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Reporting Emissions from Concrete Batch Plants

Emissions Inventory Help Sheet

Maricopa County Air Quality Department

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What to Report

Facilities with concrete batch plants should report all particulate matter (PM) primary, PM₁₀ primary, and PM_{2.5} primary emissions from material handling, crushing and screening, silo loading, truck or mixer loading, and storage piles.

PM primary refers to all of the particulate matter emissions (filterable and condensable) from an emissions process. PM₁₀ primary refers to all PM primary that measures less than 10 microns in diameter. PM_{2.5} primary refers to all PM primary that measures less than 2.5 microns in diameter. PM₁₀ and PM_{2.5} primary are subsets of PM primary.

Some concrete batch plants may also have emissions from other types of equipment, such as solvent cleaning, fuel burning, gasoline storage, non-vehicle internal combustion engines, and vehicle travel on unpaved roads that need to be reported. Refer to the applicable process specific help sheets for instructions on how to report emissions from other types of equipment.

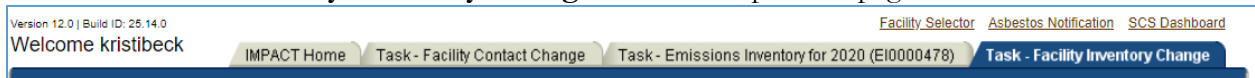
How to Report

This help sheet provides emissions inventory preparers information on how to accurately report emissions from concrete plants in the AQD Online Portal. First, preparers will use the “Task-Facility Inventory Change” tab to structure the emission units, processes, and control equipment. Then, preparers will use the “Task-Emissions Inventory” tab to enter the operating schedule, throughput, and emissions factors for each process.

Task – Facility Inventory Change

Step 1

Click on the **Task-Facility Inventory Change** tab at the top of the page.



Step 2 – Emission Units

Verify that the facility inventory tree shows all the of the emission units at the facility.

Concrete batch plants typically have the following emission units:

Emission Unit Type	Emission Unit Description
Material Handling (MAT)	Aggregate ground storage Sand ground storage Weigh hopper
Crushing/Screening/Handling (CSH)	Conveyor(s) Elevated storage bin(s)

Emission Unit Type	Emission Unit Description
Storage Tank/Silo (TNK)	Cement silos Cement supplement (such as fly ash) silos
Concrete Batch / Cement Mixer (CMX)	Cement mixer (central mix) Concrete batch plant (truck mix)
Open Air Fugitive Source (FUG)	Storage Piles Unpaved roads – Light duty vehicles Unpaved roads – Medium duty vehicles Unpaved roads – Heavy duty vehicles

To add an emission unit to the facility inventory tree, click on the **Facility ID** at the top of the Facility Inventory Tree on the left side of the page. Click **Create Emission Unit** at the bottom of the page.

The screenshot displays a web interface for facility management. On the left, a 'Collapse Facility Tree' button is visible above a tree view containing 'F006332' (highlighted with a red box) and 'GIN001'. The main area is titled 'Facility Information' and contains the following details:

- Facility ID: F006332
- Facility Name: AQ Production Validation
- Facility Description: Record created for validation of production environment.
- Facility Class: Minor
- Facility Type: Other (Unknown)
- Associated Monitor Group ID:
- Operating Status: Operating
- AFS:
- Number of Employees:
- Department:

Below the information are expandable sections for 'Annual Administrative Fee', 'Location', and 'NAICS'. At the bottom, a row of buttons includes 'Edit', 'Validate', 'Submit', 'Download/Print Detail', 'Print Facility Tree', and 'Create Emissions Unit' (highlighted with a red box), along with 'Create Control Equipment' and 'Create Release Point'.

Select the **Emission Unit Type**, complete the required Emission Unit Information and click **Save**.

Emissions Unit Information

AQD ID:

* Emission Unit Type: Crushing/Screening/Handling [Help me select the Emission Unit Type](#)

AQD Description:

* Company Equipment ID:

* Company Equipment Description:

* Operating Status: Operating

* Quantity:
Enter a value greater than 1 only in the scenario where you have multiple "identical" emission units that have the same emissions process and whose air flow follows the same path.

* Initial Construction Commencement Date:

* Initial Operation Commencement Date:

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

Emission Unit Type Specific Information

* Type of Unit: Screening

* Maximum Annual Throughput: * Units: tons/yr

* Model Name and Number:

Serial Number Tracking

Row Id	Manufacturer Name	Serial Number	Effective Date
<input type="button" value="Add"/> <input type="button" value="Printable view"/> <input type="button" value="Export to excel"/>			

*There must be at least one entry in the Serial Number Tracking table. The first serial number entered in this table should have an effective date that is the same as the initial operation date.

Permitted Emissions

This table is populated by AQD staff based on established/permitted emission limits. It is shown here for informational purposes only.

Pollutant	Potential Emissions		Allowable Emissions		Comments
	Lbs/Hour	Tons/Year	Lbs/Hour	Tons/Year	
<input type="button" value="Printable view"/> <input type="button" value="Export to excel"/>					

The **initial construction commencement date** is the date when construction or installation of the emission unit began.

The **initial operation commencement date** is the date when the facility began operating the emission unit.

Step 3 – Emission Processes

Each emission unit will have one or more emissions process. Use the following source classification codes (SCC), as applicable, depending on the type of process.

Concrete batch plants typically have the following emissions processes:

Emission Unit Description	Process Description	SCC
Aggregate ground storage	Aggregate delivery to ground storage	30501121
Sand ground storage	Sand delivery to ground storage	30501122
Weigh hopper	Weigh hopper loading of sand and aggregate	30501108
Conveyor(s)	Aggregate transfer to conveyor	30501123
	Sand transfer to conveyor	30501124
Elevated storage bin(s)	Aggregate transfer to elevated storage bin	30501104
	Sand transfer to elevated storage bin	30501105
Cement silo(s)	Cement pneumatic transfer to elevated silo	30501107
Cement supplement (such as fly ash) silo(s)	Cement supplement (such as fly ash) pneumatic transfer to elevated silo	30501117
Cement mixer (central mix)	Mixer loading (central mix)	30501109
Concrete batch plant (truck mix)	Truck loading (truck mix)	30501110
Storage Piles	Sand and aggregate storage piles	30502507
Unpaved roads – Light duty vehicles	Light duty vehicles on unpaved roads	30502504
Unpaved roads – Medium duty vehicles	Medium duty vehicles on unpaved roads	30502504
Unpaved roads – Heavy duty vehicles	Heavy duty vehicles on unpaved roads	30502504

If one of the emissions processes is not listed, click on the **Emission Unit ID** in the **Facility Inventory Tree** on the left side of the screen. Click **Create Emissions Process** at the bottom of the screen.

Emissions Unit Information

AQD ID: CSH001

Emission Unit Type: Crushing/Screening/Handling [Help me select the Emission Unit Type](#)

AQD Description:

Company Equipment ID: CSH001

Company Equipment Description: Screening emission unit.

Operating Status: Operating

Quantity: 1
Enter a value greater than 1 only in the scenario where you have multiple "identical" emission units that have the same emissions process and whose air flow follows the same path.

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: Screening

Maximum Annual Throughput: 10000000 Units: tons/yr

Model Name and Number: Model 99999

Serial Number Tracking

Row Id	Manufacturer Name	Serial Number	Effective
<input type="button" value="Add"/> <input type="button" value="Printable view"/> <input type="button" value="Export to excel"/>			

*There must be at least one entry in the Serial Number Tracking table. The first serial number entered in this table should have an effective initial operation date.

Permitted Emissions

This table is populated by AQD staff based on established/permitted emission limits. It is shown here for informational purposes

Pollutant	Potential Emissions		Allowable Emissions	
	Lbs/Hour	Tons/Year	Lbs/Hour	Tons/Year
<input type="button" value="Printable view"/> <input type="button" value="Export to excel"/>				

Enter the Process Name, Company Process Description, the applicable SCC, and click **Save**.

The screenshot shows a software window titled "Process Information". On the left is an "Expand Facility Tree" with nodes F006332, CSH001, and GIN001. The main area contains the following fields:

- Process ID: (empty)
- Process Name: Rock product screening
- Company Process Description: Screening with watering
- * Source Classification Code (SCC): 30502511

Below the SCC field is a note: "Enter as 1-22-333-44 or 12233344". There are two buttons: "Select SCC through cascading levels" and "search SCCs by keyword". At the bottom are "Save" and "Cancel" buttons.

Step 4 – Control Equipment

Fugitive Dust Suppression

If water or dust suppressants are used to control fugitive dust emissions from the concrete batch plant, and the plant is in full compliance with the recordkeeping requirements in Rule 316 (Nonmetallic Mineral Processing), there should be one “Fugitive Dust Suppression (FDS)” control equipment associated with each emissions process that is controlled by water or dust suppressants.

Control Equipment	Design Control Efficiency	Operating Control Efficiency	Capture Efficiency ¹
Fugitive Dust Suppression	90%	90%	100%

FDS control equipment is commonly used to control the following emissions processes:

- Aggregate delivery to ground storage
- Sand delivery to ground storage
- Weigh hopper loading of sand and aggregate
- Aggregate transfer to conveyor
- Sand transfer to conveyor
- Aggregate transfer into elevated storage bin
- Sand transfer into elevated storage bin
- Sand and aggregate storage piles
- Light duty vehicles on unpaved roads
- Medium duty vehicles on unpaved roads
- Heavy duty vehicles on unpaved roads

Baghouses

If baghouses are used to control emissions from the cement and supplement silos, each baghouse should be created as one “Filter / Baghouse (BAG)” control equipment and associated with the emissions process the baghouse controls:

- Cement pneumatic transfer to elevated silo
- Cement supplement (such as fly ash) pneumatic transfer to elevated silo

¹ If controls are used continuously, capture efficiency is assumed to be 100%.

Controlled Process	Design Control Efficiency	Operating Control Efficiency ²	Capture Efficiency ³
Cement Silo Loading	99.9%	99.9%	100%
Cement Supplement Silo Loading	99.7%	99.7%	100%

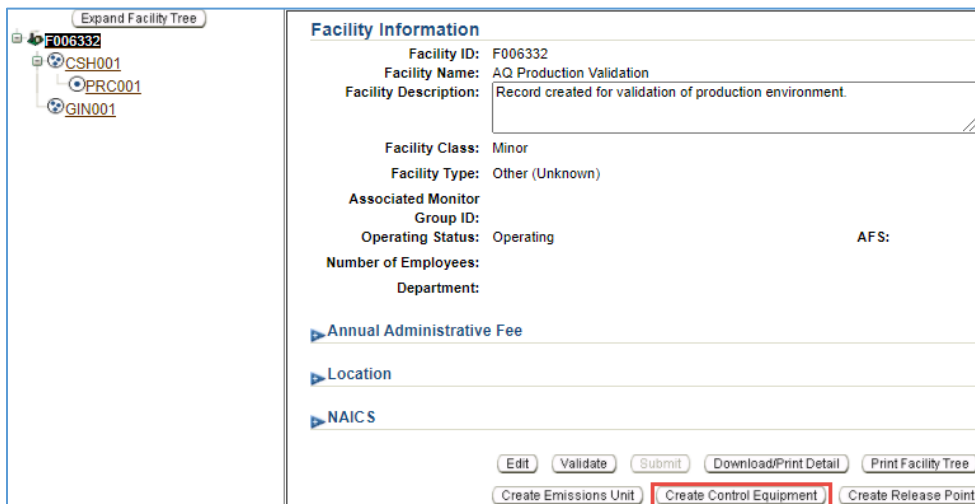
Mixer Loading Controls

If mixer loading is controlled, create control equipment and associate it with the mixer loading process. If mixer loading emissions are controlled with water, the control equipment type is “Fugitive Dust Suppression.” If mixer loading emissions are controlled with a baghouse, the control equipment type is “Filter / Baghouse.” If mixer loading emissions are controlled with a fill tube, or an enclosure, the control equipment type is “Other.”

Type of Mixer Loading	Design Control Efficiency	Operating Control Efficiency ²	Capture Efficiency ³
Central Mix	96.8%	96.8%	100%
Truck Mix	91.2%	91.2%	100%

Adding Control Equipment

If the necessary control equipment is not in the facility inventory tree, click on the **Facility ID** at the top of the Facility Inventory Tree on the left side of the page. Click **Create Control Equipment** at the bottom of the page.



² Operating control efficiency estimated using controlled and uncontrolled emission factors in AP-42, Table 11.12-2: Emission Factors for Concrete Batching (English Units).

³ If controls are used continuously, capture efficiency is assumed to be 100%.

Complete the **Control Equipment Information**. Click **Add Pollutant** two times. Select PM primary, PM₁₀ primary, and PM_{2.5} primary in the pollutant drop down list. Enter the design control efficiency, operating control efficiency, and capture efficiency for PM primary and PM₁₀ primary, and click **Save**.

Control Equipment Information

* Control Equipment Type: Filter/Baghouse
AQD ID:
AQD Description:

* Company Control Equipment ID: CP1
 * Company Control Equipment Description: Crushing Plant Baghouse #1
 * Operating Status: Operating
 Initial Installation Date: 1/1/1987

Manufacturer Name: _____ Model Name and Number: _____

Control Equipment Type Specific Information

Filter/Baghouse Type : _____
 Pressure Type : positive negative
 Fabric Cleaning Mechanism : _____
 Operating Pressure Drop Range (inches of water) : _____
 Lime Injection/fabric Coating Agent : Yes No
 Lime Injection/Fabric Coating Agent Type : _____
 Lime Injection/Fabric Coating Feed Rate - specify units : _____
 Bag Leak Detection System : Yes No
 Inlet Gas Temp (F) : _____
 Number of Bags : _____
 Sec. Outlet Gas Temp (F) : _____
 Inlet Gas Flow Rate (dscfm) : _____
 Outlet Gas Flow Rate (dscfm) : _____

Pollutants Controlled

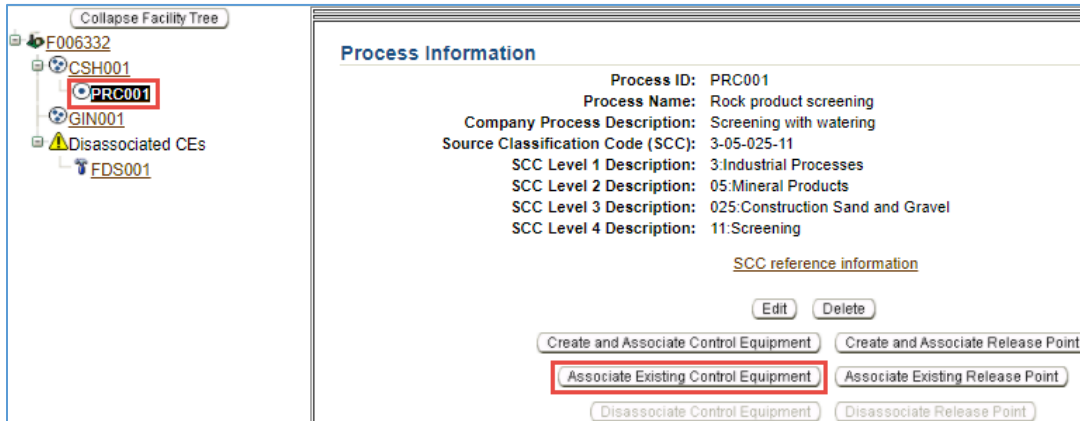
Explanation
*You must specify at least one pollutant in the Pollutants Controlled table
[Select All](#) | [Select None](#)

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

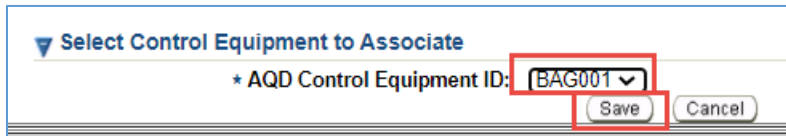
Add Pollutant
Delete Selected Pollutants
Printable view
Export to excel

Save
Cancel

To associate the control equipment, click on the emissions process it controls (**PRC001**) and click **Associate Existing Control Equipment**.



Select the **Control Equipment ID** and click **Save**.



Step 5

Validate Facility Inventory Changes

Once you have finished adding emissions units, processes and control devices, you must validate the “Task – Facility Inventory Change.” Click on the **Facility ID** at the top of the Facility Inventory Tree. At the bottom of the Facility Information screen, click **Validate**.

Facility Information	
Facility ID:	F006332
Facility Name:	AQ Production Validation
Facility Description:	Record created for validation of production environment.
Facility Class:	Minor
Facility Type:	Other (Unknown)
Associated Monitor Group ID:	
Operating Status:	Operating
Number of Employees:	
Department:	
▶ Annual Administrative Fee	
▶ Location	
▶ NAICS	
<input type="button" value="Edit"/> <input type="button" value="Validate"/> <input type="button" value="Submit"/> <input type="button" value="Download/Print Detail"/> <input type="button" value="Print Facility Tree"/>	
<input type="button" value="Create Emissions Unit"/> <input type="button" value="Create Control Equipment"/> <input type="button" value="Create Release Point"/>	

If there are errors that need to be corrected, a pop-up window will appear. Click on the error message to be directed to the screen that contains the error that must be corrected. Correct all errors and repeat Step 5 to validate the facility inventory changes.

Severity	EU ID	Message
ERROR		Control Equipment [PAF001]: Attribute Change Frequency - specify units is not set.

Task – Emissions Inventory for Reporting Year

Step 1

Click on the **Task-Emissions Inventory** tab at the top of the page.

Version 12.0 | Build ID: 25.14.0

Welcome kristibeck

[Facility Selector](#)
[Asbestos Notification](#)
[SCS Dashboard](#)

Step 2

Emissions from similar types of equipment can be reported on a single process. For example, a facility with two cement silos will frequently track the total amount of cement delivered instead of the amount of cement delivered to each silo. In these instances, emissions from similar pieces of equipment can be reported on a single process.

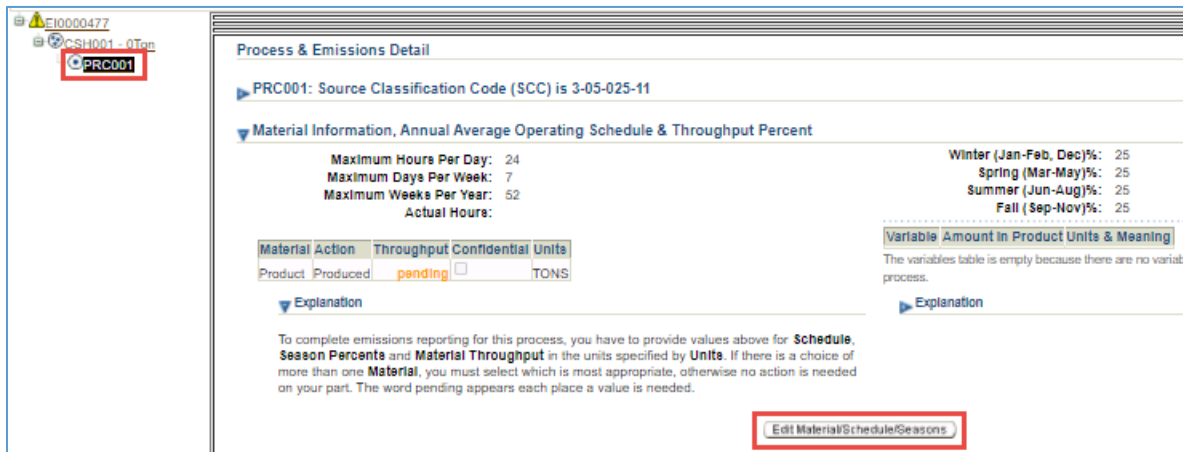
To report emissions from multiple emission units under one process, click **Exclude/Include Emission Units** at the bottom of the page. Mark one emission unit of each type (i.e., one cement silo) as **Detailed Emissions Reporting**. Mark other cement silo emission units as **Reported Under Another Emission Unit**. In the drop down, select the cement silo emission unit where emissions will be reported, click **Save**.

The following example shows a facility that has three sets of conveyors (CSH004, CSH005, and CSH006). Conveyor emissions will be reported under CSH004, so it is marked as **Detailed Emissions Reporting**, and the other conveyor emission units are marked as **Reported Under CSH004**.

Emission Unit	Company Equipment ID	Detailed Emissions	Exclude Detailed Emissions Reporting
CSH001	S1	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
CSH002	C32	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH003 ▼
CSH003	C1	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
CSH004	CB	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
CSH005	CB2	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH004 ▼
CSH006	CB3	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH004 ▼
CSH007	C4	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH003 ▼
CSH008	C5	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH003 ▼
CSH009	C6	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH003 ▼
CSH010	S2	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input checked="" type="radio"/> Reported Under Another EU CSH001 ▼
FUG001	Stockpiles	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
MAT001	Mining	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
MAT002	Mining	<input checked="" type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU
SVC001	999999	<input type="checkbox"/>	<input type="radio"/> Less Than Reporting Requirement <input checked="" type="radio"/> Did Not Operate <input type="radio"/> Reported Under Another EU

Step 3

Click **PRC001** in the Emissions Inventory Tree on the left side of the screen. Click **Edit Material/Schedule/Seasons** in the middle of the screen.



1. Click the triangle next to the Process ID at the top of the page to see the SCC and the Company Process Description.
2. Enter the **maximum number of hours per day**, **maximum number of days per week**, and the **maximum number of weeks per year** the emissions process operated.
3. Enter the annual **actual hours** of operation for the emissions process.
4. Enter the material **throughput**.

Process Description	Throughput Material	Throughput Units
Aggregate delivery to ground storage	Aggregate	Tons
Sand delivery to ground storage	Sand	Tons
Aggregate transfer to conveyor	Aggregate	Tons
Sand transfer to conveyor	Sand	Tons
Aggregate transfer into elev. storage bin	Aggregate	Tons
Sand transfer into elevated storage bin	Sand	Tons
Sand and aggregate storage piles	Stockpile Area	Acres
Cement pneumatic transfer to elevated silo	Cement	Tons
Cement supplement (such as fly ash) pneumatic transfer to elevated silo	Cement Supplement	Tons

Process Description	Throughput Material	Throughput Units
Weigh hopper loading of sand and aggregate	Sand + Aggregate	Tons
Central mix - mixer loading	Cement + Cement Supplement	Tons
Truck mix – truck loading	Cement + Cement Supplement	Tons

5. Click **Save**.

RC001: Source Classification Code (SCC) is 3-05-025-11

SCC Level 1: 3:Industrial Processes
 SCC Level 2: 05:Mineral Products
 SCC Level 3: 025:Construction Sand and Gravel
 SCC Level 4: 11:Screening

Process Name: Rock product screening
 Company Process Description: Screening with watering

Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day:	24	+ Winter (Jan-Feb, Dec)%:	25
Maximum Days Per Week:	7	+ Spring (Mar-May)%:	25
Maximum Weeks Per Year:	52	+ Summer (Jun-Aug)%:	25
+ Actual Hours:		+ Fall (Sep-Nov)%:	25

Material Action: Throughput Confidential Units
 Product Produce: TONS

Variable Amount in Product Units & Meaning
 The variables table is empty because there are no variables in the 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.

Step 4

Click **Edit Emissions** at the bottom of the screen.

Process Emissions

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

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 have more accurate information.

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

Edit Emissions

Reporting Criteria Air Pollutant Emissions

1. Enter the **Hours Uncontrolled** for each pollutant. If emissions of a pollutant are not controlled, then hours uncontrolled should be equal to actual hours. If emissions of a pollutant were controlled continuously throughout the reporting year, enter zero (0) for hours uncontrolled.
2. Enter emissions factors from the table below in the **Uncontrolled Emissions Factor** column. For pollutants not emitted from the processes listed below (carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds, and ammonia) enter zero (0) as the emissions factor.

Process Description	SCC	Emissions Factors ⁴			Emissions Factor Unit
		PM	PM ₁₀	PM _{2.5} ⁵	
Aggregate delivery to ground storage ⁶	30501121	0.0069	0.0033	0.00099	lb/ton
Sand delivery to ground storage ⁶	30501122	0.0021	0.00099	0.000297	lb/ton
Aggregate transfer to conveyor ⁶	30501123	0.0069	0.0033	0.00099	lb/ton
Sand transfer to conveyor ⁶	30501124	0.0021	0.00099	0.000297	lb/ton
Aggregate transfer into elevated storage bin ⁶	30501104	0.0069	0.0033	0.00099	lb/ton
Sand transfer into elevated storage bin ⁶	30501105	0.0021	0.00099	0.000297	lb/ton
Sand and aggregate storage piles ⁶	30502507	630	630	189	lb/acre-year
Cement pneumatic transfer to elevated silo ⁷	30501107	0.73	0.47	0.141	lb/ton
Cement supplement (such as fly ash) pneumatic transfer to elevated silo ⁷	30501117	3.14	1.1	0.33	lb/ton
Weigh hopper loading of sand and aggregate ⁶	30501108	0.0048	0.0028	0.00084	lb/ton
Central mix - mixer loading ⁷	30501109	0.572	0.156	0.0468	lb/ton
Truck mix – truck loading ⁷	30501110	1.118	0.31	0.093	lb/ton

The screenshot shows the 'Process Emissions' interface. It features a table with the following columns: Criteria Air Pollutants/Other, Method Used, Hours Uncontrolled, Uncontrolled Emissions Factor (Lbs/Throughput Units), Time-based Factor (LBS/Hour), Fugitive Amount, Stack Amount, Total, Units, and Explanation. The 'Hours Uncontrolled' and 'Uncontrolled Emissions Factor' columns are highlighted with a red box. The 'Save' button at the bottom is also highlighted with a red box.

Step 5

Click **Save** at the bottom of the screen. The AQD Online Portal will calculate emissions based on the throughput, the emissions factors provided, and the control efficiency specified for control equipment associated with the emissions process.

⁴ EPA. 2011. Compilation of Air Pollutant Emissions Factors AP-42, Table 11.12-2: Emission Factors for Concrete Batching.

⁵ SCAQMD. 2006. Methodology to Calculate PM_{2.5}: Mineral Products (Crushing, Screening, Blasting, Loading, and Unloading).

⁶ If water or dust suppressants are in use for the process and the site is in full compliance with the record keeping requirements Rule 316 (Nonmetallic Mineral Mining and Processing) add control equipment (fugitive dust suppression) to the process and enter the capture efficiency and control efficiency for PM, PM₁₀, and PM_{2.5}.

⁷ If the silo or mixer loading operations are controlled, associate the control equipment with the emissions process and enter the capture and control efficiency for PM, PM₁₀, and PM_{2.5}.

Step 6

Repeat steps 3 and 4 to report all emissions processes at the facility. Refer to other process specific help sheets at maricopa.gov/5628 for emissions processes that are not discussed in this document.

Step 7

When emissions have been reported for each emissions process that occurs at the facility, refer to Task 5 on page 26 of the Emissions Inventory Instructions to validate and submit the emissions inventory. The Emissions Inventory Instructions are available at maricopa.gov/5628.

Example

The following example shows emissions from a controlled central mix loading process that used 17,500 tons of cement and 2,500 tons of fly ash.

Enter Capture and Control Efficiency

Expand Facility Tree

- [-] F006332
 - [+] CMX001
 - [+] PRC049
 - [+] OTH002
 - [+] Shutdown EUs
 - [+] Disassociated CEs
 - [+] Disassociated R. Points

Control Equipment Information

AQD ID: OTH002

Control Equipment Type: Other

AQD Description:

Company Control Equipment ID: DC1

Company Control Equipment Description: Dust Collector

Operating Status: Operating

Initial Installation Date:

Manufacturer Name: Model Name and Number:

Control Equipment Type Specific Information

Pollutants Controlled

Explanation

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

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
PM Primary (includes filterables > 10 microns + condensibles)	96.8	96.8	100	96.8
PM10 Primary (includes filterables + condensibles)	96.8	96.8	100	96.8
PM2.5 Primary (includes filterables + condensibles)	96.8	96.8	100	96.8

Enter Operational Data and Emission Factors

Throughput = 17,500 tons + 2,500 tons = 20,000 tons

The screenshot displays the 'Process & Emissions Detail' page for process PRC049. The process name is 'Mixer Loading' and the company process description is 'Central mix controlled with a dust collector'. The source classification code (SCC) is 3-05-011-09. The process is categorized under SCC Level 1: 3 Industrial Processes, SCC Level 2: 05 Mineral Products, SCC Level 3: 011 Concrete Batching, and SCC Level 4: 09 Mixer Loading of Cement/Sand/Aggregate.

Material Information, Annual Average Operating Schedule & Throughput Percent

Maximum Hours Per Day: 12
 Maximum Days Per Week: 5
 Maximum Weeks Per Year: 50
 Actual Hours: 3,000.00

Seasonal breakdown:
 Winter (Jan-Feb, Dec)?: 26
 Spring (Mar-May)?: 25
 Summer (Jun-Aug)?: 24
 Fall (Sep-Nov)?: 25

Material Action: Throughput Confidential Units
 Material Processed: 20000 TONS

Process Emissions

Criteria Air Pollutants/Other	Method Used	Uncontrolled Emissions		Emissions Reported			Explanation
		Hours (Uncontrolled)	Factor (Lbs/Throughput Units) (LBS/Hour)	Fugitive Amount	Stack Amount	Total Units	
PM Primary (includes filterables > 10 microns + condensables)	Throughput-based factor Uncontrolled factor input by user.	0	0.572	366.06	0	366.06 POUNDS	
PM10 Primary (includes filterables + condensables)	Throughput-based factor Uncontrolled factor input by user.	0	0.156	99.84	0	99.84 POUNDS	
PM2.5 Primary (includes filterables + condensables)	Throughput-based factor Uncontrolled factor input by user.	0	0.0468	29.952	0	29.952 POUNDS	
CO - Carbon Monoxide	Throughput-based factor Uncontrolled factor input by user.	0	0	0	0	0 TONS	
NOx - Nitrogen Oxides	Throughput-based factor Uncontrolled factor input by user.	0	0	0	0	0 TONS	
SO2 - Sulfur Dioxide	Throughput-based factor Uncontrolled factor input by user.	0	0	0	0	0 TONS	
VOC - Volatile Organic Compounds	Throughput-based factor Uncontrolled factor input by user.	0	0	0	0	0 TONS	
Ammonia	Throughput-based factor Uncontrolled factor input by user.	0	0	0	0	0 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	Method Used	Uncontrolled Emissions		Emissions Reported			Explanation
		Hours (Uncontrolled)	Factor (Lbs/Throughput Units) (LBS/Hour)	Fugitive Amount	Stack Amount	Total Units	
Arsenic	Throughput-based factor Available factors: 1	0	2.32E-07	2.32E-06	0	2.32E-06 TONS	
Cadmium	Throughput-based factor Available factors: 1	0	1.10E-08	1.10E-07	0	1.10E-07 TONS	
Chromium	Throughput-based factor Available factors: 1	0	1.42E-06	1.42E-05	0	1.42E-05 TONS	
MN - Manganese	Throughput-based factor Available factors: 1	0	6.12E-05	6.12E-04	0	6.12E-04 TONS	
Nickel	Throughput-based factor Available factors: 1	0	3.28E-06	3.28E-05	0	3.28E-05 TONS	
Pb - Lead	Throughput-based factor Available factors: 1	0	3.82E-07	3.82E-06	0	3.82E-06 TONS	
Phosphorus	Throughput-based factor Available factors: 1	0	2.02E-05	2.02E-04	0	2.02E-04 TONS	

Questions

If you have questions or need assistance with the AQD Online Portal, please contact Emissions Inventory staff at 602-506-6790 or EmissionsInventory@maricopa.gov. Please provide a brief explanation of the question or issue you are encountering and include a screenshot if contacting us via email. If you are encountering errors in the portal, include the following information in your message: the date and time when the error occurred, the browser you were using when the error occurred, and the type of device you were using when the error occurred (i.e., computer, tablet, phone, etc.).

Additional Resources

How to create a Shared CROMERR Services (SCS) electronic signature to access the AQD Online Portal: maricopa.gov/DocumentCenter/View/56270

Emissions inventory instructions and other process specific help sheets:
maricopa.gov/5628

Instructions for permit applications, compliance reports, asbestos notifications, performance test protocols, and other documents that can be submitted through the AQD Online portal:
maricopa.gov/1820
