

# Emissions Inventory Guidance

January 23, 2020

Presented by  
Oklahoma Department of Environmental Quality  
Emissions Inventory Section

# Contact Information

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# Today's Agenda

- ▶ Introduction - *Carrie Schroeder* (slides 1-36)
- ▶ Emissions Inventory (EI) Basics - *Shelby Willeby* (slides 37-106)
- ▶ *Break*
- ▶ Emissions Calculations - *Grant Loney* (slides 107-150)
- ▶ *Break*
- ▶ SLEIS QC and Common Mistakes - *Michael Ketcham* (slides 151-190)

*Q&A scheduled after each presentation*

# Intro Presentation Objectives

- ▶ Emissions Inventory Introduction
- ▶ Air Programs - Tier II, Green House Gas Reporting(GHGR), Toxic Release Inventory (TRI)
- ▶ ODEQ Website Navigation
- ▶ SLEIS
- ▶ Invoicing, Ownership, and Responsible Officials

# What is an Emissions Inventory?

# What is an Emissions Inventory?

- ▶ A report of actual emissions of regulated pollutants during the previous year
- ▶ Provides a description to DEQ of your facility and its operations



# Required to File an Inventory

- ▶ The owner or operator of any facility that is a source of Regulated Air Pollutants (RAP)
- ▶ Facilities with Individual Permits, or registered under a General Permit. *Facilities registered under a Permit by Rule need only report if they registered in 2019 (whether operating or not in 2019)*
- ▶ “Special Inventories” upon request by AQD Director
- ▶ Exception: Permit Exempt & De Minimis facilities are not required to file an inventory

# Site Specific Questions

Remember  
Air Quality Rules  
Always Apply

<https://www.deq.ok.gov/asd/rules-and-regulations/>



# Other Air Programs

# Tier II Reporting

*<https://www.deq.ok.gov/land-protection-division/chemical-reporting-and-preparedness/tier-ii/tier-ii-reporting/>*

- ▶ Emergency Planning and Community Right-to-Know Act (EPCRA)
- ▶ Established to help communities plan for potential chemical emergencies
- ▶ Administered by ODEQ Land Protection Division: Due on March 1 of each year
- ▶ Information: 405-702-5100



# Toxics Release Inventory (TRI) Program


*<https://www.epa.gov/toxics-release-inventory-tri-program>*

- ▶ The TRI is a resource for learning about toxic chemical releases and pollution activities reported by industrial and federal facilities






# TRI Screening Tool

<https://www.epa.gov/toxics-release-inventory-tri-program/tri-threshold-screening-tool>

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## Toxics Release Inventory (TRI) Program

TRI Program Home

What is TRI?

Covered Chemicals

Covered Industry Sectors

Find, Understand & Use TRI

TRI Data & Tools

TRI National Analysis

Data Quality

What You Can Do

Reporting for Facilities

Enforcement

GuideME

Laws & Regulatory Activities

Pollution Prevention

TRI P2 Resources

TRI-MEweb

TRI Site Map

### TRI Threshold Screening Tool

The Toxics Release Inventory (TRI) Threshold Screening Tool uses a step-by-step questionnaire to help facilities determine if they meet or exceed established facility, employee, and chemical thresholds and as such, may be required by Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA) to report to the TRI Program.


This tool is only intended to help facilities determine if they are required to submit annual TRI data; it does not help facilities fill out TRI reporting forms. We suggest printing out the threshold screening report at the end of the tool's third section for your reference.

- NEW** EPA has recently upgraded the Threshold Screening Tool to help you determine if your facility is required to submit a TRI reporting form. We would appreciate your feedback on the tool and how we can improve it. Within the tool, please click the "Provide Feedback" button at the top center of the screen. [Start using the TRI Threshold Screening Tool](#)

### TRI Reporting Requirements

Your facility is required to report to the TRI Program if it meets ALL of these three threshold criteria:

- The facility is included in a [TRI-covered North American Industry Classification System \(NAICS\) code](#); and



**Note:** The tool provides reporting requirements for reporting year 2017.

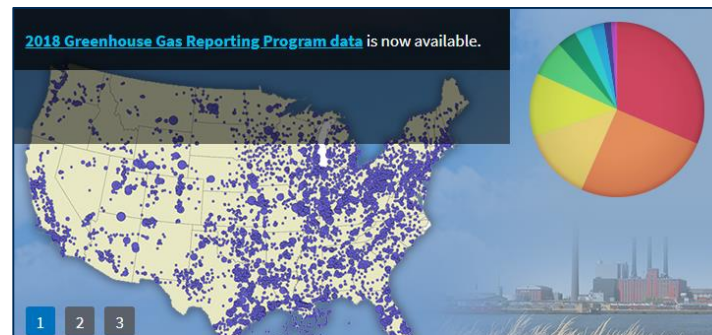
# Greenhouse Gas Reporting

- ▶ In response to the FY2008 Consolidated Appropriations Act, **EPA issued 40 CFR 98 Mandatory Greenhouse Gas Reporting**
- ▶ Under the rule, suppliers of fossil fuels or industrial greenhouse gases (GHG), manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to **submit annual reports to EPA starting with the 2010 reporting year**
- ▶ **Pollutants:** carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF<sub>6</sub>), and other fluorinated gases including nitrogen trifluoride (NF<sub>3</sub>) and hydrofluorinated ethers (HFE)

# Greenhouse Gas Reporting

- ▶ GHGRP is a Federal requirement
- ▶ DEQ is not involved in the implementation or reporting of the Greenhouse Gas Inventory
- ▶ EPA Greenhouse Gas Reporting Program
- ▶ EPA Greenhouse Gas Applicability Tool
- ▶ EPA Electronic Greenhouse Gas Reporting Tool (e-GGRT)

[www.epa.gov/ghgreporting](https://www.epa.gov/ghgreporting)



# EPA's GHG Reporting Program

<https://www.epa.gov/ghgreporting/ghg-reporters>



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Greenhouse Gas Reporting Program (GHGRP) Home

GHGRP Data

**For GHG Reporters**

Learn About GHGRP

Help Center

## Greenhouse Gas Reporting Program (GHGRP)

### For GHG Reporters

In response to the FY2008 [Consolidated Appropriations Act \(PDF\)](#) (613 pp, 1.5MB, [About PDF](#)) (H.R. 2764; Public Law 110-161), EPA issued the Greenhouse Gas Reporting Rule (74 FR 56260) which requires reporting of greenhouse gas (GHG) data and other relevant information from large sources and suppliers in the United States.

The For GHG Reporters section provides information and resources for businesses and institutions that are or may be subject to reporting under the Greenhouse Gas Reporting Program (GHGRP). The pages in this section provide more detailed GHGRP information.

Topic	Description
<a href="#">Proposed Rules</a>	Currently active regulatory proposals related to the GHGRP.
<a href="#">Resources by Subpart</a>	Guidance and supporting materials arranged by industry.
<a href="#">Training and Testing Opportunities</a>	Current training opportunities and archived training presentations.

READ THE CURRENT RULE

#### Quick Help

- [GHG Reporting Rule](#)
- [Reporter FAQs](#)
- [EXIT](#)
- [Applicability Tool](#)
- [General Fact Sheet](#)

Go to [Rule Help Center](#)



# EPA's Applicability Tool

<https://www3.epa.gov/ghgreporting/help/tool2014/index.html>

**EPA** United States Environmental Protection Agency

Advanced Search **A-Z Index**

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**Greenhouse Gas Reporting Program** [Contact Us](#) [Share](#)

**Greenhouse Gas Reporting Program Home**  
Basic Information  
GHG Data  
Help Center  
For GHG Reporters  
Site Map

**You are here:** EPA Home » Greenhouse Gas Reporting Program » Help Center » Applicability Tool

## Applicability Tool

► **Is the Mandatory Greenhouse Gas Reporting Rule applicable to your FACILITY?**

This tool\* is designed to help you assess whether your facility is required to report greenhouse gas (GHG) emissions as required by EPA's Mandatory GHG Reporting Rule (40 CFR Part 98). Applicability depends on the source categories located at the facility and, for some source categories, the emission level or production capacity.

This tool is **not** intended for **Suppliers** of fossil fuels or industrial GHGs and **Engine Manufacturers**. However, guidance for Suppliers and Engine Manufacturers is available at the links below. In addition, CALCULATORS are available that can be used by importers and exporters of industrial GHGs and by destroyers of fluorinated GHGs to determine whether the quantities that they import, export, or destroy exceed the 25,000 metric ton CO<sub>2</sub>e reporting threshold.

- Mobile Sources Information Sheet
- Suppliers of Carbon Dioxide Information Sheet
- Suppliers of Coal-based Liquid Fuels Information Sheet
- Suppliers of Industrial Greenhouse Gases (Including Bulk Importers and Bulk Exporters of Fluorinated GHGs and N<sub>2</sub>O and Destroyers of Fluorinated GHGs) Information Sheet
  - Download CO<sub>2</sub>e Calculators for Importers and Exporters of Industrial GHGs
  - Download CO<sub>2</sub>e Calculator for Destroyers of Fluorinated GHGs
- Importers and Exporters of Fluorinated Greenhouse Gases Contained in Pre-charged Equipment or Closed-cell Foams Information Sheet
- Suppliers of Natural Gas and Natural Gas Liquids Information Sheet
- Suppliers of Petroleum Products Information Sheet

You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more.

\* Please read our disclaimer.

**Run the Applicability Tool >>**


**Required browser settings for using this tool:** JavaScript and cookies *must* be enabled in your browser. [More >](#)


Top of Page




# EPA's e-GGRT

[https://ghgreporting.epa.gov/ghg/login.dowl](https://ghgreporting.epa.gov/ghg/login.dow<u>l</u>)

 United States Environmental Protection Agency

 e-GGRT  
Electronic Greenhouse Gas Reporting Tool

 e-GGRT Help

- ▶ How to Login to e-GGRT
- ▶ How to Retrieve Your Lost or Forgotten User Name
- ▶ How to Retrieve Your Lost or Forgotten Password
- ▶ How to Reset an Expired Password
- ▶ How to Reset Your Locked e-GGRT Account

## Welcome to EPA's electronic Greenhouse Gas Reporting Tool

### About e-GGRT

E-GGRT supports facility and supplier reporting for the [EPA Greenhouse Gas Reporting Program](#). The rule requires electronic reporting of greenhouse gas (GHG) emissions from large sources and suppliers in the United States.

Additional information on [e-GGRT](#).

### Warning Notice

In proceeding and accessing U.S. Government information and information systems, you acknowledge that you fully understand and consent to all of the following: 1. you are accessing U.S. Government information and information systems that are provided for official U.S. Government purposes only; 2. unauthorized access to or unauthorized use of U.S. Government information or information systems is subject to criminal, civil, administrative, or other lawful action; 3. the term U.S. Government information system includes systems operated on behalf of the U.S. Government; 4. you have no reasonable expectation of privacy regarding any communications or information used, transmitted, or stored on U.S. Government information systems; 5. at any time, the U.S. Government may for any lawful government purpose, without notice, monitor, intercept, search, and seize any authorized or unauthorized communication to or from U.S. Government information systems or information used or stored on U.S. Government information systems; 6. at any time, the U.S. Government may for any lawful government purpose, search and seize any authorized or unauthorized device, to include non-U.S. Government owned devices, that stores U.S. Government information; 7. any communications or information used, transmitted, or stored on U.S. Government information systems may be used or disclosed for any lawful government purpose, including but not limited to, administrative purposes, penetration testing, communication security monitoring, personnel misconduct measures, law enforcement, and counterintelligence inquiries; and 8. you may not process or store classified national security information on this computer system.

### e-GGRT LOGIN

User Name:

Password:

☐ Show Password

**LOGIN**

**FORGOT YOUR USER NAME?  
FORGOT YOUR PASSWORD?**

**New e-GGRT Users Must Register**  
New users must complete a one-time registration process. After establishing a user account you can register your facility.

**NEW USER REGISTRATION**

**You are already registered if...**

**You have a CDX Account**  
If you have an existing CDX Web account, log in above with your CDX User Name and Password and complete an abbreviated e-GGRT registration process.

# Emissions Inventory Webpage Navigation

<https://www.deq.ok.gov/air-quality-division/emissions-inventory/>

# SLEIS

## State and Local Emissions Inventory Reporting Tool

# What Is SLEIS?

- ▶ DEQ purchased and customized SLEIS from Windsor Solutions to replace Redbud
- ▶ SLEIS is currently used by several other states
- ▶ SLEIS is cross-browser compatible
- ▶ SLEIS can accept data through spreadsheet upload
- ▶ Companies can submit amendments through SLEIS
- ▶ SLEIS provides a streamlined process for DEQ to use in submitting data to the EPA

**SLEIS**  State & Local  
Emissions Inventory System

## Welcome

Welcome to the Oklahoma State and Local Emissions Inventory System (SLEIS), a web-based application that allows permitted facilities to compile and submit point source emissions inventory data in accordance with regulatory reporting.

# New in SLEIS

- ▶ Spreadsheet upload
- ▶ SLEIS user roles
  - Viewer - can view report
  - Editor - can view, start, modify and edit data
  - Administrator - Can change users' roles
  - Submitter - Can submit inventory, must be an RO
- ▶ Greater validation
- ▶ Batch Processing

# Important SLEIS Differences

- ▶ All amendments are now done in SLEIS, we are no longer using Turn Around Documents (TADs)
- ▶ If you make an inventory submission in SLEIS and determine you need to change something, you must initiate an inventory amendment to make changes

# Webinar Links from our Website

*<https://www.deq.ok.gov/air-quality-division/emissions-inventory/emissions-inventory-workshop/>*

The screenshot displays the DEQ website's 'Emissions Inventory Workshop' page. The header includes the DEQ logo and navigation links: ABOUT DEQ, PERMITS, RULES & REGULATIONS, ENVIRONMENTAL COMPLAINTS, DIVISIONS, and CONTACT. A sidebar on the left lists various topics under the 'AIR QUALITY DIVISION' header, including Ambient Air Monitoring, Air Permits, Emissions Inventory, Air Compliance/Enforcement, Lead-Based Paint, Rules & Planning, and Forms & Public Participation. The main content area features a yellow banner announcing a series of webinars for SLEIS (State and Local Emission Inventory System) starting in December. Below this, there is a section for SLEIS registration, including instructions on how to register and a link to the SLEIS landing page. A 'Webinar Recordings' section at the bottom lists three recorded webinars: 'SLEIS Registration, Account Management and Report Preparation', 'SLEIS User Interface', and 'SLEIS Template Use and Bulk Operations', each with a YouTube icon and presenter information.

← → ↻ 🔒 [deq.ok.gov/air-quality-division/emissions-inventory/emissions-inventory-workshop/](https://www.deq.ok.gov/air-quality-division/emissions-inventory/emissions-inventory-workshop/)

Apps SLEIS

OK Gov

Agencies

**DEQ**  
OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

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**AIR QUALITY DIVISION**  
AQD Contact Information  
AQD Contacts by Topic

Ambient Air Monitoring >  
Air Permits >  
Emissions Inventory >  
Air Compliance/Enforcement >  
Lead-Based Paint >  
Rules & Planning >  
Forms & Public Participation >

**EMISSIONS INVENTORY WORKSHOP**

This year our workshop is a series of webinars! The series will begin in December and go over **SLEIS (State and Local Emission Inventory System)**.

**SLEIS** State & Local Emissions Inventory System

To attend, please complete the registration form below. *Spots are limited; we encourage screen sharing.* Recordings will be linked on this page for anyone after each webinar. You will receive a confirmation email for each selected webinar, which includes a link and calendar reminder.

Instructions on registering as a SLEIS user can be found on the [SLEIS landing page](#). After creating an account, the user's SLEIS emission inventory data will be available for viewing prior to the 2019 reporting season.

Please forward any additional questions to the [Emissions Inventory Section](#).

What's New for CY2019 Reporting?  
The latest updates on the program can be found here: [CY2019 Emissions Reporting Updates](#).

**Webinar Recordings**

SLEIS Registration, Account Management and Report Preparation  
Carrie Schroeder, Environmental Programs Manager  
Sara Long, Environmental Programs Specialist  
Emissions Inventory Section  
Oklahoma Department of Environmental Quality

SLEIS User Interface  
Carrie Schroeder, Environmental Programs Manager  
Joshua Kaffas, Environmental Programs Specialist  
Oklahoma Department of Environmental Quality

SLEIS Template Use and Bulk Operations  
Carrie Schroeder, Environmental Programs Manager  
Joshua Kaffas, Environmental Programs Specialist  
Oklahoma Department of Environmental Quality

**Emissions Inventory Webinars Registration Form**

# Invoicing and Annual Operating Fees



# Invoicing

- ▶ Two years in arrears
  - 2018 inventories submitted by April 1, 2019 - billed in 2020
  - 2019 inventories submitted by April 1, 2020 - billed in 2021
  - This allows the Emission Inventory Section ample time for quality control
- ▶ The Title V operating fee was set at \$32.30 per ton in 2008, and it is adjusted yearly based on the change in the annual Consumer Price Index
  - The 2020 Title V fee is \$39.86 per ton
  - The minor source fee is fixed at \$25.12 per ton

# Invoicing Continued

- ▶ Pollutants can not be double billed
  - We split your reported Total VOC into HAP and non-HAP VOC for billing
  - Only bill for PM-10. (PM-2.5 is a subset of PM-10)

OF OKLAHOMA - 2016 REPORTED EMISSIONS (SEE INSTRUCTIONS ON REVERSE)					
TONS OF REGULATED AIR POLLUTANT					
HAP	NOX	PM-10	SOX	TOX	VOC
24.656	1,257.247	7.871	2.035	0.000	2,290.994

- When calculating PBR annual operating fees, the last reported inventory emission amounts are used

# Invoice

- Invoices sent out July 1<sup>st</sup>
- Vital to have correct Responsible Official information
- A 100-882 must be signed and submitted to designate a Responsible Official

**DEQ**  
OKLAHOMA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
Air Quality Division

Mailing Address:  
Department of Environmental Quality  
Administrative Services - Accounts Receivable  
P O Box 2036  
Oklahoma City, OK 73101  
DEQ's FEI # 73-6017957

2015 AIR QUALITY ANNUAL OPERATING FEE  
BASED UPON EMISSIONS REPORTED FOR 2013

Account: 0000421898

Invoice: 50028378  
Invoice Date: 7/01/2015  
Due Date: 7/31/2015  
Purchase Order: [REDACTED]

Note: Authorized Fees: (See back of invoice)  
Emissions Inventory Questions: Michelle Horn 405-702-4176  
Accounts Receivable Questions: 405-702-1130

PS ID: 292150701 60378

STATE OF OKLAHOMA - 2013 REPORTED EMISSIONS  
(SEE INSTRUCTIONS ON REVERSE)

FACILITY INFO	TONS OF REGULATED AIR POLLUTANT							
	TOTAL BILLABLE	CO*	HAP	NOX	PM-10	SOX	TOX	VOC
SEE SUMMARY	146.951	84.256	5.537	111.316	1.333	0.058	0.000	28.707

\*CO tons are not included in billable tons.

FEE CALCULATION

TOTAL TONS	RATE PER TON	TOTAL FEE
146.951	SEE SUMMARY	\$3,691.41

DETACH HERE

Invoice: 50028378 Amount Due: \$3,691.41  
PS ID: 292150701 60378

Account: 0000421898

DEPOSIT INFORMATION: 59002 \$3,691.41  
DEQ USE ONLY 59003

DEPARTMENT OF ENVIRONMENTAL QUALITY  
ADMINISTRATIVE SERVICES - ACCOUNTS RECEIVABLE  
P O BOX 2036  
OKLAHOMA CITY OK 73101

Please Choose One Form of Payment **SEND**  
Emissions Non-Tide V [50002] - Emissions Tide V [50004]


☐ Check Made Payable to DEQ  
☐ Money Order Made Payable to DEQ  
☐ Electronic Payment\* Date of Transfer: [REDACTED]  
Chase; Routing #103000648 Account #10030052  
\*Please Notify DEQ Accounts Receivable:  
Fax 405-702-7120 or email: deqEffNotification@DEQ.OK.GOV

☐ Purchase Order No.: [REDACTED]  
☐ Visa or MasterCard:  
Pay by telephone: 405-702-1130  
Pay by fax: 405-702-7120 Exp (mm/yy) DEQ Use Only

Card Number: [REDACTED] Authorized Signature and Phone # [REDACTED]


# #100-882 Designation of Responsible Official

<https://www.deq.ok.gov/air-quality-division/forms-public-participation/air-forms/>

		<b>100-882 Designation of Responsible Official/SLEIS Registration</b> Oklahoma Department of Environmental Quality, Air Quality Division, P.O. Box 1677, Oklahoma City, OK 73101-1677 (405) 702-4100 (Tel), (405) 702-4101 (Fax)	
Please mail completed forms to the Air Quality Division office or email to <a href="mailto:aei@deq.ok.gov">aei@deq.ok.gov</a> All SLEIS User Registrations Require a Responsible Official Signature			
<b>Section 1: Responsible Official (RO) Registration</b>			
RO Name			
RO Address			
City		Phone/Extension	
State, Zip		Cell Phone	
RO Email (required)		Fax	
<b>Section 2: Responsible Official SLEIS Role Selection</b> – All ROs are assigned as Submitter, Administrator, and Viewer. The Editor role is optional.			
Assigned	Submitter – Can initiate submission process		
	Administrator – Can remove or change a user's role (assigned to same company)		
	Viewer – Can view the contents of a report, but cannot make any data modifications		
Optional	<input type="checkbox"/>	Editor – Can view, start, modify, enter a report (facility inventory and emissions data)	
<b>Section 3: Company and Facility Information</b> – An RO can be associated with multiple companies and facilities. An RO can be associated with all the facilities at a company or only a portion of facilities at a company. Check the all facilities checkbox, list your associated facilities below, or attach a list of your associated facilities.			
Company Name(s)			
	<input type="checkbox"/>	Assign RO to all facilities at the Company(s)	
Facility Name(s)			
<b>Section 4: Certification</b> – I certify that I am a Responsible Official for the above-listed facility(s) meeting the definition of OAC 252:100-1-3.			
RO Signature		Title	Date

# #100-733 SLEIS User Registration

<https://www.deq.ok.gov/air-quality-division/forms-public-participation/air-forms/>

		<b>100-733 SLEIS User Registration</b> Oklahoma Department of Environmental Quality, Air Quality Division, P.O. Box 1677, Oklahoma City, OK 73101-1677 (405) 702-4100 (Tel), (405) 702-4101 (Fax)	
Please mail completed forms to the Air Quality Division office or email to <a href="mailto:aei@deq.ok.gov">aei@deq.ok.gov</a>			
<b>Section 1: SLEIS User Registration</b>			
Name			
Contact	<input type="checkbox"/>	Check if you are the primary facility contact for emissions inventory issues	
	<input type="checkbox"/>	Check if you are a consultant or contractor for the facility(s)	
Address			
City		Phone/Extension	
State, Zip		Cell phone	
Email (required)		Title	
<b>Section 2: SLEIS Role Selection</b> – Choose either Editor or Viewer. <b>Consultants and contractors cannot choose the Administrator role.</b>			
Optional	<input type="checkbox"/>	Administrator – Can remove or change a user's role (assigned to same company)	
Check one	<input type="checkbox"/>	Editor – Can view, start, modify, and edit a report (facility inventory and emissions data)	
	<input type="checkbox"/>	Viewer – Can view the contents of a report, but cannot make any data modifications	
<b>Section 3: Company and Facility Information</b> – A SLEIS user can be associated with multiple companies and facilities. A SLEIS user can be associated with all the facilities at a company or only a portion of facilities at a company. Check the all facilities checkbox, list your associated facilities below, or attach a list of your associated facilities.			
Company Name(s)			
	<input type="checkbox"/>	Assign SLEIS user to all facilities at the Company(s)	
Facility Name(s)			
<b>Section 4: Certification</b> – All SLEIS User Registration forms require a Responsible Official's signature. I certify that I am a Responsible Official for the above-listed facility(s) meeting the definition of OAC 252:100-1-3.			
RO Name	RO Signature	Title	Date

To update the Main Facility Contact, add a consultant, or add an additional SLEIS user submit form 100-733

# Ownership & Annual Operating Fee Liability

- ▶ **Change of ownership** - New owners **assume liability** for payment of the annual operating fees based on emission reported in years of operation prior to transfer of ownership (However purchase contracts can shift the liability to the previous owner)
- ▶ To change the ownership of a facility a **Form 100-883** must be submitted

# Change of Ownership

Responsibilities of the:

- **Transferor (Seller)**

“The transferor shall notify the DEQ using a prescribed form **no later than 30 days** following the change in ownership.”

- **Transferee (Purchaser)**

“The transfer of ownership of a stationary source or a facility is an administrative amendment that shall subject the new owner or operator to existing permit conditions &/or compliance schedules.”

# #100-883 Administrative Change Notification (Transfer of Ownership)

<https://www.deq.ok.gov/air-quality-division/forms-public-participation/air-forms/>

<b>AIR QUALITY DIVISION</b> <b>ADMINISTRATIVE CHANGE NOTIFICATION</b> Request for Transfer and Administrative Amendment of Permit		Oklahoma Dept. Of Environmental Quality Air Quality Division 707 N Robinson, Suite 4100, P.O. Box 1677 Oklahoma City, Oklahoma 73101-1677	
<b>FACILITY INFORMATION</b>			
Facility Name (Current)			
Operating Permit No.			
Legal Description	Section	Township	Range
Latitude (to 3 Decimals)	Longitude (to 3 Decimals)		
UTM coordinates	Horizontal	Vertical	Zone
Physical Address or Driving Directions			
City or Nearest Town	County	Zip	
<b>INFORMATION UPDATE</b>			
<b>INFORMATION ITEM</b>	<b>PREVIOUS/CURRENT (Transferor)</b>	<b>NEW (Transferee)</b>	
Facility Name	[Listed Above]		
Company Name (Owner/Operator)			
Headquarters Mailing Address			
City			
State			
Zip			
Responsible Official (Name)			
Title			
Phone			
Fax			
Email Address			
Technical Contact (Name)			
Title			
Phone			
Fax			



# Important Dates

- ▶ 2019 reports created in SLEIS by January 1
- ▶ Emission Inventories **due April 1**
- ▶ Deadline with approved 30 day extension - May 1
- ▶ Invoices mailed July 1
- ▶ Operating Fees **due July 31**

# Resources & Help

- ▶ Sometimes the workshop is just a starter
- ▶ You can e-mail or call us
- ▶ You are welcome to come into our office
  - Schedule a time if you need one-on-one help
  - Bring your laptop, spreadsheets & other pertinent information

# General Contact Information

- ▶ **Emission Inventory email:** [aei@deq.ok.gov](mailto:aei@deq.ok.gov)
- ▶ **Air Quality front desk:** 405-702-4100

Questions on air emission inventory, compliance & enforcement, permitting, rules

# Questions?

# Emission Inventory Basics

Shelby Willeby

# Agenda

- ▶ Intro
- ▶ Company and Facility Pages
- ▶ Emission Unit Page
- ▶ Release Point Page
- ▶ Control Device Page
- ▶ Unit Process Page
- ▶ Flares
- ▶ Process Emission Page

# What is an Emission Inventory?

- ▶ Detailed estimate of the amounts of regulated air pollutants released into the atmosphere
- ▶ Provides enough information to show:
  - ▶ Where and when emissions occurred
  - ▶ What processes produced emissions
  - ▶ Calculation methods for determining emissions



# Note on First Inventories

- ▶ If a facility is submitting an Emissions Inventory for the first time, SLEIS will have no information populated for emission units, processes, or emissions
  - ▶ See permit or permit application for a list of emission units and information about them. \* This might not have all units though\*

Point	Source
E-1	25-hp Kohler CH730S engine
E-2	203-hp Caterpillar 3306TA
	Produced Water Tank (s)
	Fugitive Emissions

- ▶ After the first inventory, most data are copied forward to the next year
  - ▶ Key exceptions: annual process rates, annual hours of operation, annual emission amounts



# Company and Facility Data

- ▶ Largely unchanged from year to year, with a few things to watch out for
  - ▶ Make sure the appropriate Responsible Official has been designated
    - ▶ Form #100-882 is used for Responsible Official changes
- ▶ Make sure all change of ownership paperwork has been submitted to the DEQ before preparing emissions inventories
  - ▶ Form #100-883 is used for ownership changes
  - ▶ The new owner assumes responsibility for reporting, paying fees, and compliance schedules, unless specifically written into the purchase agreement

# SLEIS Homepage



**SLEIS**



State & Local  
Emissions Inventory System

## Welcome

Welcome to the Oklahoma DEQ State and Local Emissions Inventory System (SLEIS), a web-based application that allows permitted facilities to compile and submit point source emissions inventory data. SLEIS replaces Redbud, OKDEQ's previous web-based emissions reporting application. Companies may submit inventory amendments through SLEIS at any time after notifying and receiving approval from OKDEQ.

### Please Note

Minimum browser requirements for SLEIS are Chrome, Mozilla Firefox or Microsoft Edge.

### Locked Accounts

SLEIS accounts will be locked after 5 unsuccessful attempts accessing SLEIS. Contact [aei@deq.ok.gov](mailto:aei@deq.ok.gov) or 405-702-4100 to reset your password.

### SLEIS User Registration

Accounts have been created for all existing Responsible Officials (RO) and Main Facility Contacts (MFC). Access the login page and choose "Forgot Password?". You will receive email instructions. New ROs should request a SLEIS user account by completing [Form 100-882, Designation of Responsible Official/SLEIS User Registration Form](#). Other company representatives should complete [Form 100-733, SLEIS User Registration Form](#). Mail or email the completed forms to the address indicated on the form. An email link to create your initial account password will be sent.

### SLEIS Supporting Documentation



The following documents are provided as supporting materials that may be useful when reviewing an emissions inventory report.

- [SLEIS Facility Application Guide](#) - version 2.5
- [SLEIS Code Tables \(Excel Workbook\)](#)
- [SLEIS File Import Specification](#) - (Batch/Bulk Import) - version 2.5
- [SLEIS File Import Specification](#) - (Report Homepage Import) - version 2.5
- [Regulated Air Pollutants \(RAPs\)](#)
- [Emissions Inventory Frequently Asked Questions \(FAQs\)](#)
- [External Resources including NAICS, SIC, SCC and AP-42 Emission Factor searchable databases](#)
- [Guide to Determining Oil and Gas Facility Categories](#)

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









# My Companies Page













State & Local  
Emissions Inventory System

Welcome EMISSIONS INVENTORY SECTION  
[Home](#) | [My Companies](#) | [My Profile](#) | [Help](#) | [Logout](#)

## My Companies

Identifier	Name	Company Roles	Actions
3327	EMISSIONS INVENTORY TEST CO	Administrator, Editor, Submitter	 
4446	TEST - OK DEQ AQ COMPANY - C	Administrator, Editor, Submitter	 
3431	TESTCO - DEQ	Administrator, Editor, Submitter	 

# My Facilities Page

<div><div><div><div>SLEIS</div><div>State &amp; Local Emissions Inventory System</div></div></div></div>				
TESTCO - DEQ Facilities				
Filter: <input type="text"/>				
Identifier	Name	Facility Roles	Ready for Submission	Actions
20969	TEST - GENERIC AREA MACT-SMALL NSPS GP			
20970	TEST - GENERIC COMPRESSOR STATION 1			
20971	TEST - GENERIC COMPRESSOR STATION 2			
20972	TEST - GENERIC COMPRESSOR STATION 3			
20973	TEST - GENERIC GAS PLANT 1			
20974	TEST - GENERIC GAS PLANT 2			
20975	TEST - GENERIC GAS PLANT 3			
20976	TEST - GENERIC POWER PLANT 1			
20977	TEST - GENERIC POWER PLANT 2			
20978	TEST - GENERIC REFINERY			
10023	TESTMYFAC			

# SLEIS Facility Home Page

**2016 Emissions Report**  
Facility Inventory

Facility Release Points Control Devices Emission Units Unit Processes

**Emissions**

Process Emissions Report Attachments

Download Template Import Data

**More Actions**

Validate Report Initiate Submission Print Report

# Facility Tab

## 2016 Emissions Report

### General Facility Information

Facility

Contacts

Addresses

Location

Additional Information

Facility Identifier:  
90091

Facility Name:  
TestFac

Company/Owner Name:  
Emissions Inventory

Description:

Status:  
Operating as of 06-27-2018

NAICS:  
211130 - Natural Gas Extraction

Comments:

To update the facility or  
company name submit form  
100-883

# Facility Address Tab

## 2016 Emissions Report

### General Facility Information

Facility	Contacts	Addresses	Location	Additional Information
----------	----------	-----------	----------	------------------------

**Location Address:**  
707 North Robinson  
Oklahoma City, OK 73101

**Mailing Address:**  
707 North Robinson  
Oklahoma City, OK 73101

To update the facility address  
email: [aei@deq.ok.gov](mailto:aei@deq.ok.gov)

# Facility Location Tab

**Latitude (decimal degrees):**

35.822

**Longitude (decimal degrees):**

-96.745

**UTM X (meters):**

703710.232219

**UTM Y (meters):**

3966552.837496

**UTM Zone:**

14

*Assumes northern hemisphere*

**Collection Method:**

028 - GPS with unspecified parameters

**Data Collection Date:**

06-25-2018

**Geographic Reference Point:**

103 - Boundary point for a facility or System (Facility boundary points can be singular, or part of a series of boundary points)



# Facility Additional Information Tab

General Facility Information			
Facility	Contacts	Addresses	Location
<b>Oil &amp; Gas Facility Category:</b> Oil/NG Well Site			
<b>Permit Number(s):</b> 2018-1150-NOI			
<b>API/US Well Number:</b> 3501725214,3501725215			
<b>SIC Number:</b> 1311			
<b>TRI Identifier (ID):</b>			

# Oil and Gas Facility Category

- ▶ Oil/NG - Well Site
- ▶ Central Tank Battery
- ▶ Produced Water Injection Facility
- ▶ NG - Gathering Compressor Station
- ▶ NG - Treatment Without Compression
- ▶ NG Plant - Transmission Compressor Station
- ▶ NG - Underground Storage Facility
- ▶ Oil - Pipeline Breakout Facility/Truck Station
- ▶ Oil - Tank Farm
- ▶ Oil/NGL/Refined Petroleum - Pipeline Pump Station
- ▶ Oil Refinery
- ▶ Refined Petroleum - Product Terminal
- ▶ Oil/NG/NGL - Other



# Oil and Gas Facility Category

- ▶ A guide to classifying oil and gas facility categories can be found on our website and on the SLEIS homepage
  - ▶ [https://www.deq.ok.gov/wp-content/uploads/air-division/EI\\_Oil\\_and\\_Gas\\_Facility\\_Categories\\_Guide.pdf](https://www.deq.ok.gov/wp-content/uploads/air-division/EI_Oil_and_Gas_Facility_Categories_Guide.pdf)
  - ▶ [https://www.deq.ok.gov/wp-content/uploads/air-division/EI\\_Oil\\_and\\_Gas\\_Facility\\_Categories\\_Guide.pdf](https://www.deq.ok.gov/wp-content/uploads/air-division/EI_Oil_and_Gas_Facility_Categories_Guide.pdf)




# API Number

- ▶ Please provide all API numbers for your facility. API numbers are very important for improving the accuracy of our oil and gas emission submittal to the National Emission Inventory
- ▶ All API numbers supplied by industry and many API numbers that we found on the OK Corporation Commission website are already loaded into SLEIS
  - ▶ Please review the API numbers already loaded into SLEIS
- ▶ To add new API numbers to SLEIS, please enter the API number as a string separated by commas with no spaces
  - ▶ For Example: 35XXXXXXXXX,35XXXXXXXXX

# Emission Unit

# Emission Units



**2016 Emissions Report**  
Facility Inventory

Facility Release Points Control Devices **Emission Units** Unit Processes

**Emissions**

Process Emissions Report Attachments

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

**More Actions**

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

# Emission Unit

- ▶ Physical object or group of objects that produces emissions
- ▶ Many Types
  - ▶ Engines, storage tanks, stock piles, paint booths, etc
- ▶ Each emission unit has one or more release points
- ▶ Report operating status for both the emission unit and the release point

# Emission Unit

**Emission Units**

Emission Unit	Additional Information
<b>Identifier:</b> 162223	
<b>Type:</b> Reciprocating IC Engine	
<b>Description:</b> Compressor Engine	
<b>Status:</b> Operating	
<b>Design Capacity:</b> 457 HORSEPOWER	
<b>Related Unit Processes:</b> 285840 - Compressor Engine	
<b>Comments:</b>	



# Design Capacity

- ▶ Maximum output a machine, tool, or other component can achieve under ideal conditions with unlimited resources
- ▶ Engines, process heaters, and flares have design capacities



# Design Capacity

## Redbud

- ▶ Design capacity was listed at the process level

## SLEIS


- ▶ Design Capacity is listed at the emission unit level
- ▶ For instances where an emission unit had two or more processes that listed different design capacities in Redbud, no design capacity was loaded into SLEIS

# Grouping Emission Units

- ▶ Some small sources of emissions should be logically grouped into one source
  - ▶ An individual emission unit may not have emissions above the reporting threshold but a group of that emission unit type might
  - ▶ For example 20 similar process heaters at a facility could be logically grouped together
- ▶ How to report grouped emission units
  - ▶ Include number of units being grouped in the name
  - ▶ Fugitive release point includes total length and width of all units and the average height
  - ▶ Process rates, operating hours, and design capacity should be reported as an average
  - ▶ Actual emissions determined by actual process rates of each unit, not average emissions

# Release Point

# Release Points



**2016 Emission Report**

Facility Inventory

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

**Emissions**

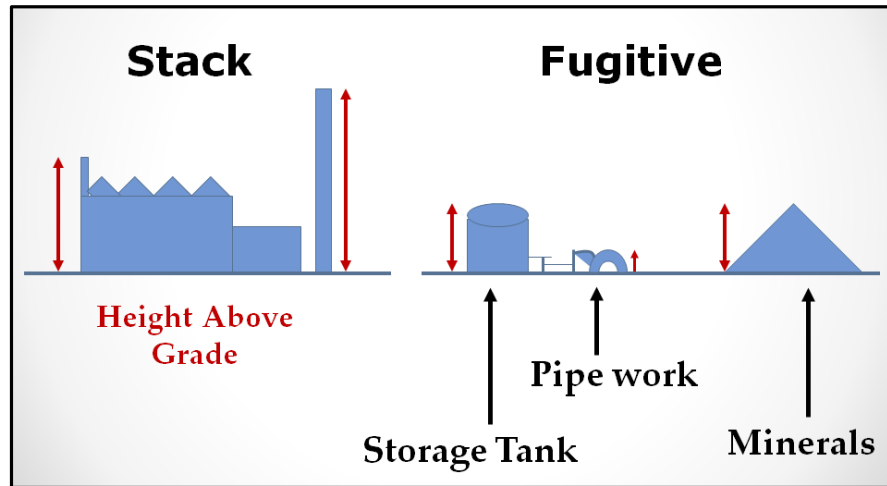
- Process Emissions
- Report Attachments

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

**More Actions**

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

# Release Point



- ▶ The point at which emissions are emitted to the atmosphere
- ▶ Can be either fugitive or stack
  - ▶ Stacks have a distinct point where emissions are emitted to the atmosphere
  - ▶ Fugitives are emitted over a wide area and do not have a distinct point where emissions are emitted
- ▶ Fugitive release point examples
  - ▶ Leaks from pressurized equipment
  - ▶ Stockpiles
  - ▶ Material handling that cannot be easily funneled into a stack or control device

# Release Points

## Redbud

- ▶ Release points were listed at each emission unit record
- ▶ A release point could only be associated with one emission unit

## SLEIS

- ▶ Release Points are listed separately from the emission unit. At the unit process page the release point is associated with the appropriate process
- ▶ The same release point can be associated with multiple emission units and processes

# Fugitive Release Point Fields

- ▶ Fugitive Length
  - ▶ The length of the fugitive release in the North-South direction
- ▶ Fugitive Height
  - ▶ The fugitive release height above ground level
- ▶ Fugitive Width
  - ▶ The width of the fugitive release in the East-West direction
- ▶ Fugitive Angle
  - ▶ The orientation angle for the area in degrees from North, measured positive in the clockwise direction. Should be between 0 and 179 inclusive





# Release Points

Release Points

Release Point

Location

Additional Information

Identifier:

161616

Type:

Vertical

Description:

Compressor Engine Stack

Status:

Operating

Stack Height:

21.0 FEET

Stack Shape:

Circular

Stack Diameter:

1.00 FEET

Exit Gas Temp:

950 °F

Exit Gas Flow Rate:

1802 ACTUAL CUBIC FEET PER MINUTE

Exit Gas Velocity:

38.24 FEET PER SECOND

Related Unit Processes:

162223 - Compressor Engine , 285840 - Compressor Engine

Comments:

# Release Point Location Tab

**2017 Emissions Report**

**Release Points**

Release Point Location Additional Information

Release point utilizes facility coordinates?:  
☒

**Release Points**

Release Point Location Additional Information

Release point utilizes facility coordinates?:  
Yes

Latitude (decimal degrees):  
35.822

Longitude (decimal degrees):  
-96.745

UTM X (meters):  
703710.232219

UTM Y (meters):  
3966552.837496

UTM Zone:  
14  
Assumes northern hemisphere

Collection Method:  
028 - GPS with unspecified parameters


Data Collection Date:  
06-25-2018

Geographic Reference Point:  
103 - Boundary point for a facility or System (Facility boundary points can be singular, or part of a series of boundary points)

Geodetic Reference System:  
003 - World Geodetic System of 1984

# Control Device

# Control Devices



**2016 Emissions Report**  
Facility Inventory

Facility   Release Points   **Control Devices**   Emission Units   Unit Processes

**Emissions**

Process Emissions   Report Attachments

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

**More Actions**

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

# Control Device Definitions

## ▶ Control Device/Scenario

- ▶ The control system, abatement equipment, or approach applied to reduce emissions of the pollutant

## ▶ Capture Efficiency

- ▶ The percentage of air emission that is directed to the control equipment

## ▶ Control Efficiency

- ▶ The percentage by which a control device or technique reduces the emissions from a stationary source

# Control Device

## Control Devices

### Control Device

### Additional Information

**Identifier:**

151429

**Description:**

Condenser Primary 100 80

**Status:**

Temporarily Shutdown as of 01-01-2019

**Control Measure:**

Condenser

**Controlled Pollutants:**

100414 (Ethylbenzene): 80.00%

108883 (Toluene): 80.00%

110543 (Hexane): 80.00%

1330207 (Xylenes (mixed isomers)): 80.00%

71432 (Benzene): 80.00%

VOC (Total VOC): 80.00%

**Related Unit Processes:**

185130 - Glycol Dehydrator Reboiler and Still Vent, 311154 - Natural Gas Production - Glycol Dehydrator Reboiler Still Stack

# Changes to Control Devices

## Redbud

- ▶ Control Devices were listed at each emission record



## SLEIS

- ▶ Control Devices are listed separately from the process and emissions
- ▶ At the Unit Process page the control device is associated with the appropriate process
- ▶ The same control device can be associated with multiple processes

# Unit Processes



# Unit Process

## 2016 Emissions Report

Facility Inventory



Facility



Release Points



Control Devices



Emission Units



Unit Processes

Emissions



Process Emissions



Report Attachments

Download Template

Import Data

More Actions

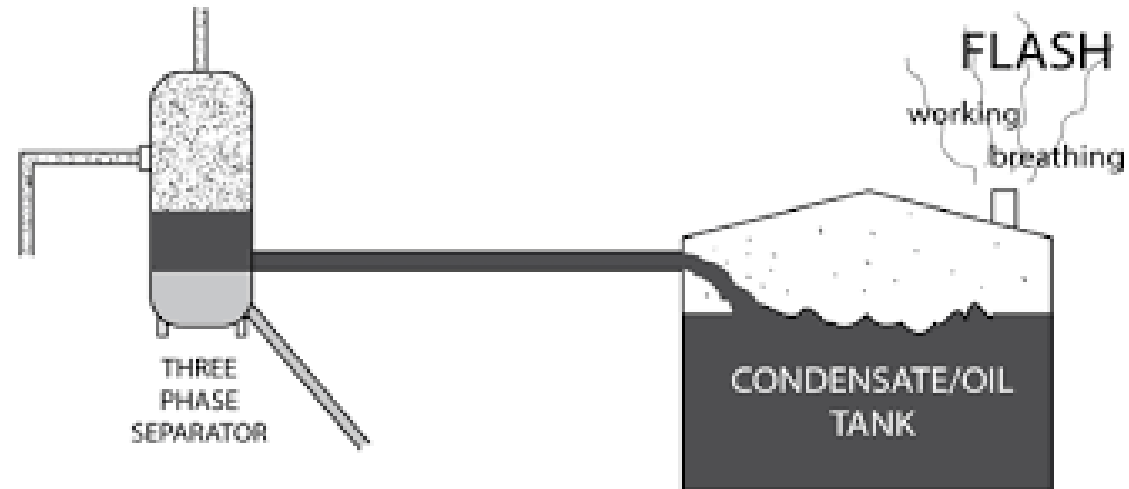
Validate Report

Initiate Submission

Print Report

# Emission Process

- ▶ Activity at an emission unit that produces emission
- ▶ Associated with a specific Source Classification Code (SCC)
- ▶ An emission unit can have multiple emission processes
  - ▶ An engine can have two processes if it burns both natural gas and diesel
  - ▶ Storage Tanks can have three processes working, breathing, and flashing losses



# Reporting Fixed Roof Tanks

## ▶ Grouping Fixed-Roof Tanks

- ▶ A group of fixed-roof tanks that share a common header can be reported as a single emission unit if the combined total of emissions is less than or equal to 6 tons
- ▶ If the combined total of emissions for the group of tanks is greater than 6 tons, the tanks must be reported separately

## ▶ Reporting Fixed Roof Tanks

- ▶ If emissions from the tank or group of tanks is greater than 6 tons then separate processes for working, breathing, and flashing losses need to be reported
- ▶ If emissions from the tank or group of tanks is less than 6 tons then only one process using the combined source classification code for working, breathing, and flashing losses need be reported

# Unit Process

Unit Processes

Unit Process

Control Approach

Release Point Apportionment

Additional Information

Process Identifier:

285840

Emission Unit Identifier:

162223 - Compressor Engine

SCC:

20200253

Internal Combustion Engines-Industrial-Natural Gas-4-cycle Rich Burn

Description:

Compressor Engine

Last/Final Emissions Year:

Related Process Emission:

285840 - Compressor Engine

Comments:

# Unit Process Control Approach Tab

Unit Processes

Unit Process

Control Approach

Release Point Apportionment

Additional Information

?

Not Controlled?:

☐

?

Control Approach Description :

Control approach not specified. Assumes not controlled.

# Unit Process Control Approach Tab

2019 Emissions Report

In Process

Unit Processes

Unit Process

Control Approach

Release Point Apportionment

Additional Information

Not Controlled?:

☐

Control Approach Description :

Flaring

Control Devices

Control Device:

46796 - Flaring Primary 100

Sequence:

1

Capture (%):

98

Uptime (%):

100

# New Fields

## ▶ Sequence

- ▶ Indicates the order by which control devices will be used to calculate overall control efficiency. Different control devices with identical sequence numbers will be processed in parallel. Different sequence values will be processed sequentially

## ▶ Uptime Percentage

- ▶ An estimate of the percentage of the reporting year that the overall control system was operating as designed

## ▶ Release Point Apportionment

- ▶ The average annual percent of an emissions process that is vented through a release point

# Capture Efficiency

## Redbud

- ▶ The capture efficiency was listed at each emission record
- ▶ The capture efficiency could be different at each emission record

## SLEIS

- ▶ The capture efficiency is listed on the Unit Process Control Approach page
- ▶ The capture efficiency is the same for all pollutants associated with a control device



# Control Efficiency

## Redbud

- ▶ The control efficiency was listed at each emission record



## SLEIS

- ▶ The control efficiency for all pollutants are listed at the control device
- ▶ The control device is then associated to the process
- ▶ One control device may be associated to multiple processes

# Unit Process Release Point Apportionment

Unit Processes			
Unit Process	Control Approach	Release Point Apportionment	Additional Information
<b>Release Point Apportionment:</b> 161616 - Compressor Engine Stack: 100%			

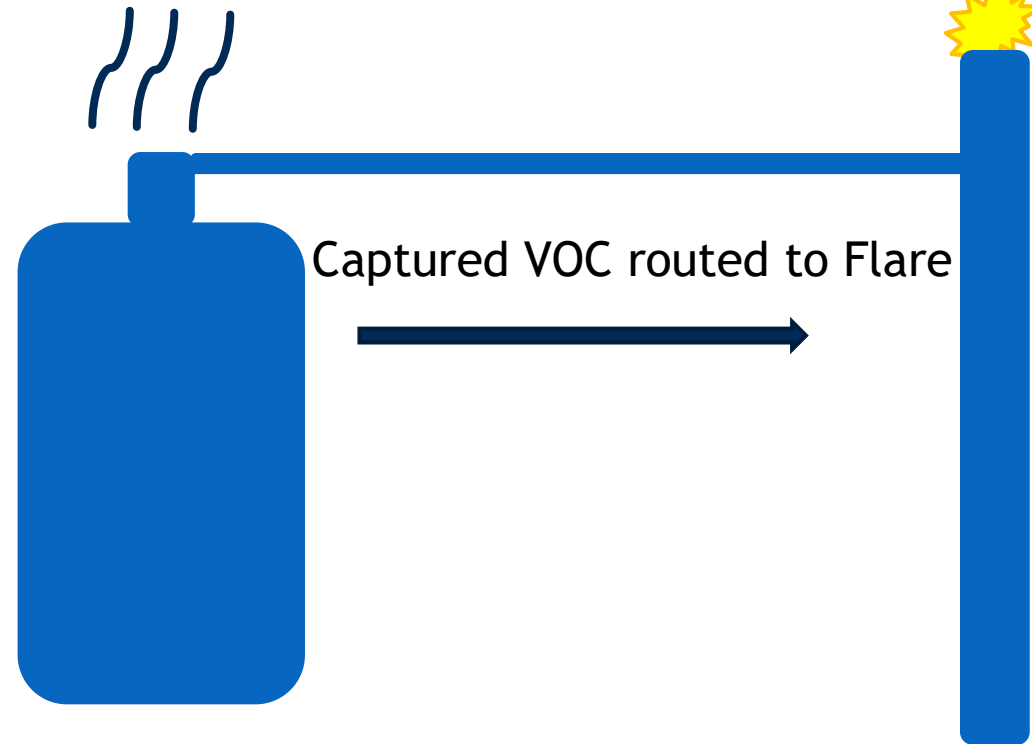
# Flares

# Tank-Flare System

- Fugitive uncaptured VOC
  - Reported as one process for fugitive VOC
- Tank Fugitive Release Point
  - (100% Release Point Apportionment)

- Un-combusted VOC, combustion emissions, and pilot light emissions
  - Reported as one or two processes
- Vertical Release point
  - (100% Release Point Apportionment )

98% Capture



98% Control Efficiency

# Flare Unit Process - One Process

- ▶ Report one process
  - ▶ This process represents NO<sub>x</sub> and CO emissions due to combustion of the captured gas stream, un-combusted VOC emissions, and pilot light NO<sub>x</sub>, CO, and VOC emissions
  - ▶ Instead of using the actual throughput that enters the flare over the reporting year, multiply the maximum flare design capacity by the hours of operation to get the yearly throughput for the flare
    - ▶ This is a conservative estimate so pilot light emissions are assumed to be accounted for and do not need to be calculated and reported under a different process
  - ▶ The NO<sub>x</sub> and CO emissions are accounted for using either AP-42 or TCEQ emission factors and multiplying by the maximum annual heat input
  - ▶ Un-combusted VOC emissions can be estimated by taking a percentage (2% if the flare combustion destruction efficiency is 98%) of the captured emissions from the emission units that route to the flare

# Flare Unit Process - 2 Processes


- ▶ One process for NOX, CO, and VOC combustion emissions associated with the pilot light
- ▶ The other process is for un-combusted VOC emissions and NOx and CO emissions associated with the combustion of the gas stream
- ▶ The NOx and CO emissions are accounted for using either AP-42 or TCEQ emission factors and multiplying by the maximum annual heat input
- ▶ Un-combusted VOC emissions can be estimated by taking a percentage (2% if the flare combustion destruction efficiency is 98%) of the captured emissions from the emission units that route to the flare


# Process Emissions


# Process Emissions


## 2016 Emissions Report


### Facility Inventory

  
Facility


  
Release Points


  
Control Devices

  
Emission Units

  
Unit Processes

### Emissions

  
Process Emissions

  
Report Attachments

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

### More Actions

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



# What Pollutants Need to be Reported

## ► Permit

Parameter	Natural Gas			#2 Fuel Oil		
	Factor	Emissions		Factor	Emissions	
	lb/MMBtu	Lb/hr	TPY	Lb/MMBtu	Lb/hr	TPY
NO <sub>x</sub>	0.035	0.72	3.16	0.190	3.78	16.55
CO	0.037	0.75	3.28	0.070	1.43	5.26
VOC	0.018	0.33	1.43	0.030	0.61	2.88
SO <sub>2</sub>	0.001	0.02	0.08	0.515	10.51	46.00
PM	0.010	0.20	0.89	0.024	0.49	2.15

## ► List of Regulated Air Pollutants

- <https://www.deq.ok.gov/air-quality-division/emissions-inventory/oklahoma-regulated-air-pollutants/>

## ► EPA Webfire Database

- <https://cfpub.epa.gov/webfire/>

### Welcome to WebFIRE

WebFIRE is the EPA's online database that contains [emissions factors](#) for criteria and hazardous air pollutants (HAP) for industrial and non-industrial processes and [multiple reports](#) submitted to the EPA using the Compliance and Emissions Data Reporting Interface (CEDRI) in response to regulatory requirements under Parts 60 and 63 of Title 40 of the U.S. Code of Federal Regulations (CFR). WebFIRE also allows you to [register](#) to receive periodic email notifications when reports are submitted to WebFIRE and to prepare [batch downloads](#) of WebFIRE emissions and facility information.

- [Search for emissions factors](#)
- [Search for reports](#)
- [Register for email notifications](#)
- [Download WebFIRE data in bulk](#)

## Process Emissions

Process

Operations

Emissions

### Process Identifier:

311151 - Natural Gas - 4-cycle Lean Burn

### Emission Unit Identifier:

185127 - Compressor Engine NO 391 - Caterpillar 3516BLE, 1380 hp

### SCC:

20200254

Internal Combustion Engines-Industrial-Natural Gas-4-cycle Lean Burn

### Process is Reported?:

No

### Throughput:

### Throughput Unit of Measure:

### Throughput Type:

### Throughput Material:

### Process is CBI?:

No

### Supplemental Calculation Parameters:

% Ash	% Sulfur	% Moisture	% Silt	Mean Vehicle Speed	Mean Vehicle Weight
Precipitation days	Silt Loading	% VOC	Density (lbs/unit)	Heat Content (MMBTU/Unit)	% Initial Yeast
Yeast Hours	% Final Yeast	Spiking Time	Horiz. Area	Wind Speed (mph)	Drop Height (ft)
Sulfur Content (gr/100 ft3)	% Carbon	% Chlorine in fuel	Molar Calcium/Sulfur ratio		

### Comments:

none

# Supplemental Calculation Parameters

## ► Fuel Heat

- The heat content of fuel, which is the amount of heat released during combustion

- % Ash, % Sulfur, % Moisture, % Silt, Mean Vehicle Speed, Mean Vehicle Weight, Precipitation Days, Silt Loading, % VOC, Density, % Initial Yeast, Yeast Hours, % Final Yeast, Spiking Time, Horiz. Area, Wind Speed, Drop Height, Sulfur Content, % Carbon, % Chlorine, Molar Calcium/Sulfur Ratio

# Fuel Heat Content

## Redbud

- ▶ Fuel heat content was listed at the process level.
- ▶ The options for units included HP, MW, and MMBTU/HR

## SLEIS

- ▶ Fuel heat content is listed with the supplement calculation parameters on the process emissions page
- ▶ The fuel heat content units can not be chosen and are assumed to be the units of the MMBTU/throughput.

# Reporting Threshold

Process Emissions

Process

Operations

Emissions

Process Identifier:

311151 - Natural Gas - 4-cycle Lean Burn

Emission Unit Identifier:

185127 - Compressor Engine NO 391 - Caterpillar 3516BLE, 1380 hp

SCC:

20200254

Internal Combustion Engine Industrial Natural Gas-4-cycle Lean Burn

?

Process is Reported?:

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

?

Annual Throughput:

Throughput Combination: (Select to populate Throughput Unit of Measure, Type, and Material)

?

Throughput Unit of Measure:

?

Throughput Type:

?

Throughput Material:

?

Process is CBI?:

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

If emissions for the process are below the reporting threshold of .1 tons, uncheck the box. Unchecking the box will zero out any emissions, hours of operation, and throughput data at the process

# Confidential Business Information

## 2017 Emissions Report

### Process Emissions

Process


Operations

Emissions

SCC:

31000404

Industrial Processes-Oil and Gas Production-Process Heaters-Natural Gas


 Process is Reported?:

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

 Annual Throughput:

4302.25

Throughput Combination: *(Select to populate Throughput Unit of Measure, Type, and Material)*

 Throughput Unit of Measure:


E6BTU - MILLION BTUS

 Throughput Type:

I - Input

 Throughput Material:

209 - Natural Gas

 Process is CBI?:

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

If you would like to keep information about a process confidential, select the 'Process is CBI' checkbox. No throughput or emission factor data will be submitted to EPA or made available to the public if the checkbox is selected

# Throughput

**Process Emissions**

Process

Operations

Emissions

**Process Identifier:**  
311337 - Building A Diesel Engine Test Cell 1

**Emission Unit Identifier:**  
185295 - Building A Diesel Engine Test Cell 1

**SCC:**  
20300101  
Internal Combustion Engines-Commercial/Institutional-Distillate Oil (Diesel)-Reciprocating

**Process is Reported?:**  
☒ Uncheck this box if there are no reportable emissions for the reporting year

**Annual Throughput:**

**Throughput Combination:** *(Select to populate Throughput Unit of Measure, Type, and Material)*  

E3GAL - 1000 GALLONS | I - Input | 57 - Distillate Oil (Diesel) ▼  
E3GAL - 1000 GALLONS | I - Input | 57 - Distillate Oil (Diesel)  
E6BTU - MILLION BTUS | I - Input | 142 - Heat  
HP-HR - HORSEPOWER-HOURS | O - Output | 959 - Energy

**Throughput Type:**  
I - Input

# Hours of Operation

Process Emissions

Process	Operations	Emissions
Average Days/Week:		
7.0		
Average Hours/Day:		
24.0		
Average Weeks/Year:		
52.0		
Actual Hours/Year:		
8760.0		
Seasonal Operations		
December-February	March-May	June-August
25.0 %	25.0 %	25.0 %
September-November		
25.0 %		



# Calculating Emissions

# Emission Factor

- ▶ An emission factor is a representative value that attempts to relate the quantity of a pollutant release with an activity associated with the release of that pollutant
- ▶ SLEIS has 3 subtypes emission factor
  - ▶ No Control Emission factor
  - ▶ Pre-Control Emission Factor
  - ▶ Post Control Emission Factor

# Calculation Methods with Emission Factors

- ▶ Industry Publication
  - ▶ No EF, No Control EF, pre-Control EF, post-Control EF
- ▶ Mass Balance
  - ▶ No EF, pre-Control EF, post-Control EF
- ▶ Manufacturer Test Data With OK DEQ Approval
  - ▶ No Control EF, pre-Control EF, post-Control EF
- ▶ Stack Test - US EPA Reference Method
  - ▶ No Control EF, pre-Control EF, post-Control EF
- ▶ US EPA Documents incl. AP-42 & Webfire
  - ▶ No EF, No Control EF, pre-Control EF, post-Control EF
- ▶ OK DEQ Approved Method
  - ▶ No EF, No Control EF, pre-Control EF, post-Control EF

# Calculation Methods without Emission Factors

- ▶ Continuous Emission Monitoring System (CEMS)
- ▶ Portable Electrochemical Analyzer (PEA) Tests
- ▶ Speciation Profile
- ▶ AMINECalc
- ▶ E&P TANKS
- ▶ US EPA TANKS 4.09
- ▶ ProMax
- ▶ Vasquez-Beggs Equation

# Emissions Tab

Process Emissions

Process

Operations

Emissions

Filter:

x

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
▶ VOC	2.4	E3GAL	8_3 - US EPA Documents incl. AP-42 & WebFIRE (no Control EF)	

?

Pollutant Code:

?

Calculation Method:

?

Emission Factor (Lbs/Unit):

?

Emission Factor Unit:

?

Estimated Emissions (Tons):

?

Comment:

# Auto-Calculation

## 2019 Emissions Report

In Process

### Process Emissions

ProcessOperationsEmissions

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
CO			8_0 - US EPA Documents incl. AP-42 & WebFIRE (no EF)	5
VOC		E6FT3	8_2 - US EPA Documents incl. AP-42 & WebFIRE (pre-Control EF)	

Pollutant Code:

VOC - Total VOC

Emission Factor (Lbs/Unit):

Estimated Emissions (Tons):

Comment:

Calculation Method:

8\_2 - US EPA Documents incl. AP-42 & WebFIRE (pre-Control EF)

Emission Factor Unit:

E6FT3 - MILLION CUBIC FEET

Overall Control Efficiency (%):

#### Emission Factors - Formulas

Source	Control	Factor/Formula	Description	Notes
<input type="radio"/> WebFIRE (ID:9954)	0 - Uncontrolled	5.5	(AP42 Text: Section 1.4) EPA. Ma...	

SelectCancel

Company: 3327

Mailing Address: PO BOX 1, OKLAHOMA, US

Phone: (405) 555-1234

Fax: (405) 555-1234

Your roles: Administrator

TEST CODE: 1234

Facility ID: 9054

Location / Address: 1234 Main St, Oklahoma City, OK 73101

Process ID: 311162

# Auto-Calculation

## 2019 Emissions Report

In Process

Process Emissions

ProcessOperationsEmissions

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
CO			8_0 - US EPA Documents incl. AP-42 & WebFIRE (no EF)	5
VOC	5.5	E6FT3	8_2 - US EPA Documents incl. AP-42 & WebFIRE (pre-Control EF)	2.75

?

Pollutant Code:

VOC - Total VOC

?

Emission Factor (Lbs/Unit):

5.5

?

Estimated Emissions (Tons):

2.75

?

Comment:

?

Calculation Method:

8\_2 - US EPA Documents incl. AP-42 & WebFIRE (pre-Control EF)

?

Emission Factor Unit:

E6FT3 - MILLION CUBIC FEET

?

Overall Control Efficiency (%):

0%

# Emissions With Associated Control Device

Process Emissions				
Process	Operations	Emissions		
				Filter: <input type="text"/>
Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
CO	3.51	E6BTU	8_2 - USEPA EF (pre-control EF)	30.7476
<div><div><div>Pollutant Code: CO - Carbon Monoxide</div><div>Emission Factor (Lbs/Unit): 3.51</div><div>Estimated Emissions (Tons): 30.7476</div><div>Comment:</div></div><div><div>Calculation Method: 8_2 - USEPA EF (pre-control EF)</div><div>Emission Factor Unit: E6BTU - MILLION BTUS</div><div>Overall Control Efficiency (%): 76%</div></div></div>				
SO2	0.000588	E6BTU	8_2 - USEPA EF (pre-control EF)	0.021462



# Summary

- ▶ Review data loaded from Redbud as the applications have very different data structures
  - ▶ Control devices, release points, design capacity, fuel heat content, etc.
- ▶ When creating new records is best to progress from left to right to avoid later validation and linking issues
  - ▶ Facility -Release Point - Control Device - Emission Unit - Unit Process - Process Emissions
- ▶ The SLEIS homepage and emission inventory website have additional resources to aid in creating your inventory

# Questions?

# Emissions Calculations

Grant Loney, Environmental Programs Specialist

# Outline

- ▶ Overview of General Equation
- ▶ Calculation Methods available in SLEIS
- ▶ Emission Factors in SLEIS
- ▶ Example calculations
  - ▶ Calculation of CO, NOx, and Benzene from an Emergency Engine
  - ▶ Calculation of Total VOC and Formaldehyde from a Compressor Engine
  - ▶ Calculation of PM-10 and PM-2.5 from Grain Receiving
  - ▶ Calculation of PM-10 and PM-2.5 from a Limestone Conveyor
  - ▶ Calculation of Hexavalent Chromium from Shielded Metal Arc Welding
  - ▶ Calculation of Total VOC and Xylenes from a Paint Booth
  - ▶ Calculation of Total VOC from a Tank-Flare system

# General Equation

$$A \times EF = E$$

A is Activity Rate

EF is Emission Factor

E is calculated Emissions

All three have **units!**

# Overview of General Equation

$$A \times EF = E$$

**A is Activity Rate**

Activity Rate refers to the amount of the activity that occurs in a given year that is associated with emissions.

Examples include:

- ▶ Million standard cubic feet of natural gas burned by an engine
- ▶ Vehicle miles travelled on a dirt road
- ▶ Barrels of hydrocarbon in a storage tank
- ▶ Gallons of paint used in a spray booth
- ▶ Tons of rock crushed
- ▶ And many more...

# Overview of General Equation

$$A \times \text{EF} = E$$

**EF** is Emission Factor

## Calculation Methods

- Relative Accuracy ↑
- Continuous Emission Monitoring System (CEMS)
  - Stack Test- US EPA Reference Method
  - Stack Test, Similar Unit-US EPA RM
  - Manufacture Test Data
  - ProMax
  - US EPA TANKS 4.09d
  - Mass Balance
  - US EPA Documents (AP 42, Webfire, etc.)
- ↓

Use the most accurate Emission Factor available to you!

# Overview of General Equation

$$A \times EF = E$$

**E** is for Calculated Emissions

- ▶ Calculated Emissions will always be reported in units of tons.
- ▶ The correct Emission Factor and a little bit of unit analysis will help you get from the units of the Activity Rate to tons of emissions.



# Helpful Documents and Links

- ▶ DEQ Permitting Advice Documents

<https://www.deq.ok.gov/air-quality-division/air-permits/permit-guidance/>

- ▶ DEQ Reporting Guidance and FAQs

<https://www.deq.ok.gov/air-quality-division/emissions-inventory/reporting-guidance/>

- ▶ EPA Webfire

<https://cfpub.epa.gov/webfire/>

- ▶ EPA SCC Search

<https://ofmpub.epa.gov/sccwebservices/sccsearch/>

- ▶ Your Permit/Permit Application

# SLEIS Calculation Methods

- ▶ More Calculation Methods than there were previously. Some are familiar, some are new.
- ▶ Stack tests now **require** stack test date!
- ▶ New attribute of calculation methods.
  - ▶ No EF
  - ▶ No Control EF
  - ▶ Pre-Control EF
  - ▶ Post-Control EF

# Emission Factors in SLEIS

- ▶ All emission factors in SLEIS **MUST** be in units of pounds/unit.

- ▶ Pounds/MMBTU 

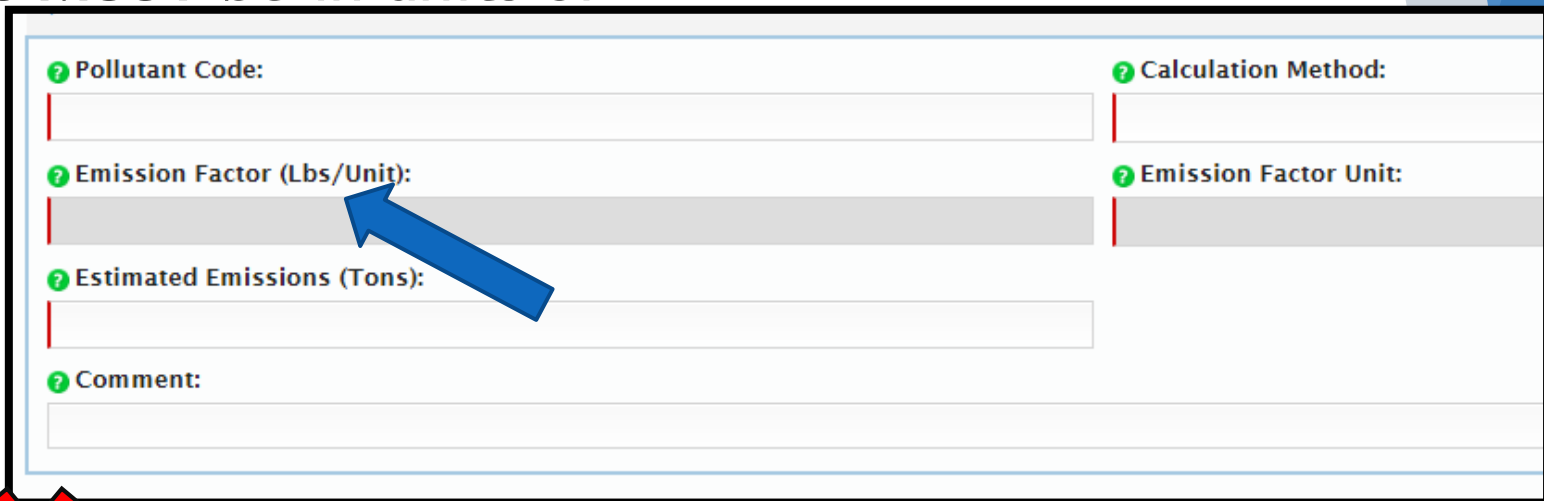
- ▶ Pounds/MMSCF 

- ▶ Pounds/ton 

- ▶ Pounds/gallon 

- ▶ Grams/horsepower-hour 

- ▶ Pounds/hp-hr = (grams/hp-hr) / 453.592



<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	

# Emergency Engine

- ▶ Activity Information
- ▶ Source Classification Code: 20200102
- ▶ Process Material: Diesel Fuel
- ▶ Process Rate: 500 gallons
- ▶ Annual Hours of Operation: 50 hours
- ▶ Design Capacity (if applicable): 400 hp
- ▶ Fuel Data (if applicable): 140 MMBTU/1,000 gal
- ▶ Control Scenario (if applicable): none

# Emergency Engine

## ► Relevant Emission Factors

- Carbon Monoxide (CO): 1.3E2 Lb per 1000 gallons = 130 pounds/1,000 gal
- Nitrogen Oxides (NO<sub>x</sub>): 6.04E2 Lb per 1000 gallons = 604 pounds/1,000 gal
- Benzene: 9.33E-4 Lb per Million BTUs = 0.000933 pounds/MMBTU

Simple Search

☒ Exclude Revoked Factors

Submit Search

☒ SCC ⓘ 20200102 [Details](#)

Internal Combustion Engines > Industrial > Distillate Oil (Diesel) > Reciprocating

**POLLUTANT ⓘ** Carbon monoxide **NEI CO ⓘ** CAS 630-08-0 ⓘ

Primary Control / Secondary Control ⓘ : UNCONTROLLED ,

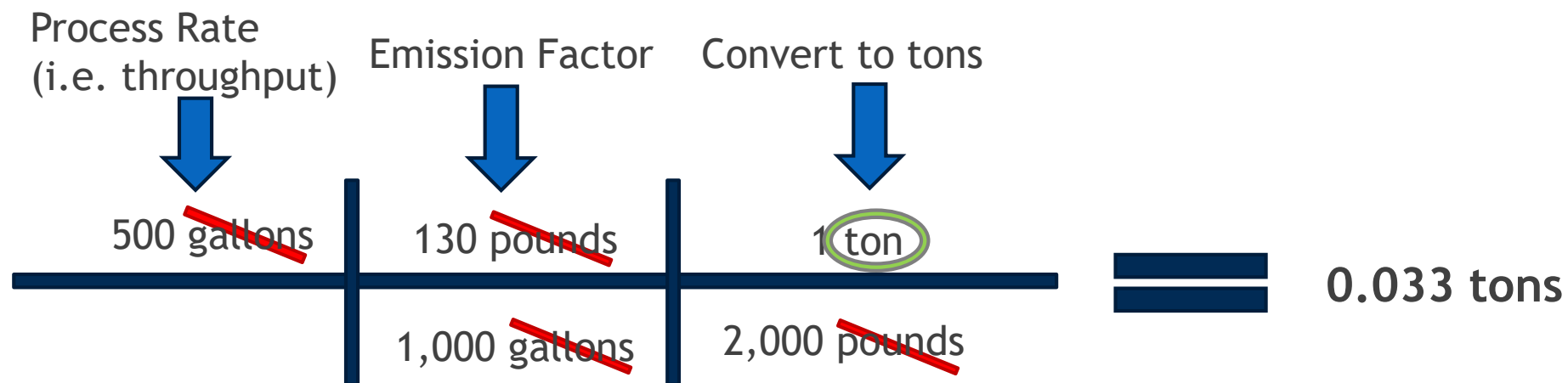
**Emission Factor ⓘ** -- 1.300E2 Lb per 1000 Gallons Distillate Oil (Diesel) Burned;

**Quality ⓘ** -- D [Emissions Factors Applicability](#)

<https://cfpub.epa.gov/webfire/index.cfm?action=fire.SearchEmissionFactors>

# Emergency Engine

## Carbon Monoxide Calculation



# Emergency Engine

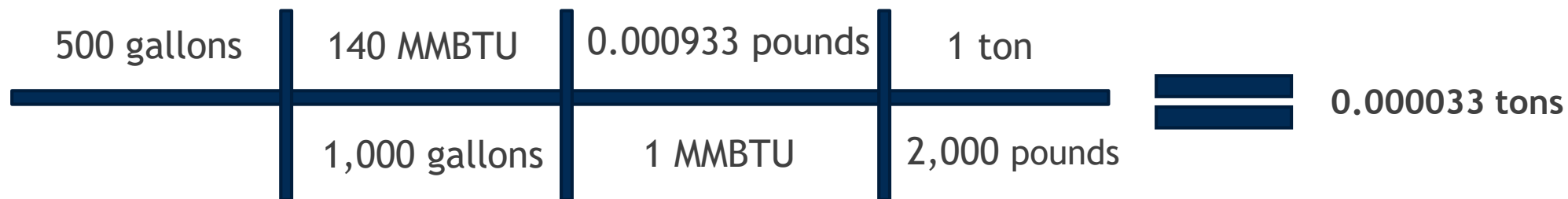
## NOx Calculation

$$\begin{array}{ccc} 500 \text{ gallons} & 604 \text{ pounds} & 1 \text{ ton} \\ \hline & 1,000 \text{ gallons} & 2,000 \text{ pounds} \end{array} = 0.151 \text{ tons}$$

# Emergency Engine

## ► Benzene Calculation

Fuel Data  
(i.e. fuel heat content)



Reporting Threshold



# Compressor Engine

## Activity Information

- ▶ SCC: 20200254
- ▶ Process Material: Natural Gas
- ▶ Annual Process Rate: 115 MMscf
- ▶ Annual Hours of Operation: 8,760 hours
- ▶ Design Capacity: 1,380 hp
- ▶ Fuel Data: 1,020 MMBtu/MMscf
- ▶ Control Scenario: Oxidation Catalyst (100% capture, 50% control)

# Compressor Engine

- ▶ Total VOC-Potential EF Problems
  - ▶ Emission Factor for Total VOC obtained from a Stack Test using Method 25A
    - ▶ Methods 18 and 25A are known to not detect formaldehyde, which is a VOC. Because of this you must add a formaldehyde emission factor to the factor generated by the stack test when calculating Total VOC.
    - ▶ Total VOC factor from Stack Test: 0.15 grams/horsepower-hour
    - ▶ Formaldehyde factor from Manufacturer data: 0.44 g/hp-hr

VOLATILE ORGANIC COMPOUNDS Pass - Stack Test No  
Allowable Value: .700000000000000000 Result: .150000000000000000 Allowable Unit: g/hp-hr

EMISSIONS DATA - ENGINE OUT			
NOx (as NO2)	(11)(12)	g/bhp-hr	0.50
CO	(11)(13)	g/bhp-hr	2.43
THC (mol. wt. of 15.84)	(11)(13)	g/bhp-hr	4.77
NMHC (mol. wt. of 15.84)	(11)(13)	g/bhp-hr	0.72
NMNEHC Δ/OCs (mol. wt. of 15.84)	(11)(13)(14)	g/bhp-hr	0.48
HCHO (Formaldehyde)	(11)(13)	g/bhp-hr	0.44
CO2	(11)(13)	g/bhp-hr	474
EXHAUST OXYGEN	(11)(15)	% DRY	9.0
LAMBDA	(11)(15)		1.68

Don't forget the control scenario, or to convert EF to pounds/hp-hr!

# Compressor Engine

- ▶ Formaldehyde emission factor from Manufacturer data:  
0.44 g/hp-hr
- ▶ Control scenario: 100% capture, 50% control
- ▶ Formaldehyde emission factor with control:  
 $0.44 \text{ g/hp-hr} \times (1 - (100\% \times 50\%)) = 0.22 \text{ g/hp-hr}$
- ▶ Combined emission factor for Total VOC:  
 $0.15 + 0.22 = 0.37 \text{ g/hp-hr}$
- ▶ Formaldehyde emission factor used in SLEIS:  
 $(0.22 \text{ g/hp-hr}) / (453.592 \text{ g/pound}) = 0.000485 \text{ pounds/hp-hr}$
- ▶ Total VOC emission factor used in SLEIS:  
 $(0.37 \text{ g/hp-hr}) / (453.592 \text{ g/pound}) = 0.0008157 \text{ pounds/hp-hr}$

# Compressor Engine

$$\frac{1380 \text{ hp} \times 8,760 \text{ hours} \times 0.000485 \text{ pounds}}{1 \text{ hp-hr} \times 2000 \text{ pounds}} = 2.932 \text{ tons formaldehyde}$$

\*Remember, as with all VOC HAPs, formaldehyde should be reported individually, *AND* as part of Total VOC

$$\frac{1380 \text{ hp} \times 8,760 \text{ hours} \times 0.0008157 \text{ pounds}}{1 \text{ hp-hr} \times 2000 \text{ pounds}} = 4.93 \text{ tons Total VOC}$$

# Grain Receiving

## Activity Information

- ▶ SCC: 30200552
- ▶ Process Material: Grain
- ▶ Annual Process Rate: 260,816 tons
- ▶ Hours of Operation: 932 hours
- ▶ Control Scenario: Baghouse (100% capture, 90% control)

# Grain Receiving

- ▶ How to find the AP-42 Emission Factor for Grain Receiving from a Hopper Truck

## AP 42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources

Chapter	Title
Cover page and Table of Contents	<a href="#">Cover page, detailed Table of Contents, Publications in Series, Insertion Instructions, and Key Word Index (PDF)</a> (26 pp, 128 K, <a href="#">About PDF</a> ). This is current through the Fifth Edition, Supplement C of AP 42. For sections and chapters added after November 1997, see the chapter web pages below.
Chapter 7	<a href="#">Liquid Storage Tanks</a>
Chapter 8	<a href="#">Inorganic Chemical Industry</a>
Chapter 9	<a href="#">Food and Agricultural Industries</a>
Chapter 10	<a href="#">Wood Products Industry</a>

<https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors>

# Grain Receiving

- ▶ How to find the AP-42 Emission Factor for Grain Receiving from a Hopper Truck

The screenshot shows the EPA AP-42 compilation website. On the left is a navigation menu with links for 'AP-42', 'Pollutants', 'State', 'Chapter 1', 'Chapter 2', 'Chapter 3', 'Chapter 4', 'Chapter 5', 'Chapter 6', 'Chapter 7', 'Chapter 8', 'Chapter 9', 'Chapter 10', and 'Chapter 11'. The main content area displays the hierarchy for Grain Processing:

- 9.9 Grain Processing**
  - 9.9.1 Grain Elevators & Processes**
    - Final Section - Update 2003, May 2003 (PDF 530K)
    - Background Document (PDF 10M)
    - Related Information
  - 9.9.2 Cereal Breakfast Food**
    - Final Section - Supplement A, August 1995 (PDF 64K)
    - Background Document (PDF 175K)
  - 9.9.4 Alfalfa Dehydrating**
    - Final Section - Supplement B, September 1996 (PDF 73K)

At the bottom of the screenshot, the URL <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors> is displayed next to the Oklahoma Department of Environmental Quality logo.

# Grain Receiving

- How to find the AP-42 Emission Factor for Grain Receiving from a Hopper Truck

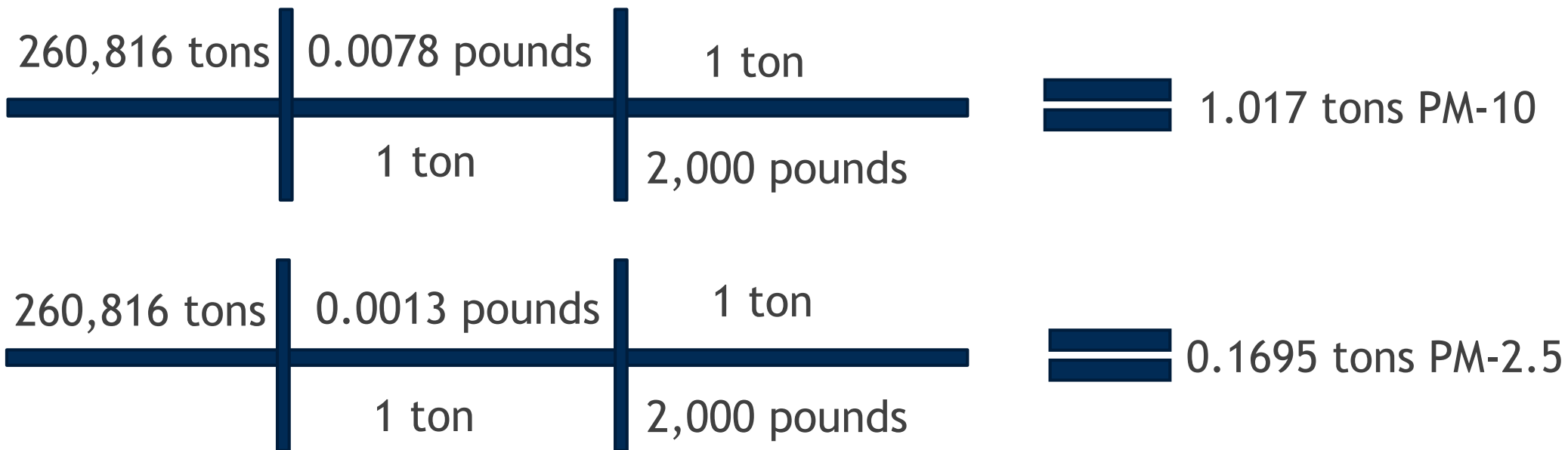
AP-42 Pollutant Station	9.9 Grain Processing	Table 9.9.1-1. PARTICULATE EMISSION FACTORS FOR GRAIN ELEVATORS <sup>a</sup>						
		Emission Source	Type of Control	Filterable <sup>b</sup>				EMISSION FACTOR RATING
				PM	EMISSION FACTOR RATING	PM-10 <sup>c</sup>	EMISSION FACTOR RATING	
Chapter 10 Cover p and Tab Conten	9.9.1 Grain Elevators	Grain receiving (SCC 3-02-005-05)						
		Straight truck (SCC 3-02-005-51)	None	0.18 <sup>e</sup>	E	0.059 <sup>f</sup>	E	0.010 <sup>g</sup>
		Hopper truck (SCC 3-02-005-52)	None	0.035 <sup>e</sup>	E	0.0078 <sup>f</sup>	E	0.0013 <sup>g</sup>
	9.9.2 Cereal Processing	Railcar (SCC 3-02-005-53)	None	0.032 <sup>f</sup>	E	0.0078 <sup>f</sup>	E	0.0013 <sup>g</sup>
		Barge (SCC 3-02-005-54)						
		Continuous barge unloader (SCC 3-02-005-56)	None	0.029 <sup>h</sup>	E	0.0073 <sup>j</sup>	E	0.0019 <sup>j</sup>
	9.9.4 Alfalfa Dehydration	Marine leg (SCC 3-02-005-57)	None	0.15 <sup>h</sup>	E	0.038 <sup>i</sup>	E	0.0050 <sup>j</sup>
		Ships (SCC 3-02-005-55)	None	0.15 <sup>k</sup>	E	0.038 <sup>k</sup>	E	0.0050 <sup>k</sup>

PM-10 EF: 0.0078 lbs/ton

PM-2.5 EF: 0.0013 lbs/ton



# Grain Receiving



We're not done yet! Don't forget to apply the Control Scenario!

# Grain Receiving

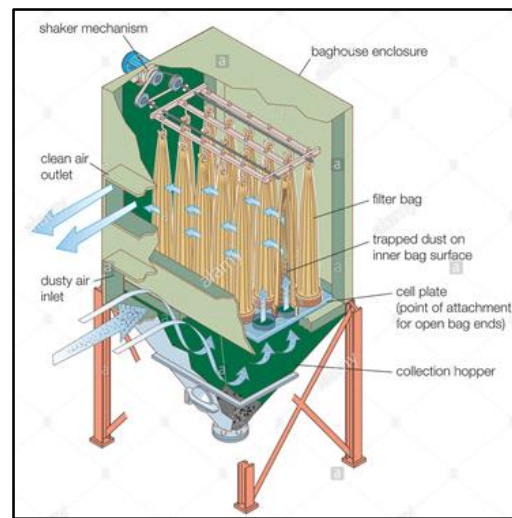
Uncontrolled PM-10 Emissions = 1.017 tons

Uncontrolled PM-2.5 Emission = 0.1695 tons

Control Scenario: **100% Capture**; **90% Control**

Reportable PM-10 Emissions:  $1.017 * (1 - (100\% * 90\%)) = 1.017 * 0.1 = 0.102$  tons

Reportable PM-2.5 Emissions:  $0.1695 * (1 - (100\% * 90\%)) = 0.1695 * 0.1 = 0.017$  tons



# Grain Receiving

## 2019 Emissions Report

In Process 

### Facility Inventory



Facility



Release  
Points



Control  
Devices



Emission  
Units



Unit  
Processes

### Emissions




Process  
Emissions



Report  
Attachments




 Download Template

 Import Data

### More Actions

 Validate Report

 Initiate Submission

 Print Report

# Grain Receiving

## 2019 Emissions

### Facility Inventory



Facility



Re  
P

### Emissions



Process  
Emissions



R  
Attac

Download Template

Imp

### More Actions

Validate Report

Initiate S

## Control Devices

Control Device

Additional Information

### Identifier:

151670

### Description:

Baghouse

### Status:

OP - Operating

### Status Date:

### Control Measure:

127 - Fabric Filter / Baghouse

### Controlled Pollutants:

PM10-PRI

90.00

%

PM-10 (All Particulate Matter <10 microns)

### Related Unit Processes:

185777 - Grain Receiving, 311717 - Grain Receiving

### Comments:

In Process



# Grain Receiving

## 2019 Emissions Report

In Process 

### Facility Inventory



Facility



Release  
Points



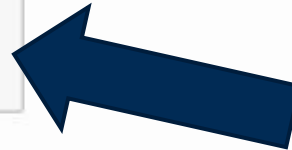
Control  
Devices



Emission  
Units



Unit  
Processes



### Emissions



Process  
Emissions




Report  
Attachments

 Download Template

 Import Data

### More Actions

 Validate Report

 Initiate Submission

 Print Report

# Grain Receiving

Unit Processes

Unit Process

Control Approach

Release Point Apportionment

Additional Information

Not Controlled?:  
☐

Control Approach Description :  
Baghouse

Control Devices

Control Device:	Sequence:	Capture (%):	Uptime (%):
<div>151670 - Baghouse</div>	1	100.0	100.0

Emissions

Attachments

Download Template

Import Data

More Actions

Validate Report

Initiate Submission

Print Report

# Grain Receiving

## 2019 Emissions Report

In Process

### Facility Inventory



Facility



Release  
Points



Control  
Devices



Emission  
Units



Unit  
Processes

### Emissions



Process  
Emissions



Report  
Attachments

Download

Import Data

### More Actions

Validate Report

Initiate Submission

Print Report

# Grain Receiving

## Process Emissions

Process

Operations

Emissions

### Process Identifier:

311717 - Grain Receiving

### Emission Unit Identifier:

185777 - Grain Receiving

### SCC:

30200552

Industrial Processes-Food and Agriculture-Feed and Grain Terminal Elevators-Unloading (Receiving) from Hopper Trucks

### ? Process is Reported?:

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

### ? Annual Throughput:

260816

Throughput Combination: (Select to populate Throughput Unit of Measure, Type, and Material)

TON - TONS | O - Output | 133 - Grain ▼

In Process





# Grain Receiving

## Process Emissions

Process Operations **Emissions**

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
PM10-PRI	0.0078	TON	10_2 - OK DEQ Approved Method (pre-Control EF)	0.101718239999999

### Pollutant Code:

PM10-PRI - PM-10 (All Particulate Matter <10 microns)

### Calculation Method:

10\_2 - OK DEQ Approved Method (pre-Control EF)

### Emission Factor (Lbs/Unit):

0.0078

### Emission Factor Unit:

TON - TONS

### Estimated Emissions (Tons):

0.101718239999999

### Overall Control Efficiency (%):

90%

### Comment:

EF from AP-42 Table 9.9.1-1

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

### Annual Throughput:

260816

Throughput Combination: (Select to populate Throughput Unit of Measure, Type, and Material)

TON - TONS | O - Output | 133 - Grain

# Limestone Conveyor

## Activity Information

- ▶ SCC: 30510105
- ▶ Process Material: Limestone
- ▶ Annual Process Rate: 5,261,305 tons
- ▶ Hours of Operation: 6,782 hours
- ▶ Control Scenario: Dust Suppression

# Limestone Conveyor

## ► Relevant Emission Factors

- PM-10: 0.000046 pounds/ton
- PM-2.5: 0.000013 pounds/ton
- Factors from AP-42 11.19.2
- Both of these are Controlled Factors

- Do I need to apply my Control Scenario?
- What is the correct calculation method to select?

Table 11.19.2-2 (English Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (lb/Ton)<sup>a</sup>

Source <sup>b</sup>	Total Particulate Matter <sup>c,d</sup>	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Conveyor Transfer Point (SCC 3-05-020-06)	0.0030 <sup>h</sup>	E	0.00110 <sup>h</sup>	D	ND	
Conveyor Transfer Point (controlled) (SCC 3-05-020-06)	0.00014 <sup>i</sup>	E	4.6 x 10 <sup>-5i</sup>	D	1.3 x 10 <sup>-5q</sup>	E



8\_0 - US EPA Documents incl. AP-42 & WebFIRE (no EF)  
 8\_3 - US EPA Documents incl. AP-42 & WebFIRE (no Control EF)  
 8\_2 - US EPA Documents incl. AP-42 & WebFIRE (pre-Control EF)  
 8\_1 - US EPA Documents incl. AP-42 & WebFIRE (post-Control EF)

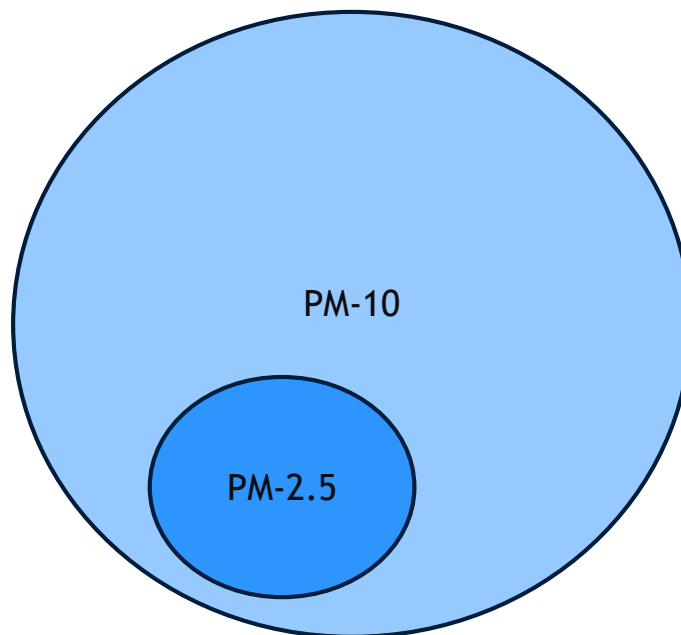
# Limestone Conveyor

$$\frac{5,261,305 \text{ tons}}{1 \text{ ton}} \times \frac{0.000046 \text{ pounds}}{2,000 \text{ pounds}} \times \frac{1 \text{ ton}}{1 \text{ ton}} = 0.121 \text{ tons PM-10}$$

$$\frac{5,261,305 \text{ tons}}{1 \text{ ton}} \times \frac{0.000013 \text{ pounds}}{2,000 \text{ pounds}} \times \frac{1 \text{ ton}}{1 \text{ ton}} = 0.034 \text{ tons PM-2.5}$$

# Notes About PM

- ▶ PM-2.5 is a subset of PM-10. This means:
  - ▶ 1. PM-10 will ALWAYS be greater than or equal to PM-2.5
  - ▶ 2. If PM-2.5 is reported, PM-10 MUST also be reported.



# Shielded Metal Arc Welding

## Activity Information

- ▶ **SCC:** 30905120
- ▶ **Process Material:** Shielded Metal Arc Welding  
Electrode E316
- ▶ **Annual Process Rate:** 27,000 pounds
- ▶ **Hours of Operation:** 1820 hours
- ▶ **Control Scenario:** Uncontrolled

# Shielded Metal Arc Welding

- Relevant Emission Factors
  - Chromium VI: 0.332 lbs/1,000 lbs

## AP 42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources

Chapter	Title
Cover page and Table of Contents	<a href="#">Cover page, detailed Table of Contents, Publications in Series, Insertion Instructions, and Key Word Index (PDF)</a> (26 pp, 128 K, <a href="#">About PDF</a> ). This is current through the Fifth Edition, Supplement C of AP 42. For sections and chapters added after November 1997, see the chapter web pages below.
Chapter 11	<a href="#">Mineral Products Industry</a>
Chapter 12	<a href="#">Metallurgical Industry</a>
Chapter 13	<a href="#">Miscellaneous Sources</a>

Welding Process	Electrode Type (With Last 2 Digits Of SCC)	HAP Emission Factor (10 <sup>-1</sup> g/kg [10 <sup>-1</sup> lb/10 <sup>3</sup> lb)			
		Cr	Cr(VI)	Co	
SMAW <sup>c</sup> (SCC 3-09-051)	14Mn-4Cr (-04)	13.9	ND	ND	2
	E11018 (-08) <sup>h</sup>	ND	ND	ND	
	E308 (-12) <sup>j</sup>	3.93	3.59	0.01	
	E310 (-16) <sup>k</sup>	25.3	18.8	ND	
	E316 (-20) <sup>m</sup>	5.22	3.32	ND	

Note: Report Chromium or Chromium VI. Do not report both!

# Shielded Metal Arc Welding

$$\frac{27,000 \text{ pounds}}{1,000 \text{ pounds}} \times \frac{0.332 \text{ pounds}}{2,000 \text{ pounds}} \times 1 \text{ ton} = 0.004 \text{ tons Chromium VI}$$





# Paint Booth

► Activity Information:

► Source Classification Code: 40200101

► Process Material: ZINC CLAD Epoxy Primer

► Process Rate: 800 gallons

► Hours Process Occurred: 2,080 hours

► Control Scenario (if applicable): none

# Paint Booth

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

B69V100

### PRODUCT NAME

ZINC CLAD® III HS Organic Zinc-Rich Epoxy Primer (Part B), Hardener

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	100-41-4	Ethylbenzene		
		ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
12	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.85 lb/gal	940 g/l
SPECIFIC GRAVITY	0.94	
BOILING POINT	174 - 360 °F	78 - 182 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	68%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
1.73 lb/gal	567 g/l	Less Water and Federally Exempt Solvents
4.73 lb/gal	567 g/l	Emitted VOC

# Paint Booth

$$\frac{800 \text{ gallons}}{1 \text{ gallon}} \times \frac{4.73 \text{ pounds}}{2,000 \text{ pounds}} \times \frac{1 \text{ ton}}{1} = 1.892 \text{ tons Total VOC}$$

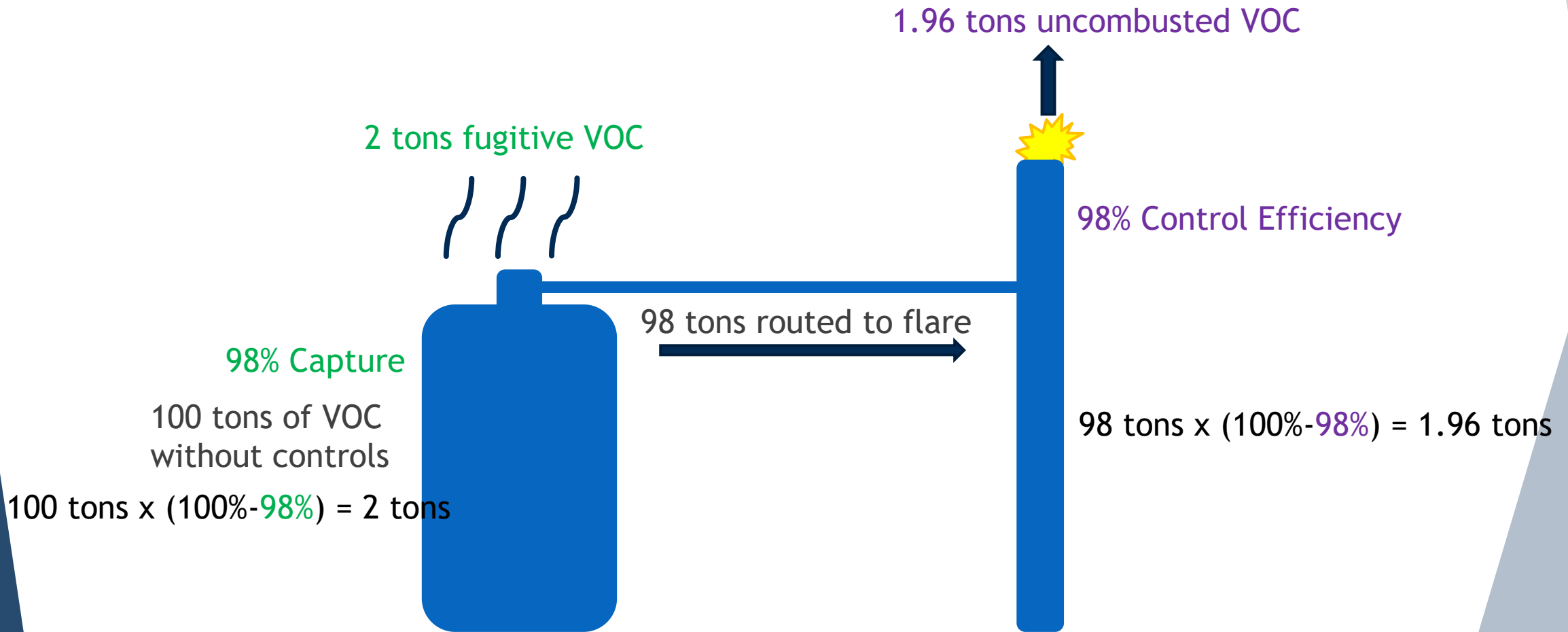
$$\frac{800 \text{ gallons}}{1 \text{ gallon}} \times \frac{7.85 \text{ pounds}}{1 \text{ pound}} \times \frac{0.12 \text{ pounds}}{2,000 \text{ pounds}} \times \frac{1 \text{ ton}}{1} = 0.377 \text{ tons Xylenes}$$

Product Weight    Percent Xylenes

# Tank-Flare System

- ▶ Process simulation software or AP-42 Chapter 7 can be used to calculate uncontrolled VOC emissions from a tank
  - ▶ Assume process simulation has been run and indicates **100 tons** of VOC emissions, if the system has no controls.
  - ▶ Vapor collection system has **98% capture** efficiency
  - ▶ Flare has a **98% control** efficiency for VOC

# Tank-Flare System



# Questions?

- ▶ Ask now or contact us at:
  - ▶ [aei@deq.ok.gov](mailto:aei@deq.ok.gov)-common inbox for Emissions Inventory Section
  - ▶ (405) 702-4100 -Air Quality Front Desk

# SLEIS Data Validation & Quality Control (QC)

Michael Ketcham, Environmental Programs Specialist

# SLEIS Data Validation

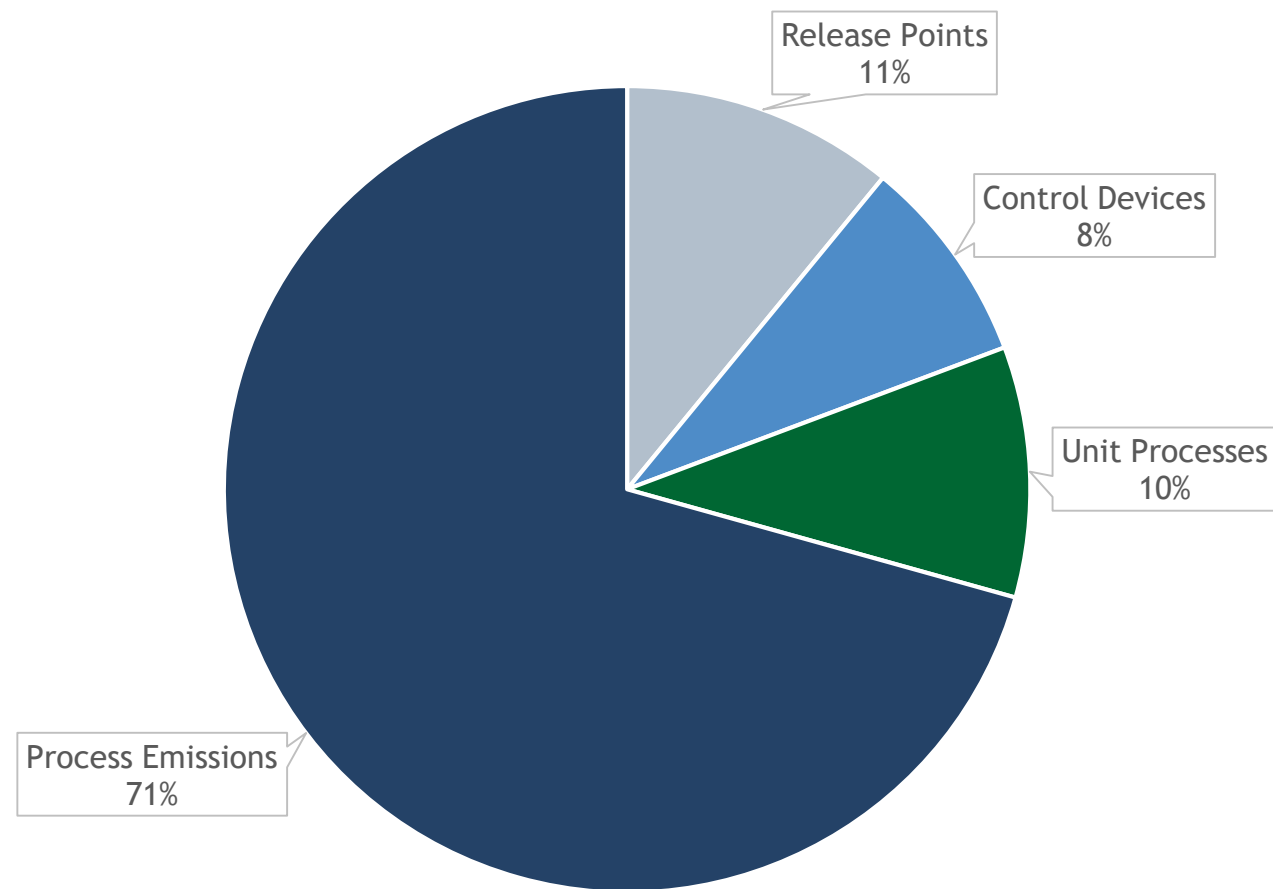


# Data Validation Within SLEIS

- SLEIS has some data validation built into the application.
  - Takes place on individual pages as you save & a final validation before you can submit
- When 2018 data was loaded, all reports were sent through the final validation process to see what issues came up.
- Some issues are due to differences between SLEIS & the previous data structure. These will have to be addressed before you can submit your 2019 report.

Error	# of hits
Process Emission Operations Actual Hours must be within 90%-110% of calculated total	14920
Process Emission Emission Factor Unit is required	11678
Process Emission Emission Factor is required	11678
Unit Process Control Device efficiency must not exceed 100% within a given sequence.	7199
The Release Point Stack Diameter, Flow Rate and/or Velocity are invalid.	6483
Process Emission Stack Test Date is required	4893
Control Device Pollutant Reduction Efficiency must be $\geq 5$ and $\leq 99.99$	3233
Process Emission Operations Actual Hours is required	2703
Control Device Pollutant Reduction Efficiency is required	2733
Process Emission Operations Average Days Per Week is required	1581
Process Emission Operations Average Hours/Day is required	1578
Process Emission Operations Average Weeks/Year is required	1551
Release Point Exit Gas Flow Rate or Exit Gas Velocity is required	1348

# Validation Hits Breakdown



■ Release Points ■ Control Devices ■ Unit Processes ■ Process Emissions

# Release Point Issues

6483

The Release Point Stack Diameter, Flow Rate and/or Velocity are invalid.

1348

Release Point Exit Gas Flow Rate or Exit Gas Velocity is required

# The Release Point Stack Diameter, Flow Rate and/or Velocity are invalid

- SLEIS validates the calculation for flow rate or velocity based on entered information.
  - Redbud did not validate these & DEQ QC didn't heavily focus on these.
- Many of these are likely historical inaccuracies that need to be corrected in 2019.
- SLEIS will auto-calculate as you fill in; you can overwrite these but they must pass validation.

# Release Point Exit Gas Flow Rate or Exit Gas Velocity is required

- One or both of these must be reported; can not be 0.
- SLEIS will auto-calculate these based off of entered release point parameters.

# Control Device Issues

**3233**

Control Device Pollutant Reduction Efficiency must be  $\geq 5$  and  $\leq 99.99$

**2733**

Control Device Pollutant Reduction Efficiency is required

# Control Devices

- Control devices are now a unique object in SLEIS
  - Previously, these were reported at the pollutant level
- Because of this, control devices were created in SLEIS based upon how they were previously reported in Redbud
  - Control devices were created for each process to ensure that all controlled emissions were associated with a control device.
- In reality, your facility likely has multiple processes leading to one control device.



# Control Devices (cont.)

- The newly created control devices will need cleaned up to match what is actually present at your facility
  - These will be critical validation errors that must be fixed before submission
  - To clean up, pollutants may need moved to appropriate control devices & excess control devices can be set to Permanently Shutdown



# Control Device Pollutant Reduction Efficiency must be $\geq 5\%$ and $\leq 99.99\%$

- Control devices were often reported incompletely in Redbud with incorrect/missing efficiencies
- These must be reported within the 5%-99.99% range
  - The pollutants can be removed from the control device or moved to another control device if they shouldn't be associated with that device

# Control Device Pollutant Reduction Efficiency is required

- Similar to the previous issue; these are instances where no efficiency was reported
- It was previously acceptable that if the factor included the control efficiency, then no efficiency needed to be reported. That is *not* the case with SLEIS though. An efficiency must always be reported
- SLEIS will not save the page without an efficiency reported

# Unit Process Issues

3233

Unit Process Control Device efficiency must not exceed 100% within a given sequence.

# Unit Process Control Device efficiency must not exceed 100% within a given sequence

- This issue deals with control devices but is found on the Unit process page
- As seen earlier, control devices are now a stand-alone piece of equipment
- Control devices can now be set in sequence
  - This issue occurs when control devices are in sequence & their efficiencies add to  $>100\%$
  - If this were the case there would be no emissions; totally controlled
- Again, control devices will need cleaning up due to data migration

# Unit Process Control Device efficiency must not exceed 100% within a given sequence (*cont.*)

Control Devices

Control Device:	Sequence:	Capture (%)	Uptime (%)
151435 - Low Excess Air Firing Pr	1	100.0	100.0
151436 - Dry Limestone Injection	2	100.0	100.0
151440 - Fabric Filter / Baghouse	3	100.0	100.0
151441 - Fabric Filter / Baghouse	4	100.0	100.0

Cancel Save

Control Devices

Control Device:	Sequence:	Capture (%)	Uptime (%)
151435 - Low Excess Air Firing Primary 1C	1	100.0	100.0
151436 - Dry Limestone Injection Primary	1	100.0	100.0
151440 - Fabric Filter / Baghouse Primary	2	100.0	100.0
151441 - Fabric Filter / Baghouse Second	3	100.0	100.0

Unit Process Control Device efficiency must not exceed 100% within a given sequence.

Unit Process Control Device efficiency must not exceed 100% within a given sequence.

Cancel Save

# Process Emissions Issues

- 14920 Process Emission Operations Actual Hours must be within 90%-110% of calculated total
- 2703 Process Emission Operations Actual Hours is required
- 1581 Process Emission Operations Average Days Per Week is required
- 1578 Process Emission Operations Average Hours/Day is required
- 1551 Process Emission Operations Average Weeks/Year is required
- 11678 Process Emission Emission Factor Unit is required
- 11678 Process Emission Emission Factor is required
- 4893 Process Emission Stack Test Date is required

# Process Emission Operations Actual Hours must be within 90%-110% of calculated total

- This is by far the most numerous issue
- SLEIS validates that average days/week, hours/day, & weeks/year calculate to match reported actual hours/year
- SLEIS will auto-fill the actual hours/year based on inputs
  - You can overwrite this but it must still pass validation
- You will not be able to save the process emissions information until the validation is satisfied



# Process Emission Operations Requirements

- Process Emission Operations Actual Hours is required
- Process Emission Operations Average Days Per Week is required
- Process Emission Operations Average Hours/Day is required
- Process Emission Operations Average Weeks/Year is required

# Process Emission Operations Requirements (*cont.*)

- All 4 of these are related, they often occur together
- Must be reported; as mentioned earlier SLEIS will use entered values to calculate Actual Hours/Year
  - Again, you can overwrite this but still must be within the 90%-110% of calculated total
- If the process had no hours, uncheck the “Process Is Reported?” box

# Process Emission Operations Requirements (*cont.*)

## 2019 Emissions Report

### Process Emissions

Process

Operations

Emissions

**Process Identifier:**  
310580 - Natural Gas - General

**Emission Unit Identifier:**  
184727 - CO2 Plant EUG-3

**SCC:**  
39000699  
Industrial Processes-In-process Fuel Use-Natural Gas-General

**? Process is Reported?:**

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

# Process Emission Emission Factor Unit is required & Process Emission Emission Factor is required

- These two have the exact same number of hits because they occur in tandem
- Emission factors & units are required for certain calculation methods
- Emission factors & units are carried forward, so there will be some cleanup from when data was migrated into SLEIS
  - Also some issues from changes to requirements for different calculation methods
  - You will not be able to save the emissions page until these are corrected

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
▼ VOC		E3GAL	7_0 - Manufacturer Test Data with OK DEQ Approval (no Control EF)	
<div> <div> <p><b>? Pollutant Code:</b></p> <input type="text" value="VOC - Total VOC"/> </div> <div> <p><b>? Calculation Method:</b></p> <input type="text" value="7_0 - Manufacturer Test Data with OK DEQ Approval (no Control EF)"/> </div> </div>				
<div> <div> <p><b>? Emission Factor (Lbs/Unit):</b></p> <input type="text"/> </div> <div> <p><b>? Emission Factor Unit:</b></p> <input type="text" value="E3GAL - 1000 GALLONS"/> </div> </div>				
<p><b>? Estimated Emissions (Tons):</b></p> <input type="text"/>				<input type="button" value="Save"/> <input type="button" value="Delete"/>
<p><b>? Comment:</b></p> <input type="text"/>				

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
▼ VOC			54_0 - US EPA TANKS 4.09	
<div> <div> <p><b>? Pollutant Code:</b></p> <input type="text" value="VOC - Total VOC"/> </div> <div> <p><b>? Calculation Method:</b></p> <input type="text" value="54_0 - US EPA TANKS 4.09"/> </div> </div>				
<div> <div> <p><b>? Emission Factor (Lbs/Unit):</b></p> <input type="text"/> </div> <div> <p><b>? Emission Factor Unit:</b></p> <input type="text"/> </div> </div>				
<p><b>? Estimated Emissions (Tons):</b></p> <input type="text"/>				<input type="button" value="Save"/> <input type="button" value="Delete"/>
<p><b>? Comment:</b></p> <input type="text"/>				

# Process Emission Stack Test Date is required

- This is a new field in SLEIS that did not previously exist
- When using a stack test emission factor, you must report the stack test date
  - You will not be able to save the process emissions page until this is done

# Quality Control (QC) by DEQ Emissions Inventory Section

# Significant change in emissions from previous reporting year

- Often, we see emissions at an emission unit increase or decrease significantly without any significant changes in throughput or operating time
  - If you have excess emissions, then report them in your emission inventory
- We email companies to verify that the emissions are accurate and if so to explain the change in emissions
  - Typos are often encountered in this check
- Providing a detailed note helps us validate these situations!



# “DEQ Approved Method”

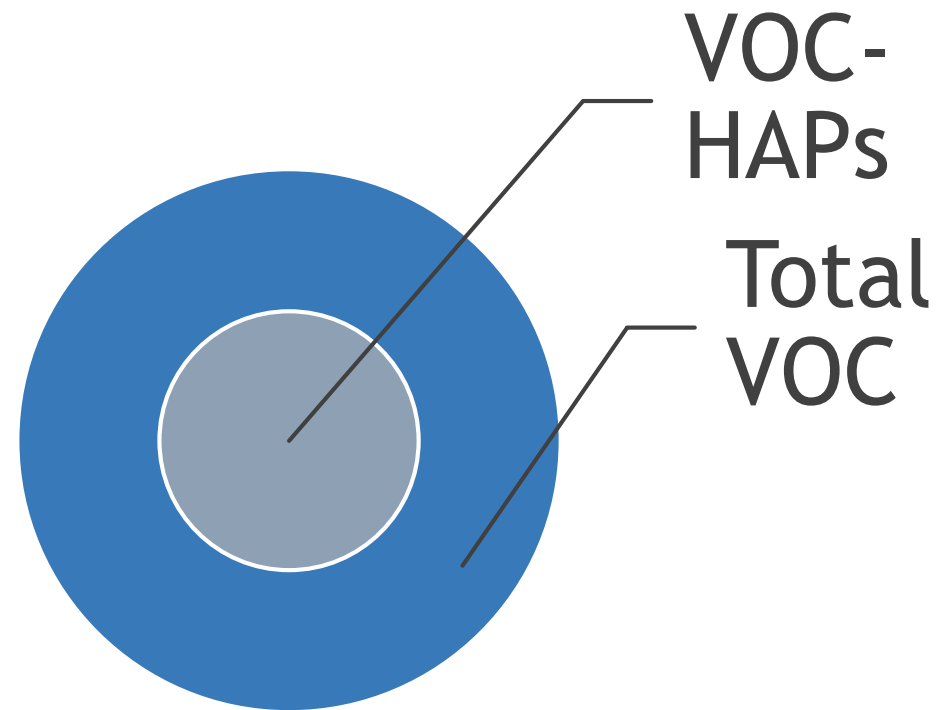
- “DEQ Approved Method” should only be selected if no other calculation method is applicable
- A comment should be added to instances where “DEQ Approved Method” is chosen
- Remember, you have to get DEQ approval before selecting this method!

# HAPs & Total VOC

- Volatile Organic Compounds (VOCs) are organic compounds that contain carbon and react in the presence of sunlight with NO<sub>x</sub> to form ozone
- Hazardous Air Pollutants (HAPs) are compounds that have been included on EPA's list of 187 pollutants that can have a detrimental effect on humans and the environment
  - Many HAPs are also VOCs
  - Both HAPs and Total VOC must be reported
  - You will not be double billed

## HAPs & Total VOC (*cont.*)

- Total VOC amount should be greater than or equal to the total of the individual HAPs



# Inconsistent Status

- If an emission unit is Operating...
  - Annual process rate & annual operating hours cannot be 0
- If an emission unit is Temporarily/Permanently Shutdown...
  - Annual throughput, actual hours/year, & estimated emissions must all be 0
- If the equipment ran more than 0 hours at any point in the year status must be Operating!!

# Inconsistent Status (cont.)

- Status Date
  - *“When the emission unit/release point/control device status was last set. The status date is not a required field when the status is operating. If the emission unit operated at all during the current calendar year then the emission unit needs to be reported, and the status date for the temporarily or permanently shutdown designation will be January 1st of the next calendar year. For example an emission unit that stops operating in June of 2018 will report a status date of January 1, 2019 in the 2019 emission inventory.”*
- Last/Final Emissions Year
  - *“The last/final year that this process will ever be reported. If the process operated at all during the current calendar year then the process needs to be reported, and the last inventory year will be the next calendar year. For example a process that stops operating in June of 2018 will have a 2019 last inventory year.”*

# Reporting the same throughput, annual hours, & emissions as the previous year

- For most emission units the throughput, annual hours, & emissions should vary from year to year
  - Emissions may be quite similar but not exact
- Some emission units like emergency engines that are tested on a regular schedule may have the same values

# Produced Water Tank Emissions

- Permits may not reference produced water tanks
- If VOC emissions are greater than 0.1 tons, the produced water emissions must be reported
- To calculate produced water emissions:
  - The volume of produced water can be entered into the TANKS program as if it were condensate/crude oil
  - 1% of the resultant value can be utilized as the produce water emissions

# New/Existing Equipment

- Your inventory should be an accurate reflection of the equipment at your facility
- Be sure to add new equipment when appropriate
  - New equipment should be created from scratch
  - Do not convert an existing emission unit to a new piece of equipment; equipment is tracked historically



# Amendments

# How do I amend my inventory?


- Amendments are now done in SLEIS
  - Can be requested at anytime during the year
  - Inventories from 2013-2018 are loaded into SLEIS
- SLEIS roles still apply
  - Must be Editor or Submitter to request amendment
  - Must be Submitter to submit

# How do I amend my inventory? (*cont.*)


- On each report year page, click the “Request Amendment” button on the right
- Please include reason for amendment, if you are adding previously unreported equipment & if the amendment stems from an enforcement case/inspector
  - Equipment should have the same unique identifier in each year, DEQ staff will have to correct this
- If granted, you will receive an email & can then make any needed changes and resubmit the report

# How do I amend my inventory? (cont.)


## 2018 Emissions Report

Submitted 


### Facility Inventory




Facility




Release Points



Control Devices




Emission Units




Unit Processes

### Emissions



Process Emissions



Report Attachments

[Download Template](#)

### More Actions

[Print Report](#)

### TEST - OK DEQ AQ COMPANY - A

Company Identifier:  
3327

Mailing Address:  
PO BOX 1677  
OKLAHOMA CITY, OK, 73101-1677  
US

Phone: (405) 702-4208  
Fax:

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

### TEST - GENERIC MANUFACTURING

Facility Identifier:  
20957

Location Address:  
6801 S SUNNYLANE RD  
OKLAHOMA CITY, OK 73135

Your roles at this facility are:  
Editor

### Submission Status

This emissions report has not been submitted.


[Request Amendment](#)

### Full Emissions Report

Emissions Inventory Report (unredacted) - [HTML](#) | [PDF](#)

### Summary Reports

Total Emissions by Facility - [CSV](#)



OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

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# Your inventory is important!!

- Missing or incorrect release point data leads to errors in geographical location of emissions and impacts photochemical modeling and health risk assessments.
- Missing or incorrect hours and season percentages lead to errors in temporal distribution of emissions.
- Errors in SCCs and SICs impact control strategy development and attainment plans.
- Missing or incorrect control equipment data impacts rule development.
- Good data leads to effective air quality regulation!

# Questions?

- Contact us at:
  - [aei@deq.ok.gov](mailto:aei@deq.ok.gov)
  - (405) 702-4100