (Mar-May)%: 25
 Summer (Jun-Aug)%: 25
 Fall (Sep-Nov)%: 25

Select Only One	Material Action	Throughput	Confidential Units
pending	Abrasive Consumed	<input type="checkbox"/>	TONS
pending	Material Processed	<input type="checkbox"/>	FEET
pending	Unit Processed	<input type="checkbox"/>	EACH

Variable Amount in Material Units & Meaning

The variables table is empty because there are no variables in the formula associated with the FIRE rows for this process.

▼ Explanation

To complete emissions reporting for this process, you have to provide values above for **Schedule**, **Season Percents** and **Material Throughput** in the units specified by **Units**. If there is a choice of more than one **Material**, you must select which is most appropriate, otherwise no action is needed on your part. The word pending appears each place a value is needed.

▶ Explanation

[Edit Material/Schedule/Seasons](#)

▼ Process Emissions

Criteria Air Pollutants/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Total Units	Explanation
					Fugitive Amount	Stack Amount			
Pollutant									
PM Primary (includes filterables > 10 microns + condensibles)	Throughput-based factor	0	pending					TONS	
PM10 Primary (includes filterables + condensibles)	Throughput-based factor	0	pending					TONS	
PM2.5 Primary (includes filterables + condensibles)	Throughput-based factor	0	pending					TONS	
CO - Carbon Monoxide	Throughput-based factor	0	pending					TONS	
NOx - Nitrogen Oxides	Throughput-based factor	0	pending					TONS	
SO2 - Sulfur Dioxide	Throughput-based factor	0	pending					TONS	
VOC - Volatile Organic Compounds	Throughput-based factor	0	pending					TONS	
Ammonia	Throughput-based factor	0	pending					TONS	

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The following information was developed using {Arizona} DEQ-generated pollutant emission calculations. The values may be provided to USEPA by the {Arizona} DEQ. You may modify these {Arizona} DEQ-generated emission calculations if you have more accurate information.

Hazardous Air Pollutants/Greenhouse Gases/Other	Method Used	Hours Uncontrolled	Uncontrolled Emissions Factor (Lbs/Throughput Units)	Time-based Factor (LBS/Hour)	Emissions Reported			Total Units	Explanation
					Fugitive Amount	Stack Amount			
Pollutant									

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[Edit Emissions](#)

- Correct errors
- Validate again

Validated

- Green ✓ - ready to submit

✓ E100001

- ENG001
 - PRC001
- ENG002
 - PRC002
- SVC001
 - PRC003

Emissions Inventory Summary

Explanation

- Use the Exclude/Include Emissions Units button to indicate which emissions units:
 - Did not operate at all during the year
 - Emitted less than the reporting requirement
 - Do require detailed emissions inventory reporting
- For each Emissions Process that requires detailed emissions inventory reporting, navigate to that Process and provide the necessary information
- Attach any files needed to support the reported emissions

Regulatory Requirement(s): Non-Title V Program

Date inventory received:

Submit

- Green ✓ - ready to submit
 - Save a copy
 - preparer or certifier
 - Submit the inventory
 - certifier only
 - Title V facilities only
 - Pay the emission fee
 - Online with a credit card
 - Print an invoice and submit with a check

Questions



Thank you.

EmissionsInventory@Maricopa.gov

602-506-6790