

ARIZONA: ANNUAL EMISSION INVENTORY REPORTING WORKSHOP



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Tai Wallace

Overview

- Introduction
- Who Must Report, What Must Be Reported And
What Does ADEQ Do With Emission Inventories (EI)?
- **Major Point Source** Reporting Through SLEIS
- **Minor Point Source** Reporting
- Q&A

Annual Updates & News



Due Date for 2014 Emission Inventory Reports
(both Major and Minor Sources):

June 1st, 2015

Our Vision & Mission

Our Vision:

To lead Arizona and the Nation in protecting the environment and improving the quality of life for the people of our state.

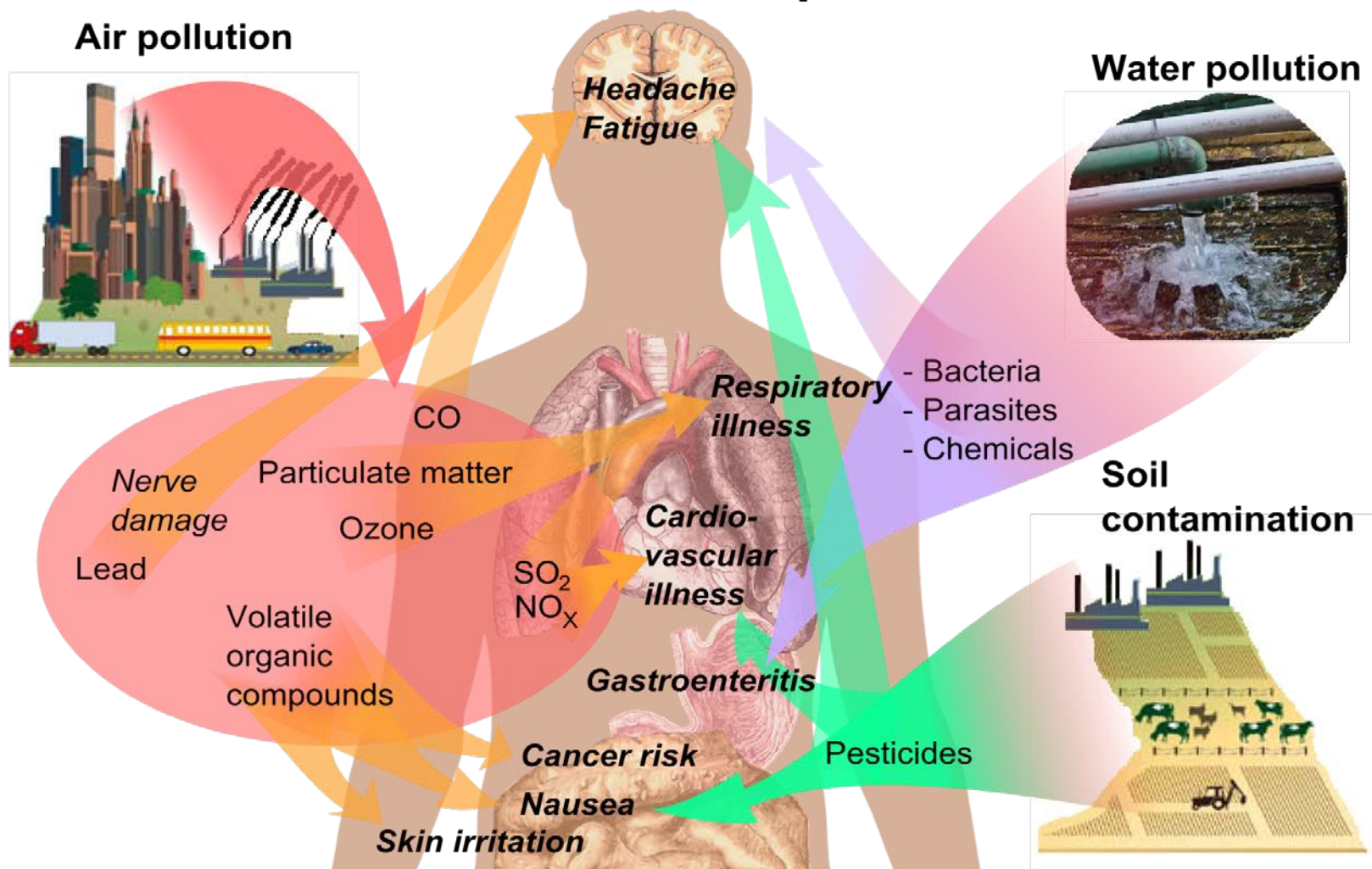


Our Mission:

To protect and enhance public health and the environment in Arizona.

Air Quality Impacts: Public Health

Health effects of pollution



Air Quality Impacts: Infrastructure, Property and Historical Monuments



Air Quality Impacts: Natural Vistas and Common Resources

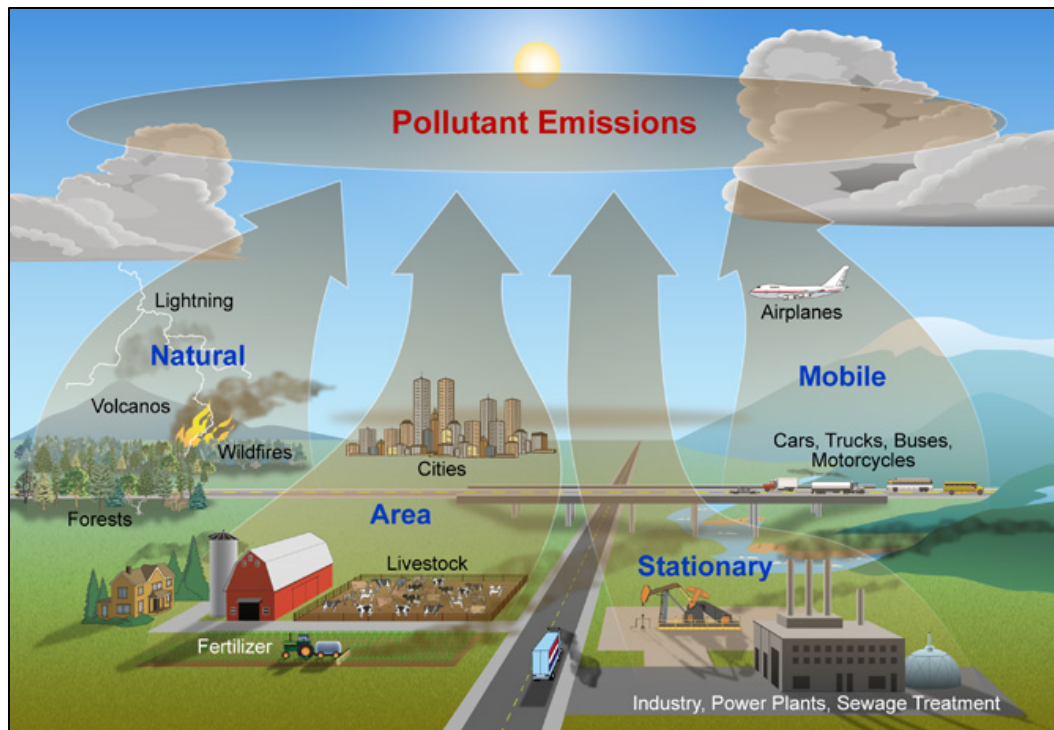


Air Pollution Can Diminish the Quality of Common Goods and Natural Resources.



What is an Emission Inventory (EI)?

- An emission inventory is a summary or forecast of the emissions produced by a source or group of sources.



What is an Emission Inventory (EI)?

- Your 2014 emission inventory should contain the total amount of air pollution that you *actually* emitted in 2014.
 - ▣ Generally reported as TONS per YEAR

Who Must Report Emissions?

- **R18-2-327. Annual Emissions Inventory Questionnaire**

(A) Every source subject to permit requirements under this Chapter shall complete and submit to the Director an annual emissions inventory questionnaire.

For definitions of a source type for the purposes of determining permit types and reporting guidelines/forms, see AAC R18-2-326 & R18-2-511

Source Classifications

Major Point Source

- Has the Potential to Emit or Emits Aggregate TPY of 10HAP|25HAPS|100CAP|250CAPS
- Full Definition @ A.A.C. R18-2-401
- Must use SLEIS to report 2013 emissions

Synthetic Minor Point Source

- Permit Restrictions on Production, Operation or Emissions
- Emissions “Artificially” Below Point Source Threshold
- Can use either SLEIS or paper forms to report 2013 emissions

Minor Point Source

- Non-Major Source Subject to Regulation by Director under ARS 49-402 (B)
- E.g. Dry Cleaner
- Can use either SLEIS or paper forms to report 2013 emissions

Portable Source

- Can Operate in Multiple Places
- E.g. Rock Crusher & Screener
- Can use either SLEIS or paper forms to report 2013 emissions

How Do I Prepare and Submit an Emission Inventory?

- Major Point Sources Are Required To Use SLEIS
- ADEQ Reports Major Source EIs From SLEIS To The EPA
- Minor Source Permit Holders (Class II and General Permits) Should Use Excel/PDF Forms Located On ADEQ Website



My Companies:

Company XYZ

My Facilities:

Facility ABC

State of Arizona

Facility ABC



Lat: 33.448729 | Long: -112.087487

1110 West Washington Street, Phoenix, AZ 85007

MY TASKS:

103634/3319 SMRF Due in 5 days

10113 Renew permit by 7/15/2013

10113 Renew permit by 7/15/2013

SHOW ALL

PERMITS:

Permit ID	PROGRAM	PERMIT TYPE	ISSUE DATE	STATUS	ACTIONS	DETAILS
23562	Water	APP, Individual	12/06/12	Issued	Select an Action	
56245	Water	EPA Waste identification	01/02/96	Issued	Select an Action	
29935	Air	Crushing and Screening, ...	06/25/13	Issued	Select an Action	
41865	Water	Dry Well Registration.	01/25/13	Issued	Select an Action	

SMRF UPLOAD

Click on the button below to upload your completed SMRF file or files.

UPLOAD SMRF

DEQNews

ADEQ to Sponsor Water Quality Testing

“The completion of this project, with its cost savings, convenience, and compliance assistance, will be a boon to business regulated by ADEQ and help attract new business to Arizona.”

— Governor Jan Brewer,
Building on the Four Corners of Reform, January 2013

What Data Do I Need To Report?

- The annual questionnaire should include the following information (R18-2-327(b)):
 - ▣ The source's name, description, mailing address, contact person (w/ phone number), and physical address and location (if different than mailing address).
 - ▣ Process information for the source, including design capacity, operations schedule, and emissions control devices, their descriptions and efficiencies.
 - ▣ The actual quantity of emissions from permitted emission points and fugitive emissions as provided in the permit of the following regulated air pollutants:
 - Any single regulated air pollutant in a quantity greater than 1 ton or the amount listed for the pollutant in the definition of "significant" in R18-2-101(130)(a), whichever is less.
 - Any combination of regulated air pollutants in a quantity greater than 2 1/2 tons.

What Data Do I Need To Report?

- At a minimum, you must report emissions as specified in your permit
- The following are the pollutants ADEQ needs to report to EPA:
 - ▣ Sulfur dioxide (SO_2)
 - ▣ Volatile organic compounds (VOC)
 - This total should include all HAPs which are also VOCs
 - ▣ Nitrogen oxides (NO_x)
 - ▣ Carbon monoxide (CO)
 - ▣ Lead and lead compounds
 - ▣ Primary $\text{PM}_{2.5}$ (PM25-PRI). As applicable, also report filterable and condensable components
 - ▣ Primary PM_{10} (PM10-PRI). As applicable, also report filterable and condensable components
 - ▣ Ammonia (NH_3)
- We strongly encourage you to report individual HAP emissions.

What is an Emission Factor (EF)?

General Emission Estimation Formula:

$$E = A \times EF \times \left(1 - \frac{ER}{100}\right)$$

E = Emissions

A = Activity Rate

EF = Emission Factor

ER = Emission Reduction Efficiency of Controls (%)

AP-42: Your EF Resource

- Emission Factors are Available at:
<http://www.epa.gov/ttn/chief/ap42/index.html>
- AP-42 Contains:
 - Emission Factors
 - Basic Process Information
 - Supplements
- EPA's WebFIRE allows for the Search of AP-42 EFs
<http://cfpub.epa.gov/webfire/index.cfm?action=fire.SearchEmissionFactors>

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE
AND DIESEL INDUSTRIAL ENGINES^a

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO _x	0.011	1.63	0.031	4.41	D
CO	6.96 E-03 ^d	0.99 ^d	6.68 E-03	0.95	D
SO _x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10 ^b	7.21 E-04	0.10	2.20 E-03	0.31	D
CO ₂ ^c	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

^a References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

^b PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

^c Assumes 99% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

^d Instead of 0.439 lb/hp-hr (power output) and 62.7 lb/mmBtu (fuel input), the correct emissions factors values are 6.96 E-03 lb/hp-hr (power output) and 0.99 lb/mmBtu (fuel input), respectively. This is an editorial correction. March 24, 2009

Other EF Resources

- Equipment Manufacturer Data

$$A \times EF \times \left(1 - \frac{ER}{100}\right)$$

- Performance Test Results

$$EF_{HOURLY\ RATE} \times T_h \times \left(1 - \frac{ER}{100}\right)$$

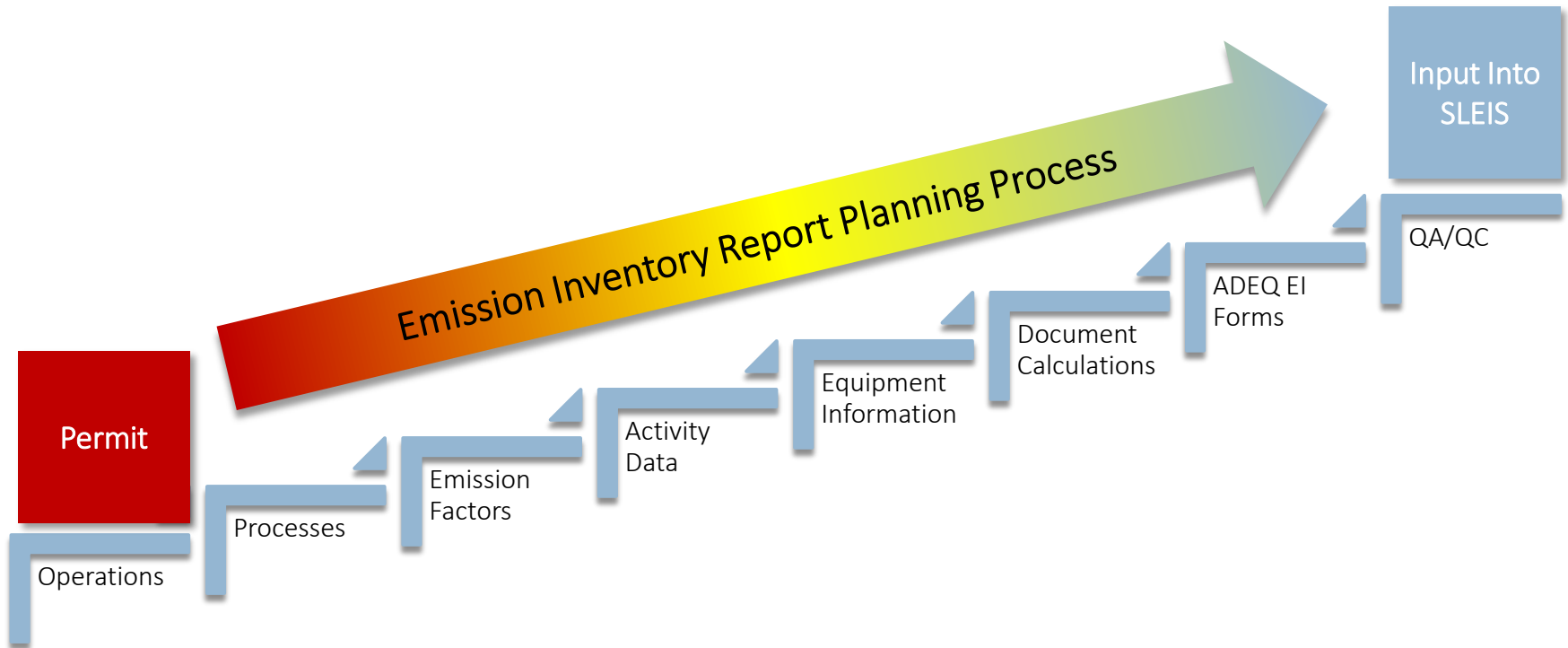
$T_h = \text{Hours of Operation}$

- Continuous Emission Monitoring System Data

EF Hierarchy

- A.A.C. R18-2-327(C) sets the following hierarchy for emission estimations:
 - ▣ CEMS data
 - ▣ Performance Test data
 - ▣ AP-42
 - ▣ Material Balance
 - ▣ Director Approved Alternate Method

EI Reporting Pre-Planning



The Importance of EI Reporting

AIR QUALITY PROGRAM EFFECTIVENESS

- Air Quality Programs are Only as Effective as the EIs They are Based
- Industry Can Be Environmental Stewards
- Industry Can Minimize the Economic Impact of Regulation

ASSESSMENT OF ANNUAL EMISSION FEES

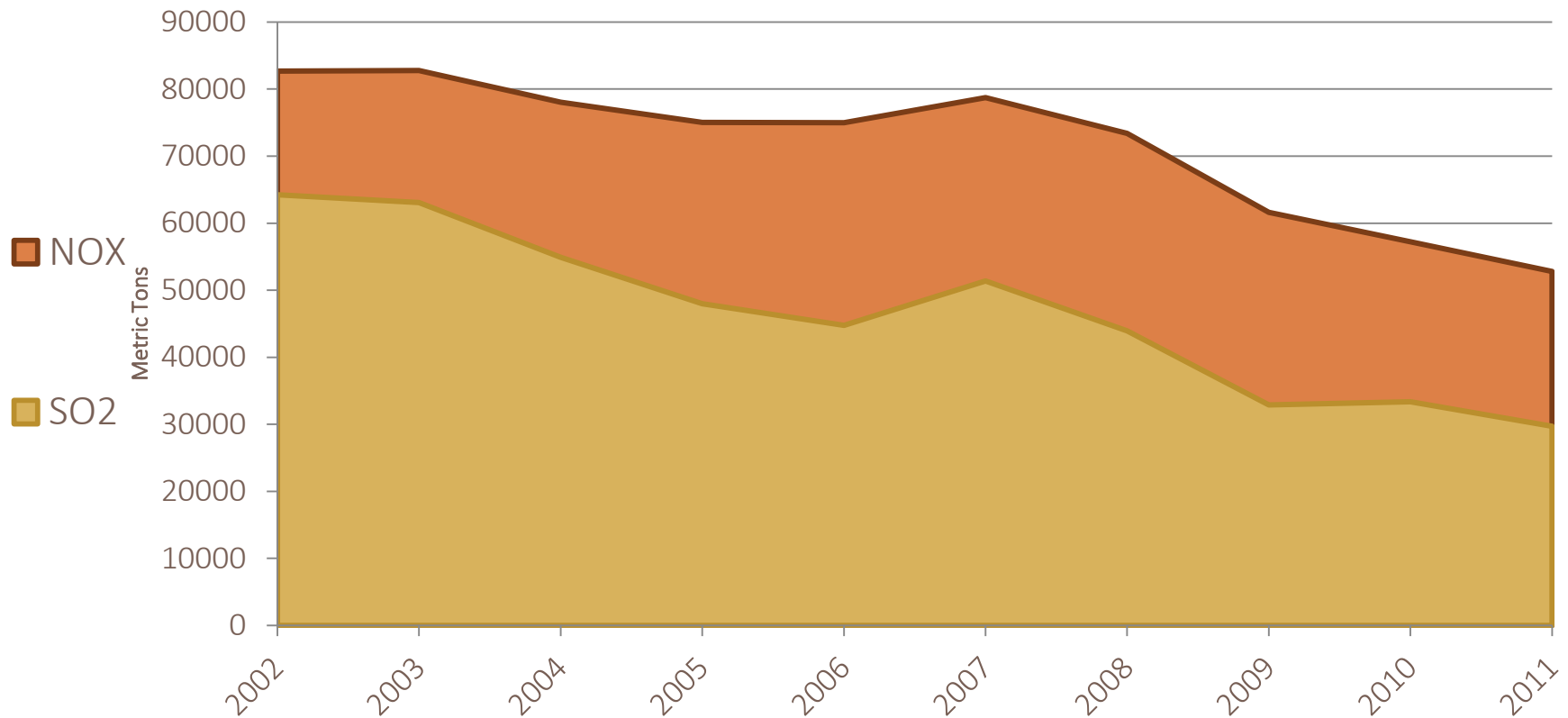
- An EI can form the Basis for Permit Revisions
- Some Fees are Based on Annual Emission Output
- EI Reporting Is Documentation for Permit Requirements

What ADEQ Does with Emission Inventories?

- Submissions to the EPA Emissions Inventory System (EIS)
 - National Emission Inventory (NEI)
- SIP Development
 - NAA
 - Maintenance
 - Control Measure Determination
- Tracking Progress or Improvements in Air Emissions

Improvements in Air Emissions

NOx & SO2 Reductions by Electric Power Industry in Arizona




Major Point Source Reporting With SLEIS



SLEIS Home Page

<https://sleis.azdeq.gov/>

**State & Local
Emissions Inventory System**

Home | Login | Help

Welcome

Welcome to the State and Local Emissions Inventory System (SLEIS), a web-based application that allows permitted facilities to compile and submit point source emissions inventory data to the Arizona Department of Environmental Quality (ADEQ). After the emissions inventory data are received, the SLEIS application is used by ADEQ to review and submit the data to the Environmental Protection Agency's (EPA) Emissions Inventory System (EIS). For additional information on SLEIS, please visit the [SLEIS product website](#).

Please Note:
Minimum browser requirements for SLEIS are Internet Explorer version 9 or later, Chrome, or Mozilla Firefox. For users of Internet Explorer version 7 or 8, please install the Chrome Frame available at <http://www.google.com/chromeframe>.

Registration and Forms:
Registration for SLEIS requires that you download and complete the provided registration form. After you have completed and signed the form, please make a copy of the form and either email or mail the original to the address indicated on the top of the form. When we receive your registration form, the information will be entered into SLEIS, and you will receive an email with a link to create your initial account password.
For questions about this process, please contact us at: SLEIS@azdeq.gov.

Please download, complete, and mail the following form to register for SLEIS:
[SLEIS User Application Form](#)

Certification after On-line Reporting:
Following successful submission of your emissions inventory report, for identify verification purposes, responsible officials must download, complete, and mail the following form:
[SLEIS Electronic Certification Form](#)

After completing the form, please make a copy of the form and mail the original along with a printout of the emissions inventory report. The report printout is an attachment to the email generated after successfully submitting your emissions inventory report electronically to ADEQ. The emissions inventory report printout can also be downloaded from the [View Submission History](#) page accessed from the SLEIS Report Homepage.

Feedback:
Your feedback regarding SLEIS is encouraged. To make an inquiry or suggestion, please click the **Submit general questions and/or comments** link below.

[Submit general questions and/or comments](#)


News

- [2013 Emission Inventory Workshops](#)
2014-03-26
- [2013 Emission Inventory](#)
2014-02-13

- 'News' section is periodically updated with important information
- Application and Certification forms available for download

SLEIS Application Form

- The SLEIS User Application form is used to:
 1. Create new facilities in SLEIS
 2. Add users to existing facilities



ADEQ
Arizona Department
of Environmental Quality

SLEIS User Application

Air Quality SIP Section
Attention: Michael Burton
1110 West Washington Street
Phoenix, AZ 85007
Phone: (602) 771-4562
Email: burton.michael@azdeq.gov

SECTION I: Plant Identification & Mailing Information

Company Name			
Facility Name			
Mailing Address			
City		County	
State		ZIP	
Phone		Fax	

SLEIS User Accounts

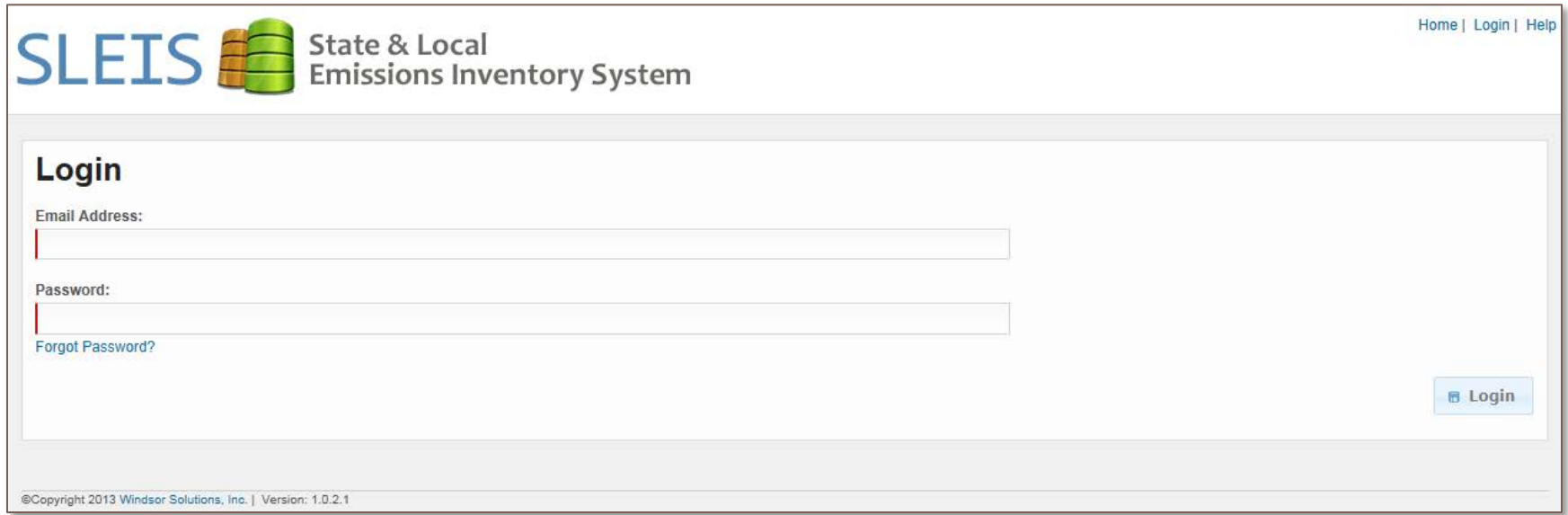
- Two main roles:
 - ▣ **Editor** – Can make changes to emission reports
 - ▣ **Viewer** – Can only view emission reports

- In addition, you can also be:
 - ▣ **Administrator** – Can edit other user accounts for the facilities they are assigned to
 - ▣ **Submitter** – Allowed to submit official version of emission report. Needs to be a responsible official of the facility.

SLEIS User Accounts Cont'd

- Administrators
 - ▣ Be aware that you are responsible for maintaining the user accounts for your facilities.
 - ▣ If someone leaves your company, it is up to you to remove or inactivate their user account.

Logging In



SLEIS State & Local Emissions Inventory System

Home | Login | Help

Login

Email Address:

Password:



[Forgot Password?](#)

Login

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1. Go to the secure application site at <https://sleis.azdeq.gov/SLEIS/>
2. Click login in the top right corner
3. Enter user email address and password
 - ▣ Only authorized facility users may access SLEIS
 - ▣ Submitters are responsible for everything submitted under your facility

Accessing Your Facility Reporting Page




State & Local
Emissions Inventory System



Welcome Michael Burton

[Home](#) | [Quick Find](#) | [My Facilities](#) | [My Profile](#) | [Help](#) | [Logout](#)

My Facilities

Identifier	Name	Roles	Ready for Submission	Actions
1111	EXAMPLE FACILITY	Editor, Submitter, Administrator		

Click Here




State & Local
Emissions Inventory System

Welcome Michael Burton

[Home](#) | [Quick Find](#) | [My Facilities](#) | [My Profile](#) | [Help](#) | [Logout](#)

My Reports

Reporting Year	Due Date	Submitted Date	Status	Actions
2012	2013-10-31		In Process	

EXAMPLE FACILITY

Identifier:
1111

Address:

Your roles at this facility are:
Editor, Submitter, Administrator

Authorized Users

0 other users at your facility have access to emissions report data.

[View facility users](#)

Click Here

First Things First: Emission Report Review

- Facility Information
- Release Points
- Control Devices
- Emission Units
- Unit Processes

The screenshot displays the SLEIS (State & Local Emissions Inventory System) interface. At the top, the logo and name 'SLEIS State & Local Emissions Inventory System' are visible, along with a user welcome message 'Welcome Michael Burton' and navigation links: 'Home | Quick Find | My Facilities | My Profile | Help | Logout'.

The main section is titled '2012 Emissions Report' and indicates the report is 'In Process'. A large orange bracket on the left side of the interface groups the following components:

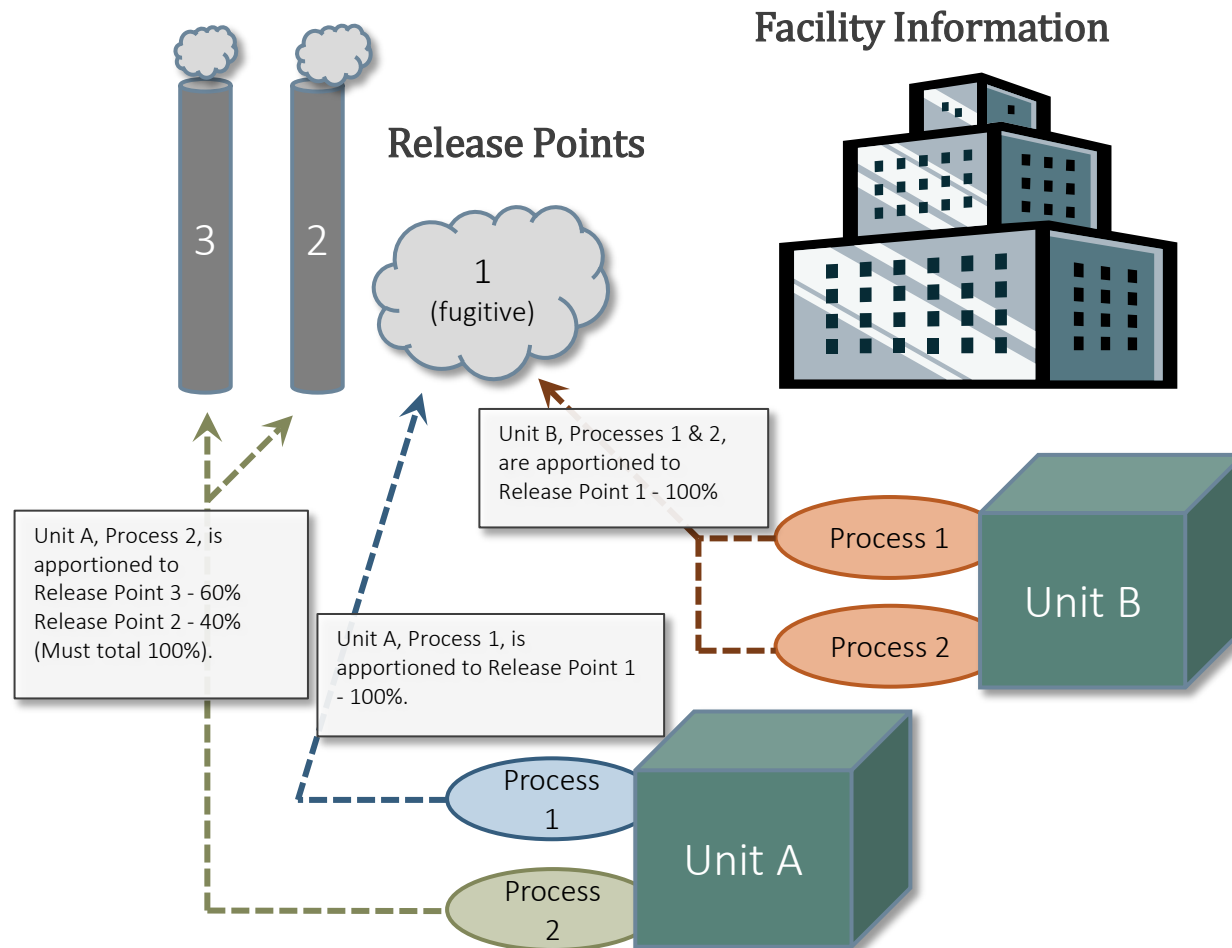
- Facility Inventory**: A row of five icons representing 'Facility', 'Release Points', 'Control Devices', 'Emission Units', and 'Unit Processes'.
- Emissions**: A row of two icons representing 'Process Emissions' and 'Report Attachments'.

Below these sections are buttons for 'Download Template' and 'Import Data'. A 'More Actions' section contains 'Validate Report' and 'Initiate Submission' buttons.

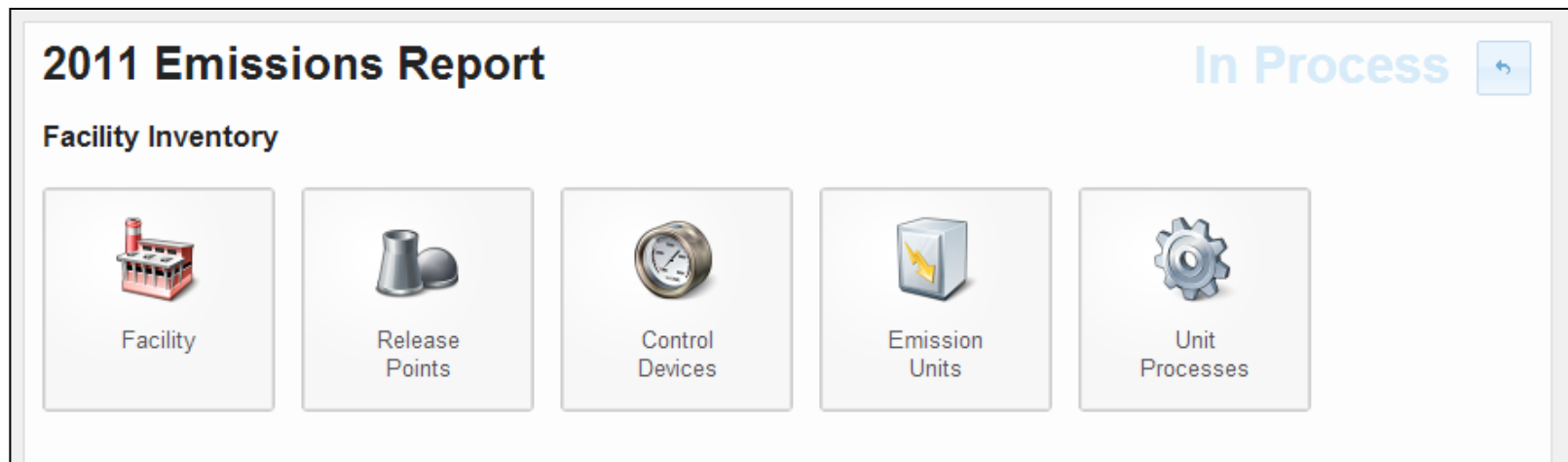
On the right side, the 'EXAMPLE FACILITY' section shows fields for 'Identifier: 1111', 'Address:', and 'Your roles at this facility are: Editor, Submitter, Administrator'. Below this is the 'Submission Status' section, which states 'This emissions report has not been submitted.' and the 'Summary Reports' section, which lists 'Total Emissions by Source', 'Total Emissions by Release Point', and 'Total Emissions by Emission Unit'.

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EPA's Emission Inventory System (EIS)



Facility Inventory



- Facility Users can Add:
 - Release Points
 - Control Devices
 - Emissions Units
 - Unit Processes
- Once submitted, Emissions Units, Control Devices and Release Points are Added to the Master Facility Inventory list. This Master list will be used to generate next year's emissions report.



Facility

Editing Facility Information

General Facility Information



Facility

- Users Cannot Create a New Facility
- Users May Edit Certain Facility Attributes
 - Facility Status
 - Emission/Permit/Compliance Contact Info
 - Physical and Mailing Address
 - Additional Information
- Facility ID, Name, and Owner are Read Only



Release
Points

Adding and Verifying Release Points

Release Point



Release
Points

2011 Emissions Report

Release Points

Release Point Location Additional Information

Identifier:

Type:

Downward-facing Vent

Description:

Status:

Operating

Status Date:

Stack Height:

 FEET

Stack Diameter:

 FEET

Exit Gas Temp:

 °F

Exit Gas Flow Rate:

- Assign a Unique Release Point Identifier
- Choose from Vertical, Horizontal, Fugitive or Vent
- Enter Description to Match Equipment or Process It Serves
- Enter Release Point Physical Characteristics

Location



Release
Points

2011 Emissions Report

Release Points

Release Point

Location

Additional Information

Release point utilizes facility coordinates?:

☐

Latitude (decimal degrees):

Longitude (decimal degrees):

UTM X (meters):

UTM Y (meters):

UTM Zone:

Assumes northern hemisphere

Collection Method:

Data Collection Date:



Geographic Reference Point:

- Some Sources May Use Facility Coordinates
- Others Enter Stack or Vent Location
- Enter Lat/Long or UTM Coordinates
- The Converse Will Auto-populate

Guidance



Release
Points

- A release point is needed for every emission source
- It is generally acceptable to have a single Facility-wide fugitive release point along with release points for stacks
- For these purposes, exhaust pipes from emergency generators do not count as stacks



Control
Devices

Adding and Verifying Control Devices

Control Device



Control
Devices

2011 Emissions Report

Control Devices

Control Device

Additional Information


Identifier:

Description:

Status:

OP - Operating ▼

Status Date:

Control Measure:

Controlled Pollutants:

Begin typing... %

Related Unit Processes:

Comments:

- Choose a Unique Identifier for Your Control Device
- Description Should Adequately Identify the Control Device
- SLEIS will Auto-Populate Control Measures
- Choose Your Controlled Pollutants Carefully!

Additional Information



Control
Devices

2011 Emissions Report

Control Devices

Control Device

Additional Information

Local Control Equipment Identifier/Name:

Serial Number:

Manufacturer:

Installation Date:



- Most Information Entered on This Page is Voluntary
- Please Enter This Info if You Have it
- Helps with the QA/QC of Emission Reporting



Emission
Units

Adding and Verifying Emission Units

Emission Unit (EU)



Emission
Units

2011 Emissions Report

Emission Units

Emission Unit

Regulatory Programs

Additional Information

Identifier:

Type:

Description:

Status:

OP - Operating

Status Date:



Operation Start Date:



Design Capacity

Related Unit Processes:

Comments:

- Identifier Designate Emission Creating Units
- Description Personalizes EUs of Facility
- Design Capacity Required for Certain EU Types

EPA Definition - Emissions Unit



Emission
Units

- “Emissions Units include all individual pieces of equipment that emit air pollutants at a stationary source. EPA regulations define an emissions unit as any part of a stationary source which emits or would have the potential to emit any pollutant subject to regulation under the Clean Air Act. Examples of common emissions units include Stationary Internal Combustion Engines, Boilers or Steam Generators, Combustion Turbines, Printing Presses, Solvent Degreasers, and Paint Spray Booths.”

EPA Definition - Emissions Unit



Emission
Units

- The Emission Units in SLEIS should match the equipment list in your permit

Regulatory Programs and Additional Information



Emission
Units

- Used Mainly to Track Regulatory Program Associated with EU
 - E.G. MACT Standards
 - E.G State and Local Regulations
- Internal Tool for Facility to Track EU
 - Tracks Title V EUs
 - Alphanumeric Value of 10 Characters or Less



Unit
Processes

Adding and Verifying Unit Processes

Unit Process



Unit
Processes

2011 Emissions Report

Unit Processes

Unit Process Control Approach Release Point Apportionment Additional Info

Process Identifier:

Emission Unit Identifier:

SCC:

Code:

Description:

Last/Final Emissions Year:

Related Process Emission:

Comments:

- Links Release Points, Control Devices, Emission Units
- Choose Identifier of EU that Matches Process
- Choose Appropriate Source Classification Code (SCC) and Description

Unit Process



Unit
Processes

- NOTE: It is important to know your emission factors when creating your processes.
- You will only be able to enter one type of throughput for each process.

Unit Process



Unit
Processes

- In general, a separate Unit Process is needed for each different Source Classification Code (SCC) associated with a particular emission unit.

EXAMPLE #1: Gasoline Storage Tanks

SCC 40400201 – Breathing Loss (RVP 13, Fixed Roof)

SCC 40400204 – Working Loss (RVP 13, Fixed Roof)

EPA's TANKS program gives emission totals for both breathing loss and working loss.

Unit Process



Unit
Processes

EXAMPLE #2: Electric Generation

SCC 10100601 – Natural Gas

SCC 10100501 – Distillate Oil

In this example, if both natural gas and distillate oil are used in the same generation unit, a separate unit process would need to be created for each of these processes. You would *not* create an emission unit for each.

Unit Process



Unit
Processes

A list of SCC's can be found in EPA's Appendix 6 – Code Tables:

<http://www.epa.gov/ttn/chief/eiinformation.html>

Click on 'EIS Code Tables (including SCCs)'

Control Approach



Unit
Processes

2011 Emissions Report

Unit Processes

Unit Process **Control Approach** Release Point Apportionment Additional In

✔ Not Controlled?:
☐

✔ Control Approach Description:

✔ Capture Efficiency:
 %

✔ Control Devices:

- If Uncontrolled, Check Box and Skip
- If Controlled
 - Add Description
 - Add Capture Efficiency
 - Designate Applicable Control Devices
 - Inherent vs. add-on

Determining What is Billable...The Annual Fee Rule



Unit
Processes

- Class I Sources Pay An Annual Emission-Based Fee
- All Sources Pay Permit Processing/Annual Fees
- Fee Rule Summary:

<http://www.azdeq.gov/environ/air/permits/fees.html>

- Fee Rule A.A.C. R18-2-326:

http://www.azsos.gov/public_services/Title_18/18-02.htm

Release Point Appointment & Additional Information



Unit
Processes

- Release Point Appointment
 - Allows for Designation of Emissions/Release Point
 - Can Designate one or Multiple Release Points
 - Must be Entered Prior to Appointment
- Additional Information: Billable Emissions
 - Are Emissions From This Process Billable?
 - If Non-Billable...Why? You Need To Include Justification In Comment Box.

Emissions Review

- Process Emissions
- Report Attachments

The screenshot displays the SLEIS (State & Local Emissions Inventory System) web interface. At the top, the SLEIS logo is accompanied by the text "State & Local Emissions Inventory System". A user greeting "Welcome Michael Burton" is visible in the top right corner, along with navigation links: "Home | Quick Find | My Facilities | My Profile | Help | Logout".

The main content area is titled "2012 Emissions Report" and includes a status indicator "In Process" with a refresh icon. Below this, the "Facility Inventory" section contains five icons representing different components: Facility, Release Points, Control Devices, Emission Units, and Unit Processes. An orange bracket on the left side of the interface groups the "Process Emissions" and "Report Attachments" icons under the "Emissions" section.

The "Emissions" section also includes two icons: "Process Emissions" and "Report Attachments". Below these icons are two buttons: "Download Template" and "Import Data".

The "More Actions" section at the bottom of the main content area contains two buttons: "Validate Report" and "Initiate Submission".

On the right side of the interface, there is a sidebar with the heading "EXAMPLE FACILITY". It contains the following information:

- Identifier: 1111
- Address:
- Your roles at this facility are: Editor, Submitter, Administrator
- Submission Status**: This emissions report has not been submitted.
- Summary Reports**:
 - Total Emissions by Source
 - Total Emissions by Release Point
 - Total Emissions by Emission Unit

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Process
Emissions

The Nitty Gritty: Reporting Process Emissions

Choose your Process



Process
Emissions

2011 Emissions Report				In Process
Process Emissions				
Retrieved records 1 - 3 of 3, showing 3.				Filter: <input type="text"/>
Emission Unit Identifier:	Process Identifier:	SCC:	Annual Throughput:	Actions
001 Natural Gas Boiler	1 Natural Gas Boiler	10300602 Ext Comb /Comm-Inst /Natural Gas /10-100 Million Btu/hr	110 MILLION STANDARD CUBIC FEET (Natural Gas) (Input)	
002 Emergency Diesel Generator	1 Emergency Diesel Generator	20300101 Int Comb /Comm-Inst /Distillate Oil (Diesel) /Reciprocating	210 HORSEPOWER-HOURS (Diesel) (Output)	
003 Crusher #1	3 Primary Crusher	30504030 Mining&Quarrying Nonmetallic Minerals /Primary Crusher		

- Emissions Must be Calculated for Each Process
- Users May Import and Export Data for All Process Emissions

Process



Process
Emissions

2011 Emissions Report

Process Emissions

Process

Operations

Emissions

Process is Reported?:

☒ Uncheck this box if there are no reportable emissions for the reporting year

Annual Throughput:

Throughput Unit of Measure:

Throughput Type:

Throughput Material:

Process is CBI?:

☐ Check this box to not report Throughput and Emission Factors to EPA

Supplemental Calculation Parameters:

Ash (%)

Sulfur (%)

Heat Content
(MMBTU/Unit)

Comments:

- Determine if Process Must be Reported
- Enter Throughput Information in Accordance to SCC
- Supplemental Calculation Parameters Necessary for Combustion Equipment
- Previous Years Information will Populate Some Fields

Operations



Process
Emissions

2011 Emissions Report

Process Emissions

Process

Operations

Emissions

ⓘ Average Hours/Day:

ⓘ Average Days/Week:

ⓘ Average Weeks/Year:

ⓘ Actual Hours:

Seasonal Operations:

ⓘ December-February (%)

ⓘ March-May (%)

ⓘ June-August (%)

ⓘ Total Ozone Season Days
(May-September)

ⓘ Total Summer Season Days
(June-August)

ⓘ T
(De

- Average Hours/Days/Weeks of Operation Required
- Actual Hours of Operation Calculates Automatically
- Please Enter Seasonal Operations

Emissions



Process
Emissions

2011 Emissions Report

Process Emissions

Process

Operations

Emissions

? Pollutant Code:

? Emission Factor (Lbs/Unit):

? Estimated Emissions (Tons):

? Comment:

? Calculation Method:

? Emission Factor Unit:

? Overall Control Efficiency (%):
0%

+ Add

- Users Can Calculate Multiple Emissions Per Process
- Be Sure Pollutant Code Matches That of Control Measure
- All Data in Process Emission Can Be Imported
- Saving will Run Error Report/Estimated Emissions

Emissions



Process
Emissions

- If you report PM25-FIL you *must* also report PM10-FIL. Same for PM25-PRI.
- For a single process, PM25 emissions should *not* exceed PM10 emissions.
- To ensure accurate totals please report PM10/25-PRI for all processes that have PM emissions. This will reduce need for EPA to augment our emissions.

SLEIS CSV Templates

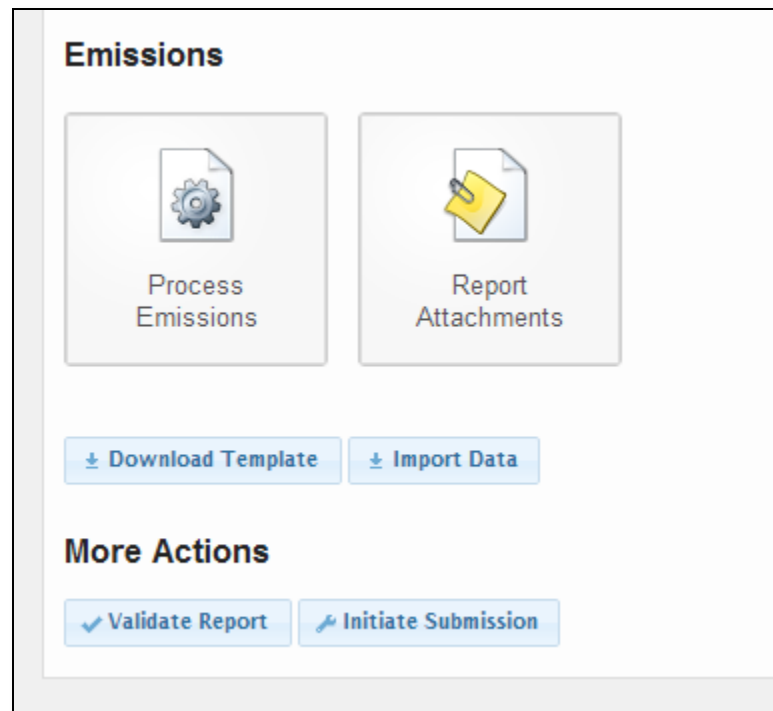


Process
Emissions

- Some Sources may Prefer to Import Data Into SLEIS
- You May Download Formatted CSV Templates for Data Entry
- These CSV Templates can Be Uploaded Directly Into SLEIS

CVS FILE UPLOAD

- Begin by downloading the CVS file templates



- A ZIP file will be downloaded

CVS FILE UPLOAD

- The ZIP file contains three CSV files
 - ▣ Processes.csv
 - ▣ ProcessEmissions.csv
 - ▣ ReferenceDataValues.csv
- You will need to unzip these files and save them to your computer

Processes.csv

- Contains throughput and activity level information for each emission process
- Required data
 - ▣ Throughput
 - Quantity (Column C)
 - Unit (Column D)
 - Type (Column E)
 - Material (Column F)
 - ▣ Activity Level
 - Actual hours of operation (Column S)
 - Average hours/day (Column T)
 - Average days/week (Column U)
 - Average weeks/year (Column V)

Processes.csv

□ Required data

C1		fx		ThroughputQuantity			
	A	B	C	D	E	F	
1	EmissionL	ProcessId	Throughp	Throughp	Throughp	Throughp	Janu
2	001	1	11	E6FT3S	I	209	
3	002	1	21	HP-HR	O	44	
4							

□ Throughput

- Quantity (Column C)
- Unit (Column D)
- Type (Column E)
- Material (Column F)

S1		fx		ActualHrsOperation			
	S	T	U	V	W	X	
1	ActualHrs	AvgHrsPer	AvgDaysP	AvgWeek	DecToFeb	MarTo	
2	11	1	1	1			
3	21	2	2	2			
4							

□ Activity Level

- Actual hours of operation (Column S)
- Average hours/day (Column T)
- Average days/week (Column U)
- Average weeks/year (Column V)

ProcessEmissions.csv

- Contains pollutant name, emission factor, and pollutant quantity
- Required data
 - ▣ All fields are required
 - Emission totals will auto-calculate based on throughput and emission factors
 - If using CEMS or other source for emission totals, you will need to enter the actual amount of pollutant
 - ▣ Unless you are changing or adding pollutant or emission factor data, none of this information needs to be edited

Importing Data

- Once you have updated the CSV files, upload them to SLEIS by clicking the 'Import Data' button
 - ▣ You will be prompted to select both the Processes.csv and ProcessEmissions.csv files.

Select Import Files

Select the *Processes.CSV* file for the report:

Browse...

Select the *ProcessEmissions.CSV* file for the report:

Browse...

Importing Data



Process
Emissions

- If the upload was successful, a blue status bar will appear.



- If the upload was unsuccessful, you will see a list of errors.

Import File Validation	
showing 2.	
Error	Context
ProcessId or EmissionUnitId is invalid.	Processes Line 2
ProcessId or EmissionUnitId is invalid.	Processes Line 3

Importing Data - Errors

- The 'Error' column will tell you the row contains the error.

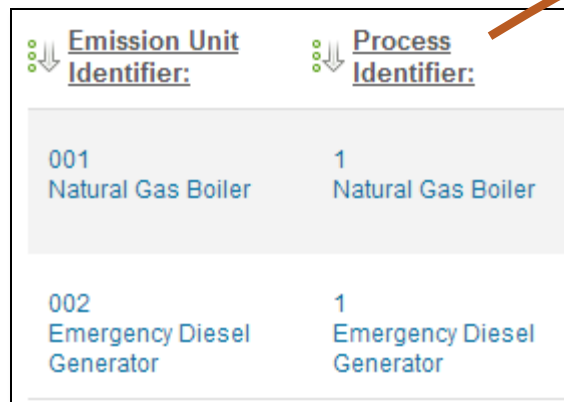
- The 'Context' column will tell you the file (Processes or ProcessEmissions) and line #



Error	Context
ProcessId or EmissionUnitId is invalid.	Processes Line 2
ProcessId or EmissionUnitId is invalid.	Processes Line 3

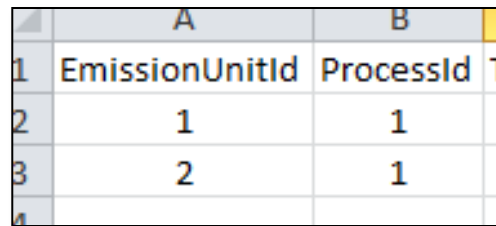
- In this example, there is an error in either the 'ProcessId' or 'EmissionUnitId' of lines 2 and 3 of the Processes.csv file.

Importing Data - Errors

- A error will occur if your Process or Emission Unit ID #'s contain leading zeroes.



 <u>Emission Unit Identifier:</u>	 <u>Process Identifier:</u>
001 Natural Gas Boiler	1 Natural Gas Boiler
002 Emergency Diesel Generator	1 Emergency Diesel Generator

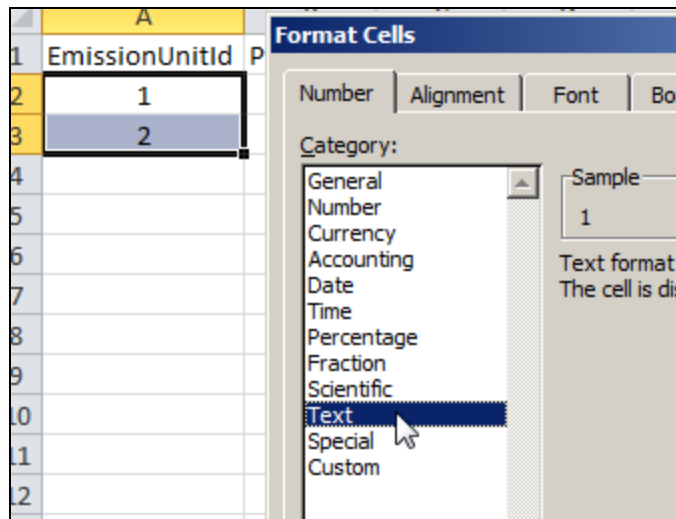


	A	B	
1	EmissionUnitId	ProcessId	T
2	1	1	
3	2	1	
4			

- Excel will disregard these leading zeroes and convert it into a number

Importing Data - Errors

- To correct this error, you will need to force Excel to treat the ID #'s as **Text**




	A	B	
1	EmissionUnitId	ProcessId	Thru
2	001	1	
3	002	1	
4			


- Then change the ID #'s so that they exactly match what's in SLEIS

Attachments, Validate Report and Initiate Submission

Emissions



Process Emissions



Report Attachments

[Download Template](#) [Import Data](#)

More Actions

[Validate Report](#) [Initiate Submission](#)

Summary Reports

- Total Emissions by Source
- Total Emissions by Release Point
- Total Emissions by Emission Unit

- Users May Attach Any Required Supporting Document
 - If using Material Balance or Engineering Judgment you *must* provide supporting documentation

More Actions

- Validate Report
- Initiate Submission

The screenshot displays the SLEIS (State & Local Emissions Inventory System) web application. The top navigation bar includes the SLEIS logo, the system name, and a user welcome message for Michael Burton. A secondary navigation bar provides links for Home, Quick Find, My Facilities, My Profile, Help, and Logout.

The main content area is titled "2012 Emissions Report" and includes a status indicator "In Process" with a refresh icon. Below this, the "Facility Inventory" section contains five icons representing Facility, Release Points, Control Devices, Emission Units, and Unit Processes. The "Emissions" section contains two icons for Process Emissions and Report Attachments. Below these sections are buttons for "Download Template" and "Import Data".

The "More Actions" section at the bottom of the main content area contains two buttons: "Validate Report" (with a checkmark icon) and "Initiate Submission" (with a play icon). An orange bracket on the left side of the slide points to these two buttons.

The right sidebar, titled "EXAMPLE FACILITY", displays facility details: Identifier 1111, an empty Address field, and roles (Editor, Submitter, Administrator). It also shows the "Submission Status" as "This emissions report has not been submitted." and a "Summary Reports" section with links for Total Emissions by Source, Total Emissions by Release Point, and Total Emissions by Emission Unit.

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 **Validate Report**

 **Initiate Submission**

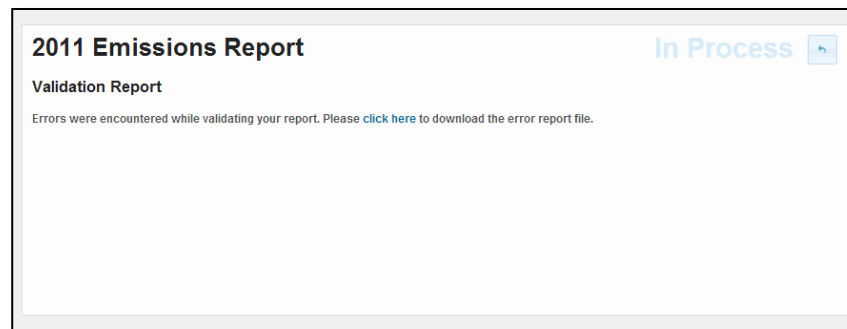
Submitting Your Emission Report

Validate Report

- Validate report will run automated quality assurance checks on your current emission report
- Can be run at any time...you don't need to wait until report is complete to check for errors
- Once clicked you will be taken to the Validate Report screen...

Validation Report


- If there are errors:



- The error report will be downloaded as a CSV file:

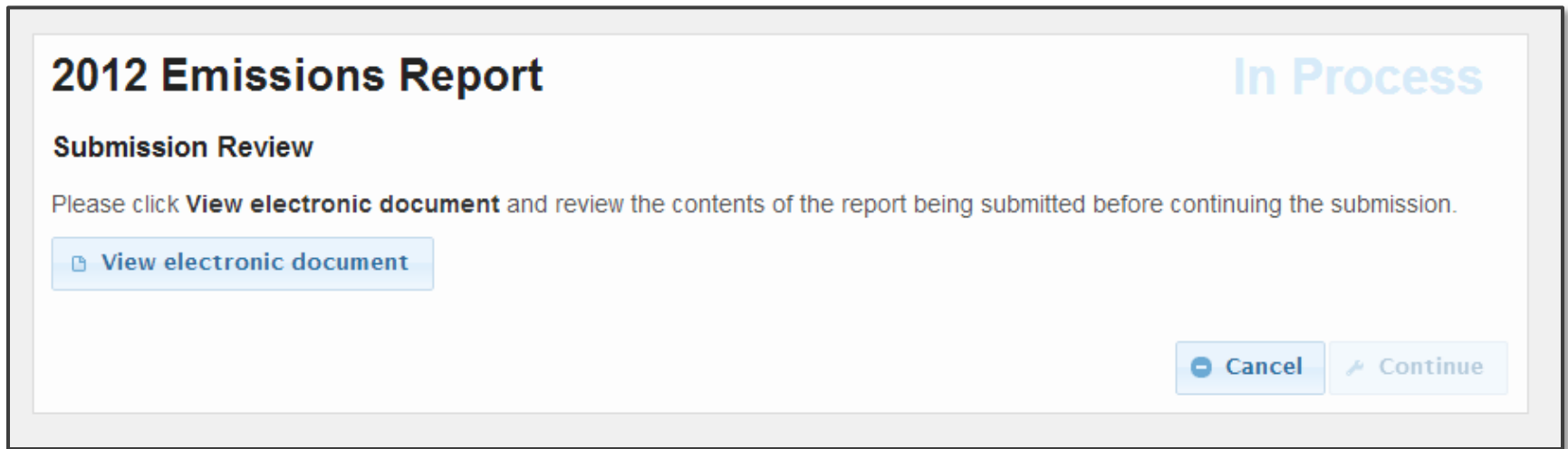
	A	B	C	D
1	Error	Context		
2	Process Emission Operations Average Hours/Day is r	Emission Unit: 003, Process: 3		
3	Process Emission Operations Average Days Per Weel	Emission Unit: 003, Process: 3		
4	Process Emission Throughput Material Type is requir	Emission Unit: 003, Process: 3		
5	Process Emission Annual Throughput is required	Emission Unit: 003, Process: 3		
6	Process Emission Throughput Unit of Measure is req	Emission Unit: 003, Process: 3		
7	Process Emission Operations Average Weeks/Year is	Emission Unit: 003, Process: 3		
8	Process Emission Throughput Type is required	Emission Unit: 003, Process: 3		
9	Process Emission requires at least one Pollutant	Emission Unit: 003, Process: 3		
10				

Validation Report Cont'd

<h2>2011 Emissions Report</h2> <p>Validation Report</p> <p>No errors were encountered while validating your report.</p> <p>Please click the Mark as Ready for Submission checkbox if this report is now ready for submission.</p>	<p>In Process </p> <hr/> <p>EXAMPLE FACILITY</p> <p>Identifier: 1111</p> <p>Address: NF-131 Tonto National Forest Young, AZ 85554</p> <p>Mark as Ready for Submission?</p> <p><input type="checkbox"/> The report will be displayed on the My Facilities page for users with the Submitter role for the report's facility.</p>
---	--

- Once all errors have been corrected the report is ready to submit

Report Submission




The screenshot shows a web interface for the "2012 Emissions Report" submission. The title "2012 Emissions Report" is in bold black text on the left, and "In Process" is in light blue text on the right. Below the title is the section "Submission Review". A message states: "Please click **View electronic document** and review the contents of the report being submitted before continuing the submission." Below this message is a button labeled "View electronic document" with a document icon. At the bottom right, there are two buttons: "Cancel" with a minus icon and "Continue" with a pencil icon.

2012 Emissions Report In Process

Submission Review

Please click **View electronic document** and review the contents of the report being submitted before continuing the submission.

 [View electronic document](#)

[Cancel](#) [Continue](#)

- ❑ An electronic (PDF) version of your emission report will be created
- ❑ You can't continue until you click on the "View electronic document" button

Report Submission Cont'd

2012 Emissions Report

In Process

Submission Agreements

I certify that I have not violated any term in my Electronic Signature Agreement and that I am otherwise without any reason to believe that the confidentiality of my userID and/or password have been compromised now or at any time prior to this submission. I understand that this attestation of fact pertains to the implementation, oversight, and enforcement of a federal environmental program and must be true to the best of my knowledge.

- ☒ I am the owner of the account used to perform the electronic submission and signature.
- ☒ I have the authority to submit the data on behalf of the facility I am representing.
- ☒ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☒ I have reviewed the electronic report being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

Cancel Continue

- You'll need to check all of the boxes under the Submission Agreement

Report Submission Cont'd

2012 Emissions Report In Process

Submission Signature

Please provide the answer to your previously specified challenge question, and re-enter your account login password.

What is the name of the place your wedding reception was held?

Password:

- You'll need to answer one of your challenge questions and your password

Report Submission Cont'd

2012 Emissions Report

Submitted

Submission Confirmation

Your Emissions Report submission was successful.

[View official copy of record](#)

Confirmation Number:
S20131112113526-F1978-R2012

Submitted on:
2013-11-12 11:36:17 GMT-07:00

[Print Confirmation](#)

[Done](#)

- When you see this page your report has been successfully submitted
- The “Official Copy of Record” and “Confirmation” documents are for your records. No need to mail them to ADEQ.

USEFUL LINKS

- EPA's Emission Inventory Trainings:
 - ▣ <http://www.epa.gov/ttn/chief/e>
- ADEQ Emission Inventory Website:
 - ▣ <http://azdeq.gov/envIRON/air/compliance/eir.html>
- GovDelievery - EI Updates:
 - ▣ <https://public.govdelivery.com/accounts/AZDEQ/subscriber/new>



Minor Source Reporting

FINDING THE FORMS

<http://www.azdeq.gov>

'Compliance'

The screenshot shows the ADEQ website with the following elements:

- Header:** Navigation tabs for Air Quality, Waste Programs, and Water Quality. The ADEQ logo and AZ.GOV logo are present.
- Left Sidebar:** A vertical menu with links: Home, About Us, ADEQ Job Openings, Assistance, Complaint, **Compliance** (highlighted with an orange arrow), Databases, Education & Outreach, Laws, Rules & Policies, Newsroom, Permits, Procurement, Programs, Public Notices & Hearings, and Publications & Forms.
- Main Content Area:** Features a large landscape image of a red rock canyon. Below it is a 'Press Releases' section with a list of recent announcements and a 'Press Release Archive' link.
- Right Sidebar:** Contains several promotional boxes: Vehicle Emissions Inspections, SUBSCRIBE TO ADEQ TOPICS, QUICK Links, Children's Environmental Health, OFFICE OF Border Environmental Protection, GIS eMAPS, BROCHURES FACT SHEETS, SRO, EMERGENCY RESPONSE, and ADEQ DONATE Employee Recession Program.
- Footer:** Includes a photo of Governor Jan Brewer, social media icons for Facebook and Twitter, and the ARIZONA OPENBOOKS logo with the URL OpenBooks.az.gov.

FINDING THE FORMS



The screenshot shows the Arizona Department of Environmental Quality (ADEQ) website's Compliance page. The URL is www.azdeq.gov/function/compliance/index.html. The page features a navigation menu on the left with links like Home, About Us, ADEQ Job Openings, Assistance, Complaint, Compliance, Databases, Education & Outreach, Laws, Rules & Policies, Newsroom, Permits, Procurement, Public Notices & Hearings, Publications & Forms, and QuickPay. The main content area is titled "Compliance" and includes a section for "Air Quality" with a list of topics: Permitted Facilities, Asbestos Abatement, Performance Testing, Agriculture Best Management Practices, State Hazardous Air Pollutant Program, Environmental Management Systems, and Inspections and Compliance Reporting. A red box highlights the "Air Quality Division: Emissions Inventory Reporting" link in the "WHO TO CONTACT?" section. An orange arrow points from this link to the right-hand screenshot.

Air Quality

All portable sources in Arizona and stationary sources (outside of Pima, Pinal, and Maricopa counties), including:

- Permitted Facilities
- Asbestos Abatement
- Performance Testing
- Agriculture Best Management Practices
- State Hazardous Air Pollutant Program
- Environmental Management Systems
- Inspections and Compliance Reporting

For The Public:

- Home M
- Prescrip

For Business:

- Contami
- Hazardou
- Lead-Ac
- Leaking
- Pollution
- Tattoo-g
- Undergr
- Used Oil
- Waste T

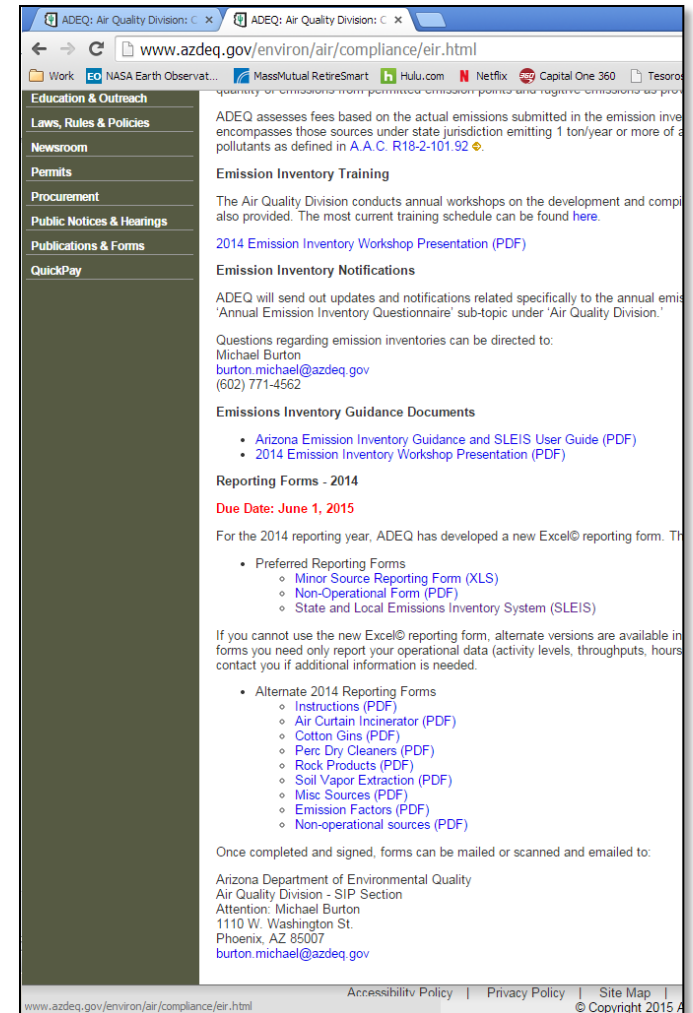
WHO TO CONTACT? ADEQ has authorized political subdivisions, such as county law, including inspections and enforcement. These delegated local authorities may counties as Arizona's most populous counties have authority to enforce most enviro

Other Links

ADEQ offers a variety of assistance to help ensure that people are in compliance w

- [Environmental Management Systems](#)
- [Facility Assistance](#)
 - [Biosolids](#)
 - [Agricultural Facilities and Operations](#)
 - [Best Management Practices](#)
 - [Concentrated Animal Feeding Operation \(CAFO\)](#)

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The screenshot shows the ADEQ website's Emissions Inventory Reporting page. The URL is www.azdeq.gov/environ/air/compliance/eir.html. The page features a navigation menu on the left with links like Education & Outreach, Laws, Rules & Policies, Newsroom, Permits, Procurement, Public Notices & Hearings, Publications & Forms, and QuickPay. The main content area is titled "Emissions Inventory Reporting" and includes a section for "Emission Inventory Training" with a link to the "2014 Emission Inventory Workshop Presentation (PDF)". A section for "Emissions Inventory Guidance Documents" lists the "Arizona Emission Inventory Guidance and SLEIS User Guide (PDF)" and the "2014 Emission Inventory Workshop Presentation (PDF)". A section for "Reporting Forms - 2014" lists the "Preferred Reporting Forms" (Minor Source Reporting Form (XLS), Non-Operational Form (PDF), State and Local Emissions Inventory System (SLEIS)) and "Alternate 2014 Reporting Forms" (Instructions (PDF), Air Curtain Incinerator (PDF), Cotton Gins (PDF), Perc Dry Cleaners (PDF), Rock Products (PDF), Soil Vapor Extraction (PDF), Misc Sources (PDF), Emission Factors (PDF), Non-operational sources (PDF)). An orange arrow points from the "Air Quality Division: Emissions Inventory Reporting" link in the left-hand screenshot to this page.

Emission Inventory Training

The Air Quality Division conducts annual workshops on the development and compi also provided. The most current training schedule can be found [here](#).

2014 Emission Inventory Workshop Presentation (PDF)

Emission Inventory Notifications

ADEQ will send out updates and notifications related specifically to the annual emis 'Annual Emission Inventory Questionnaire' sub-topic under 'Air Quality Division.'

Questions regarding emission inventories can be directed to:
Michael Burton
burton.michael@azdeq.gov
(602) 771-4562

Emissions Inventory Guidance Documents

- [Arizona Emission Inventory Guidance and SLEIS User Guide \(PDF\)](#)
- [2014 Emission Inventory Workshop Presentation \(PDF\)](#)

Reporting Forms - 2014

Due Date: June 1, 2015

For the 2014 reporting year, ADEQ has developed a new Excel® reporting form. Th

- Preferred Reporting Forms
 - [Minor Source Reporting Form \(XLS\)](#)
 - [Non-Operational Form \(PDF\)](#)
 - [State and Local Emissions Inventory System \(SLEIS\)](#)

If you cannot use the new Excel® reporting form, alternate versions are available in forms you need only report your operational data (activity levels, throughputs, hours contact you if additional information is needed.

- Alternate 2014 Reporting Forms
 - [Instructions \(PDF\)](#)
 - [Air Curtain Incinerator \(PDF\)](#)
 - [Cotton Gins \(PDF\)](#)
 - [Perc Dry Cleaners \(PDF\)](#)
 - [Rock Products \(PDF\)](#)
 - [Soil Vapor Extraction \(PDF\)](#)
 - [Misc Sources \(PDF\)](#)
 - [Emission Factors \(PDF\)](#)
 - [Non-operational sources \(PDF\)](#)

Once completed and signed, forms can be mailed or scanned and emailed to:

Arizona Department of Environmental Quality
Air Quality Division - SIP Section
Attention: Michael Burton
1110 W. Washington St.
Phoenix, AZ 85007
burton.michael@azdeq.gov

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QUESTIONNAIRE FORMAT



- Revised reporting forms available for 2014
- Goals of the new forms:
 - ▣ Streamline and simplify reporting process
 - ▣ Reduce # of forms
 - ▣ Eliminate unnecessary or duplicative reporting
 - ▣ Standardize emissions reporting with permit calculations

QUESTIONNAIRE FORMAT

- Starting with 2014 reporting, all necessary forms are contained in a single workbook
- This workbook contains various forms used to report emissions:
 - ▣ FORM 1.0 – General Facility Information
 - ▣ FORM 2.1 – Generators & Boilers
 - ▣ FORM 2.2 – PERC Dry Cleaners
 - ▣ FORM 2.3 – Cotton Gin
 - ▣ FORM 2.4 – Soil Vapor Extraction
 - ▣ FORM 2.5 – Air Curtain Incinerator
 - ▣ FORM 2.6 – Rock Products
 - ▣ FORM 3.0 – Misc. Equipment
 - ▣ FORM 3.1 – Misc. Emissions

QUESTIONNAIRE FORMAT


- Two versions available: Excel and PDF
- Excel version will auto-calculate emissions based on activity levels (throughput, hours of operation, etc)
- PDF versions will not auto-calculate
 - ▣ Only report activity levels
 - ▣ No need to manually calculate emissions
 - ▣ ADEQ will use these levels to calculate your facilities emission totals

FORM 1.0: GENERAL FACILITY INFO

ADEQ Arizona Department of Environmental Quality		FORM 1.0 - GENERAL FACILITY INFORMATION		2014	
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE					
FACILITY NAME		PLACE ID#	PERMIT# or LTP#		
FACILITY ADDRESS		CITY	STATE	ZIP CODE	
FACILITY CONTACT		TITLE	PHONE #		
E-MAIL					
PRODUCT/PRINCIPAL ACTIVITY		NAICS	NUMBER OF EMPLOYEES		
FORMS COMPLETED (mark all that apply):					
<input type="checkbox"/> Generators & Boilers		<input type="checkbox"/> Soil Vapor Extraction		<input type="checkbox"/> Misc Equipment	
<input type="checkbox"/> Dry Cleaning		<input type="checkbox"/> Air Curtain Incinerators		<input type="checkbox"/> Misc Emissions	
<input type="checkbox"/> Cotton Gin		<input type="checkbox"/> Rock Products			
Pursuant to Arizona Revised Statutes 549-432 and 549-201, do you claim the Emissions Inventory data submittal confidential? NO, I do not request confidentiality.					
If YES, include which portions of the inventory are confidential along with a brief explanation:					
PARENT COMPANY NAME					
MAILING ADDRESS		CITY	STATE	ZIP CODE	
CONTACT NAME		CONTACT TITLE	CONTACT E-MAIL		
TOTAL FACILITY EMISSIONS (TONS PER YEAR)					
<i>If you are using the PDF forms, emission totals do not need to be reported. Simply fill out your operational data (activity levels, throughputs, etc) on the appropriate forms and submit them to ADEQ. ADEQ will calculate your emission totals and contact you if additional information is needed.</i>					
CERTIFICATION OF TRUTH & ACCURACY					
I certify that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.					
PRINT NAME OF PERSON COMPLETING FORM		TITLE			
SIGNATURE		DATE			
PRINT NAME OF RESPONSIBLE OFFICIAL		TITLE			
SIGNATURE		DATE			
CONTACT INFORMATION					
Arizona Department of Environmental Quality Air Quality Division Attention: Michael Burton 1110 W. Washington St. Phoenix, AZ 85007					

- Enter general facility information
- Should be filled out with every questionnaire

FORM 2.1 – GENERATORS & BOILERS

 FORM 2.1 - GENERATORS & BOILERS		2014				
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE						
FACILITY NAME		PLACE ID#	PERMIT# or LTF#			
EQUIPMENT INFORMATION						
GENERATORS	Equipment Description	Equipment ID	ATO#	Fuel Type	Max. Capacity (HP)	Actual Hours Operated
#1						
#2						
#3						
#4						
#5						
#6						
#7						
BOILERS	Equipment Description	Equipment ID	ATO#	Fuel Type	Rated Capacity (MMBtu/hr)	Actual Hours Operated
#1						
#2						
#3						
#4						
#5						
#6						
#7						


- Used to capture emissions from any generators or boilers at a facility
- The form will auto-calculate emission totals based on fuel type, capacity, and hours of operation.

FORM 2.1 – GENERATORS & BOILERS

ADEQ Arizona Department of Environmental Quality		FORM 2.1 - GENERATORS & BOILERS				2014	
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE - Version 1.3							
FACILITY NAME				PLACE ID#		PERMIT# or LTF#	
0				0		0	
EQUIPMENT INFORMATION							
GENERATORS	Equipment Description	Equipment ID	ATO#	Fuel Type	Max. Capacity (HP)	Actual Hours Operated	
#1							
#2							
#3							
#4							
#5							
#6							
#7							
#8							
#9							
#10							
#11							
#12							
#13							
#14							
#15							
BOILERS	Equipment Description	Equipment ID	ATO#	Fuel Type	Rated Capacity (MMbtu/hr)	Actual Hours Operated	
#1							
#2							
#3							
#4							
#5							
#6							
#7							
#8							
#9							
#10							
#11							
#12							
#13							
#14							
#15							

- In the Excel version, you need to use the drop down list to select your fuel type.
- To do this, select the cell and a down arrow will appear. Click this arrow and select the appropriate fuel.

FORM 2.2 – PERC DRY CLEANING

 FORM 2.2 - PERC DRY CLEANING		2014	
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE			
FACILITY NAME		PLACE ID#	PERMIT# or LTF#
Perchloroethylene purchased & consumed during the year	YEARLY PERCHLOROETHYLENE PURCHASED & CONSUMED		
	Month	Perchloroethylene Purchased (Gallons)	Perchloroethylene Consumed (Gallons)
	January		
	February		
	March		
	April		
	May		
	June		
	July		
	August		
	September		
	October		
	November		
	December		
Total			

- Used to capture emissions from use of PERC at dry cleaning facilities
- Boiler information will need to be entered into FORM 2.1

FORM 2.3 – COTTON GIN



FORM 2.3 - COTTON GIN EQUIPMENT


2014

ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

FACILITY NAME		PLACE ID#	PERMIT# or LTF#
PROCESS DATA			
SOURCE	Quantity	Amount Processed (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			
FUGITIVE EMISSION DATA			
SOURCE	VEHICLE MILES TRAVELED (MILES/YEAR)		
Haul Roads			


- Enter number of each source in the 'Quantity' field and the total amount of material processed
- Also captures emission from unpaved haul roads

FORM 2.4 – SOIL VAPOR EXTRACTION

 ADEQ <small>Arizona Department of Environmental Quality</small>		FORM 2.4 - SOIL VAPOR EXTRACTION		2014	
FACILITY NAME		PLACE ID#		PERMIT# or LTF#	
EQUIPMENT INFORMATION					
UNIT #	EQUIPMENT ID	ATO #	ENERGY SOURCE	MANUFACTURER RATED CAPACITY (PPMV)	ACTUAL HOURS OPERATED (HOURS/YEAR)
1					
2					
3					
4					
LOCATION INFORMATION					
DATE		CITY & COUNTY OF OPERATION	LATITUDE	LONGITUDE	ADDRESS OR DRIVING DIRECTIONS
FROM	TO				
EMISSIONS FROM CONTAMINATED SOIL					
SAMPLING RESULTS DATE					
HOURS OF OPERATION					
EPA 8015 & 8021 EFFLUENT (PPM BY VOL)	VOC				
	BENZENE				
	TOLUENE				
	ETHYLBENZENE				
	XYLENE				
FLOW RATE (FT3/MIN)					

- Equipment info for the soil vapor extractor units
- Location info if the units have moved during the year
- Sampling results along with hours of operation

FORM 2.5 – Air Curtain Incinerator

 ADEQ Arizona Department of Environmental Quality		FORM 2.5 - AIR CURTAIN INCINERATOR				2014
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE						
FACILITY NAME			PLACE ID#		PERMIT# or LTF#	
EQUIPMENT INFORMATION						
Equipment Type	Equipment ID	ATO #	Max. Rated Capacity	Amount Processed (tons)	Hours Operated	
LOCATION INFORMATION						
DATE		CITY & COUNTY OF OPERATION	LATITUDE	LONGITUDE	ADDRESS OR DRIVING DIRECTIONS	
FROM	TO					


- Equipment info for the air curtain incinerator unit(s) along with hours of operation
- Location information if the units have moved during the year

FORM 2.6 – ROCK PRODUCTS

ADEQ Arizona Department of Environmental Quality		FORM 2.6 - ROCK PRODUCTS ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE		2014		
FACILITY NAME		PLACE ID#	PERMIT# or LTF#			
ASPHALT PLANTS						
PROCESS TYPE	AMOUNT PROCESSED (TONS)	FUEL TYPE	CONTROL DEVICE			
Rotary Drum Dryer						
SOURCE	AMOUNT OF FUEL USED	FUEL TYPE				
Asphalt Tank Heater						
SOURCE	AMOUNT PROCESSED (TONS)					
Plant Load-Out						
Material Handling Operations						
CRUSHING & SCREENING OPERATIONS						
SOURCE	AMOUNT PROCESSED	SOURCE	AMOUNT PROCESSED (TONS)			
Batch Drop Operations		Feed Hoppers				
Crushed		Screened				
Fine Screened		Stacked				
SOURCE	NUMBER OF TRANSFER POINTS					
Conveyor Transfer Points						
CONCRETE BATCH PLANTS						
Cubic Yards of Concrete Produced						
FUGITIVE SOURCES						
Number of Storage Piles		Vehicle Miles Traveled on Unpaved Roads				
Explosive Blasting - # of Blasts						
LOCATION INFORMATION						
DATE		CITY	COUNTY	LATITUDE	LONGITUDE	ADDRESS OR DRIVING DIRECTIONS
FROM	TO					

- FORM 2.6 covers emission from the rock products industry, including hot mix asphalt plants, concrete batch (ready mix) plants and crushing & screening operations.
- FORM 2.6 contains four sections
 - ▣ Asphalt Plants
 - ▣ Crushing & Screening Operations
 - ▣ Concrete Batch Plants
 - ▣ Fugitive Sources

FORM 2.6 – Asphalt Plants

 ADEQ Arizona Department of Environmental Quality		FORM 2.6 - ROCK PRODUCTS		2014	
ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE					
FACILITY NAME		PLACE ID#		PERMIT# or LTF#	
ASPHALT PLANTS					
PROCESS TYPE	AMOUNT PROCESSED (TONS)		FUEL TYPE	CONTROL DEVICE	
Rotary Drum Dryer					
SOURCE	AMOUNT OF FUEL USED		FUEL TYPE		
Asphalt Tank Heater					
SOURCE	AMOUNT PROCESSED (TONS)				
Plant Load-Out					
Material Handling Operations					

- ❑ Rotary Drum Dryer – Enter amount of material (in tons) processed in the drum dryer along with fuel type and control device
- ❑ Asphalt Tank Heater – Enter the amount of fuel consumed in the asphalt cement heater along with fuel type
- ❑ Plant Load-Out – Enter the amount (in tons) of material loaded into trucks from the asphalt plant
- ❑ Material Handling Operations – Enter the amount (in tons) of material handled at the asphalt plant (aggregate loaded into hoppers, etc)

FORM 2.6 – CRUSHING & SCREENING (1)

CRUSHING & SCREENING OPERATIONS			
SOURCE	AMOUNT PROCESSED	SOURCE	AMOUNT PROCESSED (TONS)
Batch Drop Operations		Feed Hoppers	
Crushed		Screened	
Fine Screened		Stacked	
SOURCE		NUMBER OF TRANSFER POINTS	
Conveyor Transfer Points			

For example, under 'Crushed' 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 sources in this category.

- ❑ **Batch Drop Operations** - Enter the total amount (in tons) of material that went through a batch drop process.
- ❑ **Feed Hoppers** - Enter the total amount (in tons) of material that went through a feed hopper

FORM 2.6 – CRUSHING & SCREENING (2)

CRUSHING & SCREENING OPERATIONS			
SOURCE	AMOUNT PROCESSED	SOURCE	AMOUNT PROCESSED (TONS)
Batch Drop Operations		Feed Hoppers	
Crushed		Screened	
Fine Screened		Stacked	
SOURCE		NUMBER OF TRANSFER POINTS	
Conveyor Transfer Points			

- ❑ **Crushed** – Enter the total amount (in tons) of material crushed at your facility.
- ❑ **Screened** – Enter the total amount (in tons) of material screened at your facility.
- ❑ **Fine Screened** – Enter the total amount (in tons) of material fine screened at your facility.
- ❑ **Stacked** – Enter the total amount (in tons) of material that was stacked at your facility.
- ❑ **Conveyor Transfer Points** – Enter the total number of conveyor transfer points

FORM 2.6 – CONCRETE BATCH PLANTS

CONCRETE BATCH PLANTS	
Cubic Yards of Concrete Produced	

- The only information needed for concrete batch plants is the total cubic yards of concrete produced.

FORM 2.6 – FUGITIVE SOURCES

FUGITIVE SOURCES			
Number of Storage Piles		Vehicle Miles Traveled on Unpaved Roads	
Explosive Blasting - # of Blasts			

- **Number of Storage Piles** – Enter the total number of storage piles at your facility. If storage piles are created and removed throughout the year, provide an estimate on the average number that existed during the year.
- **Vehicle Miles Traveled on Unpaved Roads** – Enter the total vehicle miles traveled (VMT) on unpaved roads. This is for all vehicle types.
- **Explosive Blasting** – Enter the number of blasts that occurred during the reporting year.

FORM 3.0 – MISC EQUIPMENT LIST

- ❑ The 'Misc.' forms should only be used if your facility utilizes equipment that's not covered under another form.
- ❑ There are no emission factors or emission sources in the Misc. forms...you will need to enter all of the data and perform the emission calculations yourself.

FORM 3.0 – MISC EQUIPMENT LIST

FORM 2: EQUIPMENT DATA						2013
Equipment Type	Equipment ID	Design Capacity	Units	Hours of Operation	Fuel Type	Control Device
EXAMPLE - Boiler	B-101	10	Mmbtu/hr	8760	Natural Gas	None

- FORM 3.0: Misc. Equipment List
 - ▣ Enter all equipment as specified in your permit

FORM 3.1 – MISC. EMISSIONS

FORM 3.1 - Emissions Data

[illegible]

QUESTIONNAIRE

- Live Demo of AEIQ

Q&A



Thank You!

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