

ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE AEIQ Instructions

2023

- Please review the instructions below carefully, as some steps have changed.
- If you are completing this questionnaire as a digital spreadsheet workbook, note that each individual form has been given a separate worksheet (which you should be able to navigate between using tabs along bottom of page).
- This is not a Compliance Certification form. Submitting this Annual Emission Inventory Questionnaire does not fulfill your
 obligations to submit a Compliance Certification report and vice versa.
- All forms have been locked so that data can only be entered in the appropriate fields.
- Certain fields will auto populate based on the data you enter.
- If you run into any problems please email EmissionInventory@AZDEQ.gov

STEP 1 FILL-OUT FORM 1.0 - General Facility Information

- Check the boxes next to each form that you complete. This allows us to verify that we have received all of the necessary forms from you.
- If you wish to claim any information as confidential you must state precisely what information is confidential and an explanation as to why this is needed.

STEP 2 COMPLETE each form that applies to your facility

- Fill out each form that matches the equipment at your facility. You may need to fill out more than one form.
- Emission totals will automatically calculate based on the data you enter in to each form. An emission summary is located at the bottom of each form. A complete facility-wide emission summary is located on FORM 1.0.
- Detailed instructions for filling out each form are provided on pages 2 5 of this Readme tab. Also, comments with instructions have been inserted thought the questionnaire. Please provide data for calendar year 2023 only.

STEP 3 SIGN the certification of truth and accuracy

- If you completed your forms digitally, please make sure to save the completed workbook. If you completed them on paper, please scan the completed forms and save them in whatever image format is convenient for you, or else PDF.
- All reports submitted to the Department should be certified true and accurate by the Responsible Official of the facility. This person is the owner or operator of the facility.
- If there is a change of the Responsible Official of the facility, please notify the Department with an additional letter stating the change.

Option 1: wet ink signature

- If you haven't already, print a paper copy of Form 1.0.
- Sign and date beneath the Certification of Truth and Accuracy.
- Scan the signed form and save it as either a PDF or whatever image file format is convenient for you.

Option 2: digital signature

- Save your completed workbook.
- Using your preferred digital signature solution, affix a digital signature and date stamp beneath the Certification of Truth and Accuracy. Depending on the solution you use, you may need to convert the workbook into a PDF first.
- Save your signed copy.

STEP 4 SUBMIT via email

- Address a single email message to EmissionInventory@AZDEQ.gov
- In the subject line, please include the place ID# you listed on Form 1.0. If you are submitting for multiple permits in the same email message, please list all applicable place ID#s in the subject line.
- Enclose both the signed Form 1.0 and the rest of the completed workbook as email attachments, as well as any supporting documents that you wish to include to justify your estimates.
- If you would like confirmation of ADEQ's receipt of your submission, please request it in the message body.
- Please double-check that you have entered the correct email address before sending your message.

NEED ASSISTANCE?

Contact: Nate Simpson Phone: (602) 771-2373

Email: EmissionInventory@azdeq.gov

Version 1.9 Updated: 2/8/2024

General Instructions

- You may need to fill out more than one FORM to complete your annual emission inventory. Fill out each FORM that applies to the equipment operated at your facility.
- If you are filling this form out by hand (i.e. with pencil or pen), you do not need to calculate your emission totals, however
 you should fill out as much as you can (equipment info, activity levels, throughput, etc.) and submit the completed form to
 ADEQ. ADEQ will use this information to calculate your emission totals and contact you if any additional information is
 required.
- The tab '4.0 REFERENCES & CALCS' contains all of the default emission factors and formulas that ADEQ uses to calculate your emission totals. These are provided for reference only.
- You do not need to include any activities or operations that occurred on tribal lands or areas outside of Arizona.
- If the emission totals are not calculating, make sure that Excel is set to automatically calculate. Go to the Formulas tab and under Calculation Options make sure that Automatic is checked.

FORM 2.1 - Generators & Boilers

FORM 2.1 is used to calculate emissions from any generators or boilers at your facility. As most permitted sources generally have at least one emergency generator, it is likely that most users will need to fill out this form. FORM 2.1 requires some basic information, as described below:

Favinment Description	Enter a brief description of the generator or boiler that will help identify that	
Equipment Description	_	

specific piece of equipment.

Enter the equipment ID number associated with that piece of equipment. This

would ideally be the ID number listed in your air quality permit.

ATO # Enter the ATO number assigned to this piece of equipment by ADEQ.

Fuel Type

Select from the drop-down list the fuel used in the generator or boiler. You can

only use a fuel from the list; do not enter anything manually.

Capacity

For generators, enter the maximum capacity (in horsepower). For boilers, enter

the rated capacity (in MMBtu/hr).

Actual Hours Operated Enter the total number of hours that piece of equipment was operated during

the year.

FORM 2.2 - Dry Cleaning

For each month, enter the amount (in gallons) of perchloroethylene (perc) purchased and consumed. This form will only calculate the perc emissions from dry cleaning activities.

NOTE: You will also need to use FORM 2.1 to account for your boiler or generator emissions.

FORM 2.3, FORM 2.4, and FORM 2.5

If you have any questions about FORM 2.3 - COTTON GIN, FORM 2.4 - SOIL VAPOR EXTRACTION, or FORM 2.5 - AIR CURTAIN INCINERATOR, please contact ADEQ.

FORM 2.6 - Rock Products (instruction page 1 of 2)

Form 2.6 should be used by a facility that has an asphalt plant, concrete batch plant, crushing & screening operation or any combination of these three. The form contains several sections: Asphalt Plant, Crushing & Screening Operations,

Concrete Batch Plant, Fugitive Sources, and Location Information. Each section should be filled as applicable.

NOTE: The emission factors used in this form already account for control measures and assume that these control measures are being implemented at the facility.

Asphalt Plant

Enter the amount of material (in tons) processed in the rotary drum dryer. **Rotary Drum Dryer**

> Enter the fuel used in the drum dryer. Choices are: Natural Gas, Diesel/Fuel Oil **Fuel Type**

#2, or Waste/Fuel Oil #6.

Enter the type of control device connected to the drum dryer. Choices are: Control

Fabric filter baghouse or venturi scrubber. Device

Enter the amount of fuel consumed in the asphalt cement heater. Enter gallons **Asphalt Tank Heater**

if you use LPG or Diesel/Fuel Oil #2 or cubic feed if you used Natural Gas. Enter the fuel used in the asphalt cement heater. Choices are: Natural gas,

Fuel Type Liquefied petroleum gas (LPG), or Diesel/Fuel Oil #2.

Enter the amount (in tons) of material loaded into trucks from the asphalt plant. Plant Load-Out

Enter the amount (in tons) of material handled at the asphalt plant. Material **Material Handling**

handling refers to the transfer of material from storage piles using front-end **Operations**

loaders to feed hoppers or other pieces of equipment.

Crushing & Screening Operations

For an emission source, you should report the total amount of material that is processed through that source. For example, under 'Crushers' you should report the total amount of material crushed at your facility. If you have multiple crushers, it will be necessary to add their individual throughputs together and report the grand total. This applies to all of the emission sources listed below, except for conveyor transfer points.

> Enter the total amount (in tons) of material that went through a batch drop Batch Drop Operations process. If there are multiple batch drop locations, enter the total amount of

material that passed through them all.

Enter the total amount (in tons) of material that went through a feed hopper. If **Feed Hoppers**

there are multiple feed hoppers, enter the total amount of material that passed

through them all.

Enter the total amount (in tons) of material crushed at your facility. If there are Crushed

multiple crushers, enter the total amount of material that passed through them

Enter the total amount (in tons) of material screened at your facility. If there are Screened

multiple screens, enter the total amount of material that passed through them

all.

Enter the total amount (in tons) of material that was fine screened at your **Fine Screened**

facility. If there are multiple fine screens, enter the total amount of material

that passed through them all.

Enter the total amount (in tons) of material that was stacked at your facility. If

Stacked there are multiple stackers, enter the total amount of material that passed

through them all.

FORM 2.6 - Rock Products (instruction page 2 of 2)

Conveyor Transfer Points The emission factor for transfer point emissions is based on the amount of material that passes through each conveyor transfer point. Therefore, in order

to estimate emissions, we need 1) the number of transfer points and 2) the amount of material (in tons) that passed through each transfer point.

Use the 7 categories to group transfer points that process the same (or close to the same) amount of material. For example, if there are 2 transfer points that handled 10,000 tons and 7 transfer points that handled 100,000 you would want to put these in two separate rows.

Concrete Batch

The concrete batch section only requires you to enter the total amount (in cubic yards) of concrete produced.

Fugitive Sources

The fugitive source section contains a variety of source categories, which are described in detail below.

Number of Storage Piles Enter the number of storage piles (both sand and aggregate).

Vehicle Miles Traveled on Enter the total vehicle miles traveled (VMT) on unpaved roads. This is for all

Unpaved Roads vehicle types.

Blasting Enter the number of blasts that occurred during the reporting year.

FORM 3.0 & 3.1 - Miscellaneous

FORM 3.0 - MISC EQUIPMENT LIST

FORM 3.0 is used to collect information on your emissions-generating equipment. Only equipment listed in your permit is required to be reported.

FORM 3.0 and 3.1 are provided for facilities whose operations do not fall within one of the general source categories. In this case, you will need to manually complete both forms with the following information:

Equipment Type Enter a brief description of the equipment type. For example, Boiler or Spray

Booth.

Enter the equipment ID number associated with that piece of equipment. This

would ideally be the ID number listed in your air quality permit.

Design Capacity

Enter the design capacity of this equipment along with the units. For example,

10 horsepower or 100 MMBtu/hr.

Hours of Operation Enter how many hours the equipment was operated during the year.

Fuel Type

Select from the drop-down list the fuel used in the dryer. Do not enter anything

manually in this field.

Control Device If a pollution control device is used, enter it's type. For example, Baghouse or

Thermal Oxidizer.

FORM 3.1 - MISC EMISSIONS

FORM 3.1 is used to collect emission information on the equipment listed on FORM 3.0. The Equipment Type and Equipment ID fields should match equipment that is listed on FORM 3.0.

Equipment Type Enter a brief description of the equipment type. For example, Boiler or Spray

Booth.

Equipment ID

Enter the equipment ID number associated with that piece of equipment. This

would ideally be the ID number listed in your air quality permit.

Annual Process Rate Enter the annual process rate for that equipment along with the units. The

units of the process rate should match the units of the emission factor.

Hours of Operation Enter how many hours the equipment was operated during the year.

Pollutant Enter the name of the pollutant that is being calculated.

Enter the emission factor being used to calculate the emission total along with

Emission Factor the units. Keep in mind that the emission factor units should match the process

rate units.

Emission Factor Enter the source of the emission factor. For example, AP-42 or Stack Test

Reference Results.

Pollutant Control Device If a control device is used for a specific pollutant, enter it's type.

Control EfficiencyIf a control device is used for a specific pollutant, enter that control device's

control efficiency.

Actual Emissions Enter the total emissions (in tons).



FORM 1.0 - GENERAL FACILITY INFORMATION

2023

FACILITY NAME				QUESTIONNAIRI	PLACE ID#		PERMIT# or LTF#	
FACILITY ADDRESS	5				CITY		STATE	ZIP CODE
FACILITY CONTACT	Т		TITLE			PHONE #		
E-MAIL								
PRODUCT/PRINCI	PAL ACTIVITY			NAICS		NUMBER OF EMP	LOYEES	
FORMS COMP	LETED (mark alı	that apply):						
Please note, und	Generators & Boilers Dry Cleaning Cotton Gin Soil Vapor Extraction Air Curtain Incinerators Rock Products Misc Equipment Misc Emissions							
 The chemica The existence If you do wish 	nd address of any I constituents, co e or level of a co to claim confide information wo	encentrations an acentration of ar entiality on any	d amounts of and n air pollutant in r remaining por	the environment tions of the rep	:. ort, you must a	attach a detaileo		
PARENT COMPAN	Y NAME							
MAILING ADDRESS	S				CITY		STATE	ZIP CODE
CONTACT NAME			CONTACT TITLE		CONTACT E-MAIL			
			TOTAL FACILIT	Y EMISSIONS (T	ONS PER YEAR			
PM ₁₀	PM _{2.5}	NOx	SOx	VOC	CO	HAPs	LEAD	NH ₃
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
				FION OF TRUTH 8			,	
I certify that bas and complete.	ed on informatio	n and belief forn	ned after reasond	able inquiry, the s	tatements and ir	nformation in the	document are ti	ue, accurate,
SIGNATURE OF RESP	ONSIBLE OFFICIAL						DATE	
Χ								
PRINTED NAME					TITLE			
Email complet	ed and signed	form to Emissi	onInventory@a	azdeq.gov				



FORM 2.1 - GENERATORS & BOILERS

2023

		FACILITY NAMI	E		PLAC	E ID#	PERMIT#	f or LTF#
		0			()	()
			EQUIP	MENT INFORM	ATION			
GENERATORS	Equipment	Description	Equipment ID	ATO#	Fuel	Туре	Max. Capacity (HP)	Actual Hour Operated
#1								
#2								
#3								
#4								
#5								
#6								
#7								
#8								
#9								
#10								
#11								
#12								
#13								
#14								
#15								
#16								
#17								
#18								
#19								
#20								
BOILERS	Equipment	Description	Equipment ID	ATO#	Fuel	Туре	Rated Capacity (MMbtu/hr)	Actual Hou Operated
#1								
#2								
#3								
#4								
#5								
#6								
#7								
#8								
#9								
#10								
#11								
#12								
#13								
#14								
#15								
#16								
#17								
#18								
#19								
#20								
			FORM 2.1 EMISSI					
PM ₁₀	PM _{2.5}	NOx	SOx	VOC	СО	HAPs	LEAD	NH ₃
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000



FORM 2.2 - PERC DRY CLEANING

2023

	FACILITY NAME		PLAC	Œ ID#	PERMIT# or LTF#
	0			0	0
		LY PERCHLOROETHYLENE PURCI			
	Month	Perchloroethylene Purchase	ed (Gallons)	Perchloroet	hylene Consumed (Gallons)
	January				
	February				
	March				
	April				
	May				
Perchloroethylene purchased	June				
& consumed during the year	July				
	August				
	September				
	October				
	November				
	December				
	Totals	0.00			0.00

Total PERC Emissions (tons):	0
------------------------------	---



FORM 2.3 - COTTON GIN EQUIPMENT

2023

	FACILITY NAME			PLACE ID#	PERMIT# or LTF#
	0			0	0
		PROCESS D	DATA		
SOURCE		Quantity		Amount Proces	ssed (bales/year)
Unloading fan					
No. 1 dryer & cleaner					
No. 2 dryer & cleaner					
No. 3 dryer & cleaner					
Overflow fan					
Lint cleaner with high-efficiency cyclones					
Lint cleaner with screened drums or cages					
Cyclone robber system					
Mote fan					
Mote trash fan					
Battery condenser with high- efficiency cyclones					
Battery condenser with screened drums or cages					
Master trash fan					
SOURCE		FUGITIVE EMISS		MILES TRAVELED (MILES/YEA	R)
Unpaved Haul Roa	ds		VEHICLE	WILLS HAVELED (WILLS) TEA	ny

I	FORM 2.3 EMISSION SUMMARY (TONS PER YEAR)										
	PM ₁₀	PM _{2.5}	NOx	SOx	VOC	CO	HAPs	LEAD	NH ₃		
	0.0000	-	-	-	-	-	-	-	-		



FORM 2.4 - SOIL VAPOR EXTRACTION

2023

of Environmental Q	Quality	FACILITY NAME	ONS INVENTORY	' QUESTIONNAIRE		Œ ID#	PERMIT:	# or LTF#	
		0				0)	
		0	FOUL	PMENT INFORM		5		<i></i>	
UNIT#	EQUIPN	MENT ID	ATO#	ENERGY SOURCE	MANUFACTUER	RATED CAPACITY MV)	ACTUAL HOURS OPERATED (HOURS/YEAR)		
1									
2									
3									
4									
			EMISSIONS	FROM CONTAIM	INATED SOIL				
SAMPLING R	ESULTS DATE								
HOURS OF	OPERATION								
	VOC								
EPA 8015 & 8021	BENZENE								
EFFLUENT (PPM	TOLUENE								
BY VOL)	ETHYLBENZENE								
	XYLENE								
FLOW RATE									
SAMPLING R									
HOURS OF (
	VOC								
EPA 8015 & 8021	BENZENE								
EFFLUENT (PPM	TOLUENE								
BY VOL)	ETHYLBENZENE								
	XYLENE								
FLOW RATE									
SAMPLING R									
HOURS OF (
	VOC								
EPA 8015 & 8021	BENZENE								
EFFLUENT (PPM	TOLUENE								
BY VOL)	ETHYLBENZENE								
FLOW SATS	XYLENE								
FLOW RATE	: (F13/MIN)								

	FORM 2.4 EMISSION SUMMARY (TONS PER YEAR)										
PM ₁₀	$PM_{2.5}$	NOx	SOx	VOC	CO	HAPs	LEAD	NH ₃			
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-			



FORM 2.5 - AIR CURTAIN INCINERATOR

2023

of Environmental Quality	of Environmental Quality ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE - Version 1.9										
	FACILITY NAME			PLACE ID#	PERMIT# or LTF#						
	0			0	0						
	EQUIPMENT INFORMATION										
Equipment Type	Equipment ID	ATO#	Max. Rated Capacity	Amount Processed (tons)	Hours Operated						

	FORM 2.5 EMISSION SUMMARY (TONS PER YEAR)										
PM ₁₀	$PM_{2.5}$	NOx	SOx	VOC	CO	HAPs	LEAD	NH_3			
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-			



FORM 2.6 - ROCK PRODUCTS

2023

of Environmental	Quality	FACILITY NAME	IONS INVENTOR	AY QUESTIONINA		CE ID#	PERMIT#	f or LTF#		
		0				0	(
	PROCESS TYPE			SPHALT PLANT JNT PROCESSED (FUEL TYPE	CONTRO	I DEVICE		
D	otary Drum Drye	or.	AIVIOC	JAT PROCESSED (10113)	FOEL TIPE	CONTRO	LDEVICE		
11/		=1	A. A	OUNT OF FUEL III	CED		FUEL TYPE			
	SOURCE		AM	OUNT OF FUEL U	SED		FUEL TYPE			
As	phalt Tank Heat	er								
	SOURCE				TONS PF	ROCESSED				
	Plant Load-Out									
Materi	al Handling Ope	rations								
			CRUSHING 8	& SCREENING (OPERATIONS					
SOU	RCE	•	TONS PROCESSED			URCE	TONS PR	OCESSED		
Batch Drop	Operations				Feed H	Hoppers				
Crus	hed				Scre	eened				
Fine Sc	reened				Stacked					
SOU	RCE	# OF TRANS	FER POINTS		TONS THRO	TONS THROUGH EACH TRANSFER POINT				
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
Conveyor Tra	ansfer Points									
			CONC	RETE BATCH P	LANTS					
Cubic Yar	ds of Concrete F	Produced								
			FU	IGITIVE SOURC	CES					
Nun	nber of Storage	Piles								
Vehicle Miles	Traveled on Un	paved Roads								
Explosive Blasting - # of Blasts										
			RM 2.6 EMISSI							
PM ₁₀	PM _{2.5}	NOx	SOx	VOC	СО	HAPs	LEAD	NH ₃		
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-	-		



FORM 3.0 - MISC EQUIPMENT LIST

2023

ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE - Version 1.9

	FACILITY NAME			PLAC	CE ID#	PERMIT# or LTF#
	0				0	0
FORM 3.0 and 3.1 are provid	ed for facilities w	hose equipme	nt or operation	ns are not cove	red under FORN	MS 2.1 - 2.6. If all of your
operations are covered by th						,
	,	EQUIF	PMENT INFORMA	ATION		
FOLUDA AFAIT TVDF	FOLUDATENTUD	DESIGN		HOURS OF	5 J.T.	CONTROL DEVICE
EQUIPMENT TYPE	EQUIPMENT ID	CAPACITY	UNIT	OPERATION	Fuel Type	CONTROL DEVICE
EXAMPLE - Boiler	B-101	10	Mmbtu/hr	8760	NATURAL GAS	None
deduction of the second	·					

*** If this form is used you must also complete FORM 3.1 - MISC EMISSIONS and include emission information for all equipment listed above.



FORM 3.1 - MISCELLANEOUS EMISSIONS

2023

LITY NAME						PLACE ID#			PERMIT# or LTF#			
		0					0			0		
				Ε	MISSION DATA	·						
EQUIPMENT TYPE	EQUIPMENT ID	ANNUAL PROCESS RATE	UNITS	HOURS OF OPERATION	POLLUTANT	EMISSION FACTOR	UNITS	EMISSION FACTOR REFERENCE	POLLUTANT CONTROL DEVICE	CONTROL EFFICENCY (%)	ACTUA EMISSIO (TONS/YE	
EXAMPLE - Boiler	B-101	10	MMBtu/hr	8760	NOx	0.098	lbs/MMBtu	AP-42	None	0	4.292	
EXAMPLE - Boiler	B-101	10	MMBtu/hr	8760	PM10	0.0075	lbs/MMBtu	AP-42	None	0	0.3285	

^{***} Please attach a sample calculation for each process pollutant. If using an emission factor other an AP-42, include a detailed explanation and supporting documentation showing where the emission factor was obtained from.

EMISSION DATA												
EQUIPMENT TYPE	EQUIPMENT ID	ANNUAL PROCESS RATE	UNITS	HOURS OF OPERATION	POLLUTANT	EMISSION FACTOR	UNITS	EMISSION FACTOR REFERENCE	POLLUTANT CONTROL DEVICE	CONTROL EFFICENCY (%)	ACTUAI EMISSIOI (TONS/YE	
-												
=												
* Please attach a samp												

^{***} Please attach a sample calculation for each process pollutant. If using an emission factor other an AP-42, include a detailed explanation and supporting documentation showing where the emission factor was obtained from.

***Emission totals will not automatically calculate.		MISC EMISSION SUMMARY (TONS PER YEAR)							
You will have to do these calculations yourself and	PM ₁₀	PM _{2.5}	NOx	SOx	VOC	CO	HAPs	LEAD	NH ₃
fill in the emission totals here.									



FORM 3.1 - MISCELLANEOUS EMISSIONS

2023

TY NAME						PLACE ID#			PERMIT# or LTI	#		
		0					0		0			
				Е	MISSION DATA				<u>'</u>			
EQUIPMENT TYPE	EQUIPMENT ID	ANNUAL PROCESS RATE	UNITS	HOURS OF OPERATION	POLLUTANT	EMISSION FACTOR	UNITS	EMISSION FACTOR REFERENCE	POLLUTANT CONTROL DEVICE	CONTROL EFFICENCY (%)	ACTUA EMISSIO (TONS/YE	

^{***} Please attach a sample calculation for each process pollutant. If using an emission factor other an AP-42, include a detailed explanation and supporting documentation showing where the emission factor was obtained from.

EMISSION DATA												
EQUIPMENT TYPE	EQUIPMENT ID	ANNUAL PROCESS RATE	UNITS	HOURS OF OPERATION	POLLUTANT	EMISSION FACTOR	UNITS	EMISSION FACTOR REFERENCE	POLLUTANT CONTROL DEVICE	CONTROL EFFICENCY (%)	ACTUAI EMISSIOI (TONS/YE	
-												
=												
* Please attach a samp												

^{***} Please attach a sample calculation for each process pollutant. If using an emission factor other an AP-42, include a detailed explanation and supporting documentation showing where the emission factor was obtained from.

***Emission totals will not automatically calculate.		MISC EMISSION SUMMARY (TONS PER YEAR)							
You will have to do these calculations yourself and	PM ₁₀	PM _{2.5}	NOx	SOx	VOC	CO	HAPs	LEAD	NH ₃
fill in the emission totals here.									