OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

2016 Air Quality Workshop

University of Oklahoma Schusterman Center in Tulsa
February 4, 2016 ❖ 9 AM – 4 PM

Agenda

Workshop Introduction and Air Quality Rules
Air Quality Permitting

❖ *10 minute Break* ❖

Compliance

❖ *10 minute Break* ❖

Excess Emissions Reporting Tool

Break for Lunch

Enforcement
Emissions Inventory Introduction and Guidance

❖ *10 minute Break* ❖

Basics of an Emission Inventory Report
Emissions Calculations

❖ *10 minute Break* ❖

Emissions Inventory General Issues
Live Redbud Demonstration

2016 Air Quality Workshop

Cheryl Bradley

Data & Planning Manager

Tulsa, Oklahoma

February 4, 2016

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

Housekeeping, etc.

- Emergency exits
- If you want to take a break…
- Please silence your cell phones
- If you have a question, ask!
  - Follow up with us if you have a specific question about a rule or facility

You Asked, We Answered!

- Your feedback is important
- Including Permitting, Compliance & Enforcement, and Rules sections
- Please fill out the current packet questionnaire

Workshop Agenda

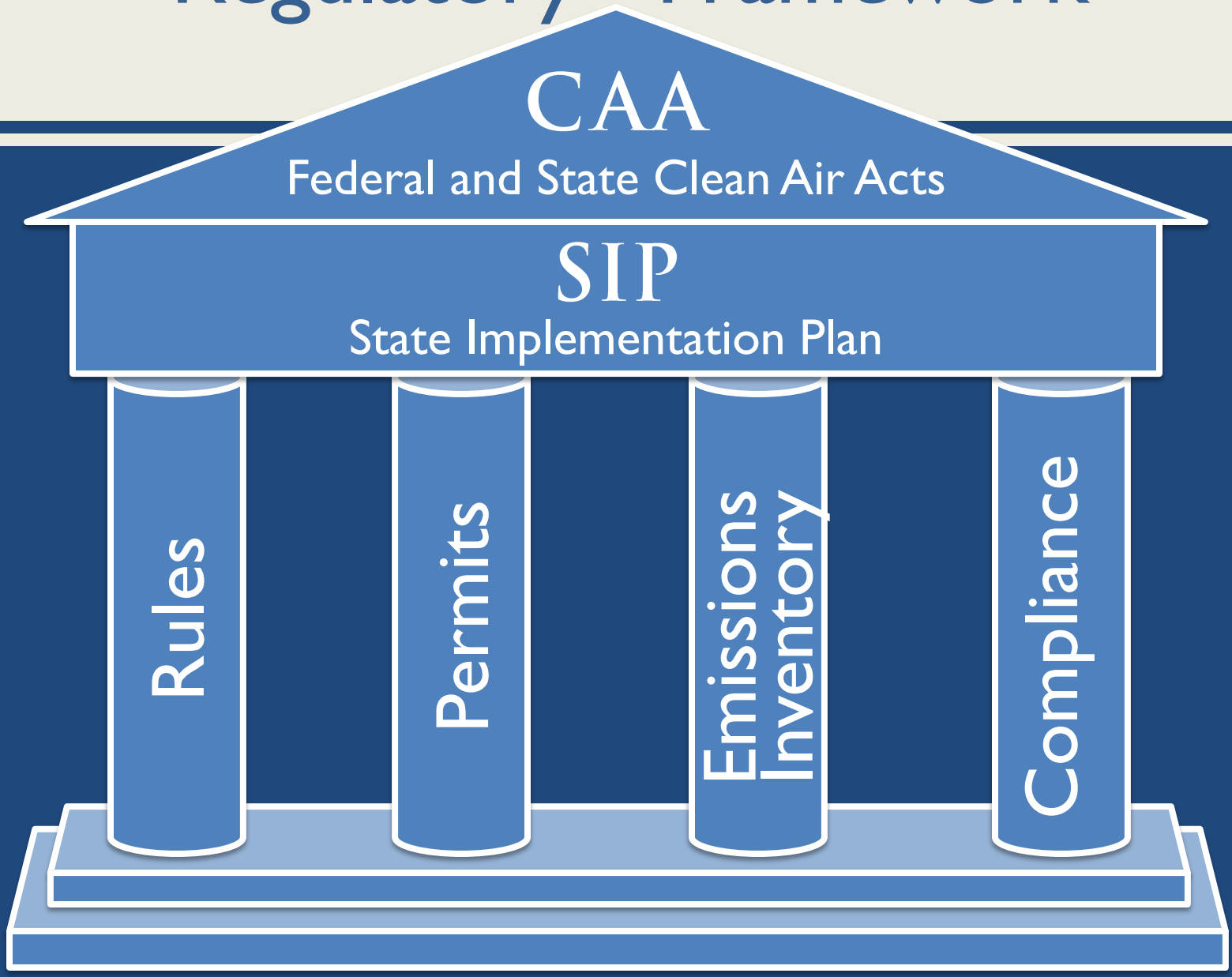
- Introduction and Air Quality Rules
- Permitting
- Compliance & Enforcement

— Lunch (on your own) —

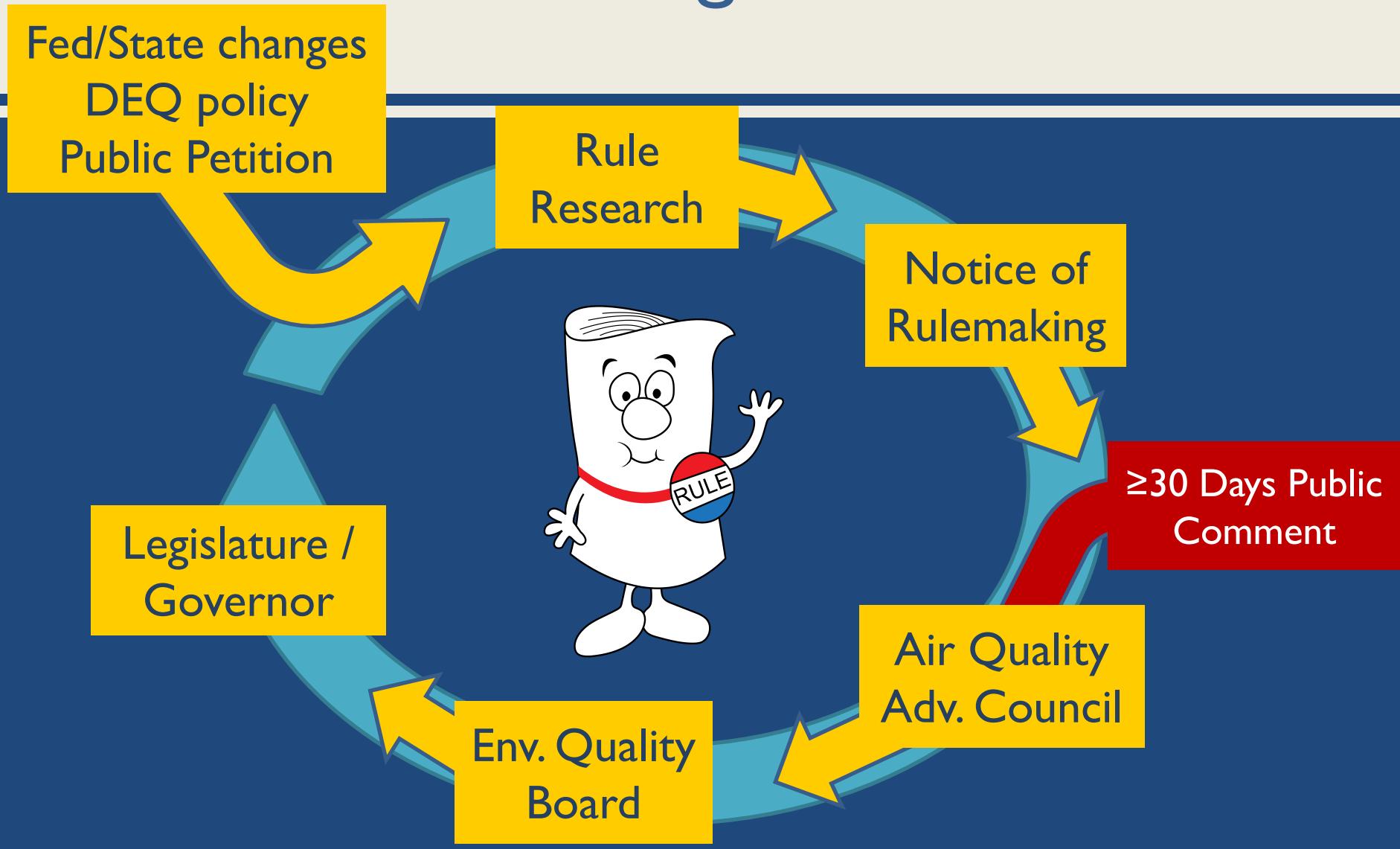
- Compliance & Enforcement (Cont.)
- Emissions Inventory
- Live Redbud Demo
- Q & A

Who are we?

Regulatory Framework



Rulemaking Process

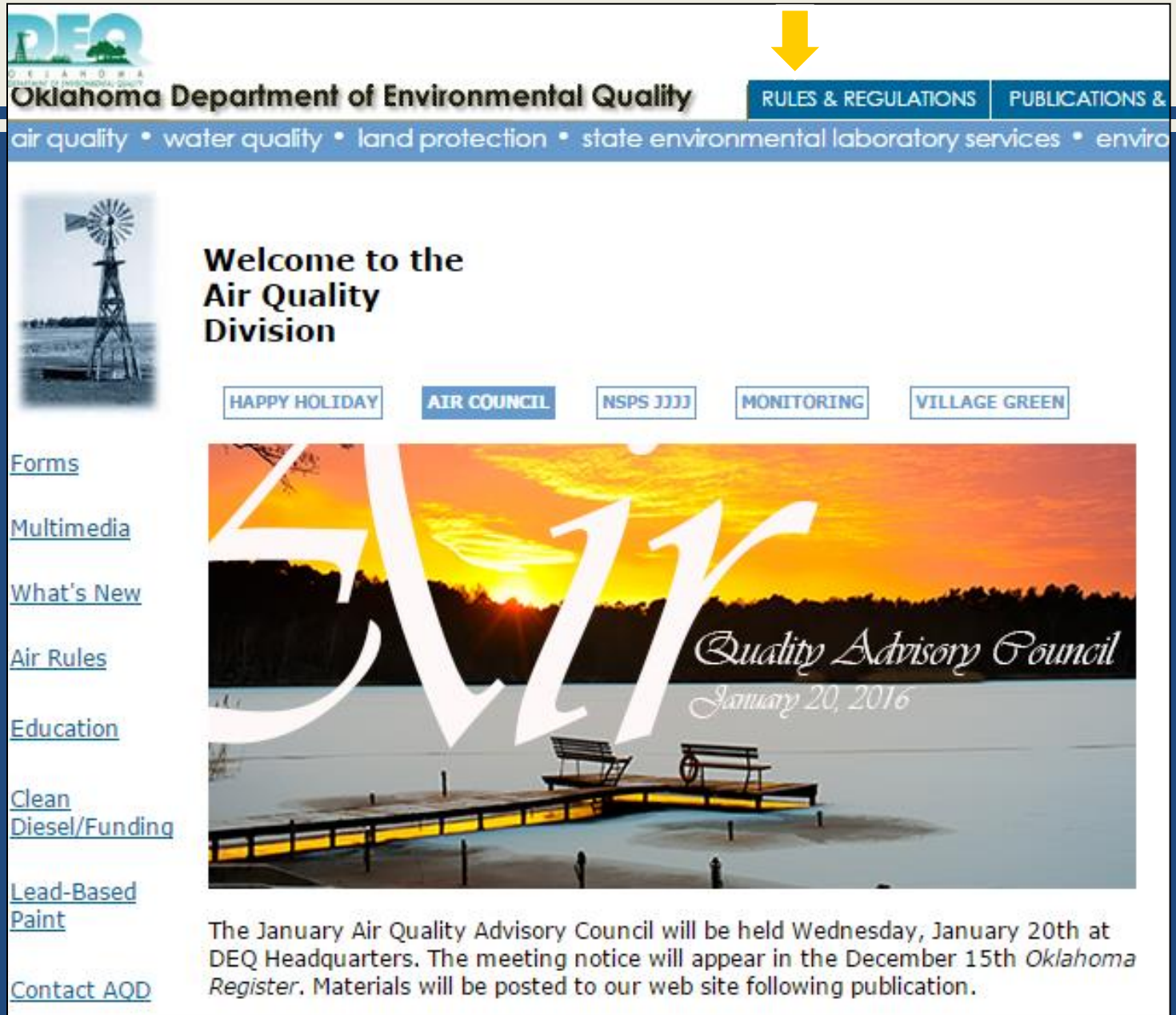


How can I find Air Quality rules and rule changes?

Finding Air Quality Rules

http://www.deq.state.ok.us

Finding AQ Rules



Finding AQ Rules

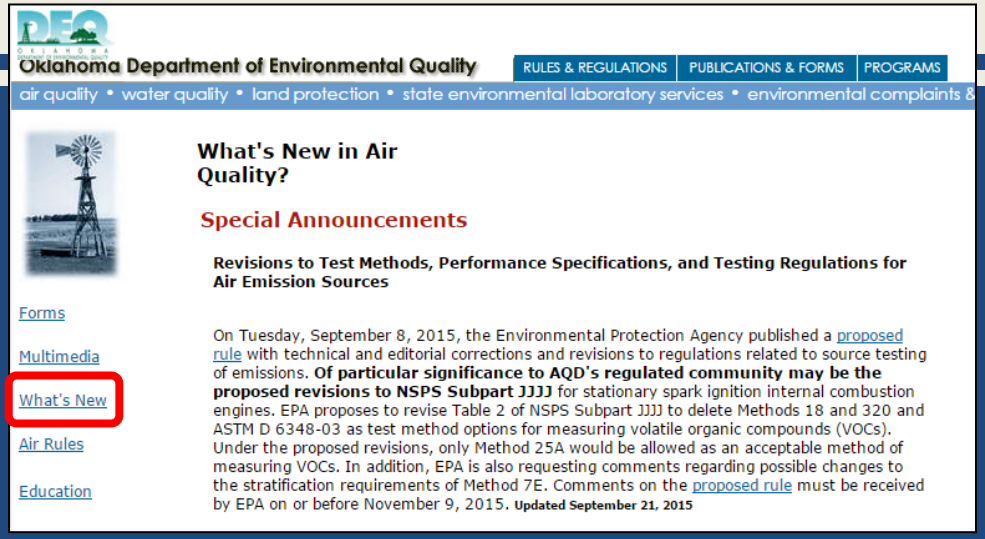
http://www.deq.state.ok.us/rules/100.pdf

Codification through the 2015 legislative session.
Subchapter 2 and Appendix Q
Board adoption - November 13, 2014
Approved by Governor's declaration on June 8, 2015
Effective date - September 15, 2015

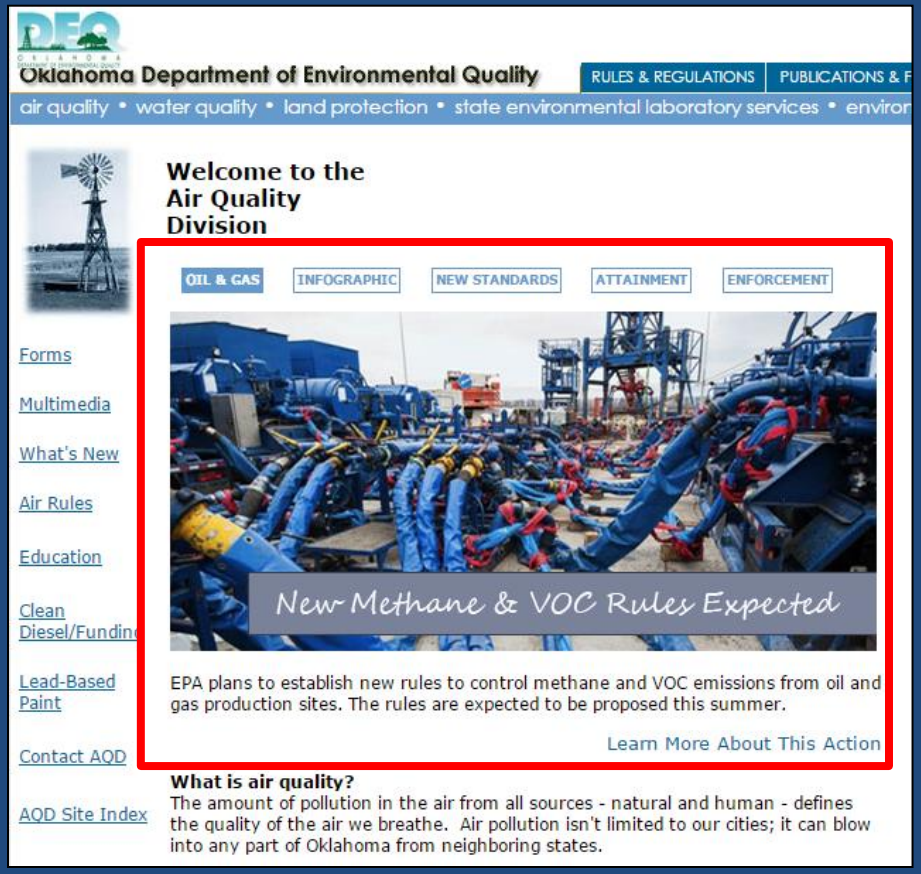
TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 100. AIR POLLUTION CONTROL

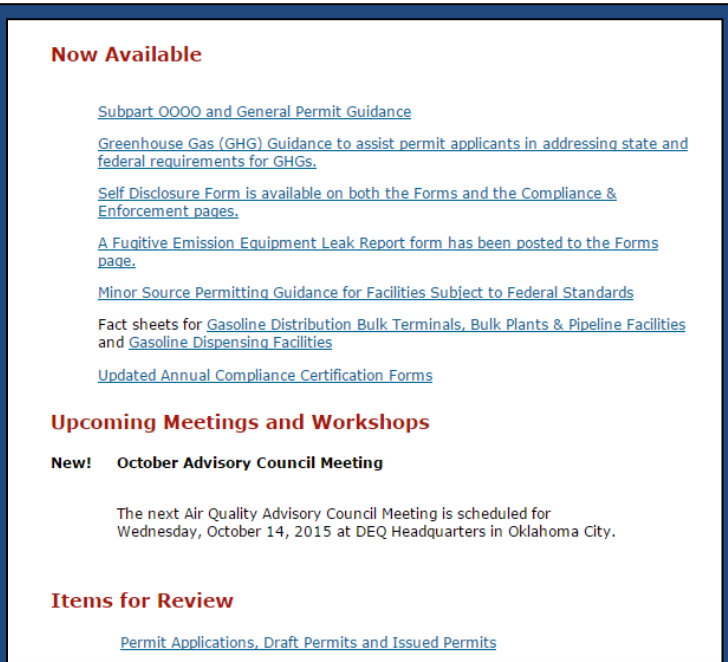
How to Track Rule Changes

What's New



Switcher

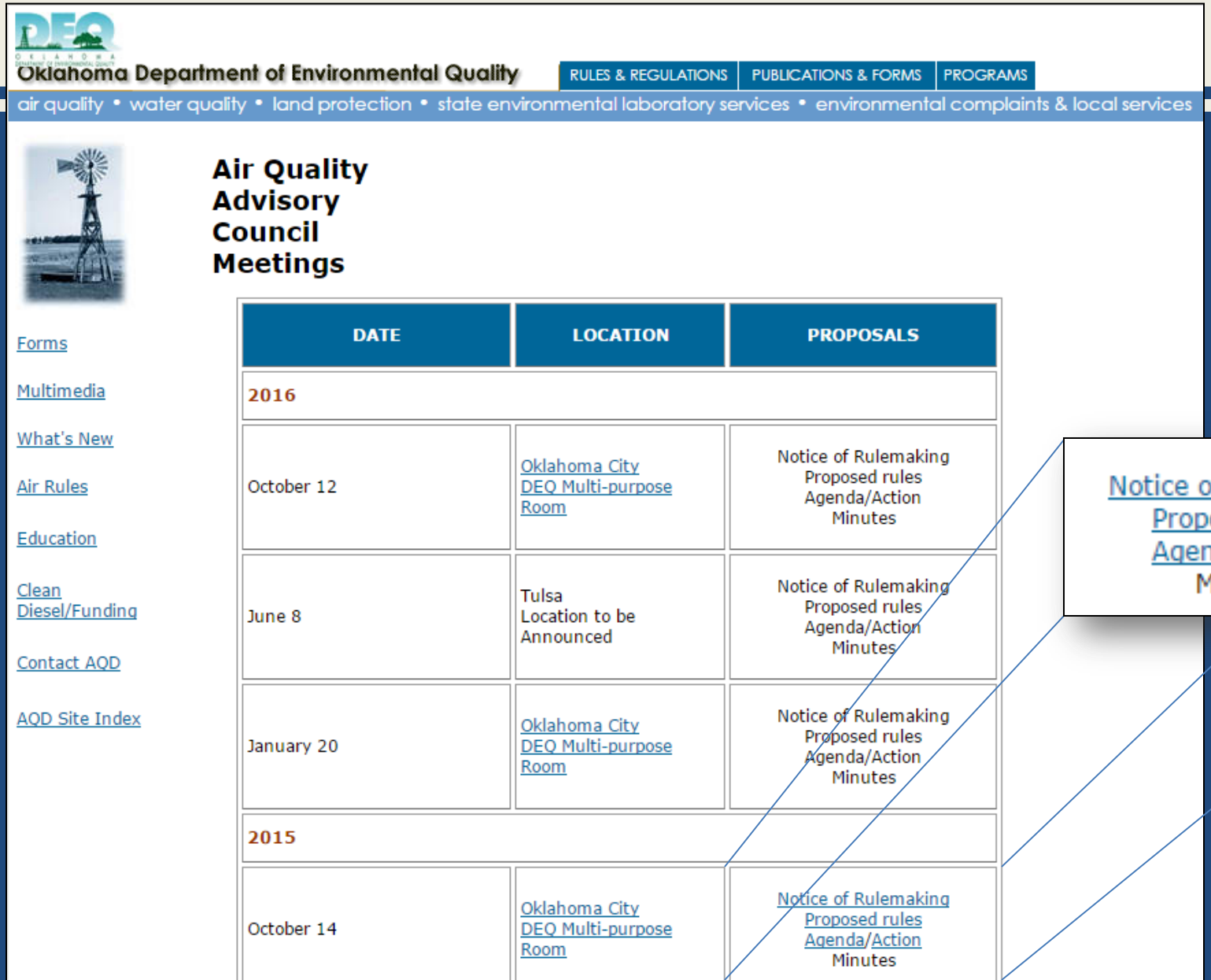




Air Quality Council

Member		Representing
Gerald Butcher		Electric Utility
Montelle Clark		General Public
Gary Collins		Agriculture
Jim Haught		Transportation
Laura Lodes		Engineering
Robert Lynch		Higher Education
Sharon Myers		General industry
David Gamble		Petroleum
(vacant)		Local Government

Air Quality Council



Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services

Air Quality Advisory Council Meetings

DATE	LOCATION	PROPOSALS
2016		
October 12	Oklahoma City DEQ Multi-purpose Room	Notice of Rulemaking Proposed rules Agenda/Action Minutes
June 8	Tulsa Location to be Announced	Notice of Rulemaking Proposed rules Agenda/Action Minutes
January 20	Oklahoma City DEQ Multi-purpose Room	Notice of Rulemaking Proposed rules Agenda/Action Minutes
2015		
October 14	Oklahoma City DEQ Multi-purpose Room	Notice of Rulemaking Proposed rules Agenda/Action Minutes

Notice of Rulemaking
Proposed rules
Agenda/Action
Minutes

Air Quality Council Meeting

Wednesday, April 17, 2013
Location: 4000 W. Florence Street, Broken Arrow, OK

(The following Subchapters of OAC 252:100 are Adobe .pdf files.)

PROPOSED DRAFT RULES: Chapter 100 -- Air Pollution Control		
Reference	**Subject**	**Proposed Change**
Subchapter 7 SC 7 as approved by AQAC for both Permanent and Emergency Rules	**Permits for Minor Facilities** Permanent Rule Emergency Rule Rule Impact Statement Response to Comments Draft Permit Application Form--(Not Part of the Proposed Rule) for informational purposes only	Amended
Appendix E Revoked New	**Primary Ambient Air Quality Standards** Rule Impact Statement	Revoked New

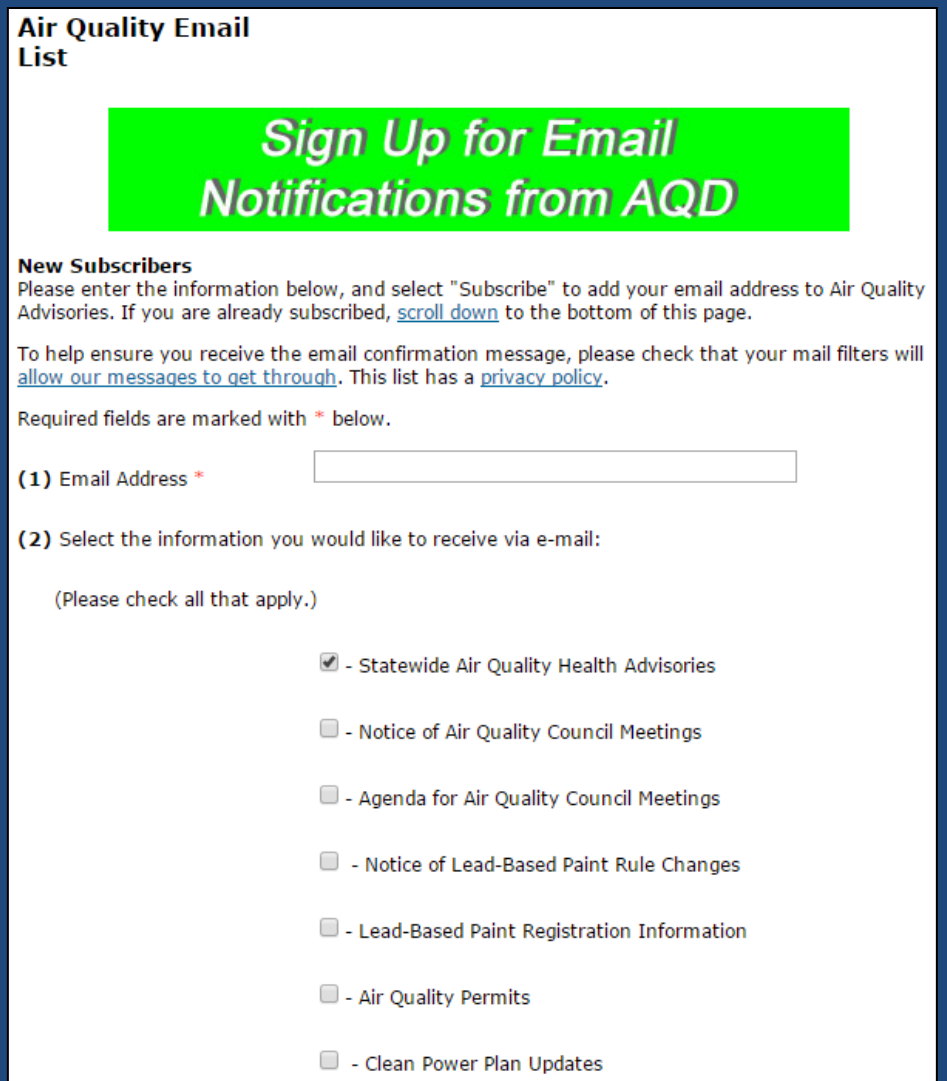
Information Outside Councils

- Check the Switcher
- Other Hearings and Important Meetings
- DEQ Calendar of Events
- Useful External Links
  - epa.gov/laws-regulations : reg. development & review
  - federalregister.gov : published rules; browse by topic
  - regulations.gov : submit comments on proposed rules

How to Get Further Information

Sign-Up for Email Health Advisories

- Sign up with our emailing list
- Choose which updates you want



Air Quality Email List

Sign Up for Email Notifications from AQD

New Subscribers
Please enter the information below, and select "Subscribe" to add your email address to Air Quality Advisories. If you are already subscribed, scroll down to the bottom of this page.

To help ensure you receive the email confirmation message, please check that your mail filters will allow our messages to get through. This list has a privacy policy.

Required fields are marked with * below.

(1) Email Address *

(2) Select the information you would like to receive via e-mail:

(Please check all that apply.)

- [x] - Statewide Air Quality Health Advisories
- [ ] - Notice of Air Quality Council Meetings
- [ ] - Agenda for Air Quality Council Meetings
- [ ] - Notice of Lead-Based Paint Rule Changes
- [ ] - Lead-Based Paint Registration Information
- [ ] - Air Quality Permits
- [ ] - Clean Power Plan Updates

Questions?

Air Quality Permitting

Air Quality Workshop 2016

Phil Martin

February 4, 2016

Tulsa, OK

Key Questions

* Do I need a permit?
* Who needs a permit?
* Who does not need a permit?

De Minimis Facility

* All the air pollutant emitting activities at the facility are on the de minimis list contained in Appendix H or the facility meets all of the following de minimis criteria:
  * Has actual emissions that are less than 5 TPY of each regulated pollutant
  * Not defined as a major source
  * Operating in conjunction with another facility or source is subject to air quality permitting
  * Not subject to a Federal NSPS or NESHAP

Permit Exempt Facility

* Has actual emissions in every calendar year that are less than 40 TPY of each criteria pollutant
* Not defined as a major source
* Operating in conjunction with another facility or source is subject to air quality permitting
* Not subject to an emission standard, equipment standard or work practice standard in Federal NSPS or NESHAP

Potential to Emit (PTE)

* **"Potential to emit"**
means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the Administrator. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Applicability Determination

* Upon written request along with the required fee and any relevant information needed, the DEQ will make a determination of whether a permit is required.
* The fee for an applicability determination is $500, to be credited against the construction or operating permit application fee, if a permit is required. If no permit is required, the fee will be retained to cover the cost of making the determination.

Facilities Covered By AQ Permits

* Permit only stationary sources.
  (Mobile sources are not part of our program.)
* Permit a variety of industries and facilities.
* There are about 8,800 facilities that are currently permitted.
  (That number was about 4,000 six years ago.)
* About 320 of those are Major Sources.
  (That number was 330 six years ago.)

Breakdown of Facilities by Type

Number of Active Facilities	Type of Permit
43	Prevention of Significant Deterioration (PSD)
320	Major Source (Title V)
2,951	Synthetic Minor Source (Includes GP-OGF)
5,517	True Minor Source

Minor Source Facilities

* OAC 252:100-7, Subchapter 7
* Facility not defined as a Part 70 source
  * < 100 Tons per Year (TPY) of Criteria Pollutant

    NOx, CO, Ozone (VOC), SO_2, PM, and Lead
  * < 10 TPY of any Individual Hazardous Air Pollutants (HAP)
  * < 25 TPY of all HAP's Combined

True Minor vs. Synthetic Minor

* True Minor
  * Facility that has the potential to emit, without controls, less than major source levels.
* Synthetic Minor
  * Facility that has a potential to emit over major source levels of any regulated air pollutant, but with controlled or limited actual emissions below major source levels.

Minor Source Permit Program

* Dual Permitting System
  * **Construction Permit**
    * Is required to "commence construction"
    * Valid for 18 months
    * Provides the Authority of Operate
  * **Operating Permit**
    * Operating Permit Application must be submitted within 180 days of operation

Application Advice

* Things that could slow the permitting process
  * Incorrect or no fees
  * No Landowner Affidavit
  * Need for Regulatory Review
  * Absence of a good explanation of the project
  * Slow response to deficiencies or information requests

Types of Minor Permits

* Permit by Rule
* General Permits
* Minor Source Individual Permits

Permit by Rule

* OAC 252:100-7-60
* Actual emissions of 40 TPY or less of a criteria pollutant and PTE of 100 TPY or less.
* PTE of less than 10 TPY for each individual HAP and 25 TPY for combination of HAP's
* Not collocated with any other air permitted facility
* Not defined as Major Source

Permit by Rule (PBR)

* Currently Five Types
  * Cotton Gins
  * Grain Elevators
  * Particulate Matter Emissions
  * VOC Storage and Loading Facilities
  * Oil and Natural Gas (O&NG) facilities (New)
  * Emergency Generators (September 2016)

PBR Requirements

* Certification to DEQ
* Minimal recordkeeping and Reporting
  * Only if required by NSPS or NESHAP
* Modification notification only required if result in a change in permit status
* Emissions inventories for PBR facilities normally required every 3rd or 6th year
  (to be explained later today)

PBR – O&NG

* Minor sources and area sources in the oil and natural gas sector
  - Production, gathering, processing, storage, or transportation of crude oil, refined petroleum products, natural gas, and natural gas liquids (NGL), including condensate
* NSPS Subparts IIII, JJJJ, and OOOO
  * Ability to request Federally Enforceable Limits (FEL) for < 6 TPY for OOOO
* NESHAP Subparts HH and ZZZZ

General Permit

* Nine Types

http://www.deq.state.ok.us/aqdnew/permitting/genperm.htm

General Permit

* General Permit for Oil & Natural Gas Facility (GP-OGF)
  * Specific to the oil and natural gas sector
  * Facility must qualify as a true minor or synthetic minor
  * Allows for engines, tanks, dehydrators, heaters, loading, and fugitives
  * Covers most wellheads and compressor/booster stations
  * In the process of being updated to include amine units

General Permit

* Area Source NESHAP &
  Small NSPS Facilities (GP-ASNF/SNF)
  * Facility must qualify as a true minor
  * Actual emissions less than 40 TPY and PTE less than 100 TPY
  * Facility/equipment must be subject to a federal standard (NSPS and/or NESHAP)

General Permit

* Construction permit for General Permits/PBR
  * Use "Notice of Intent" (NOI) process
  * Obligates the facility to construction per the GP
  * Construction authority granted upon receipt of NOI
    * Date receipt from carrier or
    * USPS postmark or
    * DEQ date stamped application

Minor Source Individual Permit

* Not industry specific
* No specific requirements except facility must qualify as:
  * True Minor
  * Synthetic Minor

Modification of Existing Facilities

* General Permits
  * Facility must submit modification forms for certain changes within 10 days of operation/change
* Individual
  * Change subject to new federal rules/regulation
  * Physical change causing change in emission > 5 TPY

General Permit vs. Individual Permit

Advantages	Disadvantages
Quick Construction Authority	Possible higher violation level if limits exceeded
Pre-approval modification	Additional recordkeeping
Lower application fees	Permit not specific to site
	More complicated

Minor/Synthetic Minor Permit Fees

Permit Type	PBR	General Permit	Individual
Applicability Determination	--	--	$500
Construction	$250	$500	$2,000
Operation	$100	$500	$750
Modification	--	No fee	$750

Permit Structure

* Transmittal Letter
* Permit Memorandum
* The Permit Page
* Specific Conditions
* Standard Conditions

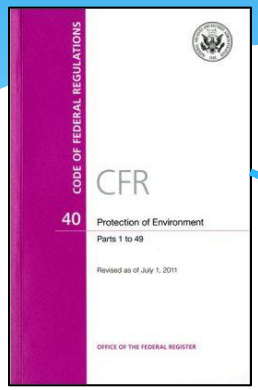
Permit Memorandum

* Includes
  * Facility description
  * History
  * Emission Data
  * Rule Applicability/Non-Applicability
* Not enforceable
* Provides baseline for future permitting activity

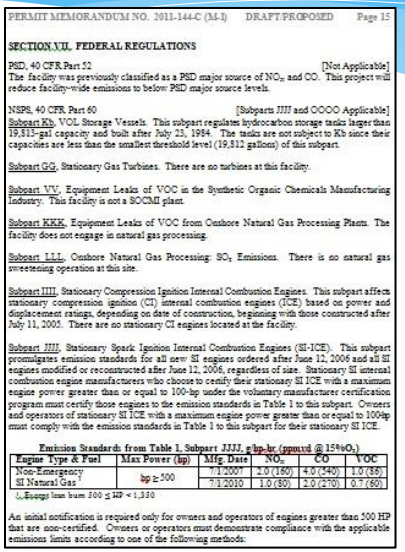
Specific/Standard Conditions

- Specific Conditions
  - Site specific
    - Emission Limitations/Throughputs
      - Hours of Operation
      - Testing Requirements
      - Operating Parameters
    - Monitoring, Recordkeeping & Reporting Requirements
      - State and Federal requirements
- Standard Conditions
  - General requirements applicable to all minor sources

Federal and State Rules are Incorporated into the Permit Package



Federal Rules



PERMIT MEMORANDUM NO. 2011-144-C (M-1) DRAFT/PROPOSED Page 12

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]
The facility was previously classified as a PSD major source of NO_x and CO. This project will reduce facility-wide emissions to below PSD major source levels.

NSPS, 40 CFR Part 60 [Subparts JJJJ and OOOO Applicable]
Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gal capacity and built after July 23, 1984. The tanks are not subject to Kb since their capacities are less than the smallest threshold level (19,812 gallons) of this subpart.

Subpart GG, Stationary Gas Turbines. There are no turbines at this facility.

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. This facility is not a SOCMI plant.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. The facility does not engage in natural gas processing.

Subpart LLL, Onshore Natural Gas Processing: SO_2 Emissions. There is no natural gas sweetening operation at this site.

Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. This subpart affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. There are no stationary CI engines located at the facility.

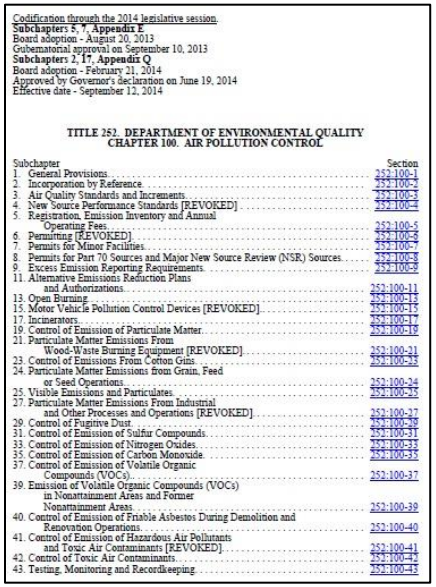
Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart promulgates emission standards for all new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006, regardless of size. Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 100-hp under the voluntary manufacturer certification program must certify those engines to the emission standards in Table 1 to this subpart. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100-hp must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Emission Standards from Table 1, Subpart JJJJ, g/hp-hr (ppmvd @ 15%O_2)

Engine Type & Fuel	Max Power (hp)	Mfg. Date	NO_x	CO	VOC
Non-Emergency SI Natural Gas	hp ≥ 500	7/1/2007	2.0 (160)	4.0 (540)	1.0 (86)
		7/1/2010	1.0 (80)	2.0 (270)	0.7 (60)

An initial notification is required only for owners and operators of engines greater than 500 HP that are non-certified. Owners or operators must demonstrate compliance with the applicable emissions limits according to one of the following methods:

Permit Memorandum

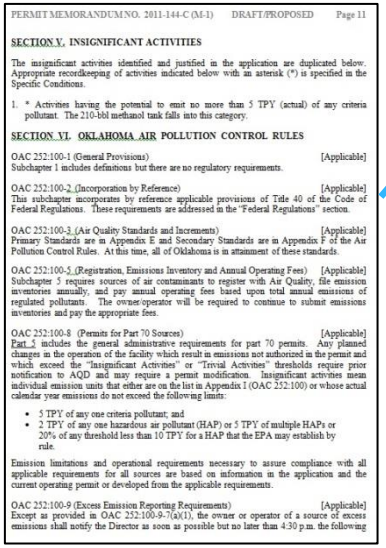


Codification through the 2014 legislative session.
Subchapters 5, 7, Appendix E
Board adoption - August 20, 2013
Governatorial approval on September 10, 2013
Subchapters 2, 17, Appendix Q
Board adoption - February 21, 2014
Approved by Governor's declaration on June 19, 2014
Effective date - September 12, 2014

TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 100. AIR POLLUTION CONTROL

Subchapter	Section
1. General Provisions	252:100-1
2. Incorporation by Reference	252:100-2
3. Air Quality Standards and Increments	252:100-3
4. New Source Performance Standards [REVOKED]	252:100-4
5. Registration, Emission Inventory and Annual Operating Fees	252:100-5
6. Permitting [REVOKED]	252:100-6
7. Permits for Minor Facilities	252:100-7
8. Permits for Part 70 Sources and Major New Source Review (NSR) Sources	252:100-8
9. Excess Emission Reporting Requirements	252:100-9
11. Alternative Emissions Reduction Plans and Authorizations	252:100-11
13. Open Burning	252:100-13
15. Motor Vehicle Pollution Control Devices [REVOKED]	252:100-15
17. Incinerators	252:100-17
19. Control of Emission of Particulate Matter	252:100-19
21. Particulate Matter Emissions From Wood-Waste Burning Equipment [REVOKED]	252:100-21
23. Control of Emissions From Cotton Gins	252:100-23
24. Particulate Matter Emissions from Grain, Feed or Seed Operations	252:100-24
25. Visible Emissions and Particulates	252:100-25
27. Particulate Matter Emissions From Industrial and Other Processes and Operations [REVOKED]	252:100-27
29. Control of Fugitive Dust	252:100-29
31. Control of Emission of Sulfur Compounds	252:100-31
33. Control of Emission of Nitrogen Oxides	252:100-33
35. Control of Emission of Carbon Monoxide	252:100-35
37. Control of Emission of Volatile Organic Compounds (VOCs)	252:100-37
39. Emission of Volatile Organic Compounds (VOCs) in Nonattainment Areas and Former Nonattainment Areas	252:100-39
40. Control of Emission of Friable Asbestos During Demolition and Renovation Operations	252:100-40
41. Control of Emission of Hazardous Air Pollutants and Toxic Air Contaminants [REVOKED]	252:100-41
42. Control of Toxic Air Contaminants	252:100-42
43. Testing, Monitoring and Recordkeeping	252:100-43

State Rules



PERMIT MEMORANDUM NO. 2011-144-C (M-1) DRAFT/PROPOSED Page 11

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Appropriate recordkeeping of activities indicated below with an asterisk (*) is specified in the Specific Conditions.

1. * Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant. The 210-bbl methanol tank falls into this category.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

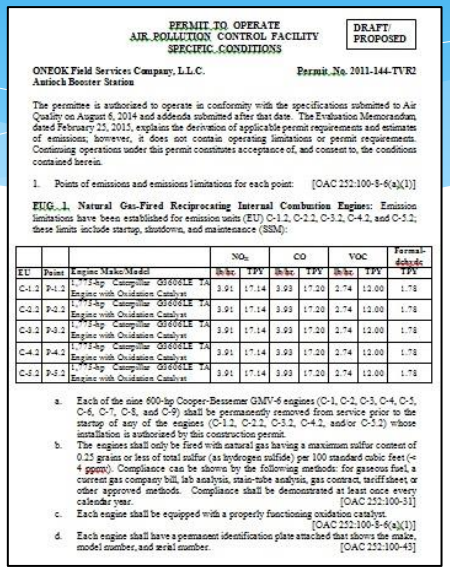
OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. The owner/operator will be required to continue to submit emissions inventories and pay the appropriate fees.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 2 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant; and
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule.

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are based on information in the application and the current operating permit or developed from the applicable requirements.

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following



PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

DRAFT/
PROPOSED

ONEOK Field Services Company, L.L.C. Permit No. 2011-144-TVR2
Antioch Booster Station

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on August 6, 2014 and addenda submitted after that date. The Evaluation Memorandum, dated February 25, 2015, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)(3)]

EUG 1, Natural Gas-Fired Reciprocating Internal Combustion Engines: Emission limitations have been established for emission units (EU) C-1.2, C-2.2, C-3.2, C-4.2, and C-5.2; these limits include startup, shutdown, and maintenance (SSM):

EU	Point	Engine Make/Model	NO_x lb/hr	NO_x TPY	CO lb/hr	CO TPY	VOC lb/hr	VOC TPY	Formal-dehyde lb/hr	Formal-dehyde TPY
C-1.2	P-1.2	1,775-hp Caterpillar G3606LE TA Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78	
C-2.2	P-2.2	1,775-hp Caterpillar G3606LE TA Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78	
C-3.2	P-3.2	1,775-hp Caterpillar G3606LE TA Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78	
C-4.2	P-4.2	1,775-hp Caterpillar G3606LE TA Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78	
C-5.2	P-5.2	1,775-hp Caterpillar G3606LE TA Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78	

a. Each of the nine 600-hp Cooper-Bessemer GMV-6 engines (C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, and C-9) shall be permanently removed from service prior to the startup of any of the engines (C-1.2, C-2.2, C-3.2, C-4.2, and/or C-5.2) whose installation is authorized by this construction permit.
b. The engines shall only be fired with natural gas having a maximum sulfur content of 0.25 grains or less of total sulfur (as hydrogen sulfide) per 100 standard cubic feet (< 4 ppmv). Compliance can be shown by the following methods: for gaseous fuel, a current gas company bill, lab analysis, stain-tube analysis, gas contract, tariff sheet or other approved methods. Compliance shall be demonstrated at least once every calendar year. [OAC 252:100-31]
c. Each engine shall be equipped with a properly functioning oxidation catalyst. [OAC 252:100-8-6(a)(3)]
d. Each engine shall have a permanent identification plate attached that shows the make, model number, and serial number. [OAC 252:100-43]

Permit Specific Conditions

Forms

* The DEQ website is located at:

http://www.deq.state.ok.us

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Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS | CAREERS

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services • office of exte

- What's New
- Permitting
- Emissions Inventory
- Compliance & Enforcement
- Monitoring
- Toxics
- Lead-Based Paint
- Asbestos
- Rules & Planning
- Council Meetings

DEQ Board & Council Meeting Schedules

This page was last updated on January 5, 2016

oma Department of Environmental Quality

Environmental Complaints Form
or call 800-522-0206

Storm Cleanup Information

Annual Report 2015

Drought and Water Conservation Information

Healthy Fish Consumption Information

Scenic Rivers Joint Study Committee

Experiencing Permitting Obstacles?
(Send a message to Agency Chief Engineer)

No Ozone or PM Watch In Effect

http://www.deq.state.ok.us/aqdnew/permitting/

Skip to Main Con

Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services • office of external affairs

Forms

Multimedia

What's New

Air Rules

Education

Clean Diesel/Funding

Contact AQD

AQD Site Index

Permitting

New! General Permit for Air Curtain Incinerators. A new general permit has been posted for Air Curtain Incinerators, along with a corresponding application form (#100-365). The general permit streamlines permitting for this type of incinerator, which may be particularly useful to municipalities through the winter storm season.
Updated December 8, 2015

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The AQD has implemented the agency's Permit Continuum concept, which uses different types of permits for different facilities, depending on size, complexity and environmental risk. Under this program no permit is required for the smallest sources of air contaminant emissions, known as "de minimis facilities." In addition, most facilities that emit less than 40 tpy are "permit exempt", unless they are subject to Federal Standards such as the New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAPs). General Permits have been issued to cover several categories of minor facilities that are more complex or have somewhat greater emissions. Many of the facilities covered by these General Permits are also subject to one or more NSPS or NESHAPs. A Permit by Rule (PBR) has been promulgated in OAC 252:100-7-60.5 for minor oil and natural gas (O&NG) facilities. Individual permits are issued for minor facilities that do not fall into one of the other continuum categories.

Fact sheets are available which describe AQD's permitting program in more depth, including descriptions of who needs a permit, and which permit category a facility may be eligible for under the Permit Continuum. Because air quality permitting issues can be quite complex, the AQD offers a service called an Applicability Determination. If the determination concludes that a permit is required, the fee charged for the Applicability Determination is applied toward the permit

AQI AIR QUALITY INDEX 50 100 150 200

Air Quality Index

No Ozone or PM Watch In Effect

SIGN-UP FOR EMAIL HEALTH ADVISORIES

Air Quality Home

PERMITTING HOME

Air Permitting Fact Sheets

Application Advice Documents & Guideli

Applications & Permits for Public Review

http://www.deq.state.ok.us/aqdnew/resources/aqforms.htm

Oklahoma Department of Environmental Quality | RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS

Skip to Main Content

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services • office of external affairs

Air Quality Division Forms

- General Air Forms
- Emissions Inventory Forms
- Permitting Forms
- Compliance/Enforcement Forms
- Asbestos Form
- Lead-Based Paint Forms

GENERAL AIR Back to Top

#100-600	NSPS Modification Form	MS Word	PDF
EXAMPLE: NSPS Modification Asphalt Plant		MS Word	PDF
#100-221	Zero Emissions Determination Forms	MS Word	PDF
#100-950	Notification of Open Burning for Fire Training	MS Word	PDF
#100-222	Determination Request For Gasoline or Diesel Fuel Desulfurization Facilities	MS Word	PDF

EMISSIONS INVENTORY Back to Top

#100-730	Turn-Around Document and Instructions	Follow hyperlink to the left	
#100-750	Emissions Inventory Reporting Form for Dry Cleaners	MS Word	PDF
#100-882	Designation of Responsible Official	MS Word	PDF

http://www.deq.state.ok.us/aqdnew/resources/aqforms.htm

Minor Source Forms Back to Top			
#100-105	Minor Facility Application Guide	MS Word	PDF
#100-360	Area Source NESHAP & Small NSPS Facilities General Permit Application	MS Word	PDF
n/a	Checklist for the Non-Title V Application	MS Word	PDF
#100-886	Minor Source Relocation Application	MS Word	PDF
#100-888	Notice of Intent to Construct	MS Word	PDF
#100-889	Notice of Intent to Operate	MS Word	PDF
#100-220	Permit By Rule Registration Form	MS Word	PDF
Industry-Specific Forms Back to Top			
#100-340	Hot Mix Asphalt Plants General Permit Application	MS Word	PDF
Oil & Gas Industry			
#100-223	Permit By Rule Oil and Natural Gas Sector Application Forms	MS Word	PDF
#100-401	40 CFR Part 63; Subparts HH & HHH Facility Registration Form	MS Word	PDF
#100-100	Natural Gas Compressor Station Application	MS Word	PDF
#100-305	Oil & Gas Facilities - Minor Source General Permit Application	MS Word	PDF

http://www.deq.state.ok.us/aqdnew/permitting/

Skip to Main Con

Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services • office of external affairs

Forms

Multimedia

What's New

Air Rules

Education

Clean Diesel/Funding

Contact AQD

AQD Site Index

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AQI AIR QUALITY INDEX 50 100 150

Air Quality Index

No Ozone or PM Watch In Effect

SIGN-UP FOR EMAIL HEALTH ADVISORIES

Air Quality Home

PERMITTING HOME

Air Permitting Fact Sheets

Application Advice Documents & Guideli

Applications & Permits for Public Review

http://www.deq.state.ok.us/aqdnew/permitting/AdviceDocuments.htm

File Edit View Favorites Tools Help

Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services • office of ex

Permitting Advice & Guidelines

Permit Application Advice Documents

Forms

Multimedia

What's New

Air Rules

Education

Clean Diesel/Funding

Contact AQD

AQD Site Index

These documents are intended to help applicants prepare permit applications and certifications with a reduced amount of effort, yielding clearer and more accurate applications. We hope to steer new applicants around some common points of confusion and mistakes, allowing them to prepare applications which are complete on their first try.

We assume that the reader has a moderate level of knowledge in air pollution regulation procedures before they commence in writing a permit application. Taking the time to go over these guides should pay great dividends in time savings later on.

- Asphalt Plant Advice .doc/.pdf
- Compressor Station Advice .doc/.pdf
- Permit Application Guide for Facilities with Coating/Painting Operations .doc/.pdf
- Permit Application Guidance for Non-Metallic Mineral Processing Facilities (NMPF-GP) .doc/.pdf
- Major Construction Permit Advice .doc/.pdf
- Minor Source General Permit for Oil and Gas Facilities (GP-OGF) .doc/.pdf
- Rock Crusher Advice .doc/.pdf
- Storage Tank Advice .doc/.pdf

(Image courtesy of Texas A&M University.)

Emissions Estimates

How much pollution is being emitted by the facility?

Facility-Wide Emissions

* Applications require unit level emission estimates
* Each facility is required to calculate short term (lb/hr) and annual (TPY) emission rates in most cases.
* Emission source data must be included (AP-42, manufacturer's, & industry)
* If a facility has a PTE greater than 100 tons per year of any criteria pollutant, they must obtain a major source or synthetic minor permit.

Estimating Emissions

* Computer tools are helpful.
  * Excel – Engine Emissions
  * Tanks
  * GRI GLYCalc
  * Process Simulator
* In many cases, a pencil and a calculator are the tools of choice.

Emissions Factors & AP 42

An **emissions factor** is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (e.g., kilograms of particulate emitted per megagram of coal burned). Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category (i.e., a population average).

The general equation for emissions estimation is:

$$E = A \times EF \times (1-ER/100)$$

where:

- E = emissions;
- A = activity rate;
- EF = emission factor, and
- ER =overall emission reduction efficiency, %

Emission Factors are often used to estimate the amount of pollutants emitted by a facility. The EPA document referred to as "AP-42" provides a framework and methodology for performing emission estimates.

Major Source Facilities

* OAC 252:100-8,

  Subchapter 8

* Facility is defined as a Part 70 source, If
  * > 100 Tons per Year (TPY) of Criteria Pollutant

    -NOx, CO, Ozone (VOC), SO_2, PM, and Lead, or
  * > 10 TPY of any Individual Hazardous Air Pollutants (HAP), or
  * > 25 TPY of all HAP's Combined

Major Source Permit Program

* Dual Permitting System
  * **Construction Permit**
    * Is required to "commence construction"
    * Valid for 18 months
    * Provides the Authority of Operate
  * **Operating Permit**
    * Operating Permit Application must be submitted within 180 days of operation

Types of Major Permits

* General Permits (Air Curtain Incinerators)
* Major Source Permits
* PSD Major

Modifications

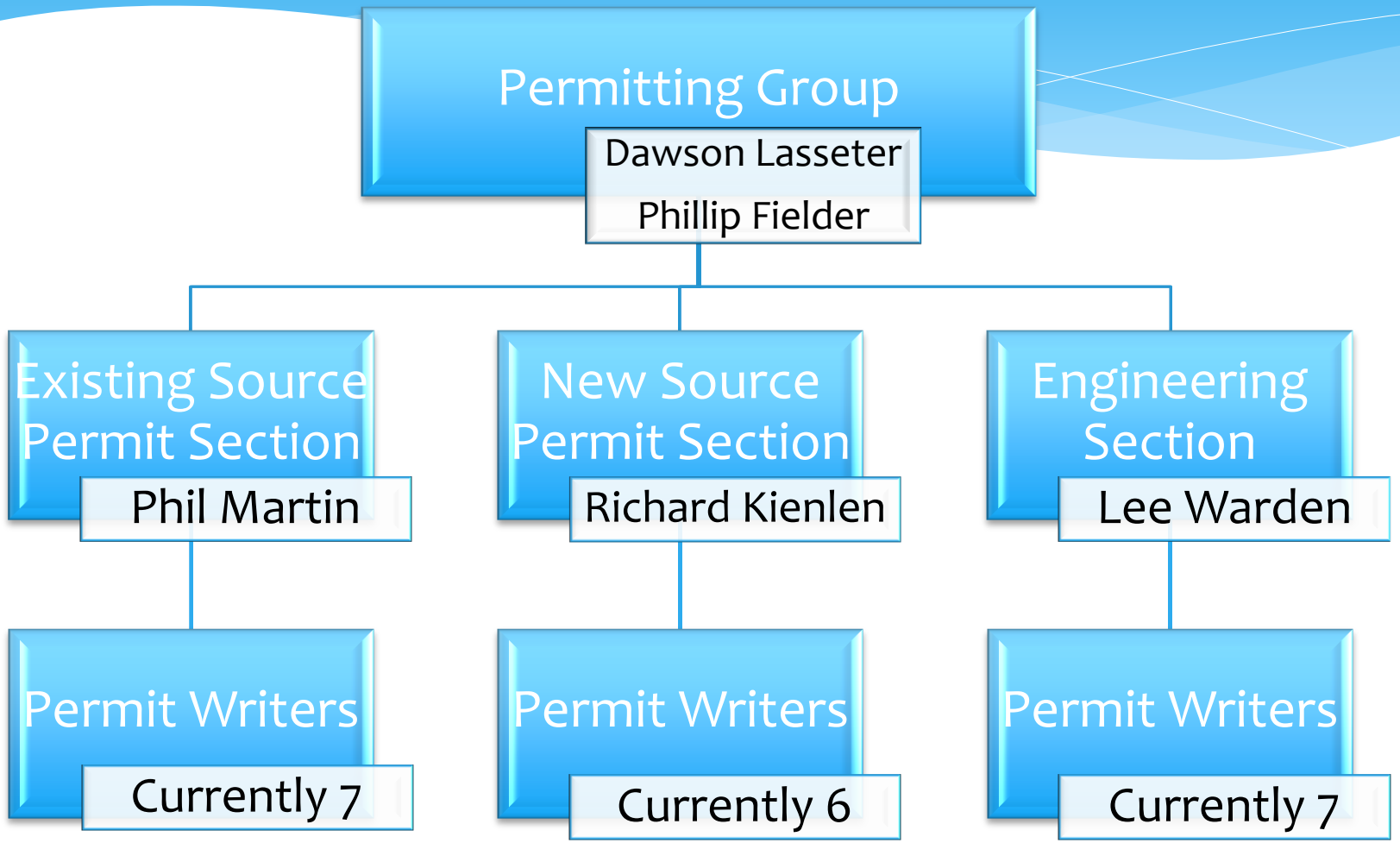
* **Tier Determinations,** Tier I, II, or III
* **Minor Modification** (see 252:100-8-7.2(b)(1))
  * Tier I
* **Significant Modification**
  * Tier II or III – Usually a construction permit
  * If the increase is greater than 100 TPY, then BACT and modeling is required.
* **PSD majors** – Use a good consultant

SSM

Startup, Shutdown, & Maintenance

* Emission limits are applicable at all times
* Some facilities may require an alternate scenario for SSM
* Facilities can include blowdowns for maintenance purposes in their permit
* Large turbines with dry low NOx burners include SUSD emissions in their permits
* SSM emissions are included in the permit so they do not have to be reported as excess emissions

Permitting Organizational Chart



Contacts

* Dawson Lasseter 405-702-4185
  dawson.lasseter@deq.ok.gov
* Phillip Fielder 405-702-4237
  phillip.fielder@deq.ok.gov

Contacts

* Richard Kienlen 405-702-4181
  richard.kienlen@deq.ok.gov
* Lee Warden 405-702-4182
  lee.warden@deq.ok.gov
* Phil Martin 405-702-4180
  phil.martin@deq.ok.gov

Questions?

Questions Received

- How will the OOOO updates impact O&G sites especially the ¼ mile colocation proposal?
  - The OOOO update is proposed now and we do not know what the result of that rulemaking will be. The ¼ mile colocation is proposed as an option and we do not know what the final rule will be.
- Will the new OOOO methane rules be retroactive?
  - No. NSPS rules are applicable for the affected unit from the proposed rule date.

Questions Received

- Do we expect Oklahoma to have any non-attainment zones after the new NOx NAAQS were released?
  - No, not at this time.
- What is the difference between series and parallel tanks under OOOO?
  - With series tanks all the throughput has to go through tank #1, where all flashing occurs, and then it goes to tank #2 or another tank. With parallel tanks, the operator can select which tank the throughput goes to and the flashing will occur at the tank in use. All parallel tanks can potentially have flash emissions.

Questions Received

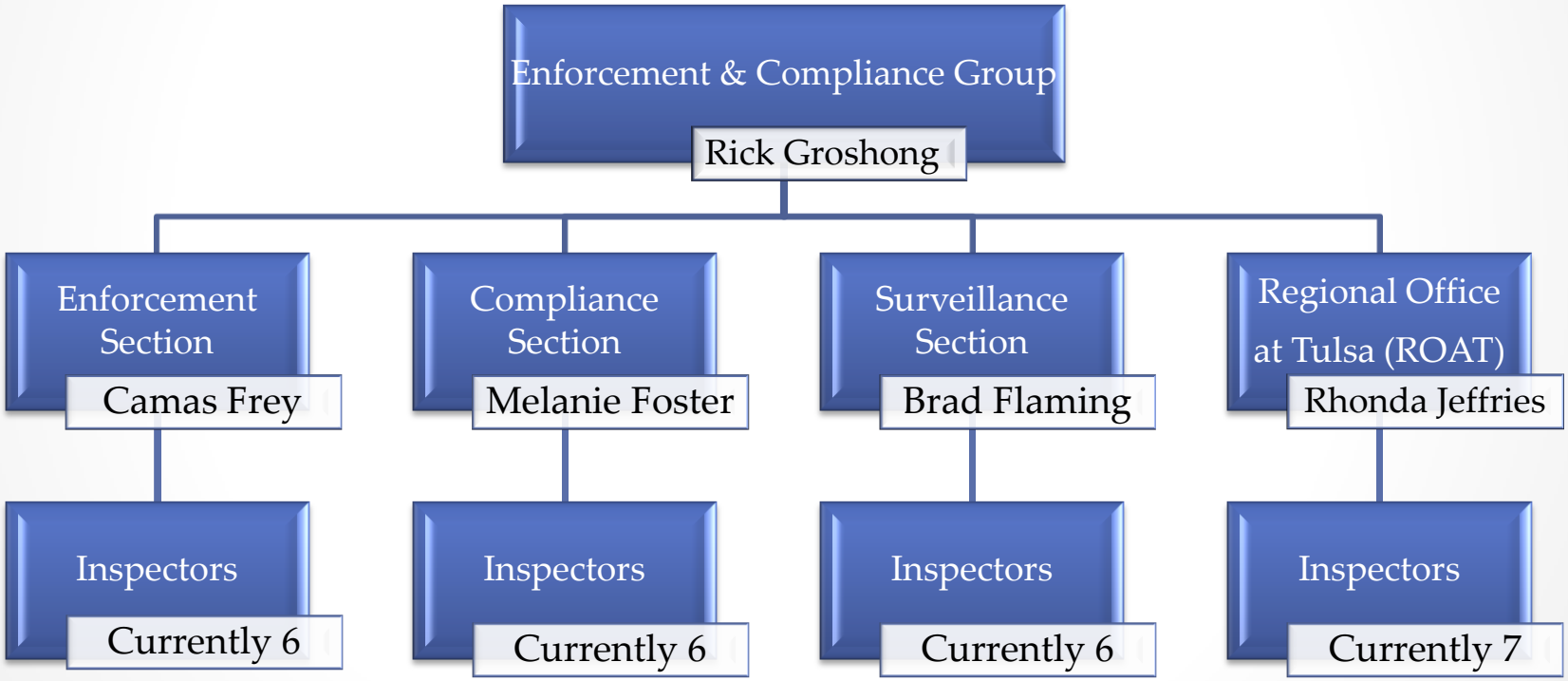
- If you install a JJJJ engine or a ZZZZ engine do you have to get a permit such as the PBR?
  - Yes, if you install a piece of equipment subject to a NSPS or NESHAP you have to get a permit.
- If you had an existing facility with a pre JJJJ engine that was operating when the engine became subject to ZZZZ (October 2013) do they have to get a permit?
  - No, they have not triggered the requirement for a permit by installing equipment since the equipment was not subject to a federal standard when installed.

Compliance

Rick Groshong
Environmental Programs Manager
Compliance & Enforcement Group

Air Quality Workshop
February 4th , 2016
Tulsa, OK

Compliance & Enforcement Organizational Chart



Compliance and Enforcement Group

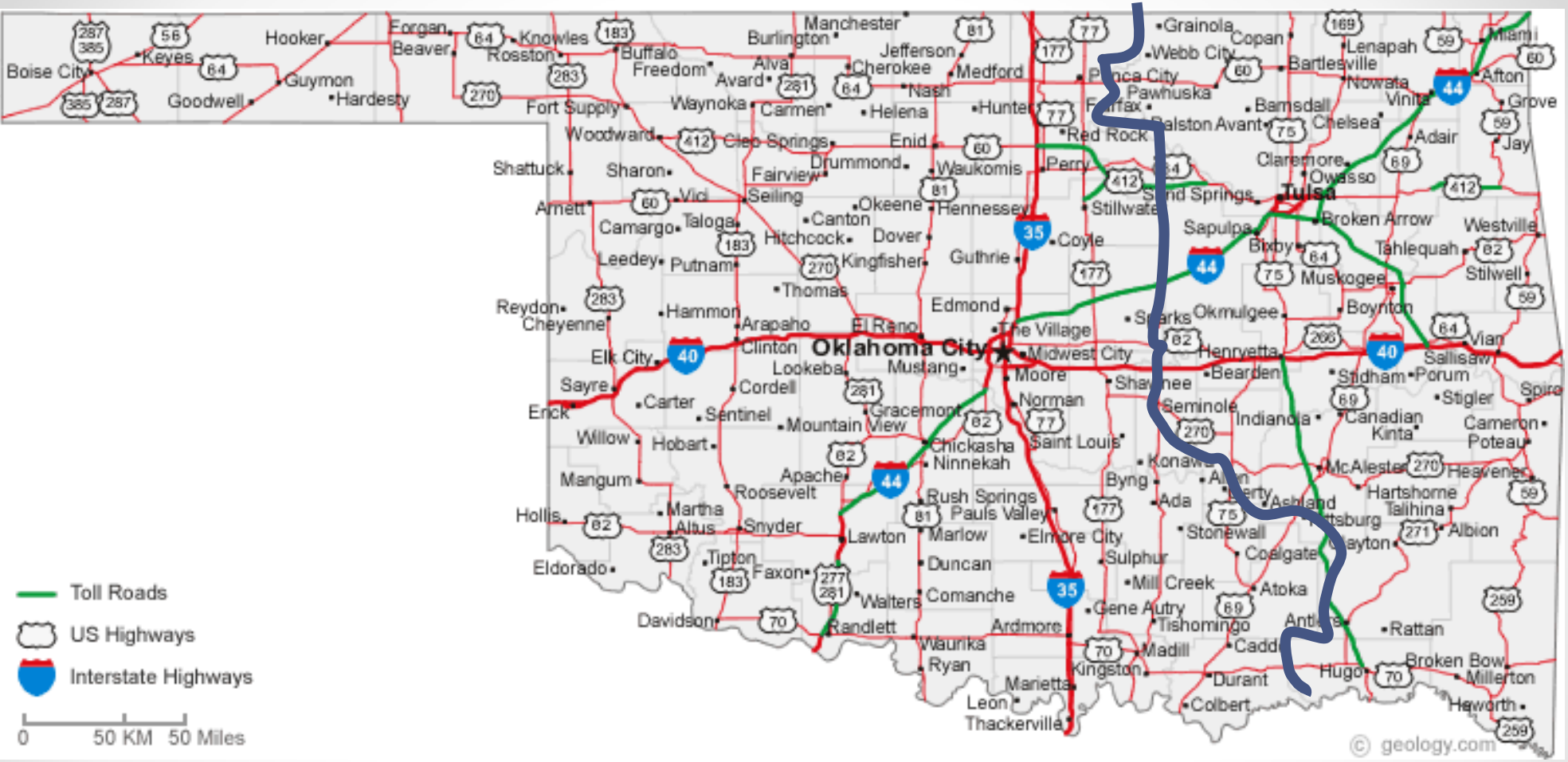
Contact Information

- Rick Groshong – Compliance/Enforcement Group Manager
  - (405) 702-4150
  - richard.groshong@deq.ok.gov
- Brad Flaming – Surveillance Section Manager
  - (405) 702-4151
  - brad.flaming@deq.ok.gov
- Melanie Foster – Compliance Section Manager
  - (405) 702-4152
  - melanie.foster@deq.ok.gov

Compliance and Enforcement Group

Contact Information

- Camas Frey – Enforcement Section
  - (405) 702-4224
  - camas.frey@deq.ok.gov
- Rhonda Jeffries – Regional Office at Tulsa Manager
  - (918) 293-1626
  - rhonda.jeffries@deq.ok.gov



Two C&E offices: OKC and Tulsa

I have a permit. Now what?

- Now that you have been issued a permit, you will be categorized into one of four emission **source categories**:
  - Major Title V Source – PTE of 100 tons per year (TPY) of one or more of the criteria pollutants, 10 TPY of a single Hazardous Air Pollutant (HAP), or 25 TPY of a combination of HAPs.

Source Categories

- Synthetic Minor 80 Sources (**SM 80**) –
  - *Uncontrolled PTE* at or above major source levels,
  - *But* have taken permitted, federally enforceable limits of 80% to 99% of the major source levels.

Source Categories

- Synthetic Minor Less Than 80 Source (SM<80, or just SM) –
  - *Uncontrolled PTE* at or above major source levels,
  - *But* have taken federally enforceable permit limits less than 80% of the major source threshold.

Source Categories

- Minor Sources –
  - *PTE* less than the major source threshold without any controls or limits,
  - Regardless of whether or not they have or require a permit.

Compliance Monitoring Strategy (CMS)

1. EPA policy outlining expectations for states to evaluate compliance for targeted sources.
   - Initially issued in April 2001, and revised in July 2014.
   - Emphasis on **TV Major and SM 80** sources
   - Sets minimum frequencies for Full Compliance Evaluations (FCE), which I will explain in a minute.

Compliance Monitoring Strategy (CMS)

- Covered Sources
  - Major Sources (These include a subset of large, complex major sources designated as Mega-sites)
    - OK's Mega-sites are the refineries and Tinker AFB
  - SM 80 Sources
  - Alternative CMS Sources – If ODEQ determines that other sources need closer scrutiny, we can add or substitute SM or minor sources in place of or in addition to some of the above, with EPA approval.

Full Compliance Evaluation

What is a Full Compliance Evaluation?

From the **CMS Policy**

"a **comprehensive evaluation** to assess **compliance of the facility as a whole** and **resulting in a compliance determination**. For the purposes of this policy, "facility" is used in the broadest sense of the term incorporating **all regulated emission units within the facility**. An FCE addresses **all regulated pollutants at all regulated emission units**." *And covers **all applicable rules.***

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Skip to Main Content

Oklahoma Department of Environmental Quality

RULES & REGULATIONS | PUBLICATIONS & FORMS | PROGRAMS | CAREERS

air quality · water quality · land protection · state environmental laboratory services · environmental complaints & local services · office of external affairs

- What's New
- Permitting
- Emissions Inventory
- Compliance & Enforcement
- Monitoring
- Toxics
- Lead-Based Paint
- Asbestos
- Rules & Planning
- Council Meetings

…oma Department of Environmental Quality

Environmental Complaints Form
or call 800-522-0206

Storm Cleanup Information

Annual Report 2015

Drought and Water Conservation Information

Healthy Fish Consumption Information

Scenic Rivers Joint Study Committee

DEQ Board & Council Meeting Schedules

This page was last updated on January 13, 2016

http://www.deq.state.ok.us/aqdnew/ComplianceEnforcement/index.htm

www.deq.state.ok.us/aqdnew/ComplianceEnforcement/

Contact AQD

AQD Site Index

- DEQ Standard Operating Procedures (SOP) for Enforcement
- High Priority Violator Policy - 2014
- Federally Reportable Violation Policy - 2014
- Alternate Enforcement Procedure
- AQD Penalty Guidance - 2014
- Title 27A. Environment and Natural Resources (Including the Oklahoma Clean Air Act – Article V)
- Clean Air Act - Stationary Source Compliance Monitoring Strategy - July 2014
- EPA's Applicability Determination Index
- EPA's Air Toxics Rules and Implementation web page
- EPA's Enforcement and Compliance History Online (ECHO) web page
- Portable Emission Analyzer Guidance
- Voluntary Disclosure / Self-Reporting of Noncompliance Form

Compliance & Enforcement Contacts

Asbestos

Excess Emissions

Page Last Updated: September 21, 2015

FCE Frequency

- **Major Sources** – Every other fiscal year (FY)
- **Mega Site** (large, complex, major sources) – once **every third FY** (likely do PCEs yearly)
- **SM 80 and SM<80** Sources – once **every five FY**
- **True minor** sources – typically inspect these due to **complaints, or as needed**

On-Site FCE

DEQ has the authority to conduct inspections unannounced during regular business hours.

- If you need to get someone such as your environmental staff there, the inspector will wait, or will work it out another way.

What should you do if an inspector shows up unannounced?

- **Do not panic**. The inspector is just there to do a job, not to play "gotcha."
  - The inspector will present credentials to show you who they are.
  - They will explain the reason they are there, and what they want to look at.

What should you do if an inspector shows up unannounced?

- **Be cooperative**. The inspector wants to get the inspection finished as quickly as possible, too.
- At the end of the inspection, you will have an **exit interview**, where the inspector will go over any preliminary findings and you can ask any questions that you have.

What should you do if an inspector shows up unannounced?

- If you have any issues with an inspector (which is very rare), feel free to call me or one of the other managers.

What will the inspector look for during an FCE?

- All **active permits** – make sure equipment on site matches the permit.
  - Specific Conditions
  - Required Records – may request copies, but will work with you if you need time to compile them.
- **Compliance** with all applicable rules and regulations
  - Keep in mind: **<u>All</u> rules and regulations apply at <u>all times.</u>**

What will the inspector look for during an FCE?

- That required **control equipment is installed and operating** as required.
- That **testing/monitoring** are being **conducted**, with required **documentation**.
- That all **required reports** have been/are being **submitted** (ACC/SAR, LDAR, CEMs reports, etc.)

Evaluation Reports

- The CMS Policy outlines the elements that should be included in the report to document that an FCE was conducted.
- The report ends with a **summary** that **outlines any violations or areas of concern** that were identified.
- **If no violations** were identified, the **summary will state that fact**.

Evaluation Report Process

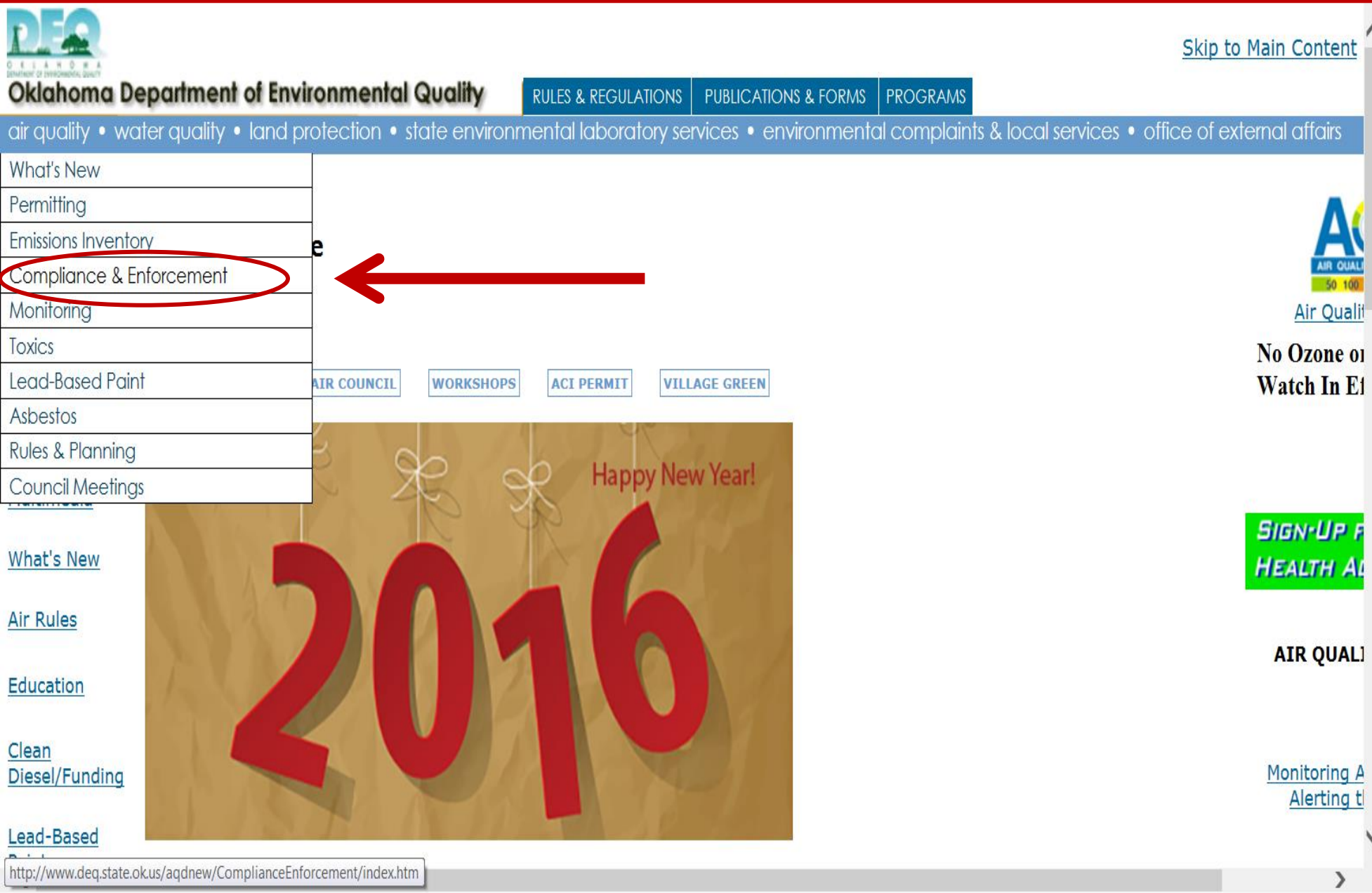
- Reports go through **peer review**, **two levels of manager review**, and **legal review** (if there is a violation), before becoming final. This **may take four to six weeks** to get final approval.
- We will send the final report either through email, or with a cover letter by US Postal Service.

If You Ever Have Questions

Our website has a contact list to help you know who can best help answer your questions.

Please feel free to call with any questions that come up.

www.deq.state.ok.us/aqdnew



www.deq.state.ok.us/aqdnew/ComplianceEnforcement/Contact.htm

DEQ believes that a strong compliance/enforcement program is one of our highest priorities and is necessary to an effective regulatory system.

The AQD Compliance/Enforcement sections are responsible for conducting inspections of air pollution sources, responding to citizens complaints, observing and evaluating emission tests, tracking and evaluating excess emissions/malfunctions and the implementation of a host of federal requirements.

Below are links to a variety of technical and policy documents that are relevant to our administration of the compliance/enforcement program. Please check back often for updates and information regarding this important aspect of our air quality program.

- DEQ Standard Operating Procedures (SOP) for Enforcement
- High Priority Violator Policy - 2014
- Federally Reportable Violation Policy - 2014
- Alternate Enforcement Procedure
- AQD Penalty Guidance - 2014
- Title 27A. Environment and Natural Resources (Including the Oklahoma Clean Air Act – Article V)
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- EPA's Air Toxics Rules and Implementation web page
- EPA's Enforcement and Compliance History Online (ECHO) web page

Questions?

Excess Emissions Reporting Tool

Melanie Foster
Compliance Section Manager

Air Quality Workshop

February 4, 2016

Tulsa, OK

What are excess emissions (EEs)?

- Oklahoma Administrative Code 252:100-9
- Definition from Subchapter 9
  - …the emission of regulated air pollutants or opacity in excess of an applicable limitation or requirement as specified in the applicable rule(s), enforceable permit, administrative or judicial order.
- NOTE: Some changes to the rule were approved during the Air Quality Council Meeting on January 20, 2016 that are not fully reflected in this presentation as they are not yet final.

When do I have to report EEs?

- Immediate notice
  - Report no later than 4:30 pm the following working day of the first occurrence of excess emissions in each excess emission event
  - Some exceptions
- Event report (i.e. 30 day report)
  - Report no later than 30 calendar days after the start of any excess emission event
  - No exceptions

Why do I have to report EEs?

- Helps identify chronic issues at a facility
- DEQ has information if a complaint is received
- EEs may adversely impact local air quality
  - Could potentially influence readings at DEQ Air Quality Monitoring Stations
- EEs should correlate with what is reported on Annual Emissions Inventory

How do I report EEs?

- Phone 1-877-277-6236
- Email excessemissions@deq.ok.gov
- Fax 405-702-4101
- Online

www.deq.state.ok.us/aqdnew/ComplianceEnforcement/ExcessEmissionHome.html

Forms
Multimedia
What's New
Air Rules
Education
Clean Diesel/Funding
Contact AQD
AQD Site Index

Excess Emissions

Online Excess Emissions Reporting System

Hardcopy Excess Emissions Reporting Forms

Online Reporting Frequently Asked Questions (FAQs)

An excess emission occurs when a regulated air pollutant is released into the environment at a rate that is above permitted levels for a facility. Our rule (OAC 252:100-9) requires excess emissions to be reported to protect public health and so that persistent problems can be identified and corrected.

Once an excess emission has occurred, the owner or operator of a facility has until 4:30 PM the next business day to notify DEQ and provide a brief description of the event.

To make a report:

Call toll-free: (877) 277-6236 (leave a message 24 hours/7 days a week)

Fax: (405) 702-4101

Email: excessemissions@deq.ok.gov

Or, use our Online Excess Emissions Reporting System

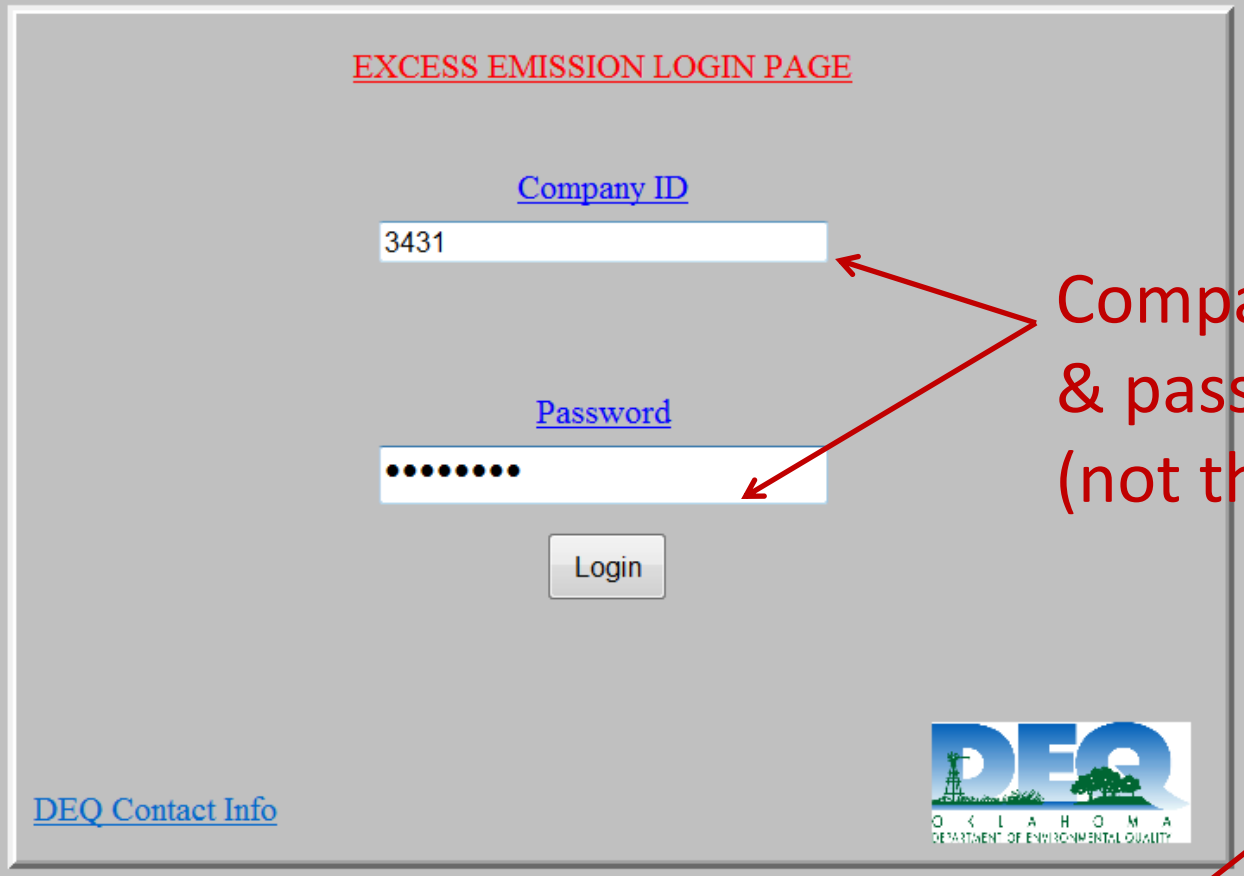
The immediate **notification must be followed by a certified written report within 30 calendar days** describing the emission and its causes.

Our electronic submission system allows a facility to quickly submit immediate notifications of excess emission events and the required 30-day official written reports online. Submissions are certified by electronic signature.

For more information, use the links at the top or call an excess emissions team member at (405) 702-4100.

Page last updated: August 26, 2015

Welcome to the Excess Emissions Reporting Tool



Company specific ID
& password
(not the same as Redbud)

Helpful contact information

Please refer to OAC 252:100-9 Excess Emission Reporting Rule for a complete copy of the excess emissions reporting requirements.

In the event that the online system is down during business hours, please notify a member of the Excess Emissions Team at 405-702-4100.

Should you have any trouble accessing the online system, you may use the following alternate methods to notify DEQ of your excess emission:

- Phone in immediate notice to 1-877-277-6236
- Email immediate notice or 30-day report to excessemissions@deq.ok.gov
- Fax 30-day report to 405-702-4101

Immediate notices are not required for every excess emission event per OAC 252:100-9-7(a). Use the Excess Emission Reporting Requirement flow chart to help determi
Please note that the online reporting system still requires you to go through the immediate notice process in order to submit a 30-day report, although you may not need to

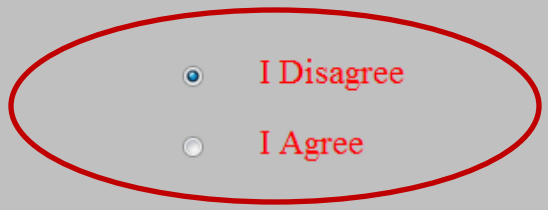
AGREEMENT

- This electronic reporting system ("System") has been established by the Oklahoma Department of Environmental Quality ("DEQ") for the use of businesses or entities required to file reports or other data pursuant to the laws and rules of the DEQ or pertaining to matters under the jurisdiction of the DEQ.
- The user's login and password serves as access to the System for data entry purposes only.
- In order to finalize the excess emission submission, an electronic signature must be affixed to the document. A signature certificate from the DEQ must be obtained to affix the electronic signature. The certificate can be obtained at
  Oklahoma DEQ Electronic Reporting System

By selecting the "I Agree" button below, I acknowledge, understand, and agree as follows:

- I am a duly authorized representative of the business or entity associated with the login and password used to gain access to this System for the purpose of submitting an electronic record or data to the DEQ.

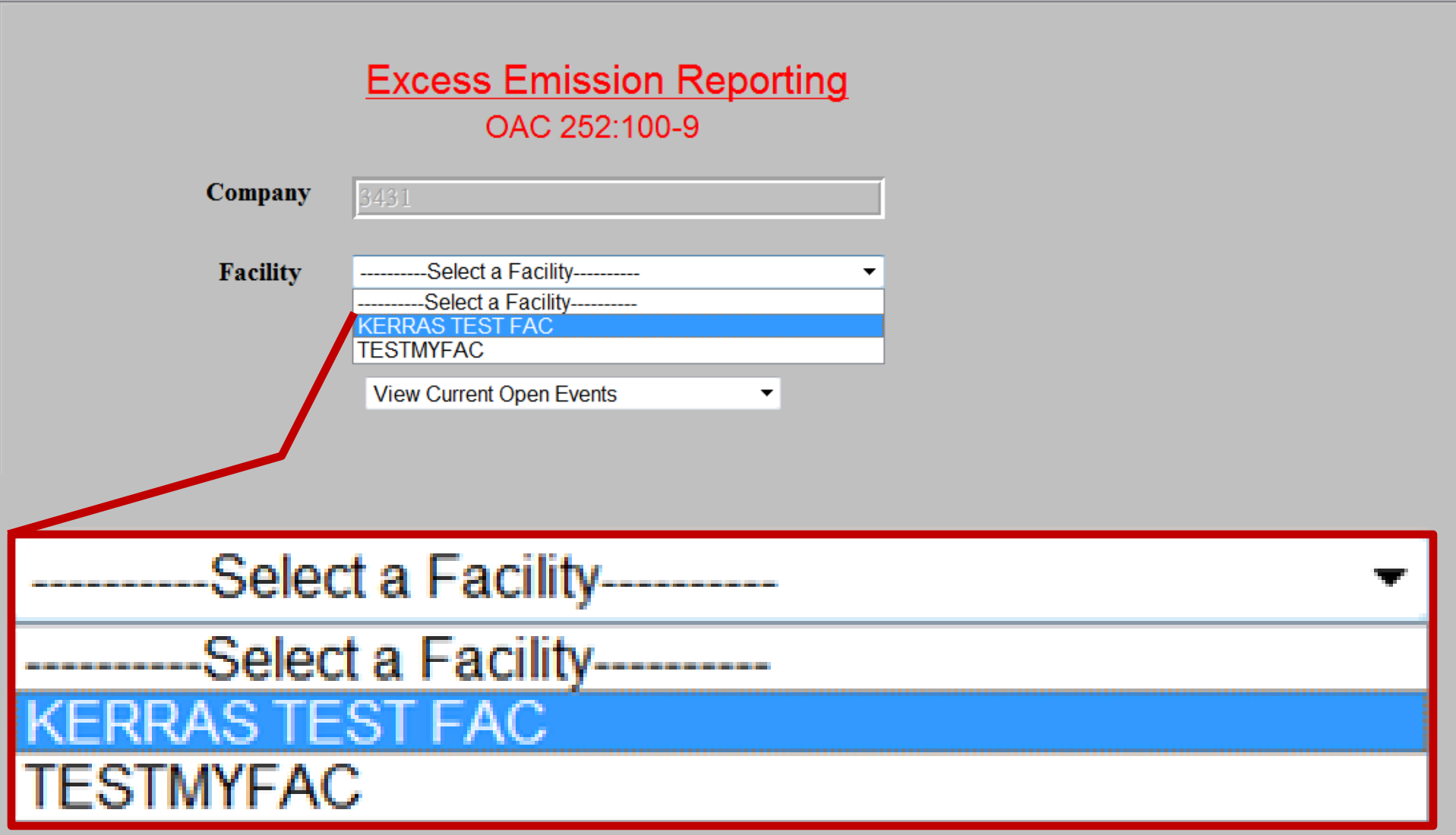
By selecting the "I Disagree" button below, I may discontinue the transaction.



Must click "I Agree" to "Continue"

Cancel

Continue



Select the facility at which the EE occurred.

Excess Emission Reporting

OAC 252:100-9

Company 3431

Facility KERRAS TEST FAC

Select an activity from the list:

View Current Open Events
- View Current Open Events
- View Previously Submitted Events
- Upload File(s)

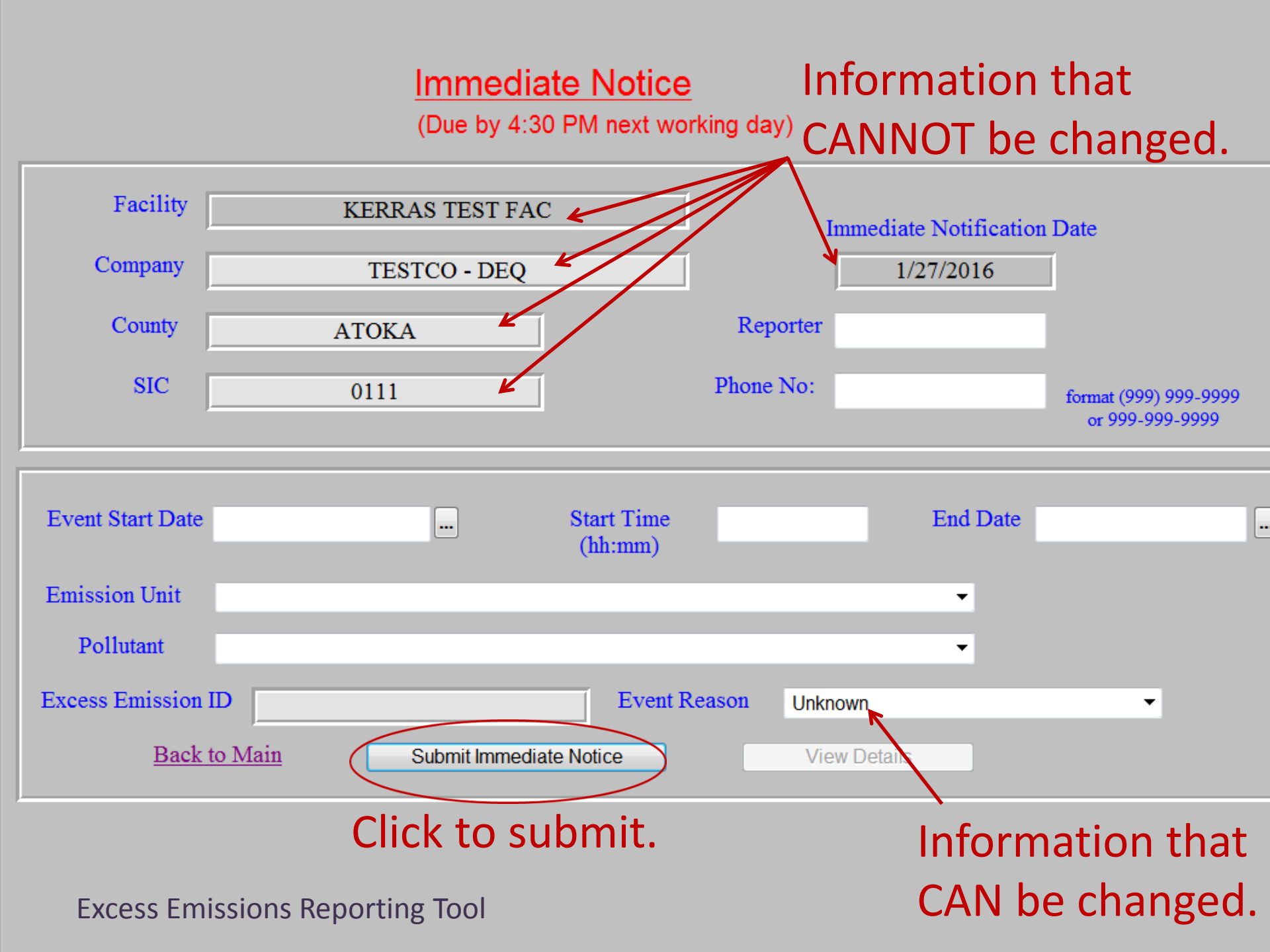
Select what you want to view

Below is a list of events for which the immediate notification has been submitted. You may select one and add 30 day written report or you may add a new event notification by clicking Add New Immediate Notification button.

Table of immediate notices.

Event ID	Event Start Date	Event End Date	Immediate Notification Date	Event Reason	Reporter	
38804	08/12/2015	08/12/2015	08/12/2015	Shutdown	kd	Select
41443	11/04/2015	11/04/2015	11/04/2015	Malfunction	Melanie	Select

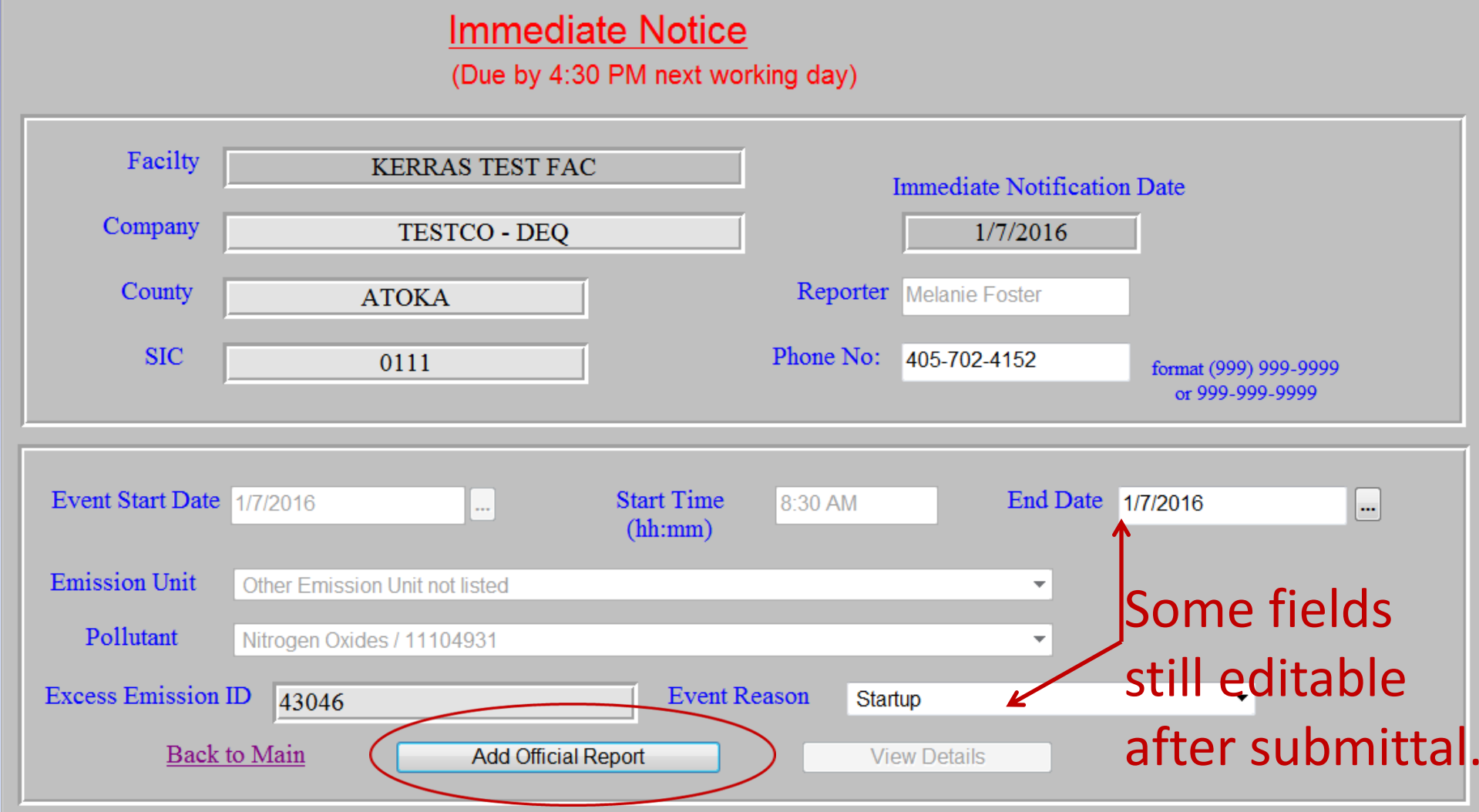
Add New Immediate Notification


Immediate Notice
(Due by 4:30 PM next working day)
Information that CANNOT be changed.
Facility
KERRAS TEST FAC
Company
TESTCO - DEQ
County
ATOKA
SIC
0111
Immediate Notification Date
1/27/2016
Reporter
Phone No:
format (999) 999-9999 or 999-999-9999
Event Start Date
Start Time (hh:mm)
End Date
Emission Unit
Pollutant
Excess Emission ID
Event Reason
Unknown
Back to Main
Submit Immediate Notice
View Details
Click to submit.
Information that CAN be changed.
Excess Emissions Reporting Tool

Thank you for submitting the immediate notification to the Department of Environmental Quality. You may come back anytime within 30 calendar days to submit the 30-day written report. If you would like to submit the 30-day written report at this time, click the corresponding link below.

Add Another Immediate Notice Add 30 Day Report Information Exit

Verification that the system received your immediate notice.



Click to enter 30 day report.

Event - Official Written 30-Day Report (Due within 30 Calendar days)

Pre-filled info from Immediate Notice, which can be edited.

Reporter: Melanie Foster

Phone No: format (999) 999-9999 — 405-702-4152

Event Date: 1/7/2016

Event Time(hh:mm): 8:30 AM

Event Duration(min):

Event Reason: Startup

Point Source: Other-Describe Point in Explanation Below

Event Explanation including: Primary Cause, Corrective Measures Taken, and Measures Taken to Prevent Reoccurance.

Rule: ----------Select a Rule----------

Permit No:

Fields with* must be completed.

Pollutant/CAS Number: Nitrogen Oxides / 11104931 *

Basis of Estimate:

Certified Reader (required for Method 9 and 22):

Explain (if Other):

If you like to upload Data and Calculations used to compute the magnitude of emissions, click the "Upload Data and Calculation" button. Data and calculations are required to be submitted according

"Upload Data and Calculation" button. Data and calculations are required to be submitted according to OAC 252:100-9-3.1(b)(1)(D).

Upload Data And Calculation

Files with extension .doc, .docx, .pdf, .xls, .xslx and .txt only

Note: You may upload data and calculations for each pollutant that has exceeded a limit. However, it is not necessary to upload the same data and calculations more than one time per Excess Emission report.

Bottom half of 30 day report.

If a Method 22 opacity observation has been conducted for this Excess Emission event, enter the Observation Period, Accumulated Time of Emissions and Emission frequency below. For all other exceedances, enter the Estimated Emissions, Allowed Emissions, Excess Emissions and Pollutant Unit below.

Estimated Emissions	Allowed Emissions	Excess Emissions	Pollutant Units
*	*	*	*

Observation Period (min)	Accumulated Time of Emissions (min)	Emissions Frequency (%)
*	*	*

If you are ready to submit an Affirmative Defense, please select the "Add Affirmative Defense" button below. An electronic version of the AD will open in a new window for you to complete electronically and then the form will automatically be uploaded and attached for you. Please note, the system will not allow you to fill out an AD if the excess emission rule does not provide for an AD (i.e. no AD for operator error).

Files with extension .doc, .docx, .pdf, .xls, .xlsx or .txt only

Files Uploaded:

Upload Attachments | Show Files Uploaded

Add Affirmative Defense | Add Pollutant | Display/Edit Events | Save Current Data | Submit Final Report

Additional action items.

Back to Immediate Notification | Back to Main

Affirmative Defense Form*

TESTCO - DEQ: KERRAS TEST FAC

Event ID: 43046

Eligibility for an Affirmative Defense

Check any of the following that apply:

Per OAC 252:100-9-8(d): If any of the below are selected, an Affirmative Defense is prohibited.

- ☐ The excess emission violated SIP limits or permit limits that have been set taking into account potential emissions during startup and shutdown, including, but not limited to, limits that indicate they apply during startup and shutdown, and limits that explicitly indicate they apply at all times or without exception.
- ☐ The excess emission caused an exceedence of the NAAQS or PSD increments.
- ☐ The excess emission was a failure to meet federally promulgated emission limits, including, but not limited to 40 CFR Parts 60, 61, and 63.
- ☐ The excess emission is a violation of requirements that derive from 40 CFR Parts 60, 61, and 63.

Event was due to Startup or Shutdown

Answer the following question.

If applicable, please state the reason(s) any monitoring systems were not kept in operation.

Check all that apply:

- ☐ The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through reasonable planning and design.
- ☐ The excess emissions were not part of a recurring pattern indicative of inadequate operation or maintenance.
- ☐ If the excess emissions were caused by a bypass, the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
- ☐ The frequency and duration of operation in startup and shutdown periods were minimized to the extent practicable.
- ☐ Reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality.
- ☐ The owner or operator's actions during the period of excess emissions were documented by contemporaneous operating logs or other relevant evidence.
- ☐ The facility was operated in a manner consistent with good practice for minimizing emissions; provided, however, that this provision shall not be construed to require the use or installation of additional or redundant pollution control equipment not otherwise required and that this provision shall not be construed to automatically require the shutdown of process equipment to minimize emissions.

Submit Affirmative Defense

Affirmative Defense Form

TESTCO - DEQ: KERRAS TEST FAC

Event ID: 43046

Eligibility for an Affirmative Defense

Check any of the following that apply:

The excess e
limits that indic
The excess e
The excess e
The excess e

Message from webpage

This Excess Emissions event is not eligible for Affirmative Defense.
Please submit the event report without an Affirmative Defense.

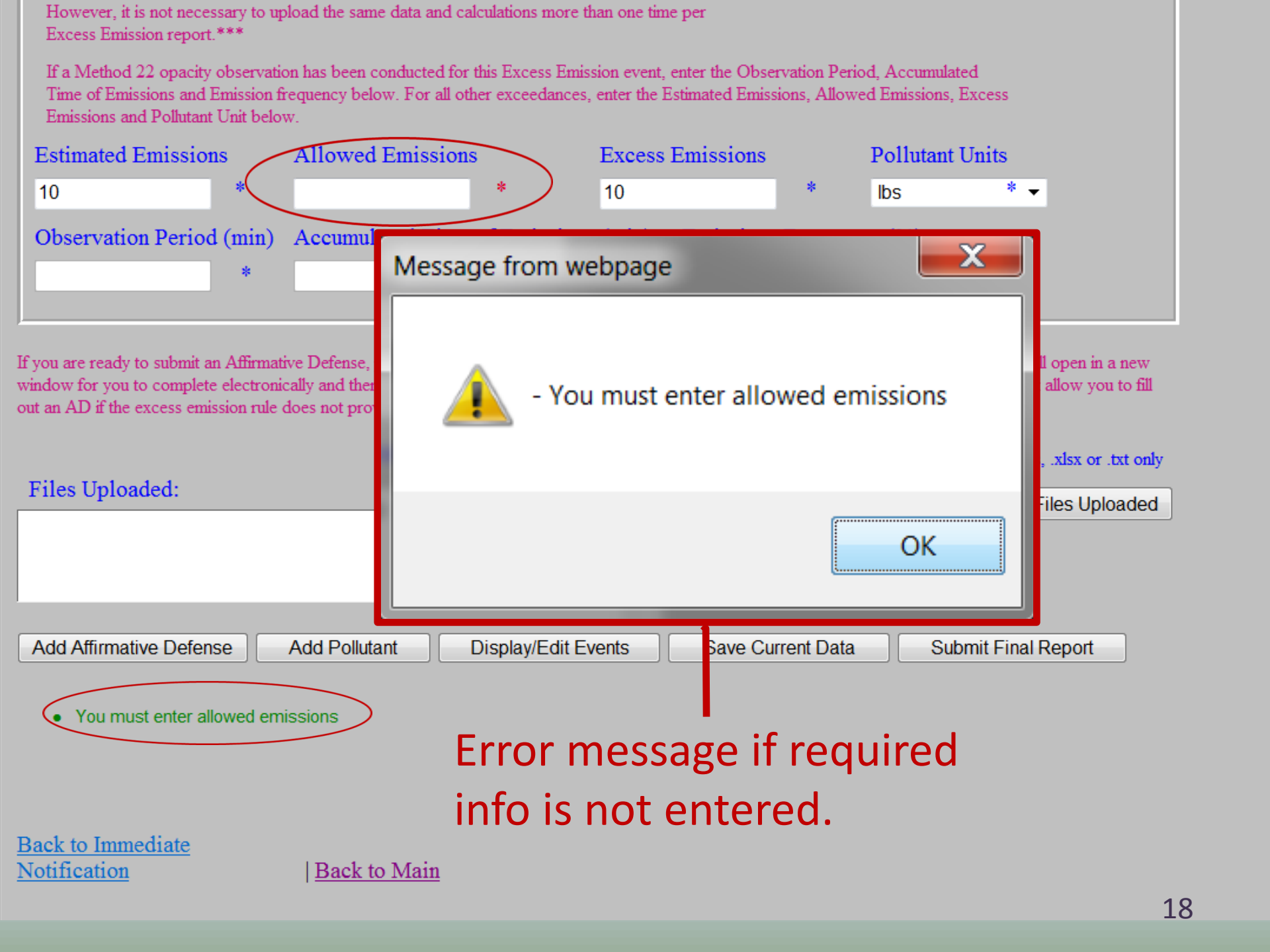
OK

If applicable, p

The periods design.
The excess emissions were not part of a recurring pattern indicative of inadequate operation or maintenance.
If the excess emissions were caused by a bypass, the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
The frequency and duration of operation in startup and shutdown periods were minimized to the extent practicable.
Reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality.
The owner or operator's actions during the period of excess emissions were documented by contemporaneous operating logs or other relevant evidence.
The facility was operated in a manner consistent with good practice for minimizing emissions; provided, however, that this provision shall not be construed to require the use or installation of additional or redundant pollution control equipment not otherwise required and that this provision shall not be construed to automatically require the shutdown of process equipment to minimize emissions.

Error message if not eligible.

Submit Affirmative Defense


However, it is not necessary to upload the same data and calculations more than one time per Excess Emission report.***
If a Method 22 opacity observation has been conducted for this Excess Emission event, enter the Observation Period, Accumulated Time of Emissions and Emission frequency below. For all other exceedances, enter the Estimated Emissions, Allowed Emissions, Excess Emissions and Pollutant Unit below.
Estimated Emissions
Allowed Emissions
Excess Emissions
Pollutant Units
10
10
lbs
Observation Period (min)
Message from webpage
- You must enter allowed emissions
OK
Files Uploaded:
Add Affirmative Defense
Add Pollutant
Display/Edit Events
Save Current Data
Submit Final Report
You must enter allowed emissions
Error message if required info is not entered.
Back to Immediate Notification
Back to Main

"Upload Data and Calculation" button. Data and calculations are required to be submitted according to OAC 252:100-9-3.1(b)(1)(D).

Upload Data And Calculation

Files with extension .doc, docx,.pdf, .xls, xslx and .txt only

Note: You may upload data and calculations for each pollutant that has exceeded a limit. However, it is not necessary to upload the same data and calculations more than one time per Excess Emission report.

If a Method 22 opacity observation has been conducted for this Excess Emission event, enter the Observation Period, Accumulated Time of Emissions and Emission frequency below. For all other exceedances, enter the Estimated Emissions, Allowed Emissions, Excess Emissions and Pollutant Unit below.

Estimated Emissions	Allowed Emissions	Excess Emissions	Pollutant Units
*	*	*	*

Observation Period (min)	Accumulated Time of Emissions (min)	Emissions Frequency (%)
*	*	*

If you are ready to submit an Affirmative Defense, please select the "Add Affirmative Defense" button below. An electronic version of the AD will open in a new window for you to complete electronically and then the form will automatically be uploaded and attached for you. Please note, the system will not allow you to fill out an AD if the excess emission rule does not provide for an AD (i.e. no AD for operator error).

Files with extension .doc, .docx, .pdf, .xls, .xlsx or .txt only

Files Uploaded:

Upload Attachments | Show Files Uploaded

Add Affirmative Defense | Add Pollutant | Display/Edit Events | Save Current Data | Submit Final Report

When all info is entered, submit.

Back to Immediate Notification | Back to Main

Printable 30 day report.

K L A H O M A
PARTMENT OF ENVIRONMENTAL QUALITY

2016
EXCESS EMISSIONS EVENTS REPORT
Air Quality Division, Dept. of Environmental Quality, PO Box 1677, OKC, OK 73101-1677, (405)702-4

COMPANY NAME : TESTCO - DEQ
FACILITY NAME : KERRAS TEST FAC
COUNTY : ATOKA
SIC: 0111

EXCESS EMISSION ID : 43046

Event Start Date : 1/7/2016
Immediate Notification Date : 1/7/2016
Event Reason : Startup

Event End Date : 1/7/2016
Event Report Date : 1/7/2016
Reported By : Melanie Foster
Phone No: : 405-702-4152

EVENT ID : 45277

Event Date : 1/7/2016
Event Duration : 120
Rule : OAC 252:100-8 / Operating Permits
Reporter : Melanie Foster

Event Time : 8:30 AM
Point Source :
Permit No : 2016-0001-O
Phone : 405-702-4152

Explanation :

The unit started up and NOx emissions were above limit due to an extended startup without controls operating.

POLLUTANT : Nitrogen Oxides

Actual Emissions : 20
Excess Amount : 10
Estimate Method : Engineering Calculations
Method Description :
Accumulated Time of Emissions : minutes

Allowed Limit : 10
Pollutant Unit : lbs
Certified Reader :
Observation Period : minutes
Emission Frequency : %

POLLUTANT : CARBON MONOXIDE

Actual Emissions : 10

Allowed Limit : 8

Event Start Date : 1/7/2016
Immediate Notification Date : 1/7/2016
Event Reason : Startup

Event End Date : 1/7/2016
Event Report Date :
Reported By : Melanie Foster
Phone No: : 405-702-4152

EVENT ID : 45277

Last chance to change data.

Event Date : 1/7/2016
Event Duration : 120
Rule : OAC 252:100-8 / Operating Permits
Reporter : Melanie Foster

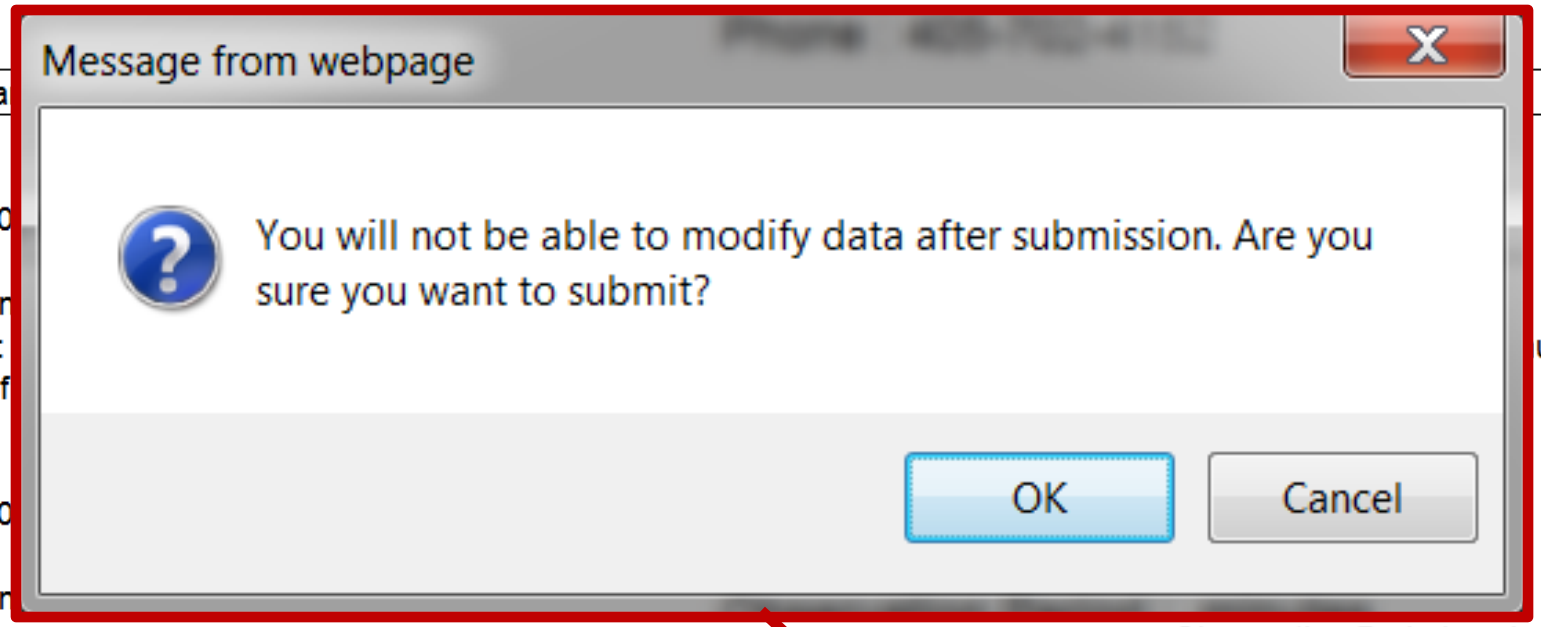
Event Time : 8:30 AM
Point Source :
Permit No : 2016-0001-O
Phone : 405-702-4152

Explanation :
The unit started up a

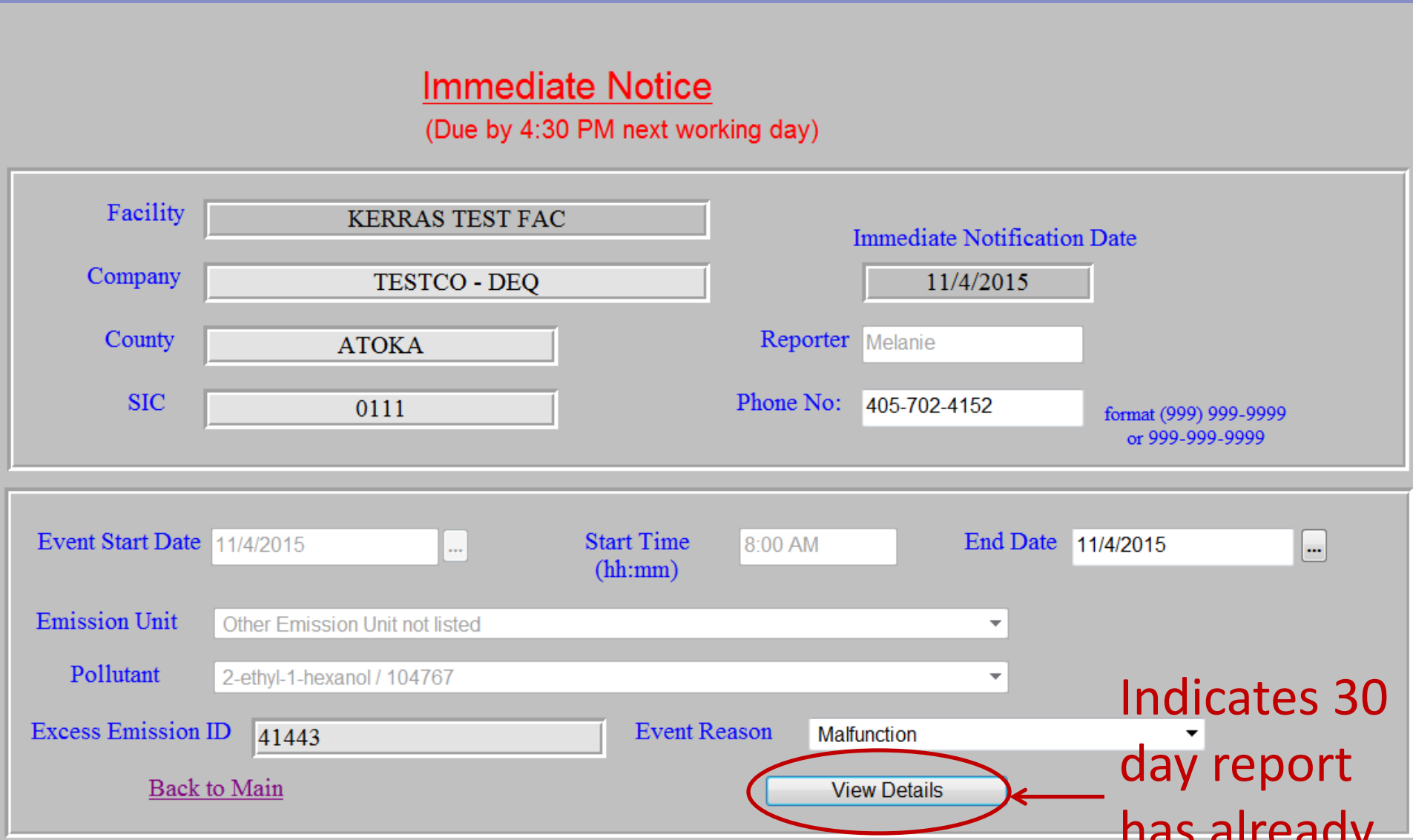
Actual Emissions : 20
Excess Amount : 10
Estimate Method : Er
Method Description :
Accumulated Time of

Actual Emissions : 10
Excess Amount : 2
Estimate Method : Er
Method Description :
Accumulated Time of Emissions : minutes

Observation Period : minutes
Emission Frequency : %



Print and Submit | Edit Event Data


Immediate Notice
(Due by 4:30 PM next working day)
Facility
KERRAS TEST FAC
Company
TESTCO - DEQ
County
ATOKA
SIC
0111
Immediate Notification Date
11/4/2015
Reporter
Melanie
Phone No:
405-702-4152
format (999) 999-9999
or 999-999-9999
Event Start Date
11/4/2015
Start Time
(hh:mm)
8:00 AM
End Date
11/4/2015
Emission Unit
Other Emission Unit not listed
Pollutant
2-ethyl-1-hexanol / 104767
Excess Emission ID
41443
Event Reason
Malfunction
Back to Main
View Details
Indicates 30 day report has already been started.

Summary of Excess Emission Event

The following event is associated with this excess emission.

Edit	Delete	Event ID	Event Date	Event Time	Event Duration	Point Source	
Edit	Delete	45277	01/07/2016	08:30	120	Point previously unidentified	Pollutants

View/Submit Report

Back to Immediate Notification | Back to Main | Exit

Table of 30 day reports not yet submitted.

Thank you for submitting data to the Department of Environmental Quality. To report another Excess Emission click on the link below.

Back to Main Page

Verification that the system received your 30 day report.

Excess Emission Reporting

OAC 252:100-9

Company 3431

Facility ----------Select a Facility----------

Select an activity from the list:

View Previously Submitted Events

Reprint or review submitted 30 day reports by date range.

To view history enter a date range when event happened

From (mm/dd/yyyy) To (mm/dd/yyyy)

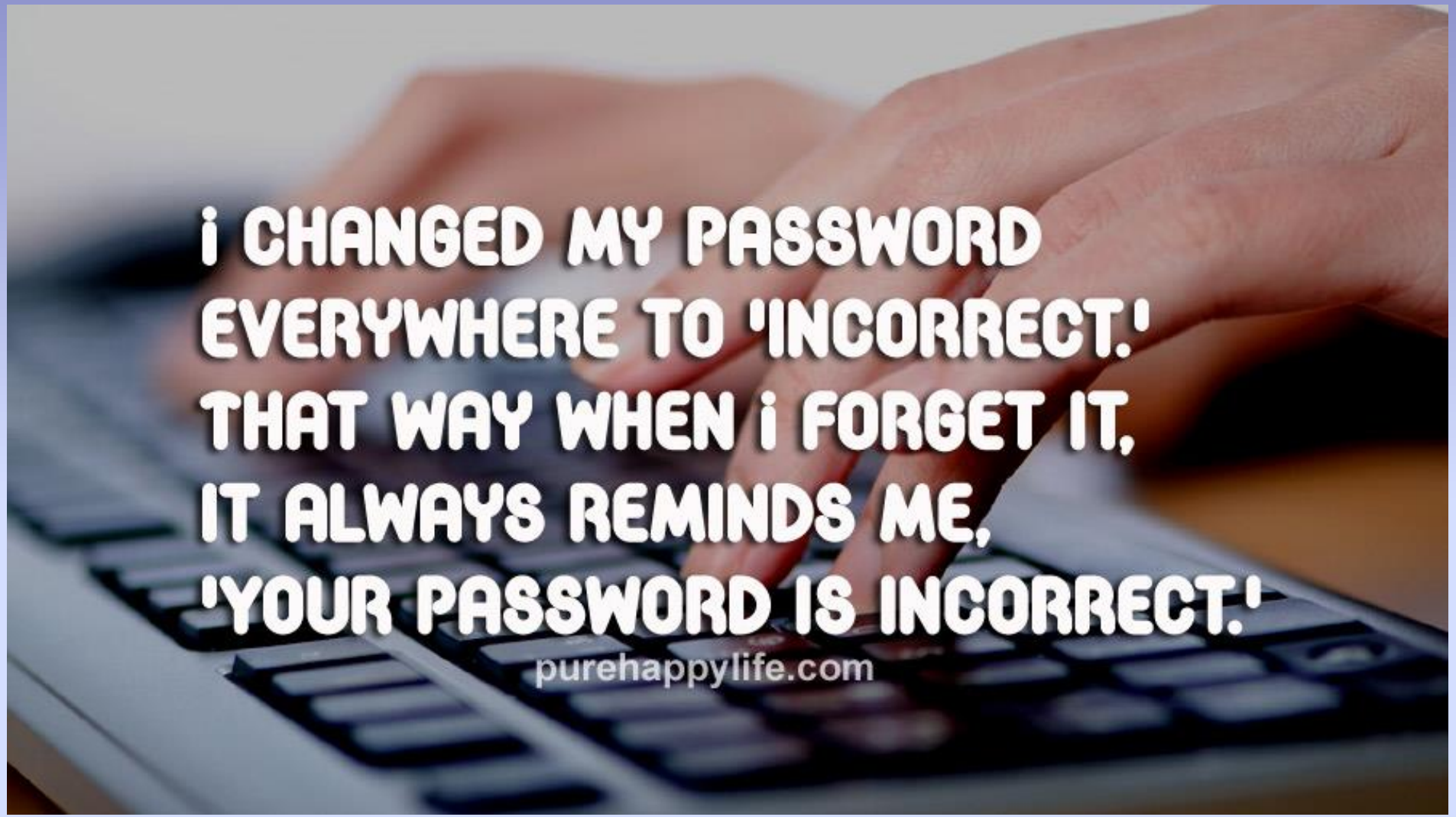
View History

Common Questions

- Can I still use the Excess Emission Reporting Tool if I called or emailed my immediate notice?
  - *Yes! But you will still have to go through the immediate notice step in the online system.*
  - *Explain in the comments when and how the immediate notice was originally submitted since the system will date stamp the immediate notice as untimely.*

Common Questions

- What do I do if my password is lost?
  - *Contact AQD and ask for a member of the Excess Emissions team.*
  - *The password will be emailed to the Responsible Official on record.*
- What if I get locked out of the system for a wrong password?
  - *Wait 15 minutes and try again.*


i CHANGED MY PASSWORD
EVERYWHERE TO 'INCORRECT.'
THAT WAY WHEN i FORGET IT,
IT ALWAYS REMINDS ME,
'YOUR PASSWORD IS INCORRECT.'
purehappylife.com

Common Questions

- What if I find out there was no EE but I submitted an immediate notice?
  - *<u>Before</u> the 30 day deadline, email AQD and ask to retract the immediate notice.*
- What if I submitted something on my 30 day report in error?
  - *Email AQD what needs to be changed and the information can be corrected in DEQ's database.*

Contact Information

- Melanie Foster
  - 405-702-4152
  - melanie.foster@deq.ok.gov
- AQD Front Desk 405-702-4100
- AQD Fax 405-702-4101
- EE Hotline 1-877-277-6236
- excessemissions@deq.ok.gov

Questions?

Enforcement

Rick Groshong
Environmental Programs Manager
Compliance & Enforcement Group

Air Quality Workshop
February 4th , 2016
Tulsa, OK

Enforcement Process

What happens if we discover a violation at your facility?

Enforcement Levels

- Level 1
  - Usually reserved for major and SM 80 sources.
    - HPV (EPA defined)
    - Non-HPV (state defined)
    - A penalty is usually required
    - Usually calls for a settlement conference

Level 1 Violations

- Examples of Level 1 Violations:
  - Failure to obtain a PSD/NSR permit
  - NSPS or major source NESHAP emission violations ≥ 7 days
  - Failure to conduct test at NSPS or major NESHAP source
  - Constructing without a construction permit
  - Failure to install and/or properly operate required controls

Level 2 Violations

- Level 2 – less severe violations.
  - May be major, SM, or minor sources
- Examples of Level 2 Violations
  - Failure to apply for a minor source operating permit within 180 days of starting operations
  - Emission violations that continue < 7 days
  - Failure to submit complete/accurate emission inventories

Level 3 Violations

- Level 3 – least severe
  - May be major, SM, or minor sources
- Examples of Level 3 violations
  - Failure to install required monitoring device at a minor source
  - Late submittal of reports required by a permit, NSPS, or NESHAP
  - Late application for a minor source operating permit, where application is submitted prior to DEQ's knowledge.

How Will We Notify You of a Violation?

- Level 3 Letter
  - Minor violations.
  - Usually does not require a response from the facility.

How Will We Notify You of a Violation?

- Alternate Enforcement Letter
  - Used in conjunction with FCE/PCE report that found violations
  - Will typically require a compliance plan
  - May request facility to contact DEQ to schedule a meeting
  - May be used for all violation levels

How Will We Notify You of a Violation?

- Notice of Violation
  - Used with violations found from report reviews and complaints, or when facility disputes AEL.
  - Will require submittal of a compliance plan
  - May request a meeting

How Are Cases Settled?

- Administrative Compliance Order (ACO)
  - Unilateral order to resolve violations
  - Usually a last resort, if someone is uncooperative
  - Facility may dispute the ACO
  - In the event of a dispute, the case goes to an Administrative Law Judge for a ruling, with the final decision made by the DEQ Executive Director.

How Are Cases Settled?

- Consent Order (CO)
  - Mutually agreed upon order to address/resolve Level 1 violations
  - Also used to address complaints where a violation is confirmed.
  - Allows both sides to negotiate
  - Usually requires a settlement conference

Settlement Conference

- What happens in a settlement conference?
  - Meeting will be at DEQ office
  - DEQ usually has in attendance: the inspector, the inspector's manager, and a DEQ attorney
  - You are encouraged to bring: any legal counsel, technical staff, consultants, and anyone else who is able to help.
  - These meetings are usually very cordial, so do not worry.

Settlement Conference

- What happens in a settlement conference?
  - We discuss the alleged violations and the company's response.
  - DEQ attorney will explain any penalty, the CO process, and any options for reducing the proposed penalty.

Self-Disclosures

If you discover a violation at your facility, DEQ encourages you to self-disclose it to us as soon as possible.

Self-Disclosures

- OAC 252:4-9-5 Consideration for self-reporting of noncompliance
  - **(a) Conditions for not seeking administrative and civil penalties.** Except in the case of habitual noncompliance or as otherwise provided in this section, in evaluating an enforcement action for a regulated entity's failure to comply with DEQ rules, **the DEQ will not seek an administrative or civil penalty when the following circumstances are present:**

Self-Disclosures

OAC 252:4-9-5 Consideration for self-reporting of noncompliance

(a) Conditions for not seeking administrative and civil penalties.

1) The regulated entity **voluntarily, promptly and fully discloses** the apparent failure to comply with applicable state environmental statutes or rules to the appropriate DEQ Division **in writing before the Division learns of it or is likely to learn of it imminently**;

Self-Disclosures

2) The failure is **not deliberate or intentional**;

3) The failure does **not indicate a lack or reasonable question of the basic good faith attempt** to understand and comply with the applicable state environmental statutes or rules through environmental management systems **appropriate to the size and nature of the activities of the regulated entity**;

4) The regulated entity, **upon discovery, took or began to take immediate and reasonable action to correct the failure** (i.e., to cease any continuing or repeated violation);

Self-Disclosures

5) The regulated entity **has taken, or has agreed in writing** with the appropriate Division **to take**, remedial **action as may be necessary to prevent the recurrence of such failure**. Any action the regulated entity agrees to take must be completed.

6) The **regulated entity has addressed, or has agreed in writing** with the appropriate Division **to address**, any **environmental impacts** of the failure in an acceptable manner;

Self-Disclosures

7) The regulated entity has not realized and will not realize a **demonstrable and significant economic or competitive advantage as a result of non-compliance**; and

8) The regulated entity **cooperates with the DEQ** as the DEQ performs its duties and provides such information as the DEQ reasonably requests to confirm the entity's compliance with these conditions.

Self-Disclosures

OAC 252:4-9-5 Consideration for self-reporting of noncompliance

(b) Partial qualification. Notwithstanding the failure of a regulated entity to meet all of the conditions in subsection (a) of this section, the DEQ will consider the nature and extent of such actions of the regulated entity in mitigation of any administrative or civil penalty otherwise appropriate. It the regulated entity meets all conditions in subsection (a) of this section except item seven (7) relating to significant economic or competitive advantage, the DEQ will seek an administrative or civil penalty to the extent of the economic or competitive advantage gained.

Self-Disclosures

Translation: Even if you do not meet all eight conditions in Subsection (a), we will take into account the good faith actions you will take or have taken to fix the problem and minimize emissions, and factor that into determining the amount of the penalty, if any.

Self-Disclosures

- What do we do when we receive your self-disclosure?
  - Acknowledgement Letter – lets you know we received it and are reviewing it.
  - We may conduct an inspection or request more information.

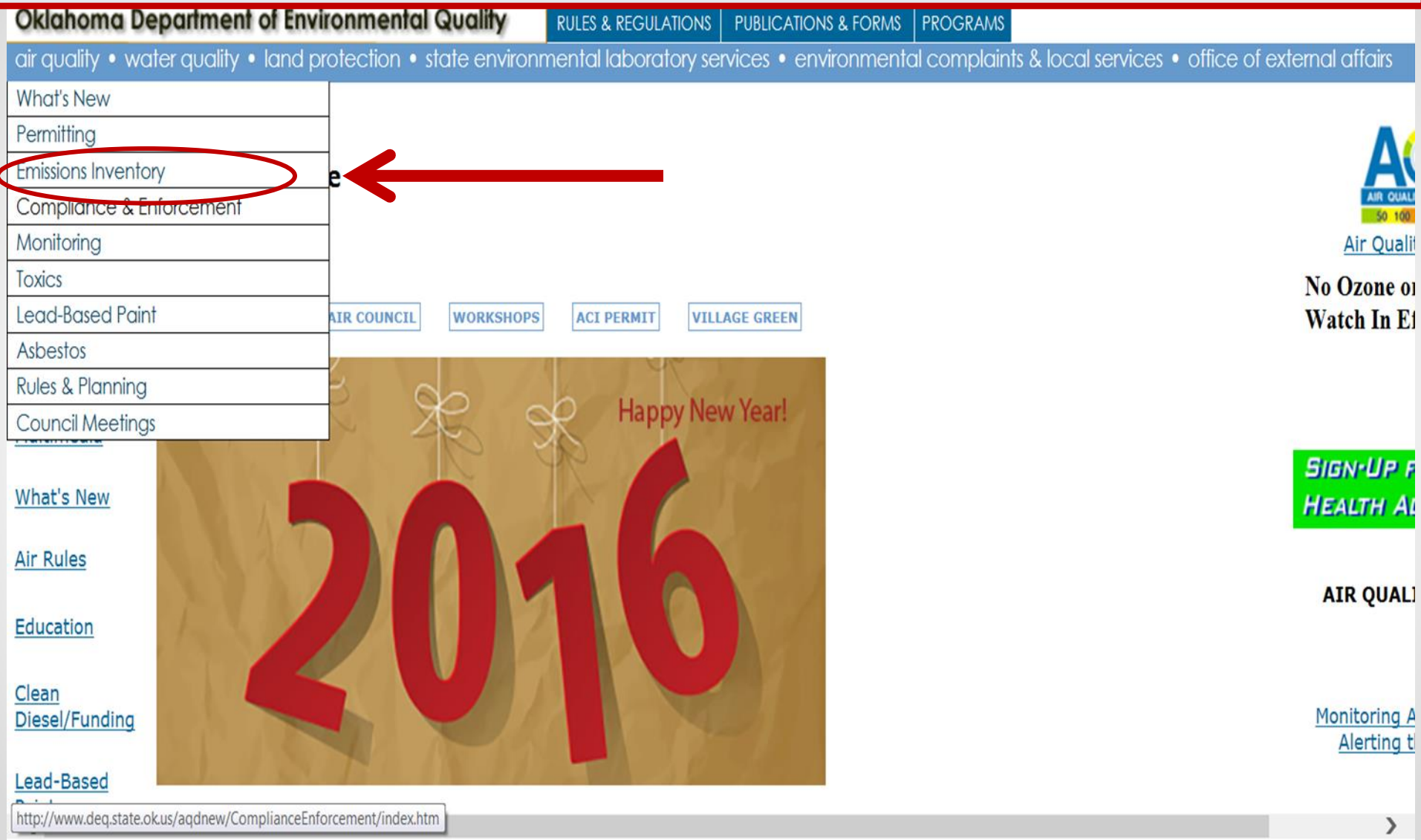
Self-Disclosures

- What do we do when we receive your self-disclosure?
  - Determination Letter
    - Tells you whether or not you received full credit for your self disclosure (did you meet all eight criteria?)
    - Will give further instructions, if any, such as to call and schedule a meeting.
    - If no further action is necessary, the Determination Letter will close the case.

Self-Disclosures

- **DEQ's Voluntary Disclosure/Self-Reporting of Noncompliance Form**

http://www.deq.state.ok.us/aqdnew



http://www.deq.state.ok.us/aqdnew/ComplianceEnforcement

Contact AQD

AQD Site Index

- DEQ Standard Operating Procedures (SOP) for Enforcement
- High Priority Violator Policy - 2014
- Federally Reportable Violation Policy - 2014
- Alternate Enforcement Procedure
- AQD Penalty Guidance - 2014
- Title 27A. Environment and Natural Resources (Including the Oklahoma Clean Air Act – Article V)
- Clean Air Act - Stationary Source Compliance Monitoring Strategy - July 2014
- EPA's Applicability Determination Index
- EPA's Air Toxics Rules and Implementation web page
- EPA's Enforcement and Compliance History Online (ECHO) web page
- Portable Emission Analyzer Guidance
- Voluntary Disclosure / Self-Reporting of Noncompliance Form

Alternate Enforcement Procedure

Compliance & Enforcement Contacts

Asbestos

Excess Emissions

Page Last Updated: September 21, 2015

AIR QUALITY DIVISION
OKLAHOMA DEPARTMENT OF
ENVIRONMENTAL QUALITY
P. O. BOX 1677
OKLAHOMA CITY, OK 73101-1677

ATTN: Mr. Eddie Terrill, Director
c/o: Voluntary Self-reporting Coordinator

OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
...for a clean, attractive, prosperous Oklahoma

VOLUNTARY DISCLOSURE / SELF-REPORTING OF NONCOMPLIANCE

NOTE: The following information is hereby voluntarily disclosed/self-reported pursuant to and in accordance with OAC 252:4-9-5(a) & (b), which sets forth the conditions under which the DEQ either (a) will not seek, or (b) will mitigate an administrative or civil penalty when addressing self-reported violations. In order to receive full penalty mitigation, full disclosure of each violation is required. This form represents the minimum information that is required by the Division to begin a penalty mitigation assessment. The AQD will utilize the EPA's BEN model to determine the economic benefit realized due to the violation(s), if any, for any High Priority or Level 1 violation.

FACILITY INFORMATION

COMPANY NAME					
FACILITY NAME					
MAILING ADDRESS					
CITY		State		Zip	
STREET ADDRESS (*i.e.*, PHYSICAL LOCATION)					
CITY		State		Zip	
CONTACT PERSON		Title		Phone	
		Fax #		E-mail	
APPLICABLE AIR QUALITY PERMIT NUMBER(S)/DATE ISSUED					
Has the facility or the company received one or more Notices of Violation (NOVs) or Alternative Enforcement Options from the Air Quality Division within the last three (3) years? If yes, provide the facility name and include details of each action (NOV# and violation description).					

The Bottom Line?

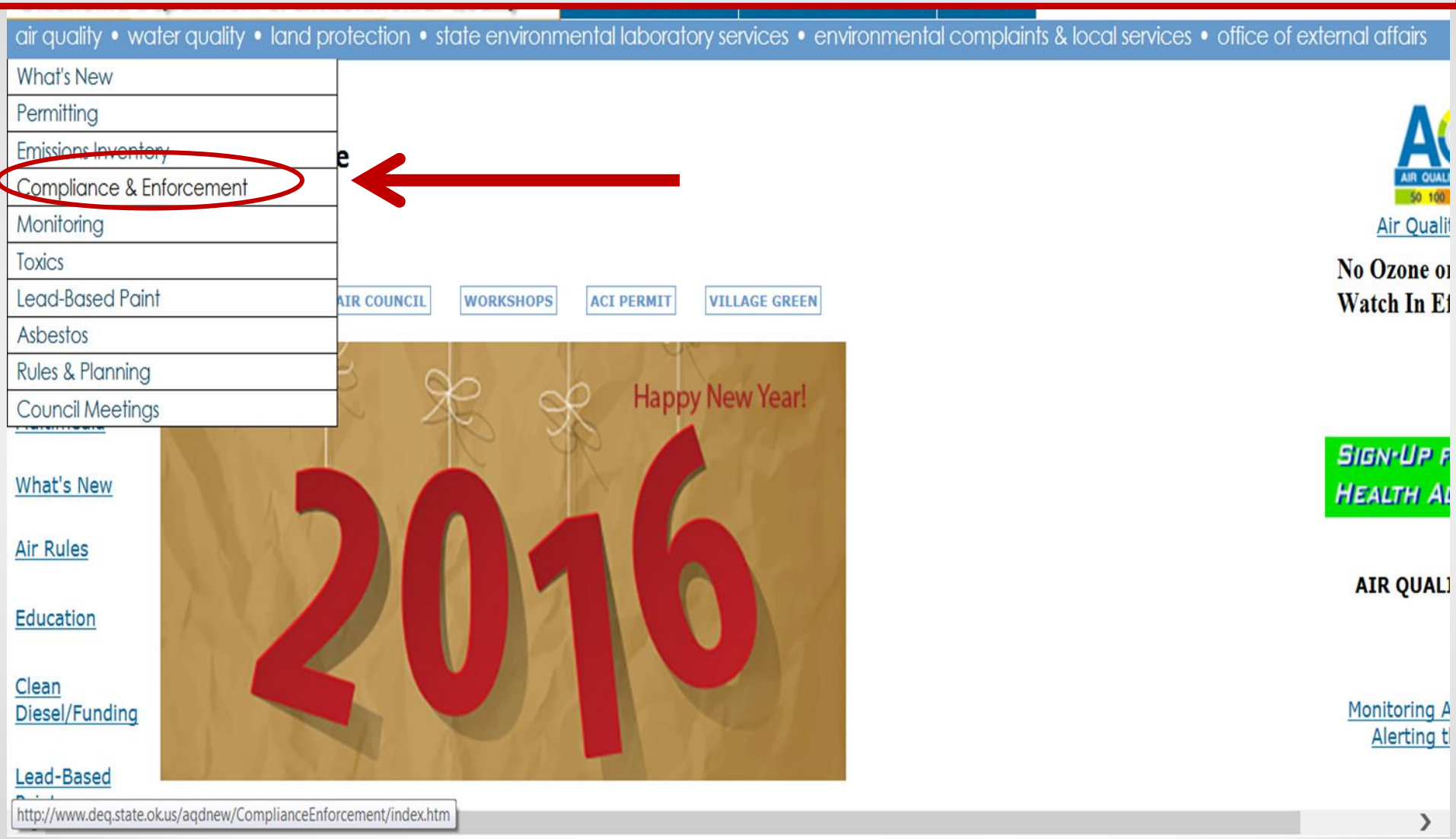
- Our goal is compliance. If we can help you stay in compliance, that benefits everyone.
- We want to work with you as much as we can, however:
  - Sometimes a penalty may be necessary.
  - Communication is the key. If you have any questions, please give us a call.

If You Ever Have Questions

Our website has a contact list to help you know who can best help answer your questions.

Please feel free to call with any questions that come up.

http://www.deq.state.ok.us/aqdnew



http://www.deq.state.ok.us/aqdnew/ComplianceEnforcement/Contact.htm

What's New

Air Rules

Education

Clean Diesel/Funding

Contact AQD

AQD Site Index

DEQ believes that a strong compliance/enforcement program is one of our highest priorities and is necessary to an effective regulatory system.

The AQD Compliance/Enforcement sections are responsible for conducting inspections of air pollution sources, responding to citizens complaints, observing and evaluating emission tests, tracking and evaluating excess emissions/malfunctions and the implementation of a host of federal requirements.

Below are links to a variety of technical and policy documents that are relevant to our administration of the compliance/enforcement program. Please check back often for updates and information regarding this important aspect of our air quality program.

- DEQ Standard Operating Procedures (SOP) for Enforcement
- High Priority Violator Policy - 2014
- Federally Reportable Violation Policy - 2014
- Alternate Enforcement Procedure
- AQD Penalty Guidance - 2014
- Title 27A. Environment and Natural Resources (Including the Oklahoma Clean Air Act – Article V)
- Clean Air Act - Stationary Source Compliance Monitoring Strategy - July 2014
- EPA's Applicability Determination Index
- EPA's Air Toxics Rules and Implementation web page
- EPA's Enforcement and Compliance History Online (ECHO) web page

HEALTH ADVISORIES

Air Quality Home

COMPLIANCE & ENFORCEMENT HOME

Alternate Enforcement Procedure

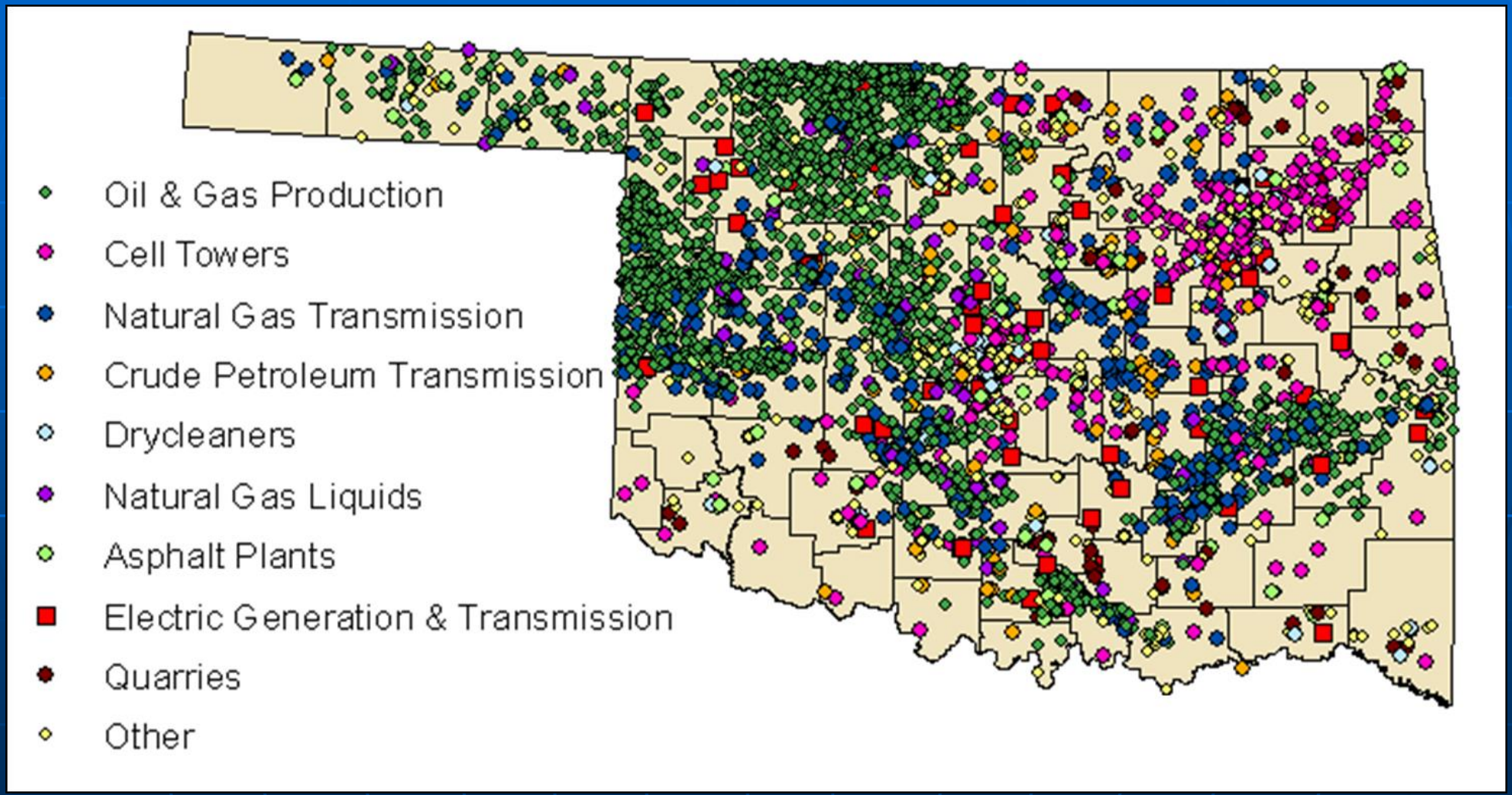
Compliance & Enforcement Contacts

Asbestos

Excess Emissions

Questions?

Inventoried Point Sources



Emissions Inventory Introduction and Guidance

Mark Gibbs
Emission Inventory Manager

Air Quality Workshop
February 4th, 2016
Tulsa, OK

Emissions Inventory Presentations

- Introduction and Guidance
- Basics of an Emissions Inventory Report
- How to Calculate Your Emissions

BREAK

- General Issues
- Live Redbud Demonstration

Introduction & Guidance Presentation Objectives

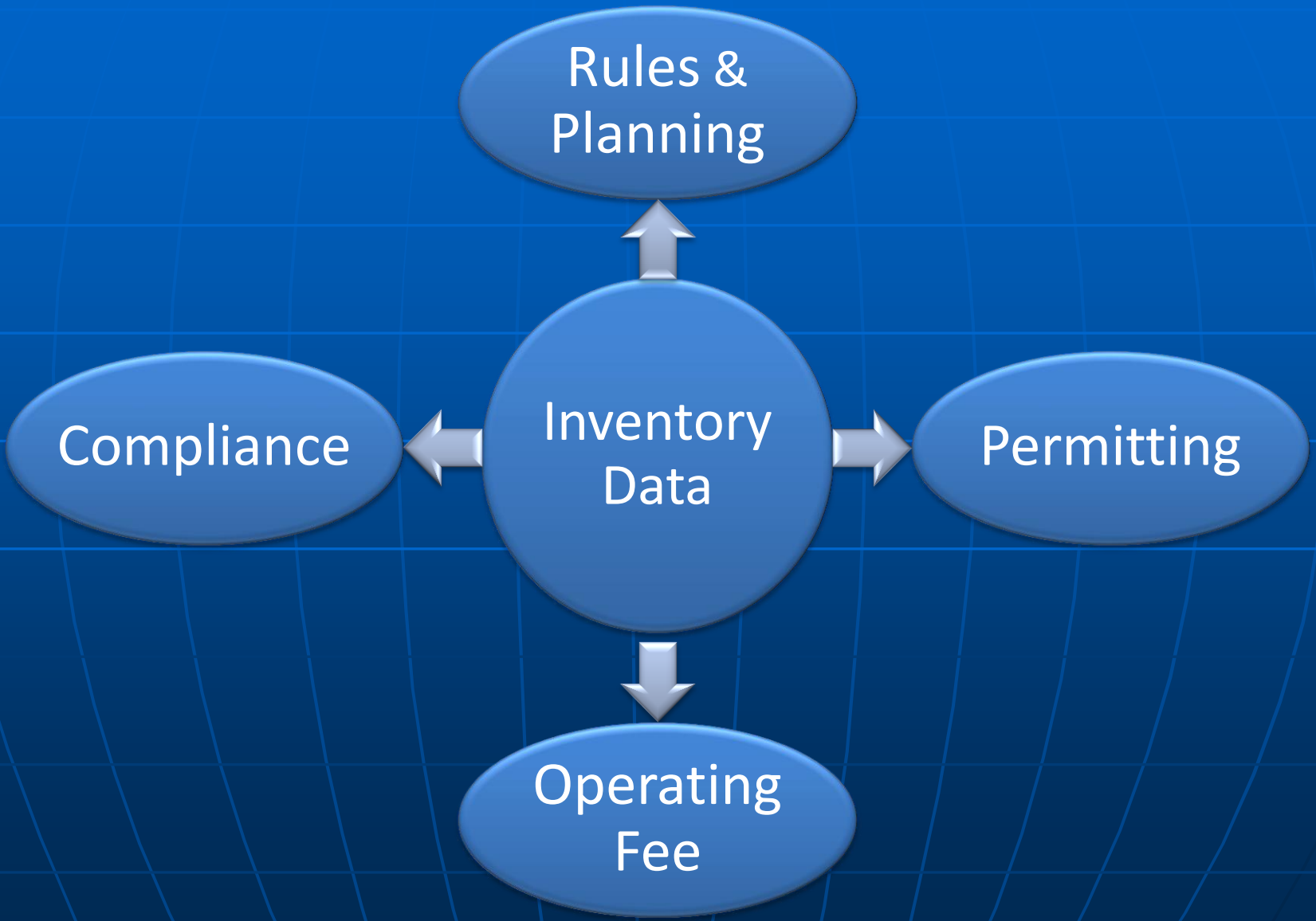
- What is an Emissions Inventory?
- Who is Required to File an Inventory?
- Emissions Inventory Data Flow
- The Annual Reporting Cycle
- What's New?
- Guidance & Help

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

Uses of Inventory Data



Who is Required to File an Emissions Inventory?

Required to File an Inventory

- The owner or operator of any facility that is a source of Regulated Air Pollutants
- Permit Exempt & De Minimis facilities excluded
- Permit by Rule: Only new facilities for 2015
- “Special Inventories” upon request by AQD Director

Permit by Rule (PBR) Facilities

- All PBR facilities that were registered by 12/31/2014 had to submit an inventory for 2014
- New PBR facilities must submit an inventory for the first year that they are registered
- Thereafter PBR facilities must submit:
  - > 5 Ton/year of any RAP – every NEI three-year cycle (next due in 2017)
  - ≤ 5 Ton/year of any RAP – every second NEI three-year cycle (next due in 2020)

PBR Reporting Schedule

Facility A:
10 Tons of emissions of NOx in 2014
12 Tons of emissions of NOx in 2017
Etc.

2014 NEI: All PBR Facilities

2020 NEI: All PBR Facilities

2014 | 2015 | 2016 | **2017** | 2018 | 2019 | **2020** | 2021 | 2022 | **2023**

2017 NEI: PBR Facilities with emissions > 5 TPY

2023 NEI: PBR Facilities With Emissions > 5TPY

PBR Reporting Schedule

Facility B:
4.5 Tons of emissions of VOC in 2014
3 Tons of emissions of VOC in 2017
Etc.

2014 NEI: All PBR Facilities

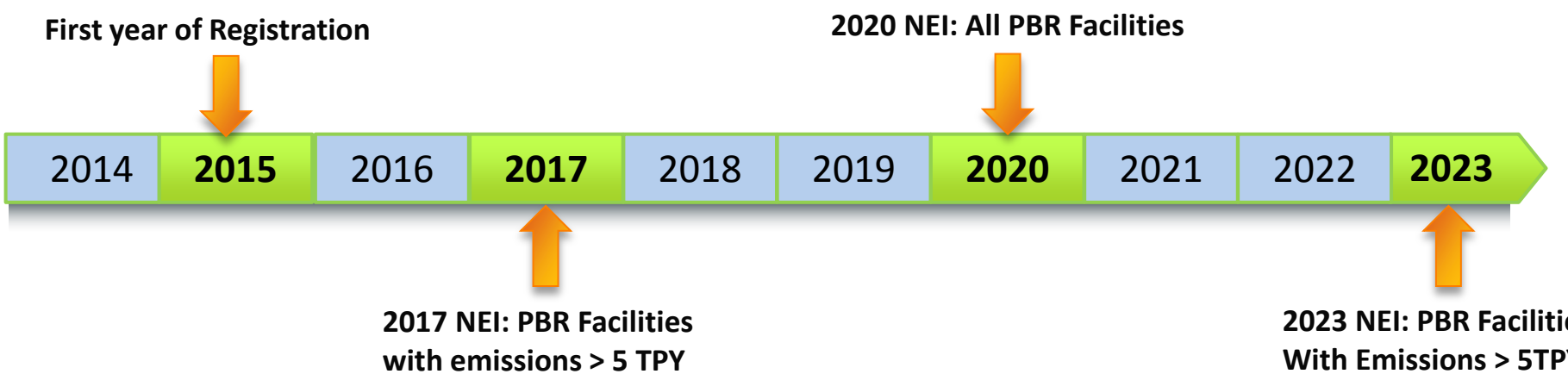
2020 NEI: All PBR Facilities

2026 NEI: All PBR Facilities

2014 2015 2016 2017 2018 2019 **2020** 2021 2022 2023 2024 2025 **2026**

PBR Reporting Schedule

Facility C:
First registered in 2015 with 15 Tons of emissions of VOC
11 Tons of emissions of VOC during 2017
Etc.

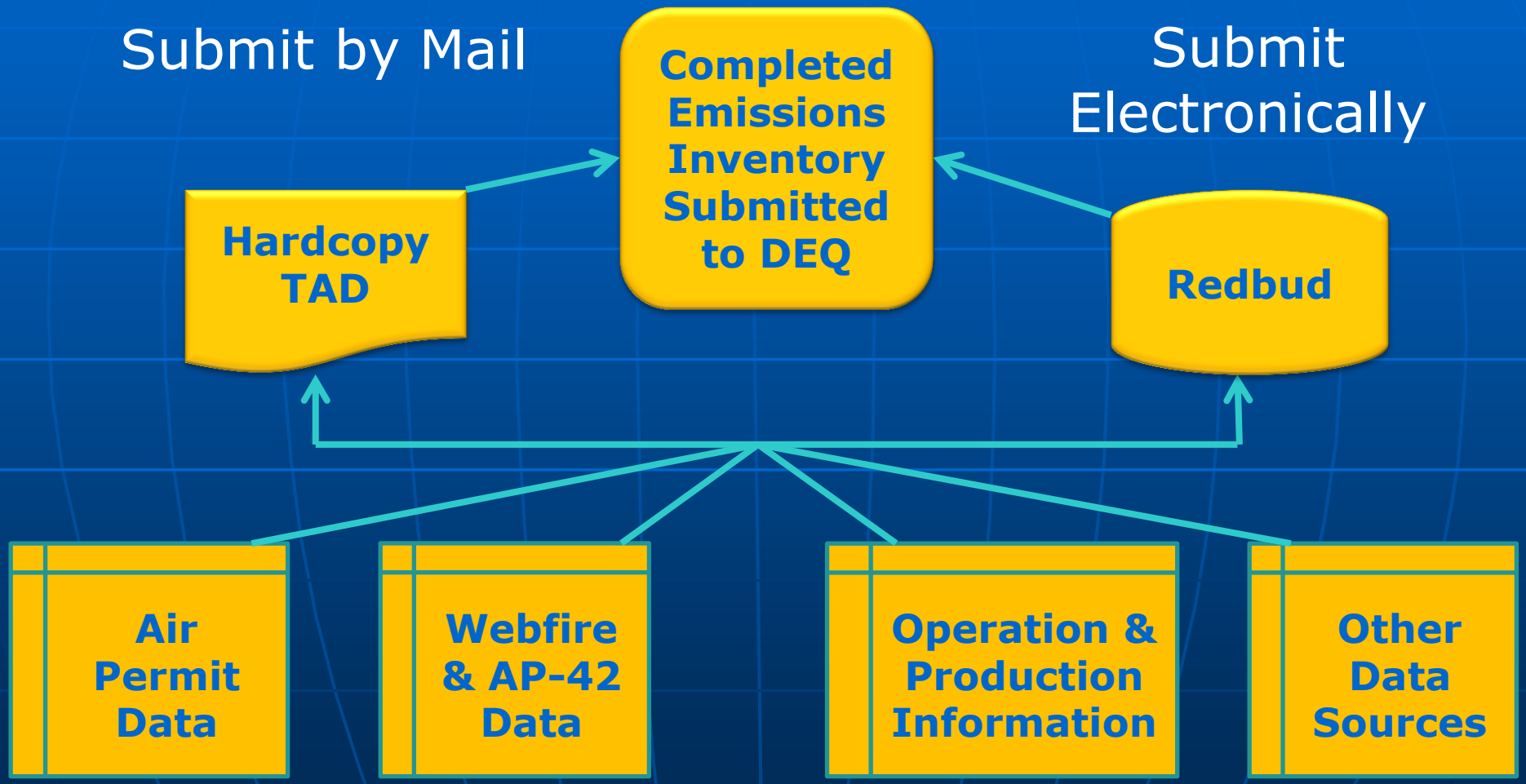


Permit by Rule (PBR) Facilities

- PBR facilities will be first invoiced in 2016 based on CY 2014 emissions
- Annual Operating Fees will be based on the most recently reported annual inventory thereafter
- PBR facilities may wish to submit a more recent inventory if production has decreased

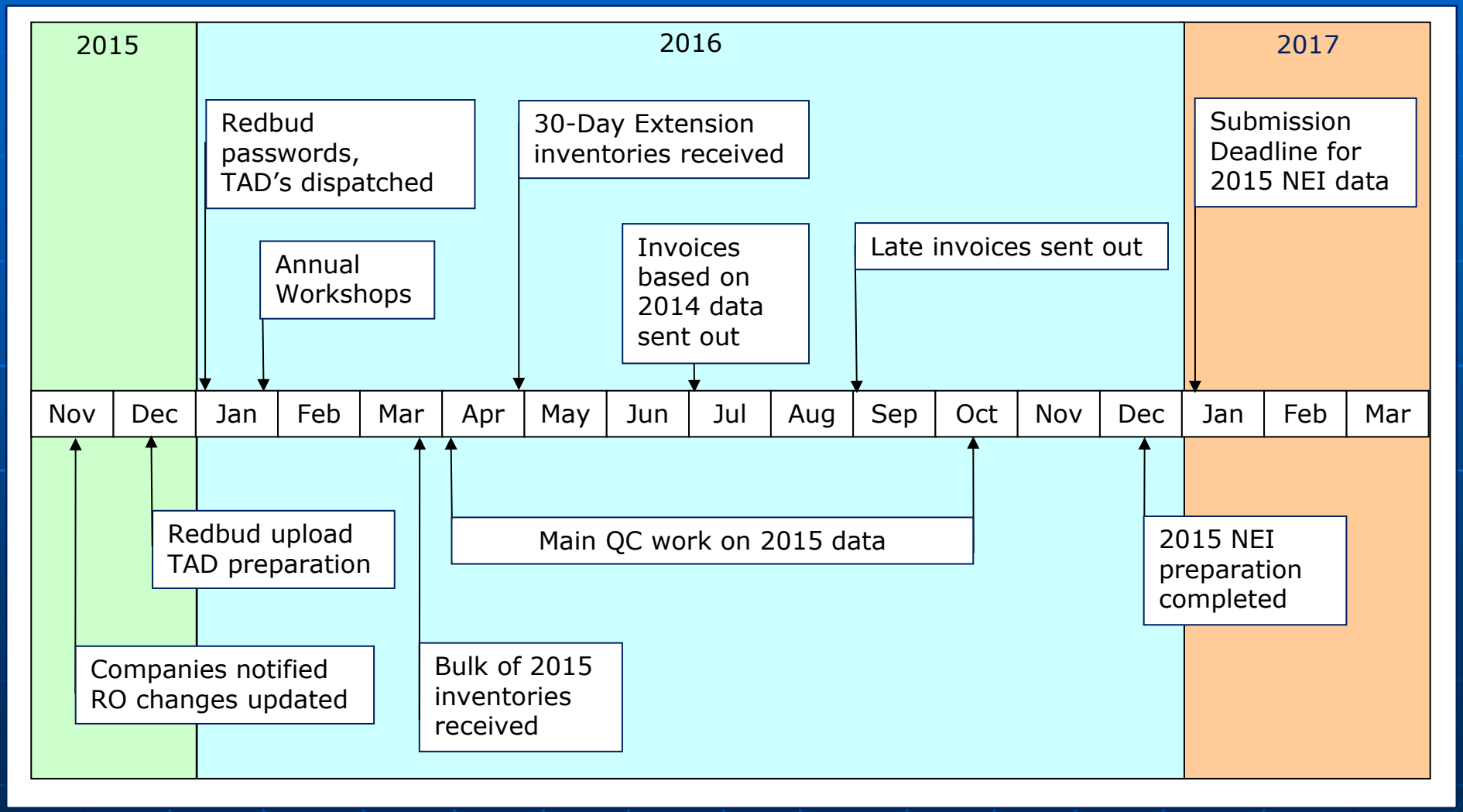
The Emissions Inventory Data Flow

The Emission Inventory Data Flow



The Annual Reporting Cycle

The Emissions Inventory Annual Reporting Cycle



What's New for 2015?

What's New for 2015 Reporting?

- Only new PBR facilities have to report for 2015
- Report Total VOC *plus* HAPs correctly
- Chrome – Use specific categories to report
- Redbud – Final submission confirmation page, improvements for Internet Explorer compatibility

More information on these topics:
www.deq.state.ok.us/aqdnew/emissions/CY2015EmissionsReportingUpdates.pdf

Lower Emission Amount Reporting Guidance

Lower Emission Amount Reporting Guidance

- There is no lower reporting limit in our rules
- AQD provides reporting guidance that is "prudent & practical"
- Our current guidance is that if during normal operation, emissions are ≥0.1 tons of any regulated air pollutant at a process then the emissions must be reported
- There are certain key exceptions

Lower Emission Amount Reporting Guidance

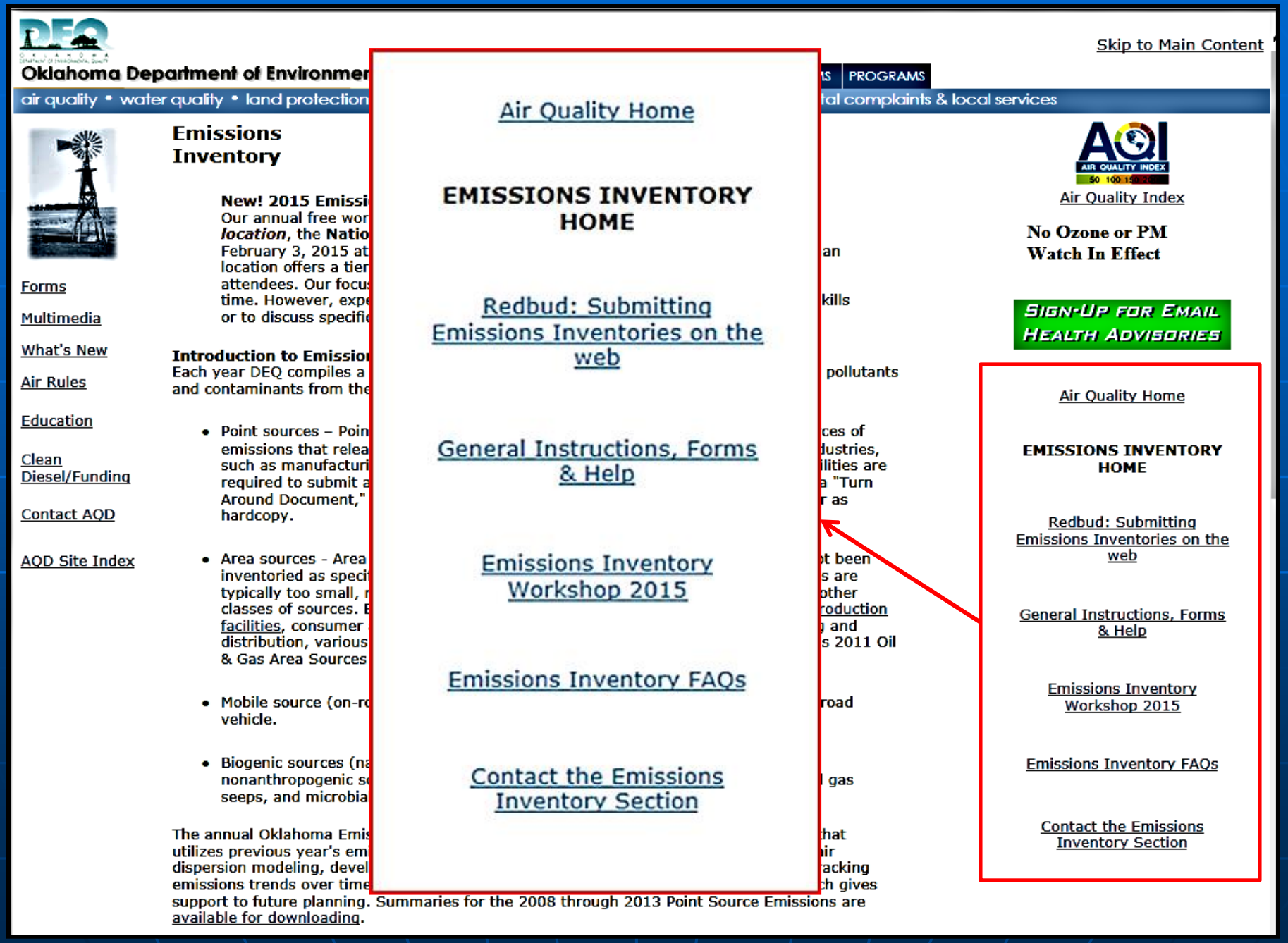
- Emissions must still be reported at 0.001 tons or greater per process for:
  - Lead, mercury & hexavalent chromium
  - Any HAP at a facility that is also reported to the TRI
  - Any HAP from glycol dehydration still vents
  - Any HAP from large storage tanks (>500 BBL)
  - Other situations where deemed necessary

Lower Emission Amount Reporting Guidance

- You can continue to report down to 0.001 tons per process if you choose to
- The Trace Checkbox is still available for <0.001 tons if you wish to use this
- Contact us to discuss removing unnecessary pollutants that may still be in your inventory
- More info on our website: http://www.deq.state.ok.us/aqdnew/emissions/EI_FAQs.htm

Resources & Help

www.deq.state.ok.us/AQDnew/Emissions



Need more 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

www.deq.state.ok.us/aqdnew/emissions/EIcontact.htm

Basics of an Emission Inventory Report

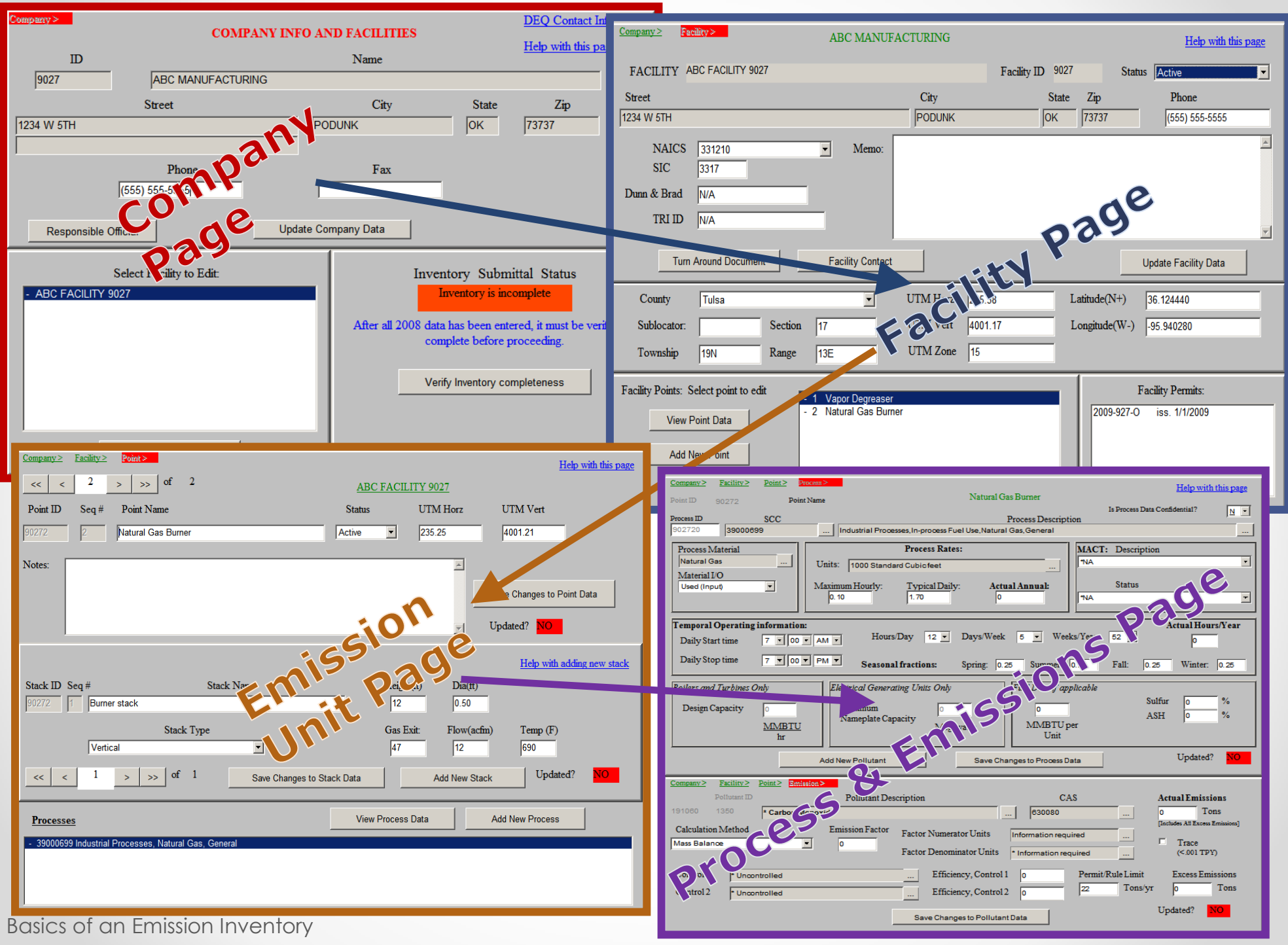
Chris Laley

Air Quality Workshop
February 4th, 2016
Tulsa, OK

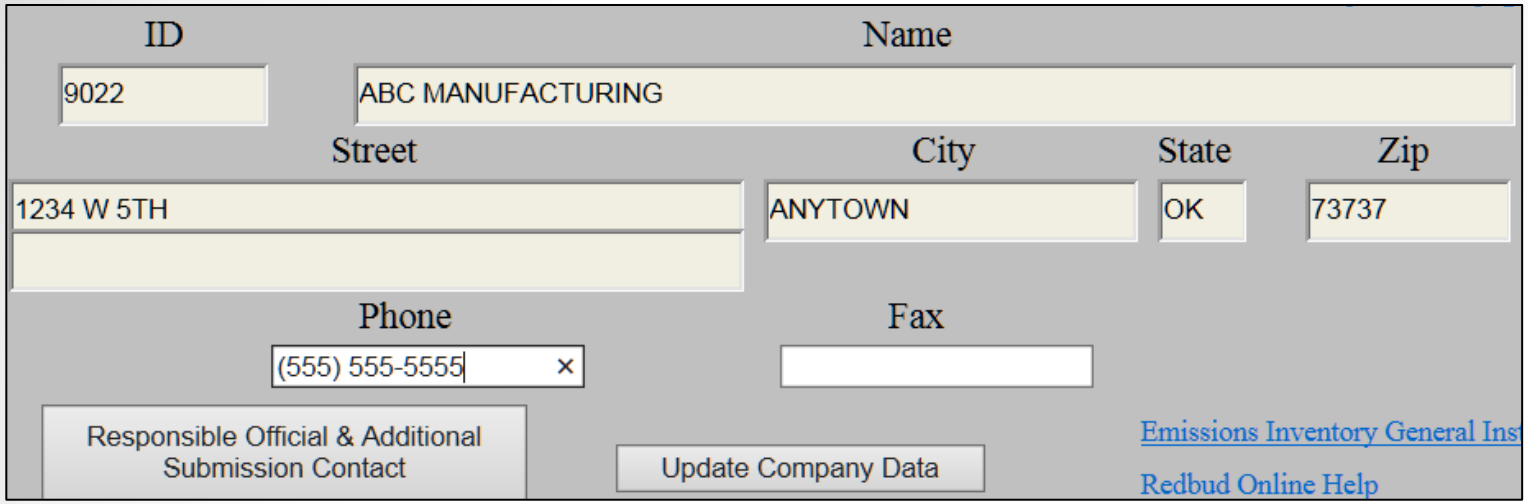
Layout of an Inventory

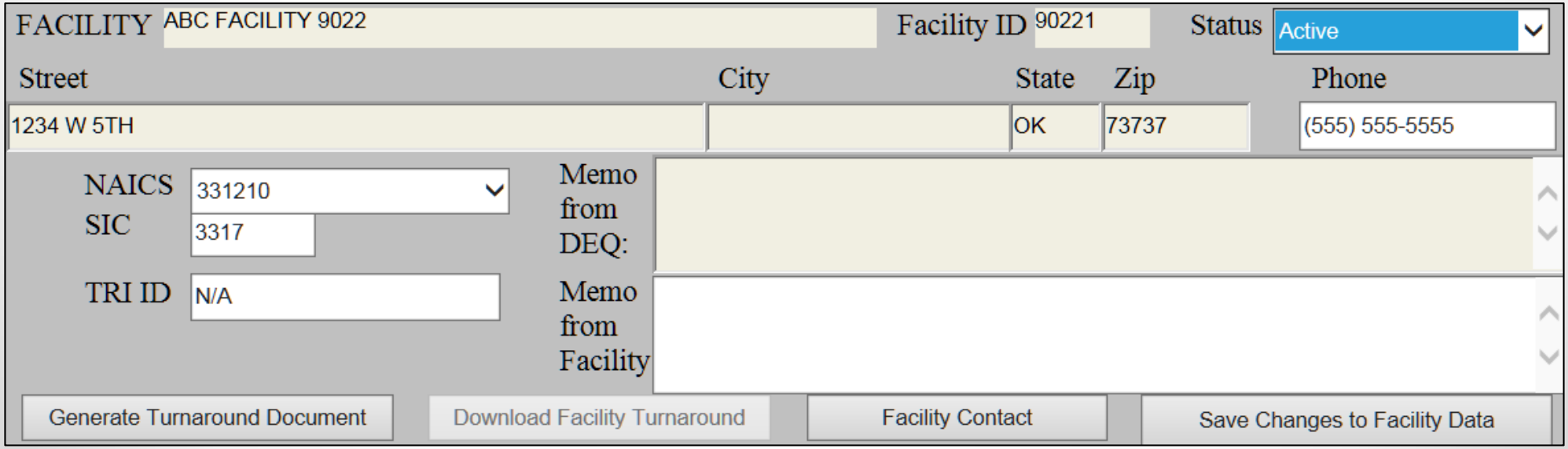
- **Company** – OU Health Sciences Center
  - **Facility** – OKC Campus Services
    - **Emission unit(s) with release point(s)** – Boiler No. 4 & Boiler No. 4 Stack

- **Process(es)** – SCC 10300602 = External Combustion Boilers, Commercial/Institutional, Natural Gas, 10-100 million Btu/hr
- **Emission(s)** – CO, NOx, PM-10, PM-2.5, SOx, Total VOC, Hexane


Company >
COMPANY INFO AND FACILITIES
DEQ Contact Inf
Help with this pa
ID
Name
9027
ABC MANUFACTURING
Street
City
State
Zip
1234 W 5TH
PODUNK
OK
73737
Phone
Fax
(555) 555-5
Responsible Offici
Update Company Data
Company Page
Select Facility to Edit:
- ABC FACILITY 9027
Inventory Submittal Status
Inventory is incomplete
After all 2008 data has been entered, it must be verif
complete before proceeding.
Verify Inventory completeness
Company > Facility >
ABC MANUFACTURING
Help with this page
FACILITY ABC FACILITY 9027
Facility ID 9027
Status Active
Street
City
State
Zip
Phone
1234 W 5TH
PODUNK
OK
73737
(555) 555-5555
NAICS 331210
SIC 3317
Memo:
Dunn & Brad N/A
TRI ID N/A
Turn Around Document
Facility Contact
Update Facility Data
Facility Page
County Tulsa
Sublocator:
Section 17
Township 19N
Range 13E
UTM Horz 235.38
UTM Vert 4001.17
UTM Zone 15
Latitude(N+) 36.124440
Longitude(W-) -95.940280
Facility Points: Select point to edit
1 Vapor Degreaser
2 Natural Gas Burner
View Point Data
Add New Point
Facility Permits:
2009-927-O iss. 1/1/2009
Company > Facility > Point >
Help with this page
<< < 2 > >> of 2
ABC FACILITY 9027
Point ID Seq # Point Name Status UTM Horz UTM Vert
90272 2 Natural Gas Burner Active 235.25 4001.21
Notes:
Changes to Point Data
Updated? NO
Emission Unit Page
Help with adding new stack
Stack ID Seq # Stack Name Dia(ft)
90272 1 Burner stack 12 0.50
Stack Type
Vertical
Gas Exit: 47
Flow(acfm) 12
Temp (F) 690
<< < 1 > >> of 1
Save Changes to Stack Data
Add New Stack
Updated? NO
Processes
View Process Data
Add New Process
- 39000699 Industrial Processes, Natural Gas, General
Company > Facility > Point > Process >
Help with this page
Point ID 90272
Point Name
Natural Gas Burner
Is Process Data Confidential? N
Process ID 902720
SCC 39000699
Process Description
Industrial Processes,In-process Fuel Use,Natural Gas,General
Process Material
Natural Gas
Material I/O
Used (Input)
Process Rates:
Units: 1000 Standard Cubic feet
Maximum Hourly: 0.10
Typical Daily: 1.70
Actual Annual: 0
MACT: Description
NA
Status
NA
Temporal Operating information:
Daily Start time 7 00 AM
Daily Stop time 7 00 PM
Hours/Day 12
Days/Week 5
Weeks/Year 52
Actual Hours/Year 0
Seasonal fractions:
Spring: 0.25
Fall: 0.25
Winter: 0.25
Boilers and Turbines Only
Design Capacity 0
MMBTU hr
Electrical Generating Units Only
Nameplate Capacity 0
MMBTU per Unit
Sulfur 0 %
ASH 0 %
Add New Pollutant
Save Changes to Process Data
Updated? NO
Company > Facility > Point > Emission >
Pollutant ID 191060 1350
Pollutant Description
CAS 630080
Actual Emissions 0 Tons
[Includes All Excess Emissions]
Trace (<.001 TPY)
Calculation Method
Mass Balance
Emission Factor 0
Factor Numerator Units
Information required
Factor Denominator Units
Information required
Uncontrolled
Efficiency, Control 1 0
Efficiency, Control 2 0
Permit/Rule Limit 22 Tons/yr
Excess Emissions 0 Tons
Updated? NO
Save Changes to Pollutant Data
Process & Emissions Page

Company/Facility Information





Air Permit Memorandum

- Includes:
  - Initial application data
  - Description of operations & processes
  - Lists emission units
  - Emission calculations & references
  - Can list acceptable Emission Factors

PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON STREET, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit Number: 2012-1436-O

But Beware !

- The permit may list some processes as:

Insignificant

De Minimis

The permit is not the final word for determining what should be in an emissions inventory

Emission Units

What is an emission unit?

What emission units do I report?

- Normally, the emission units listed in your permit

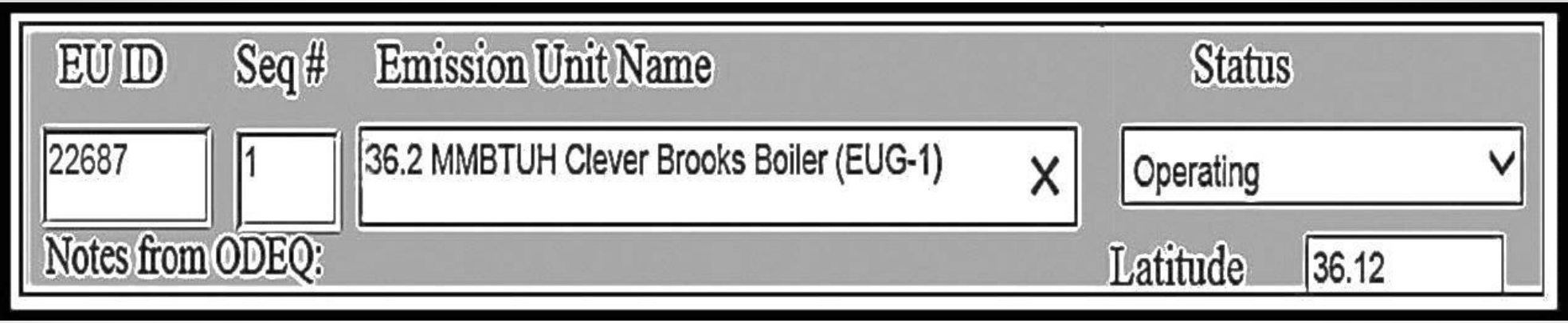
EUG 2 Package Boilers

Boiler name	EP #	Seq #	Heat Input and Manufacturer	Construction Date
B	10277	1	157 MMBTUH Trane-Murray	1974
C	10278	2	177 MMBTUH Combustion Engineering	1975

EUG 3 NSPS Boiler

Boiler name	EP #	Seq #	Heat Input and Manufacturer	Construction Date
D	102XX	24	212 MMBTUH Nebraska Boiler	1995

- However, an emission unit may be insignificant for permitting, but may not be insignificant for emissions inventory reporting
- Are emissions above the reporting threshold?
- Contact us if you are unsure!

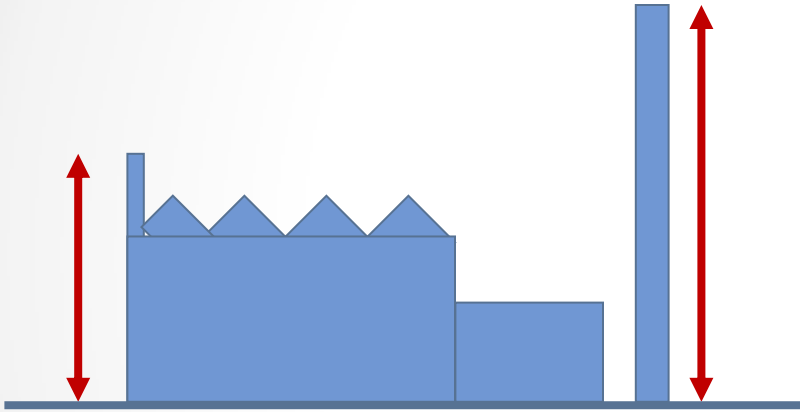


- Operating – emission unit operated at any point in the calendar year.
- Temporarily Shutdown – emission unit did not operate at all during the calendar year, but may restart at sometime in the future.
- Permanently Shutdown – select this status if an emission unit has been physically removed or permanently removed from service.

Emission Release Points

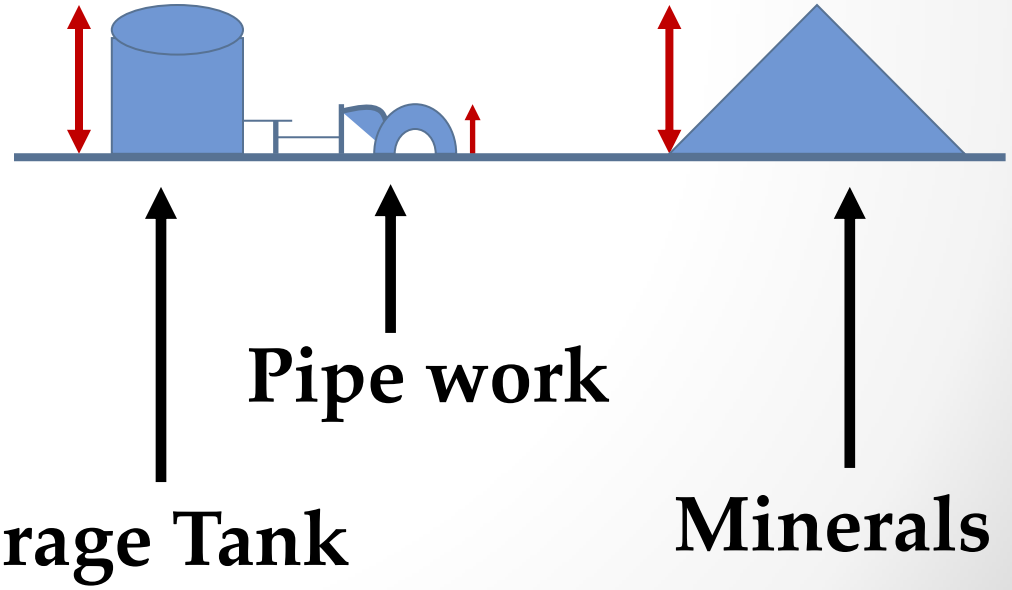
Types of Emission Release Points

Stack



Height Above Grade

Fugitive



Stack Parameters

ERP ID: 372 | Seq #: 1 | Stack/Emission Release Point Name: Stock Pile

Stack/Release Point Type: Fugitive | Status: Operating | Fugitive Area (sq ft): 114 | Fugitive height(ft): 40

<< < 1 > >> of 1 | Save Changes to Release Point Data | Add New Release Point | Updated? NO

Report parameters in the specified units:
http://www.deq.state.ok.us/aqdnew/emissions/SCFMvsACFM.PDF

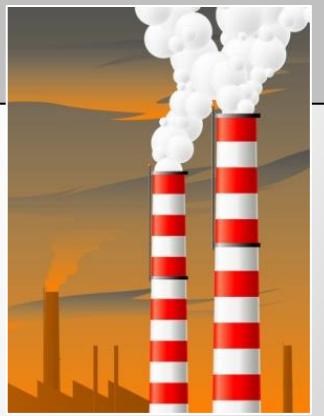
Stack Parameters

ERP ID: 373 | Seq #: 1 | Stack/Emission Release Point Name: 36.2 MMBTUH Clever Brooks Boiler (EUG-1) stack | Height(ft): 16 | Dia(ft): 0.66 | Temp (F): 450

Stack/Release Point Type: Vertical | Status: Operating | Gas Exit Velocity (ft/second): 34.10 | Flow(acfm): 700

Provide one or both of these two fields.

<< < 1 > >> of 1 | Save Changes to Release Point Data | Add New Release Point



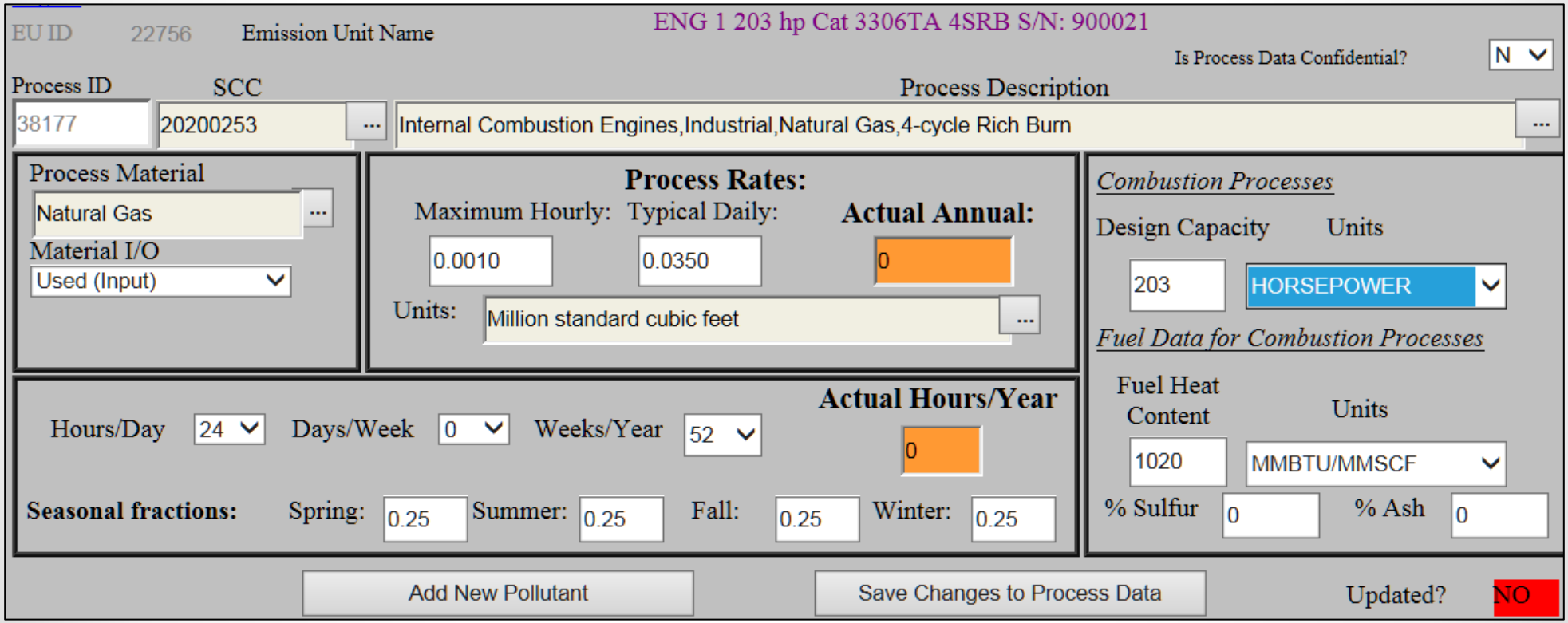
Report parameters in the specified units:
http://www.deq.state.ok.us/aqdnew/emissions/SCFMvsACFM.PDF

Emission Process Information

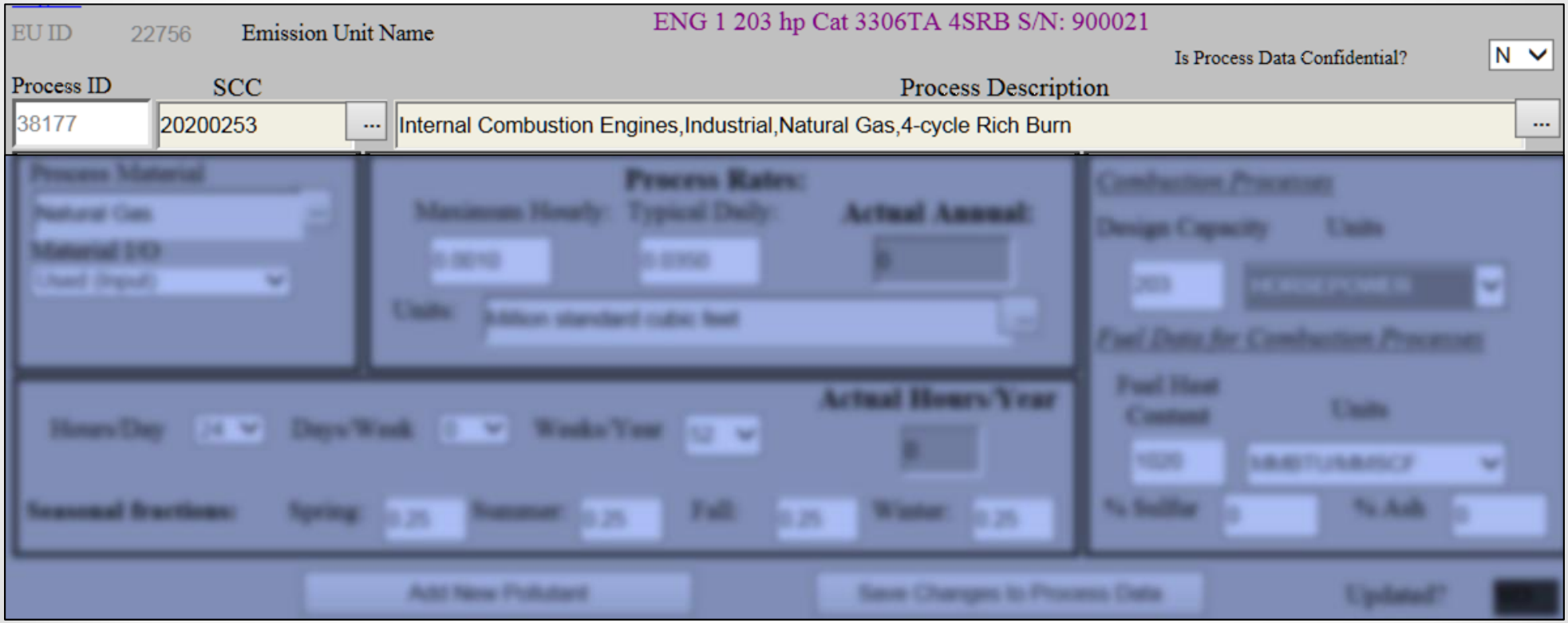
Emission Processes

- What information will I need?
  - Source Classification Code (SCC)
  - Process Material
  - Process Rates
  - Hours each process ran
  - Design capacity (if applicable)
  - Fuel data (if applicable)

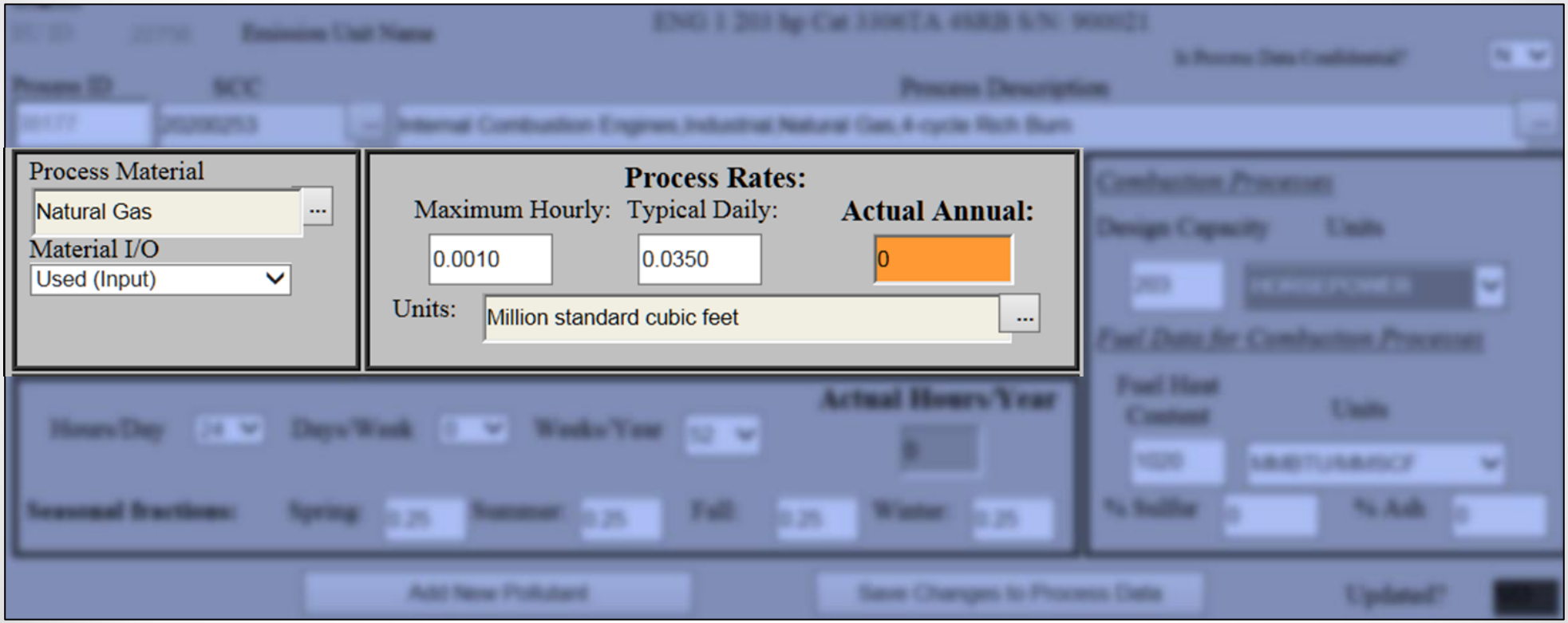
Process Material, Rate & Hours



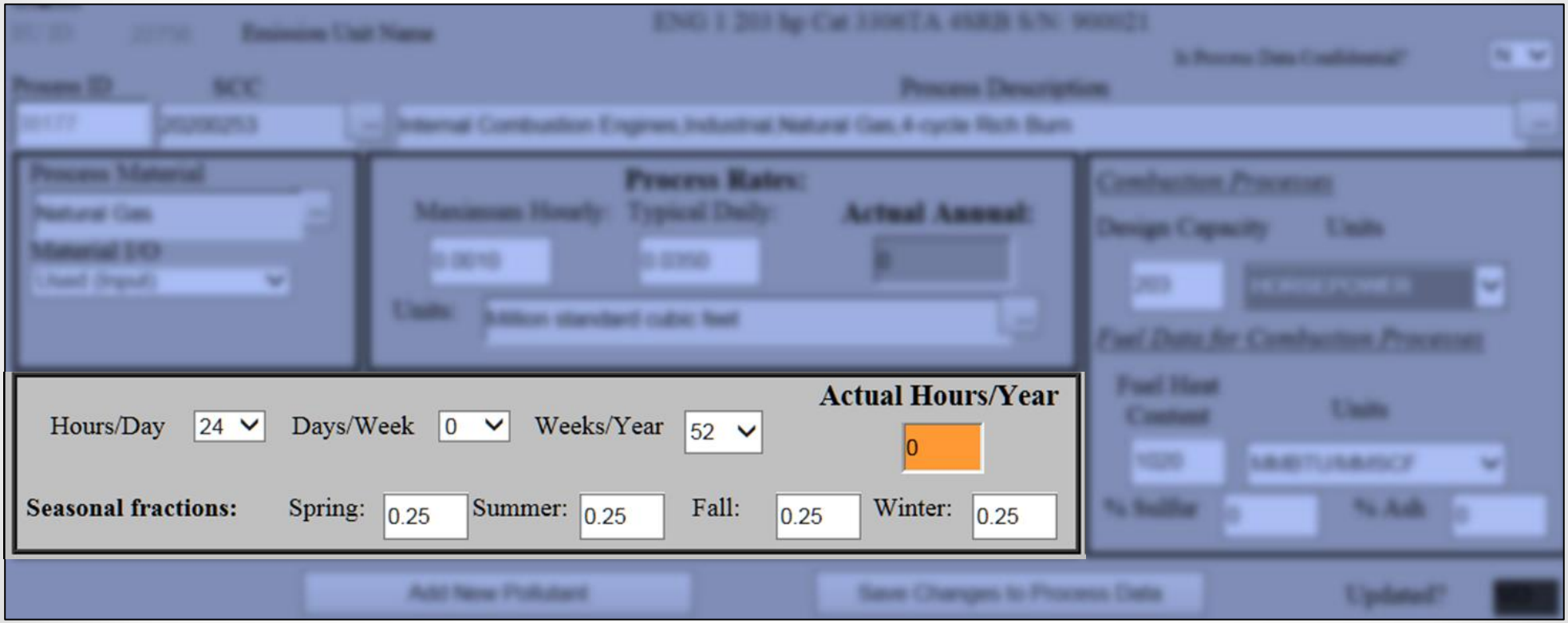
Process Material, Rate & Hours



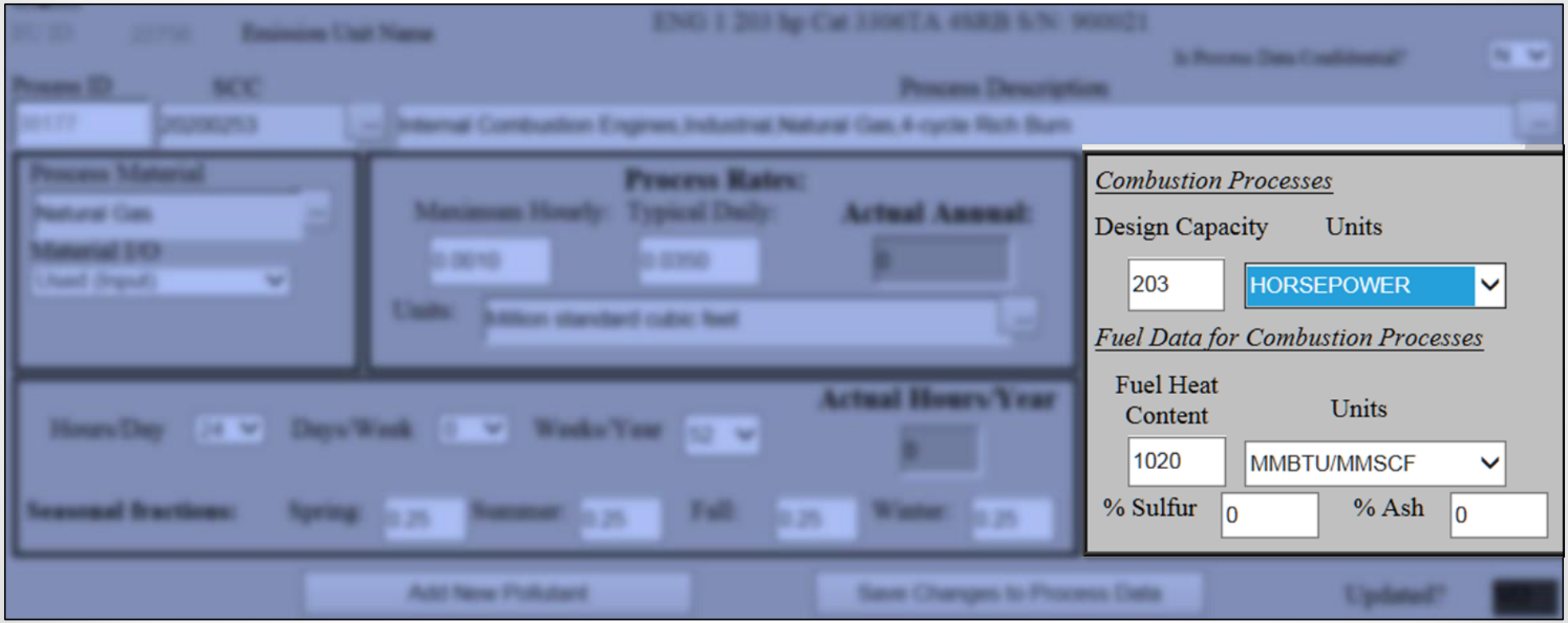
Process Material, Rate & Hours



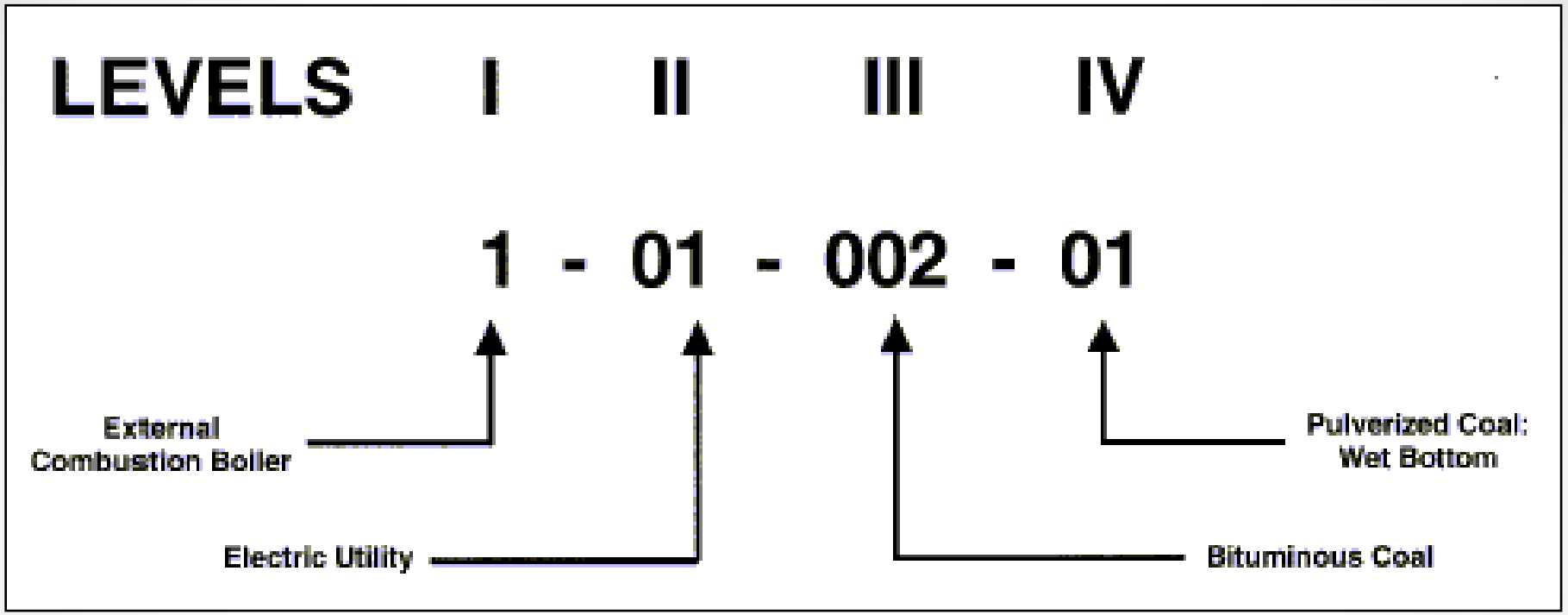
Process Material, Rate & Hours



Process Material, Rate & Hours



Source Classification Code (SCC)



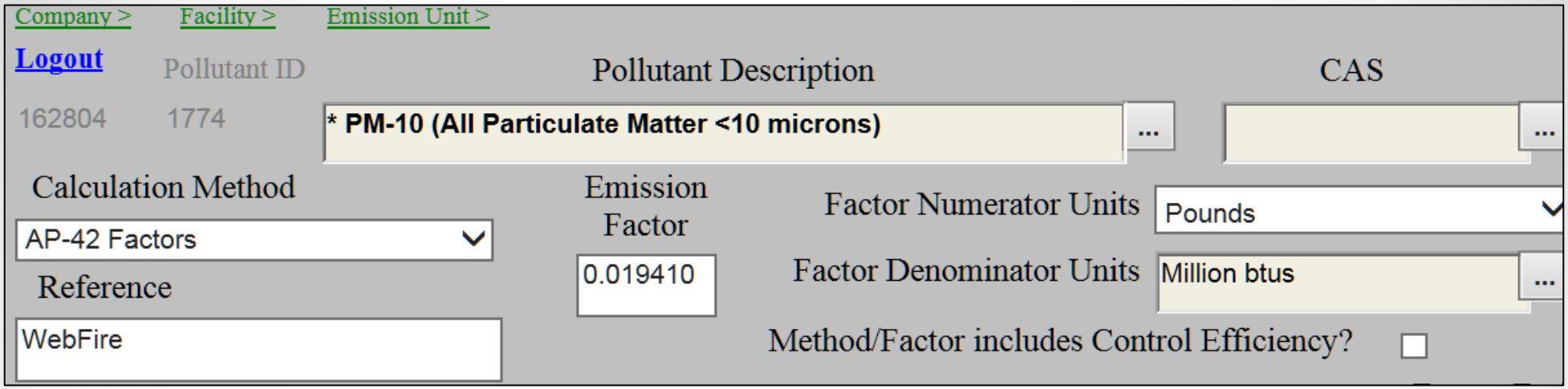
- The SCC provides a systematic description of the process
  - -Be as specific as possible
  - -Avoid miscellaneous processes (xxxxxx99)

Emissions Information

Emissions

- What information will I need?
  - What pollutants to report
  - Method for calculating the emission amounts (e.g., emission factors)
  - Capture efficiency & control efficiency (if applicable)
  - Amount of actual emissions
  - Permit or rule limit (if applicable)
  - Excess emissions (if applicable)

Emissions



- Report Regulated Air Pollutants (RAPs) – pollutants regulated by statute, rule, regulation or permit
- Not sure what pollutants come from your process?
  - Look at your permit
  - Contact your manufacturer or supplier
  - Try entering your SCC into EPA's WebFIRE database

What is an Emission Factor?

An emission factor (E.F.) relates the quantity of a pollutant released with an activity or process rate associated with the release of that pollutant.

OAC 252:100-5-2.1(d) Method of calculation.

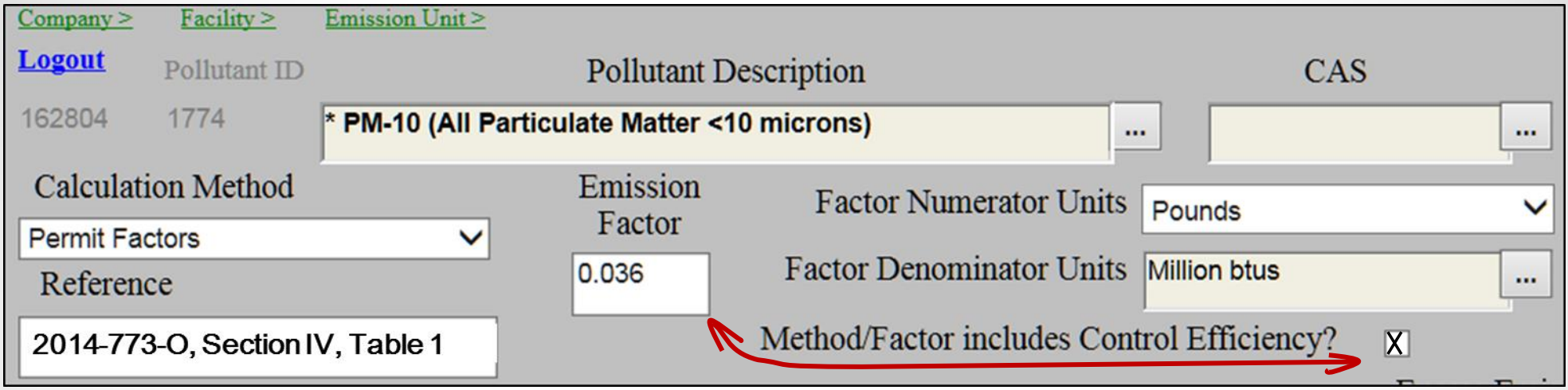
"The best available data at the time the emission inventory is or should have been prepared shall be used to determine emissions."

Emission Factors can be found in your Air Permit:

Potential Emissions From EUG 2 and EUG 3					
Source/ ID#	Hourly Throughput	Pollutant	Emission Data	Emissions	
				Lb/hr	TPY
Unit 1 B-02-1	5,131 MMBTU or 306.22 tons	PM/PM_{10}	0.036 lb/MMBTU (a)	513 (b)	2,247 (c)
		VOC	0.060 lb/ton (d)	18.4	80.5 (c)
		CO	0.17 lb/MMBTU (e)	872	3,820
		SO_2	(f)	(f)	14,525 (f)
		NOx	0.465 lb/MMBTU (g)	3592 (b, g)	15,732 (c, g)
		Fluorides	0.0019120 lb/MMBTU (h)	9.81	43.0 (c)
		Beryllium	0.0002090 lb/MMBTU (h)	0.005 (n)	0.02 (c)
		Lead	0.0000160 lb/ton (h)	0.005	0.02 (c)
		Mercury	0.04335 lb/hr (o)	0.048	0.211 (c)

- Make sure you are using the most current emission factors
- Has there been a more recent stack test?

E.F. & Calculation Method



- Does the E.F. include the reduction due to control equipment?
- Update the Reference field to show where you obtained an E.F.

No Specific Emission Factor

For modeling software, complex mass balance calculations, formulas & CEMS enter:

Emission Factor		
0	Factor Numerator Units	*N/A-Formula, Software, or CE
	Factor Denominator Units	*N/A-Formula, Software, or C ...

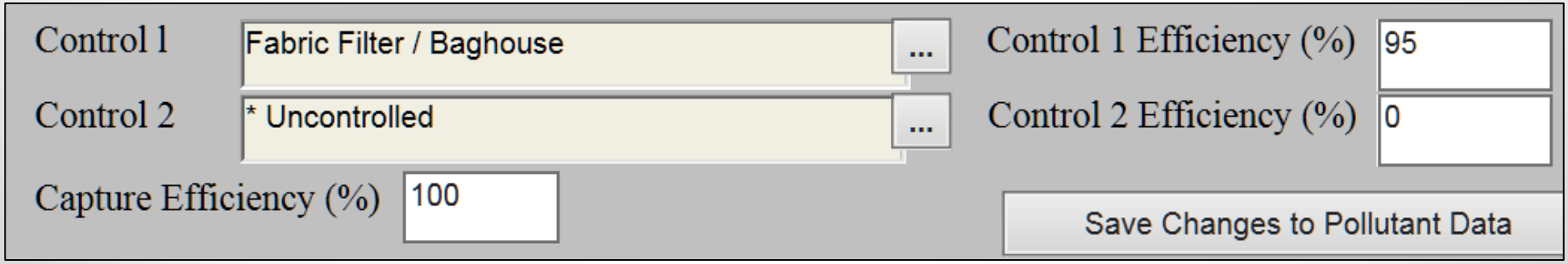
Common Examples:

TANKS, Vasquez-Beggs Equation, GRI-GLYCalc, & LANGEM

Emission Controls

- Control equipment is reported for each individual pollutant

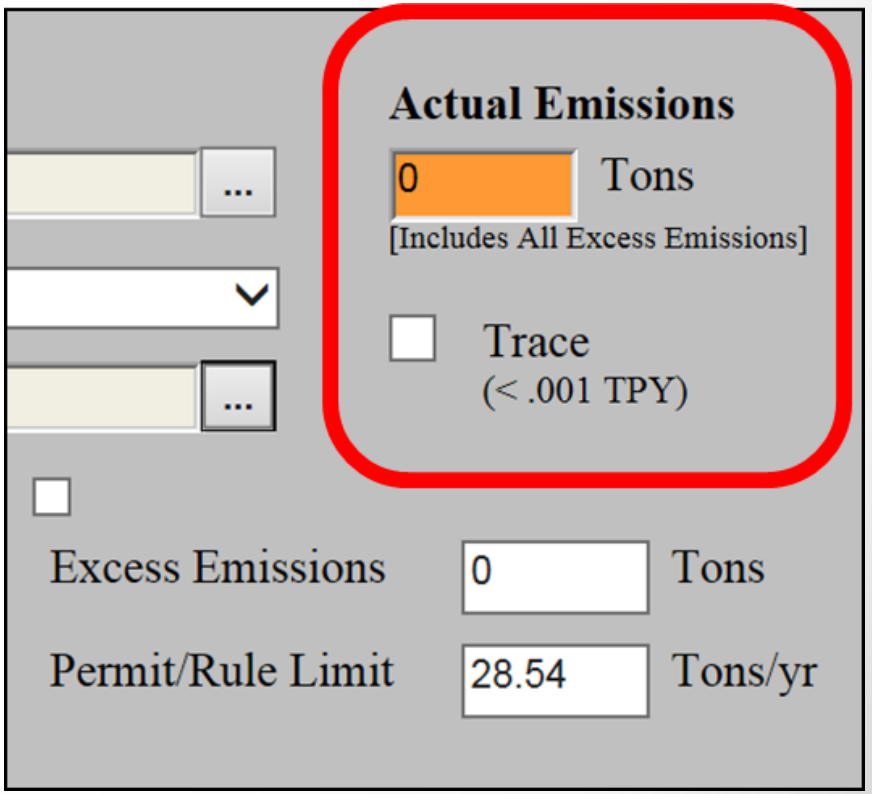
Emissions Unit	Manufacturer	Size/Rating
EP-3 Water Heater	Kemco	15 MMBTUH
EP-2 Water Heater	Kemco	12 MMBTUH
EP-1 Boiler	Williams & Davis	125 HP/ 5.325 MMBTUH
EP-4 Boiler	Superior	200 HP/ 8.40 MMBTUH
Live Receiving System Baghouse	MAC Equip., Inc.	99.9% eff. @ 7,000 cfm



Actual Emission Amount

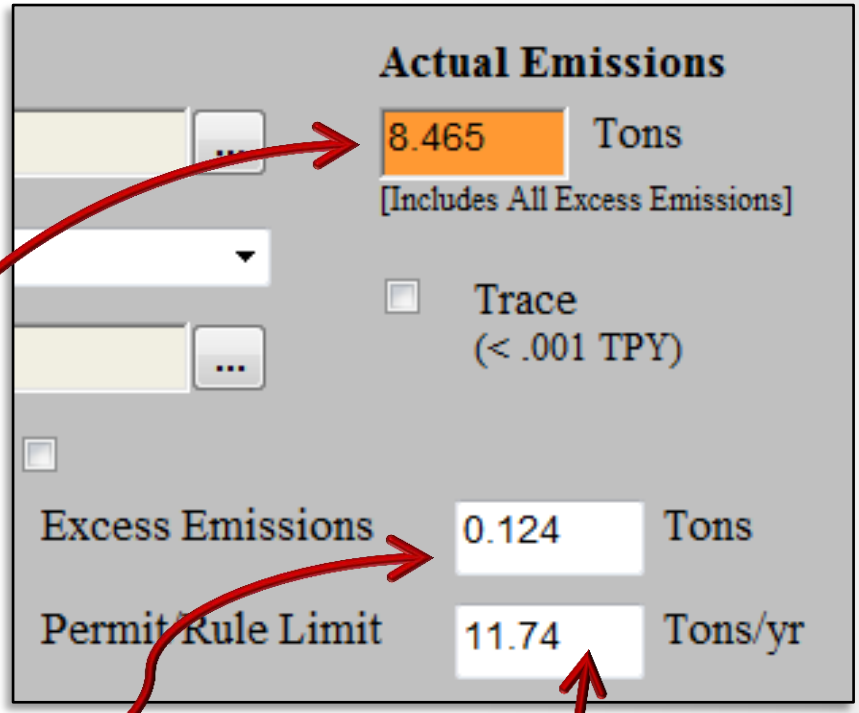
- **"Actual emissions"** means the total amount of any regulated air pollutant actually emitted from a given facility during a particular calendar year, determined using methods contained in OAC 252:100-5-2.1(d).

- This Should Include:
  - ✓Regular operations
  - ✓Startup, Shutdown, Maintenance (SSM)
  - ✓Excess emissions



Excess Emissions

Report quantifiable emissions that are in excess of a permit limit, annual or hourly



Total actual emissions of 8.465 tons includes 0.124 tons of excess emissions

0.124 tons represents total mass of all hourly limit exceedances in the reporting year

The annual limit of 11.74 tons has not been exceeded

"Emission Inventory" - a compilation of all point source, storage and process fugitive air emissions for all regulated air pollutants at a given facility.

Questions?

Emissions Calculations

Joshua Kalfas

Air Quality Workshop

February 4th, 2016
Tulsa, OK

Introduction

Q: What is an Air Emissions Inventory?

A: It is a report describing a facility. It lists activities/equipment that release emissions through various processes and quantifies emissions released.

Two fundamental questions to ask before completing emission calculations:

- **What is this emission?**
- **Where did this emission come from?**

Presentation Structure

Topics and Example Calculations Include:

- **Overview of General Emission Calculation Equation**
- **Notes and Example Calculations**
  - **AP-42 Emission Factors**
  - **WebFIRE Emission Factors**
  - **Particulate Matter**
  - **Control Scenarios**
  - **Volatile Organic Compounds (VOCs)**
- **Guidance for Reporting Chromium Emissions**
- **Final Important Items to Remember**

Overview of General Equation

$$A \times EF = E$$

***A* is Activity Rate**

***EF* is Emission Factor (determined by method)**

***E* is calculated Emission**

Overview of General Equation

$A \times EF = E$

A is Activity Rate

Identify an Activity or Process By Reviewing:

- **Permit Information**
- **Previous Emissions Inventory**
- **Permit Application**
- **Comprehensive Process Flow Diagrams**
- **Manufacturer or Supplier Details**
- **Site Maps**
- **Plot Plans**

Overview of General Equation

$A \times EF = E$

A is Activity Rate

Collect Information On:

- **Source Classification Code**
- **Process Material**
- **Process Rate**
- **Hours Process Occurred**
- **Design Capacity**
- **Fuel Data**
- **Reportable Pollutants**
- **Control Scenario**
- **Permit or Rule Limit**
- **Excess Emissions**

Overview of General Equation

$A \times EF = E$ **EF is Emission Factor (determined by method)**

Q: What is an Emission Factor?

A: An Emission Factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant.

Overview of General Equation

$A \times EF = E$ **EF is Emission Factor (determined by method)**

Calculation Methods

- Continuous Emission Monitoring System (CEMS)
- EPA RM Stack Test
- Similar Unit EPA RM Stack Test
- Manufacture Test Data
- Process Simulation Software
- Mass Balance
- WebFIRE Data Factors (EPA)
- AP-42 or other EPA Documents

Overview of General Equation

All Values Have Physical Dimensions

$$A \times EF = E$$

Two fundamental questions to ask before completing emission calculations:

- **What is this emission?**
- **Where did this emission come from?**

Overview of General Equation

$A \times EF = E$ **EF is Emission Factor (determined by method)**

http://www.epa.gov/ttn/chief/index.html

WebFIRE and AP-42

Industrial Boiler

CO calculation using AP-42

Activity Information:

- **Source Classification Code:** **10200602**
- **Process Material:** **Natural Gas**
- **Process Rate:** **673 MMscf/1 year**
- **Hours Process Occurred:** **8,025**
- **Design Capacity (if applicable):** **84 MMbtu/1 hour**
- **Fuel Data (if applicable):** **1,001 MMbtu/1 MMscf**
- **Reportable Pollutants:** **example**
- **Control Scenario (if applicable):** **none**

Industrial Boiler

CO calculation using AP-42

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B

http://www.epa.gov/ttn/chief/index.html

Industrial Boiler

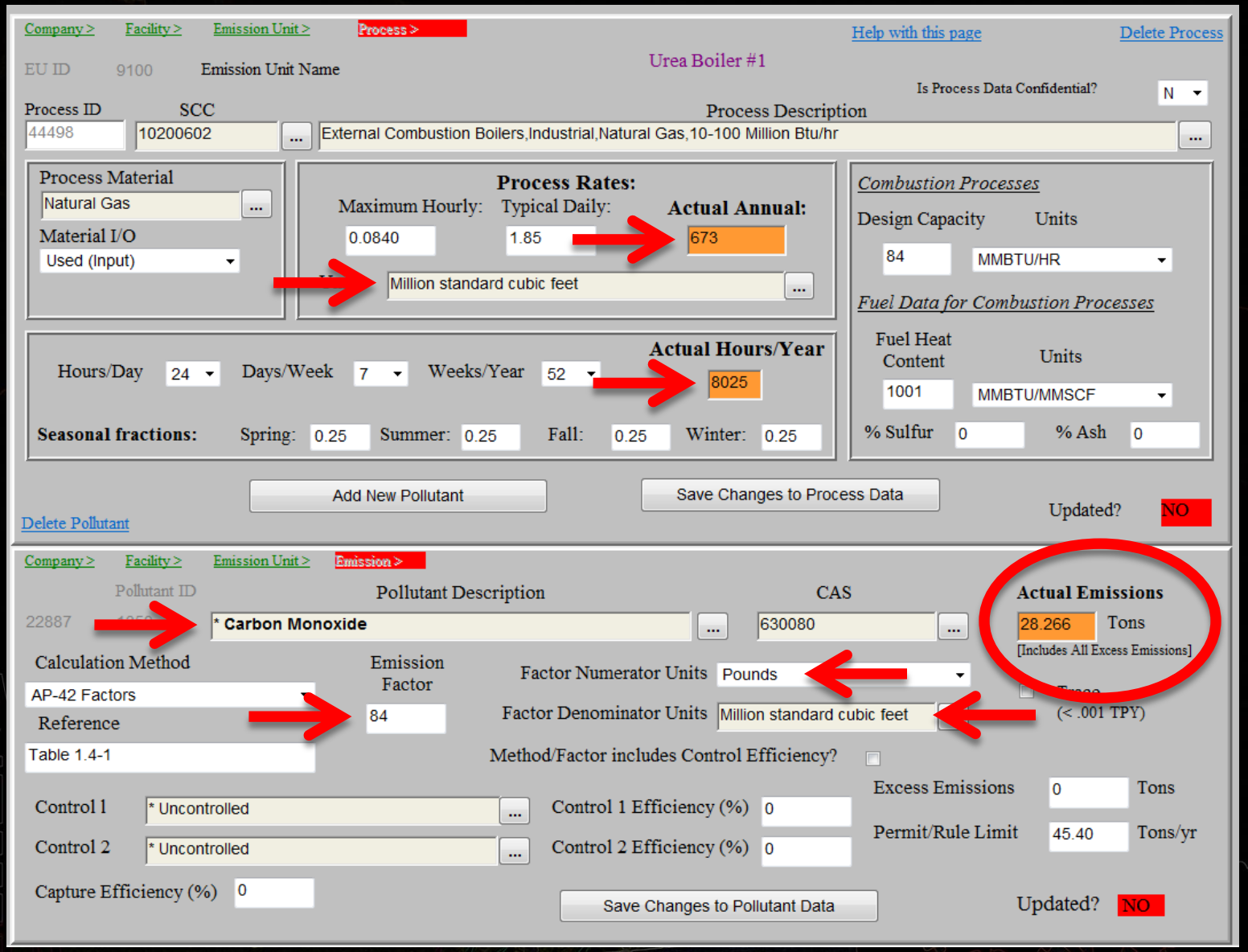
CO calculation using AP-42

$$A \times EF = E$$

$$\frac{673\ MMscf\ NG}{1\ year} \times \frac{84\ lbs\ CO}{1\ MMscf\ NG} = \frac{56,532\ lbs\ CO}{1\ year}$$

Convert to Tons

$$\frac{56,532\ lbs\ CO}{1\ year} \times \frac{1\ ton}{2,000\ lbs} = \frac{28.266\ tons\ CO}{1\ year}$$


Company >
Facility >
Emission Unit >
Process >
Help with this page
Delete Process
EU ID 9100
Emission Unit Name
Urea Boiler #1
Is Process Data Confidential? N
Process ID 44498
SCC 10200602
Process Description
External Combustion Boilers,Industrial,Natural Gas,10-100 Million Btu/hr
Process Material
Natural Gas
Material I/O
Used (Input)
Process Rates:
Maximum Hourly: 0.0840
Typical Daily: 1.85
Actual Annual: 673
Million standard cubic feet
Combustion Processes
Design Capacity 84
Units MMBTU/HR
Fuel Data for Combustion Processes
Fuel Heat Content 1001
Units MMBTU/MMSCF
% Sulfur 0
% Ash 0
Hours/Day 24
Days/Week 7
Weeks/Year 52
Actual Hours/Year 8025
Seasonal fractions:
Spring: 0.25
Summer: 0.25
Fall: 0.25
Winter: 0.25
Add New Pollutant
Save Changes to Process Data
Updated? NO
Delete Pollutant
Company >
Facility >
Emission Unit >
Emission >
Pollutant ID 22887
Pollutant Description * Carbon Monoxide
CAS 630080
Actual Emissions 28.266 Tons
[Includes All Excess Emissions]
Calculation Method AP-42 Factors
Reference Table 1.4-1
Emission Factor 84
Factor Numerator Units Pounds
Factor Denominator Units Million standard cubic feet
(< .001 TPY)
Method/Factor includes Control Efficiency?
Control 1 * Uncontrolled
Control 1 Efficiency (%) 0
Control 2 * Uncontrolled
Control 2 Efficiency (%) 0
Capture Efficiency (%) 0
Excess Emissions 0 Tons
Permit/Rule Limit 45.40 Tons/yr
Save Changes to Pollutant Data
Updated? NO

Reciprocating Emergency Generator

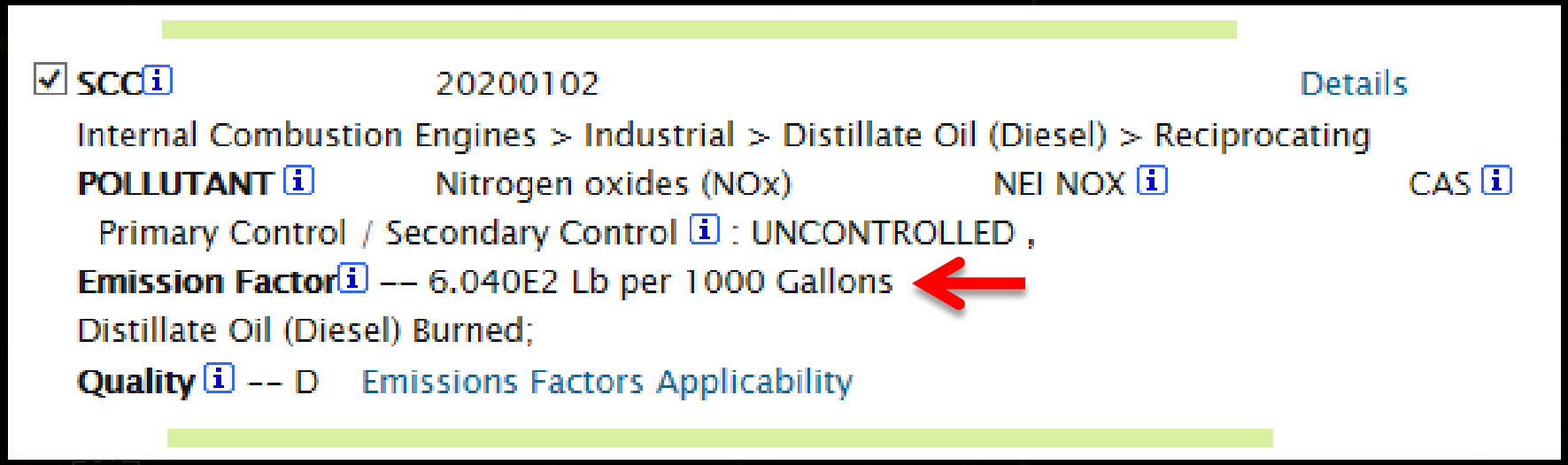
NO_x calculation using WebFIRE

Activity Information:

- **Source Classification Code:** **20200102**
- **Process Material:** **Diesel Fuel**
- **Process Rate:** **10 gal Diesel/1 hour**
- **Hours Process Occurred:** **50**
- **Design Capacity (if applicable):** **400 hp**
- **Fuel Data (if applicable):** **137 MMbtu/1,000 gal**
- **Reportable Pollutants:** **example**
- **Control Scenario (if applicable):** **none**

Reciprocating Emergency Generator

NO_x calculation using WebFIRE



http://www.epa.gov/ttn/chief/index.html

Reciprocating Emergency Generator

NO_x calculation using WebFIRE

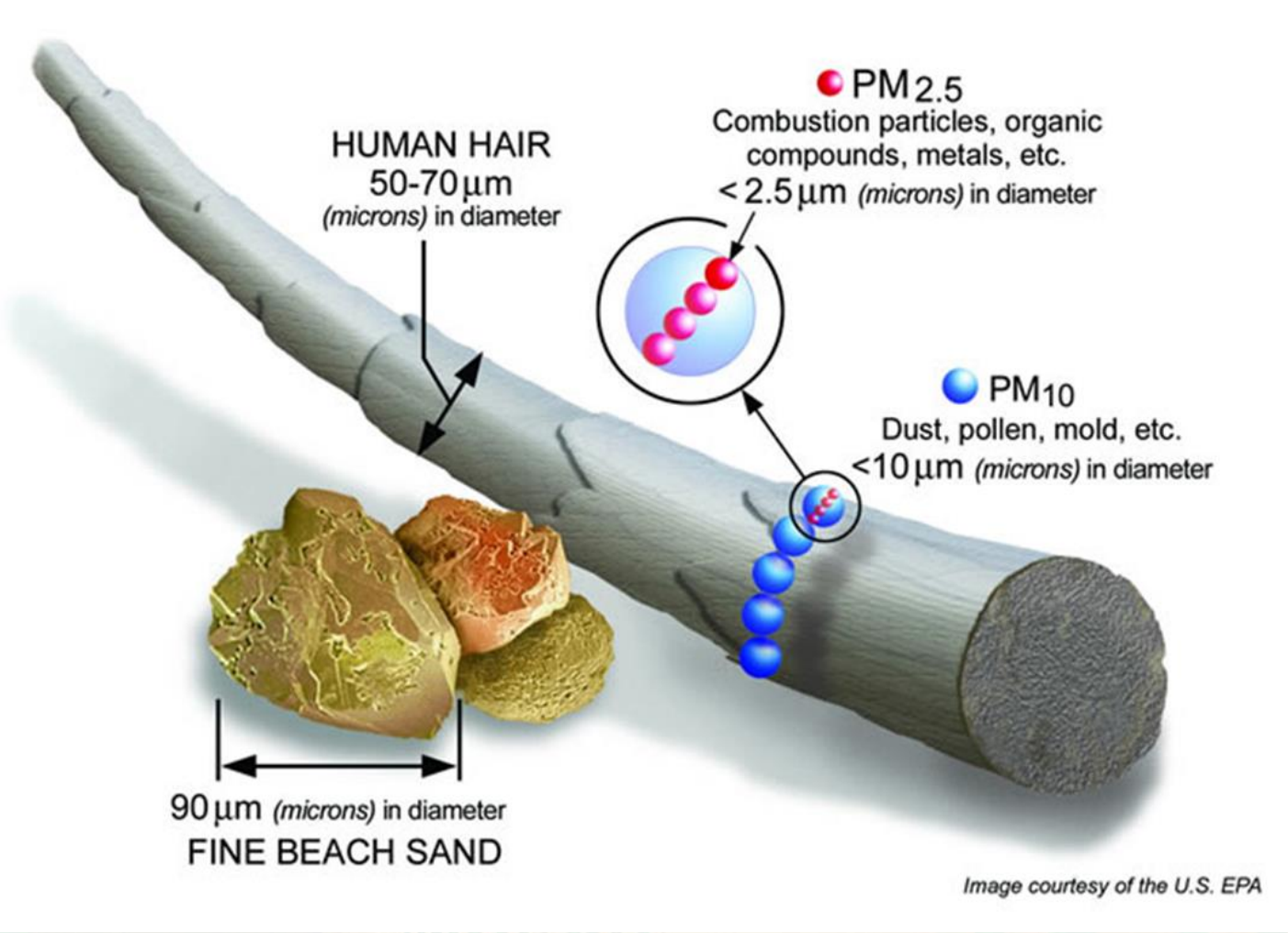
$$A \times EF = E$$

$$\frac{500\ gal\ diesel}{1\ year} \times \frac{604\ lbs\ NO_x}{1,000\ gal\ diesel} = \frac{302\ lbs\ NO_x}{1\ year}$$

Convert to Tons

$$\frac{302\ lbs\ NO_x}{1\ year} \times \frac{1\ ton}{2,000\ lbs} = \frac{0.151\ tons\ NO_x}{1\ year}$$

Particulate Matter (PM)



Particulate Matter (PM)

Two classes of Particulate Matter (PM) are reported in OK DEQ Air Emission Inventories:

- **PM-10, which is <u>all</u> particulate matter where**

$$aerodynamic\ diameter \leq 10\ \mu m$$

[This value should always be ≥ PM-2.5 in OK DEQ AEIs]

- **PM-2.5, which is <u>all</u> particulate matter where**

$$aerodynamic\ diameter \leq 2.5\ \mu m$$

[PM (Condensable) is part of PM-2.5]

Stone Quarry Tertiary Crushing

PM-10 calculation using AP-42

Activity Information:

- **Source Classification Code:** **30502003**
- **Process Material:** **Stone**
- **Process Rate:** **1,361,120 tons/1 year**
- **Hours Process Occurred:** **3,640**
- **Design Capacity (if applicable):** **-**
- **Fuel Data (if applicable):** **-**
- **Reportable Pollutants:** **example**
- **Control Scenario (if applicable):** **none**

Stone Quarry Tertiary Crushing

PM-10 calculation using AP-42

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

Source [b]	Total Particulate Matter [r,s]	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Primary Crushing (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Primary Crushing (controlled) (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Secondary Crushing (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Secondary Crushing (controlled) (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Tertiary Crushing (SCC 3-050030-03)	0.0054[d]	E	0.0024[o]	C	ND[n]	
Tertiary Crushing (controlled) (SCC 3-05-020-03)	0.0012[d]	E	0.00054[p]	C	0.00010[q]	E

http://www.epa.gov/ttn/chief/index.html

Stone Quarry Tertiary Crushing

PM-10 calculation using AP-42

$$A \times EF = E$$

$$\frac{1,361,120\ tons\ stone}{1\ year} \times \frac{0.0024\ lbs\ PM_{10}}{1\ ton\ stone} = \frac{3,267\ lbs\ PM_{10}}{1\ year}$$

Convert to Tons

$$\frac{3,267\ lbs\ PM_{10}}{1\ year} \times \frac{1\ ton}{2,000\ lbs} = \frac{1.633\ tons\ PM_{10}}{1\ year}$$

Control Scenarios

Q: What is a Control Scenario?

A: It is a control system, abatement equipment, or an approach applied to reduce emissions of a pollutant.

Control Scenarios

Q: What is Capture Efficiency?

A: When a control scenario is operating as designed, it is the percentage of air emissions that are directed to the control equipment or an estimate of that portion of an affected emissions stream that is collected and routed to the control measure.

Control Scenarios

Q: What is Control Efficiency?

A: It is the percentage of actual air emissions prevented from being emitted by the control scenario.

- **The efficiency should reflect device degradation.**
- **Any emissions during control scenario downtime should be accounted for in the total actual emissions.**

Control Scenarios

$A \times EF = E$ **E is Emission**

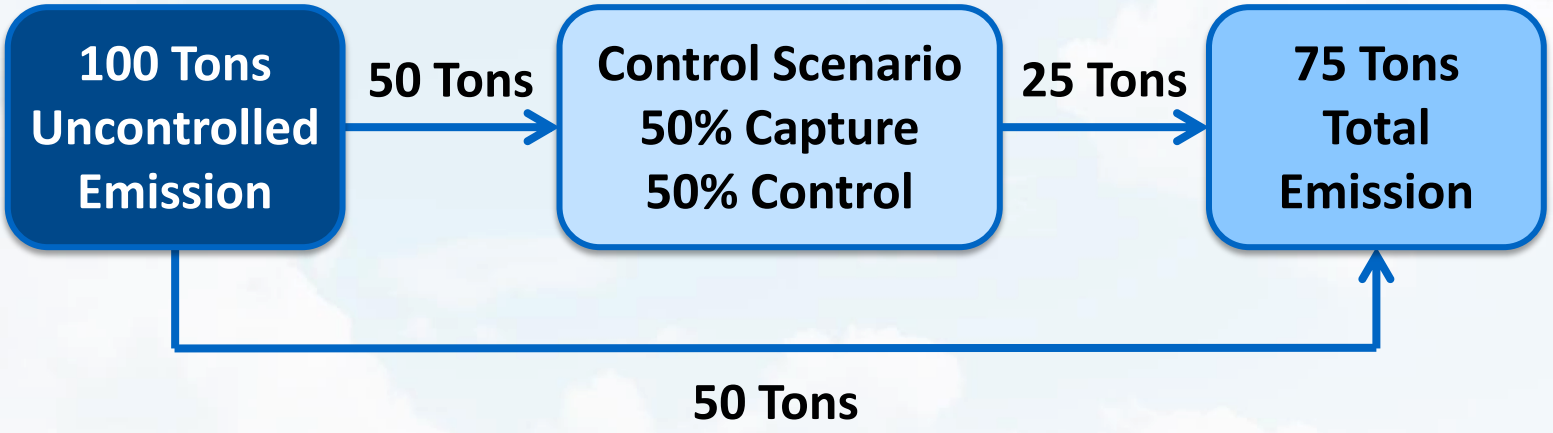
To Include a Control Scenario:

- **Calculate the Emission**
- **Apply the Capture Efficiency**
- **Apply the Control Efficiency to the Captured Emission**
- **Sum the Uncaptured Emission and the Emission Remaining After Applying the Control Efficiency**

Control Scenarios

$A \times EF = E$

E **is Emission**



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

Not all Capture Efficiencies are 100%. Use appropriately.

Stone Quarry Tertiary Crushing

PM-10 calculation using AP-42 and a Control

Activity Information:

- **Source Classification Code:** **30502003**
- **Process Material:** **Stone**
- **Process Rate:** **1,361,120 tons/1 year**
- **Hours Process Occurred:** **3,640**
- **Reportable Pollutants:** **example**
- **Control Scenario (if applicable):** **Dust Suppression**

Capture = 100%
Control = 77.7%

Stone Quarry Tertiary Crushing

PM-10 calculation using AP-42 and a Control

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

$$\frac{1.633\ tons\ PM_{10}}{1\ year}\left(1 - \frac{77.7}{100}\right) = \frac{0.364\ tons\ PM_{10}}{1\ year}$$

Many Capture Efficiencies are 100%

Volatile Organic Compounds (VOC)

VOC Reporting Guidance:

- **Calculate and report Total VOC emissions.**
- **Calculate and report all HAP VOCs as appropriate.**
- **Total VOC emissions must be ≥ the sum of individually reported HAP VOC emissions.**
  - **Do not subtract individually reported HAP VOCs from Total VOC.**
  - **Every process having an individual HAP VOC pollutant emission reported must have a Total VOC emission reported.**

Volatile Organic Compounds (VOC)

Guidance on Using Manufacturer VOC Data:

- **Verify whether the manufacturer's emission factor refers to Total VOC.**
- **Verify whether the manufacturer's VOC emission factor accounts for formaldehyde and other aldehyde compounds.**
  - **This is especially relevant for JJJJ engines.**
- **Use caution when mixing emission factors from different sources, e.g., manufacturer and AP-42 emission factors.**
- **Review the EPA's definition of VOC for clarification.**

4-Stroke, Lean Burn Engine

Total VOC calculation using vendor data

Activity Information:

- **Source Classification Code:** **20200254**
- **Process Material:** **Natural Gas**
- **Process Rate:** **138,000 bhp-hr**
- **Hours Process Occurred:** **100**
- **Design Capacity (if applicable):** **1,380 bhp**
- **Fuel Data (if applicable):** **1,020 MMbtu/1 MMscf**
- **Reportable Pollutants:** **example**
- **Control Scenario (if applicable):** **none**

4-Stroke, Lean Burn Engine

Total VOC calculation using vendor data

Emissions*		
NOx	g/bkW-hr (g/bhp-hr)	0.67 (0.50)
CO	g/bkW-hr (g/bhp-hr)	3.26 (2.43)
CO_2	g/bkW-hr (g/bhp-hr)	635 (474)
VOC**	g/bkW-hr (g/bhp-hr)	0.64 (0.48)

*at 100% load and speed, all values are listed as not to exceed
**Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ
***ISO 3046/1

How does JJJJ define VOC?

4-Stroke, Lean Burn Engine

Total VOC calculation using vendor data

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

13. … THC, NMHC, and NMNEHC do not include aldehydes.

14. VOCs – Volatile organic compounds as defined in … JJJJ.

4-Stroke, Lean Burn Engine

Total VOC calculation using vendor data

$$A \times EF = E$$

$$\frac{138,000\ bhp-hr}{1\ year} \times \frac{0.92\ g\ Total\ VOC}{1\ bhp-hr} = \frac{126,960\ g\ Total\ VOC}{1\ year}$$

Convert to Tons

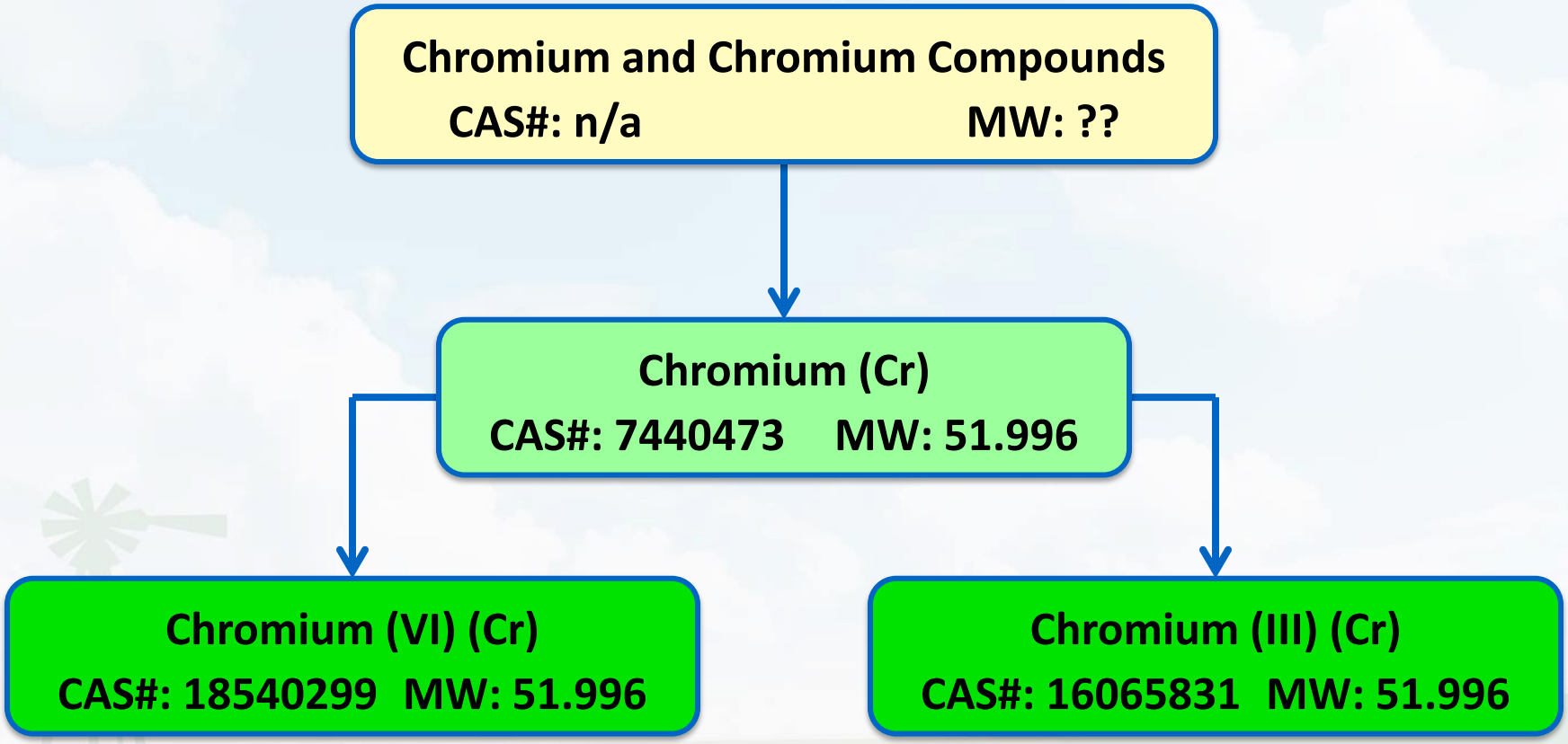
$$126,960\ g\ Total\ VOC = 0.140\ tons\ Total\ VOC$$

Volatile Organic Compounds (VOC)

Guidance on Using Manufacturer VOC Data:

- **Use caution when mixing emission factors from different sources, e.g., manufacturer and AP-42 emission factors.**
  - **Using a manufacturer Total VOC emission factor implies individual VOC emission factors require review.**
  - **TCEQ Emission Inventory Guidance *Appendix A***
    - **VOC Emissions → Vendor Data → Speciation**
- **Revisit 2014 emission inventory submissions if errors or oversights are identified.**

Chromium Compounds



Chromium Compounds

Chromium reporting guidance:

- **Do <u>not</u> report Chromium if you are reporting either Chromium (VI) or Chromium (III) at that process.**
- **Do <u>not</u> use emission factors to derive a new factor.**

Chromium (Cr)
CAS#: 7440473 MW: 51.996

Chromium (VI) (Cr)
CAS#: 18540299 MW: 51.996

Chromium (III) (Cr)
CAS#: 16065831 MW: 51.996

Chromium Compounds

Chromium reporting guidance:

- **Do not report Chromium if you are reporting either Chromium (VI) or Chromium (III) at that process.**
- **Do not use emission factors to derive a new factor.**
- **Does all Chromium come from a single chemical?**
  - **Chromium (VI) and Chromium (III) speciation info exists for numerous chemicals.**
  - **Contact Joshua.Kalfas@deq.ok.gov.**
- **Revisit 2014 emission inventory submissions if errors or oversights are identified.**

Important Items To Remember

- **A Facility's Potential To Emit (PTE) Does Not Equal a Facility's Actual Emissions.**
- **Remember to Apply Most Current Guidance.**
- **"The best available data at the time the emission inventory is or should have been prepared shall be used to determine emissions."**
- **Report Gap-Filled CEMS Data.**
- **Calculation Parameters Are Needed For Redbud!**
- **Do Reported Parameters Enable Emissions Verification?**
- **Supporting Documentation Must Be Maintained.**

Differences Between EI and TRI?

Pollutant (air emissions)	EI Facility Sum	TRI Facility Sum	TRI Range
Ammonia	0.855	4.800	
Benzene	1.637	2.075	Yes
Biphenyl	0.009	0.128	Yes
Carbon disulfide	0.598	0.725	Yes
Cumene	0.171	0.250	Yes
Ethylbenzene	1.573	2.950	
Hexane	4.802	7.800	
Hydrogen sulfide	0.010	1.325	Yes
Naphthalene	0.782	0.925	Yes
Nickel and Nickel compounds	0.020	0.125	Yes
Xylenes (mixed isomers)	8.510	15.000	

OK DEQ Emission Inventory Section

If you would like to see an example calculation for another industry, activity, or control scenario not presented today:

E-mail aei@deq.ok.gov with your request.

Questions?

OK DEQ Emission Inventory Section

Program Manager:

Mark Gibbs	Mark.Gibbs@deq.ok.gov

Emission Inventory Section Staff:

Louise Esjornson	Louise.Esjornson@deq.ok.gov
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Carrie Schroeder	Carrie.Schroeder@deq.ok.gov

http://www.deq.state.ok.us/aqdnew/emissions/index.htm

Emissions Inventory General Issues

Mark Gibbs
Emission Inventory Manager

Air Quality Workshop
February 4th, 2016
Tulsa, OK

Topics To Discuss

- Change of Ownership or Personnel
- Operating Statuses
- Data Issues & Typical Problems
- Annual Operating Fee Invoicing Process
- Other Inventory Programs

Change of Ownership or Personnel

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."

Change of Ownership

- What this means for the new owner:
  - Responsibilities transfer unless explicitly stated in contract or sale agreement
  - New owner is responsible for providing the complete year's inventory
    - Even if sale took place within the reporting year

Request for Transfer and Administrative Amendment of Permit Form #100-883

AIR QUALITY DIVISION
ADMINISTRATIVE CHANGE NOTIFICATION
Request for Transfer and Administrative Amendment of Permit

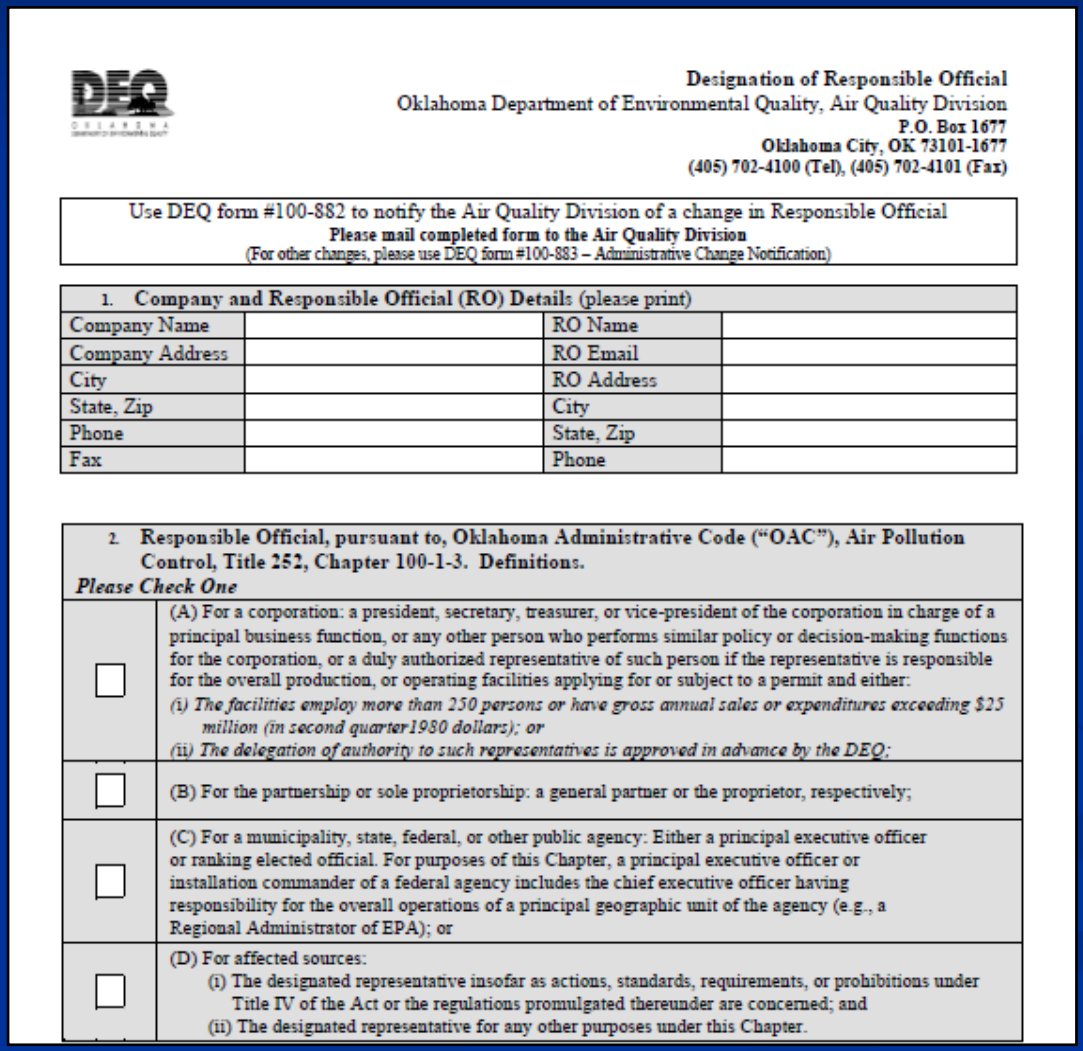
Oklahoma Dept. Of Environmental Quality
Air Quality Division
707 N Robinson, Suite 4100, P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

FACILITY INFORMATION						
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	

INFORMATION UPDATE		
INFORMATION ITEM	PREVIOUS/CURRENT (Transferor)	NEW (Transferee)
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		

(Just) Changing a Responsible Official Form #100-882

http://www.deq.state.ok.us/AQDnew/resources/aqforms.htm



Designation of Responsible Official
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)

Use DEQ form #100-882 to notify the Air Quality Division of a change in Responsible Official
Please mail completed form to the Air Quality Division
(For other changes, please use DEQ form #100-883 – Administrative Change Notification)

1. **Company and Responsible Official (RO) Details** (please print)			
Company Name		RO Name	
Company Address		RO Email	
City		RO Address	
State, Zip		City	
Phone		State, Zip	
Fax		Phone	

2. **Responsible Official, pursuant to, Oklahoma Administrative Code ("OAC"), Air Pollution Control, Title 252, Chapter 100-1-3. Definitions.** *Please Check One*	
☐	(A) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall production, or operating facilities applying for or subject to a permit and either: *(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter1980 dollars); or* *(ii) The delegation of authority to such representatives is approved in advance by the DEQ;*
☐	(B) For the partnership or sole proprietorship: a general partner or the proprietor, respectively;
☐	(C) For a municipality, state, federal, or other public agency: Either a principal executive officer or ranking elected official. For purposes of this Chapter, a principal executive officer or installation commander of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or
☐	(D) For affected sources: (i) The designated representative insofar as actions, standards, requirements, or prohibitions under Title IV of the Act or the regulations promulgated thereunder are concerned; and (ii) The designated representative for any other purposes under this Chapter.

Changing a Main Facility Contact

- Inventory questions are initially presented to the Main Facility Contact
- Changes can be made simply by emailing the EI section with the name, title, address, phone number, and email of the person.
- A form is not necessarily required.
  - aei@deq.ok.gov

Operating Statuses

Facility Status

- If Not Yet Built or Idle last year, we reset to Active for the new Reporting Year
- Facility operating status must be verified yearly
- If the facility was active at any time, status is Active for that Reporting Year

Facility Status

- "Not yet built" Status
  - E.g., permit applied for in 2015 but construction has not yet started
  - Add a brief facility note if necessary
- Exempt or De Minimis facilities must be removed completely from Redbud
  - Please contact us to do so

Emission Unit Status

Operating & Temporarily Shutdown:

Remains in your inventory next year

Permanently Shutdown:

Drops out from your inventory next year

- Example: Emission unit operated through June 2014 then physically removed from the facility in September 2014

  Status for 2014 – Operating

  Status for 2015 – Permanently Shutdown

  Status for 2016 – Not in inventory

Replacement Equipment

- Don't change the existing unit
- Create a new emission unit
- Report data for original & replacement equipment separately
- Include notes explaining the situation at both units
- Report original equipment as permanently shutdown the next year. It will then drop out of the inventory the year after that.

Data Issues & Typical Problems

Ensure Data is Consistent

If Emission Unit Status = Active

Operating Hours should be > 0

Process Rates should be > 0

At least some emissions would normally be reported

Storage Tank Emissions

- Emissions released from the bottom of a tank that has no throughput must be reported
  - Tank would be reported as Active
- Tanks linked together can be reported as a single emission unit
- Combined SCC 40400311 (working + breathing + flashing) may be used for condensate tanks with < 6 ton per year total VOC emissions
- Create new process if changing to SCC 40400311. Don't change the SCC at an existing process.

Other Typical Problems

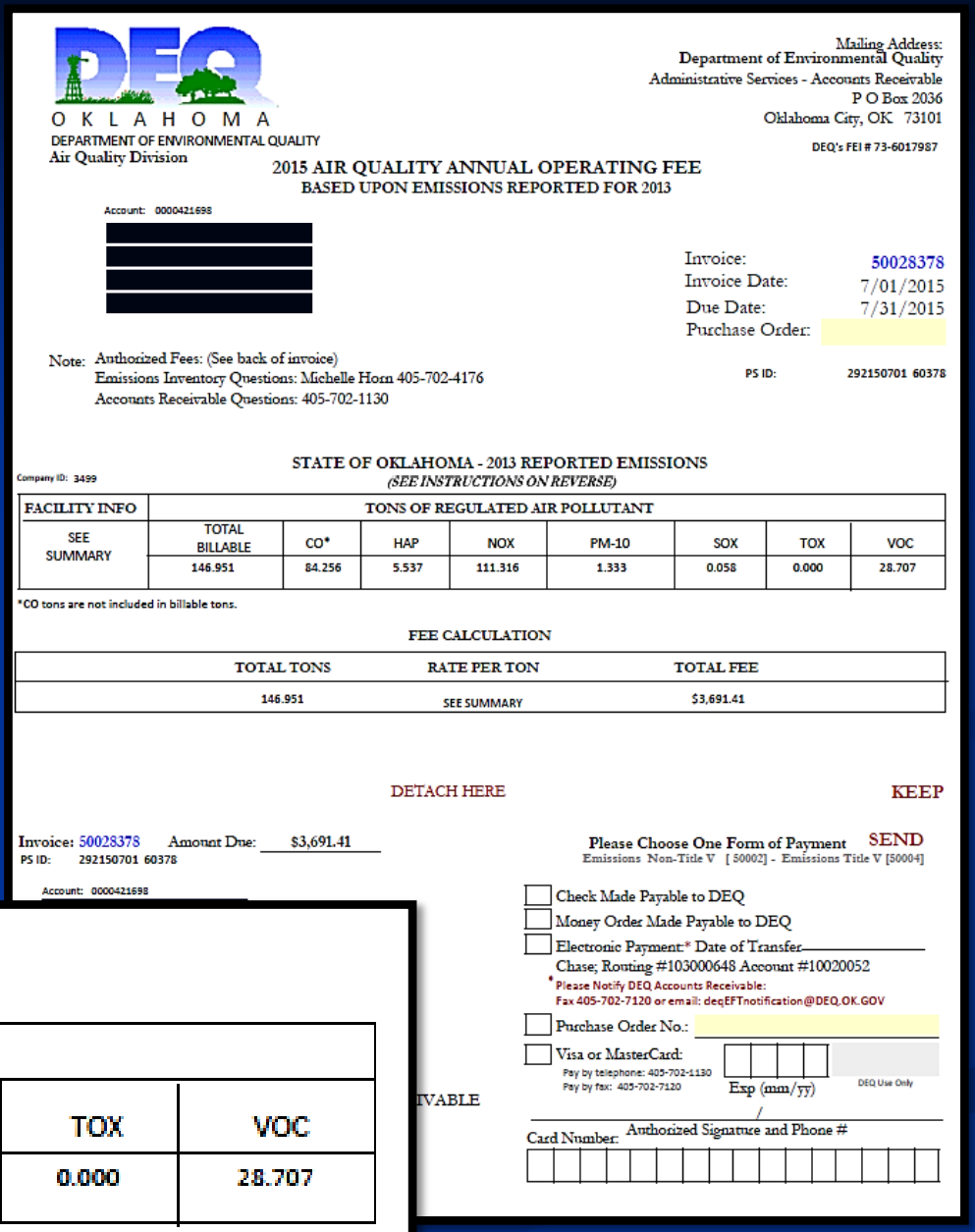
- Permit not cancelled if facility has closed
- Omitting a facility that should be reported
- Not using informative names for emission units
- Selecting the wrong Material I/O for a process
  - Used, Produced, Existed
- Not listing the primary source of the emission factor
- Using lbs/hr as the emission factor inappropriately
- Basic mistakes in data entry and calculations

Annual Operating Fee Invoicing Process

Annual Operating Fee Invoicing Process

- Two years in arrears
- Sent out July 1
- Vital to have correct Responsible Official information
- Can't double bill for pollutants
  - Only billed for Total VOC, invoice will list HAP and VOC (non-HAP) amounts
  - Will only bill for PM-10 (PM-2.5 is a subset of PM-10)

Annual Operating Fee Invoice



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 # 73-6017987

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

Account: 0000421698
[redacted]

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

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)

Company ID: 3499

FACILITY INFO	TONS OF REGULATED AIR POLLUTANT							
SEE SUMMARY	TOTAL BILLABLE	CO*	HAP	NOX	PM-10	SOX	TOX	VOC
	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 KEEP

Invoice: 50028378 Amount Due: $3,691.41
PS ID: 292150701 60378
Account: 0000421698

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

- ☐ Check Made Payable to DEQ
- ☐ Money Order Made Payable to DEQ
- ☐ Electronic Payment* Date of Transfer_____
  Chase; Routing #103000648 Account #10020052
  * Please Notify DEQ Accounts Receivable:
  Fax 405-702-7120 or email: deqEFTnotification@DEQ.OK.GOV
- ☐ Purchase Order No.:
- ☐ Visa or MasterCard:
  Pay by telephone: 405-702-1130
  Pay by fax: 405-702-7120
  Exp (mm/yy) DEQ Use Only
  Card Number: Authorized Signature and Phone #

IVABLE

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

TONS OF REGULATED AIR POLLUTANT					
HAP	NOX	PM-10	SOX	TOX	VOC
5.537	111.316	1.333	0.058	0.000	28.707

Other Inventory Reporting Programs

Other Inventory Reporting Programs

- Refer to the "Helpful Resources" document in your packet for information on:
  - Greenhouse Gas Reporting Program (GHGRP)
  - Emergency Planning & Community Right-To-Know Act of 1986 (EPCRA)
    - Tier II Ireporting
    - Toxics Release nventory (TRI)

Greenhouse Gas Reporting

- Federal requirement – DEQ is not involved in the implementation or reporting of the Greenhouse Gas Inventory
- EPA Greenhouse Gas Reporting Program

  http://www.epa.gov/ghgreporting/reporters/
- Resources Available Include:
  - Applicability Tool
  - Electronic Greenhouse Gas Reporting Tool (e-GGRT)

TIER 2 REPORTING REQUIREMENTS

- Established as Section 312 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)
- Applies to ALL substances with an MSDS
- On the premises at or above the "threshold" for any 24-hour period or more
- "Threshold" amount for reporting is either:
  - Extremely Hazardous Substances; 500 lbs.
  - All other MSDS materials; 10,000 lbs.

TOXICS RELEASE INVENTORY

- TRI, Section 313 of SARA Title III (EPCRA) Annual reporting program that produces a database on the releases, transfers, treatment, and reuse of over 650 toxic chemicals from more than 20,000 facilities nationwide
- It was designed to increase awareness of toxics within communities and provide data for public use, including emergency planning.

TRI REPORTING REQUIREMENTS

Three criteria for TRI reporting:

1) Facilities operating under covered NAICS Codes

2) Facilities with ten or more full time employees or the equivalent of 20,000 employee hours over a calendar year

TRI REPORTING REQUIREMENTS

3) Facilities which manufacture, process, or otherwise use any of over 650 specified chemicals or chemical groups at or above the thresholds over a calendar year.
   - Manufacture or process - 25,000 lbs/year
   - Otherwise use (not part of final product)- 10,000 pounds/year
   - Any activity for Persistent, Bioaccumulative, and Toxic chemicals: reporting threshold is 0.1 grams to 100 pounds/year

EPCRA Contacts & Assistance

www.deq.state.ok.us/LPDnew/saratitleiii

Call or e-mail for assistance

Clifton Hoyle (Manager, Risk Management Section)
405-702-5215 clifton.hoyle@deq.ok.gov

Jami Murphy (TRI)
405-702-1011 jami.murphy@deq.ok.gov

Tom Bergman (TIER II and CAMEO)
405-702-1013 tom.bergman@deq.ok.gov

Jim Carter (TIER II invoices)
405-702-1015 Jimmy.carter@deq.ok.gov

Matt Wormus (GIS)
405-702-5137 Matthew.wormus@deq.ok.gov

In Your Folder: Helpful Resources

Helpful Resources

- **DEQ**
  - **DEQ Contacts**
    - Who to contact for over 300 possible inquires: http://www.deq.state.ok.us/mainlinks/contacts.htm
  - **Environmental Complaints Reporting Hotline (24/7)** 800-522-0206
  - **Air Quality General Inquiries** 405-702-4100
  - **Air Quality Permitting** 405-702-4100 ask for Permitting
    - Information on applicability determinations, obtaining/modifying/cancelling a permit, new regulations affecting permitting
  - **Air Quality Compliance and Enforcement** 405-702-4100
    - Information on inspections, stack testing, excess emissions and other notifications
    - For specific contacts or industry types, see this web page: http://www.deq.state.ok.us/aqdnew/ComplianceEnforcement/Contact.htm
  - **Air Quality Emissions Inventory** 405-702-4100 or aei@deq.ok.gov
    - Information on Annual Emissions Inventory reporting, changing Responsible Official, and Annual Operating Fees
    - General Instructions, SCC's, and Oklahoma Regulated Air Pollutants help: http://www.deq.state.ok.us/aqdnew/emissions/
    - WebFire - EPA's online database that contains emission factors: http://cfpub.epa.gov/webfire/
    - For specific contacts, see this web page: http://www.deq.state.ok.us/aqdnew/emissions/EIcontact.htm

Please Complete Before You Leave

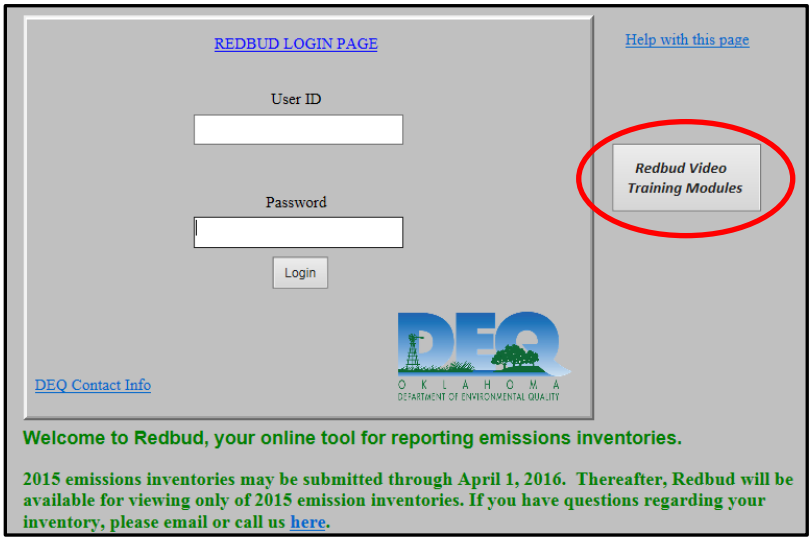
Air Quality Workshop Questionnaire

Please take a moment to offer suggestions to help us improve our workshops in the future.

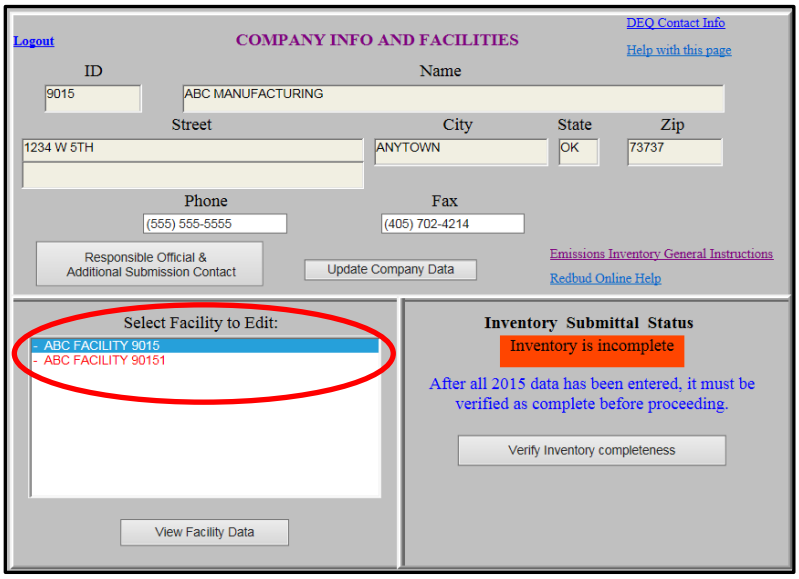
- Did you find the expanded workshop subjects helpful to you?
- Do you have any suggestion on ways to improve the workshop?
- Are there any topics not included in our workshop that would be beneficial?

Redbud Demonstration Hand-Out

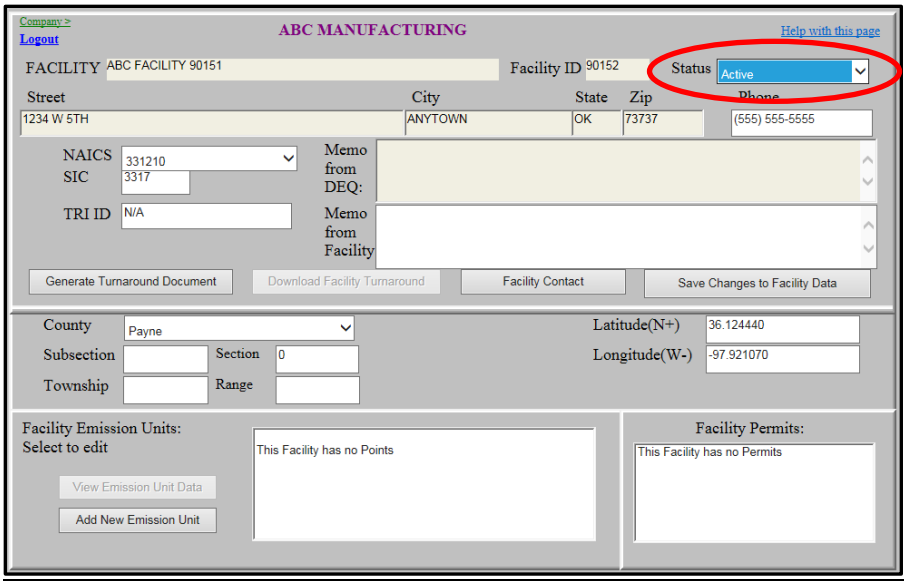
Redbud Login Page



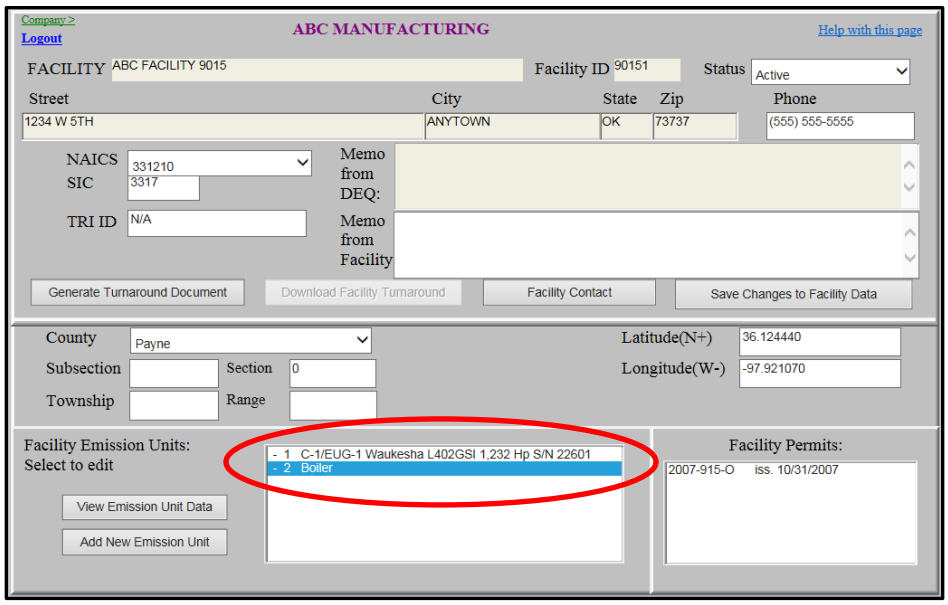
Company Page



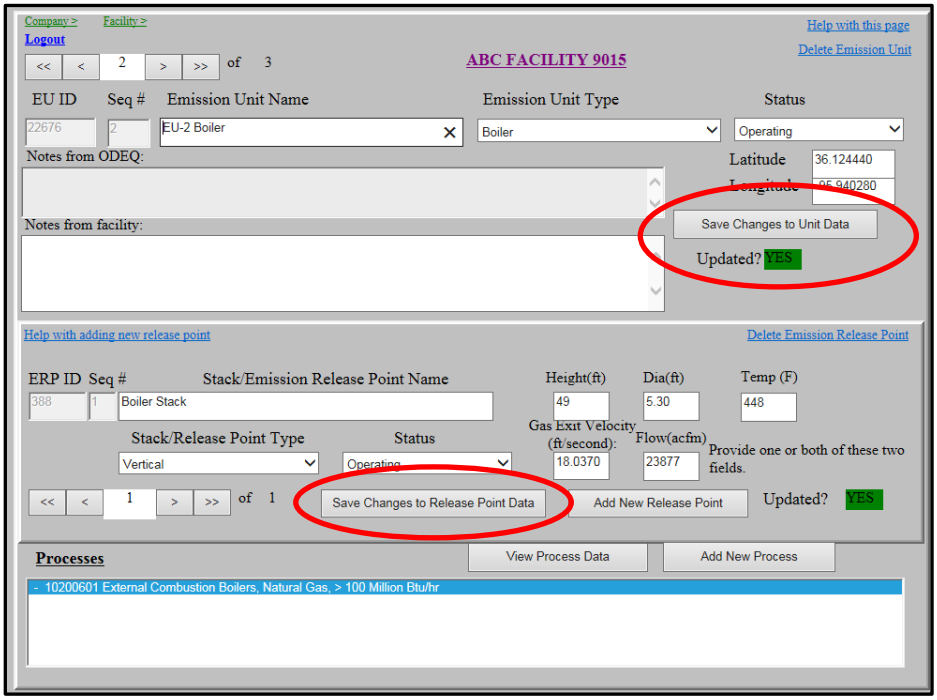
Facility Page



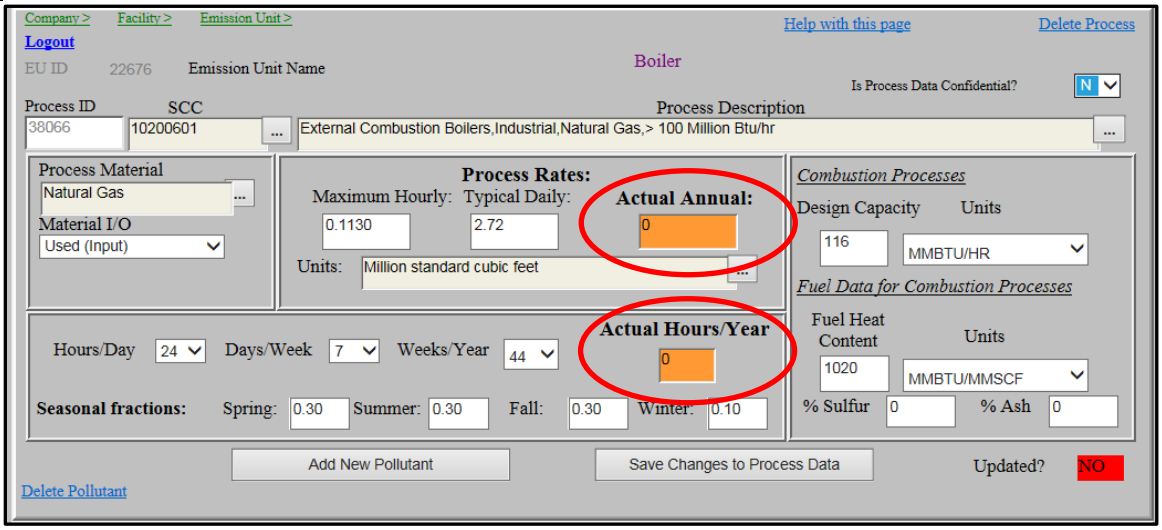
Facility Page



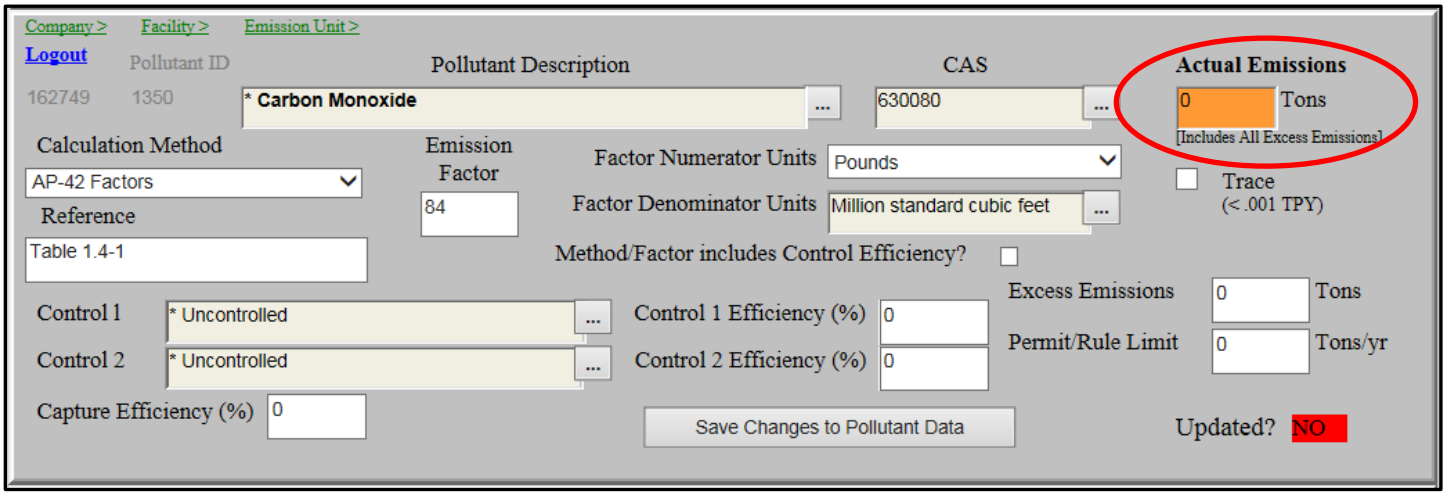
Emission Unit Page



Process Panel



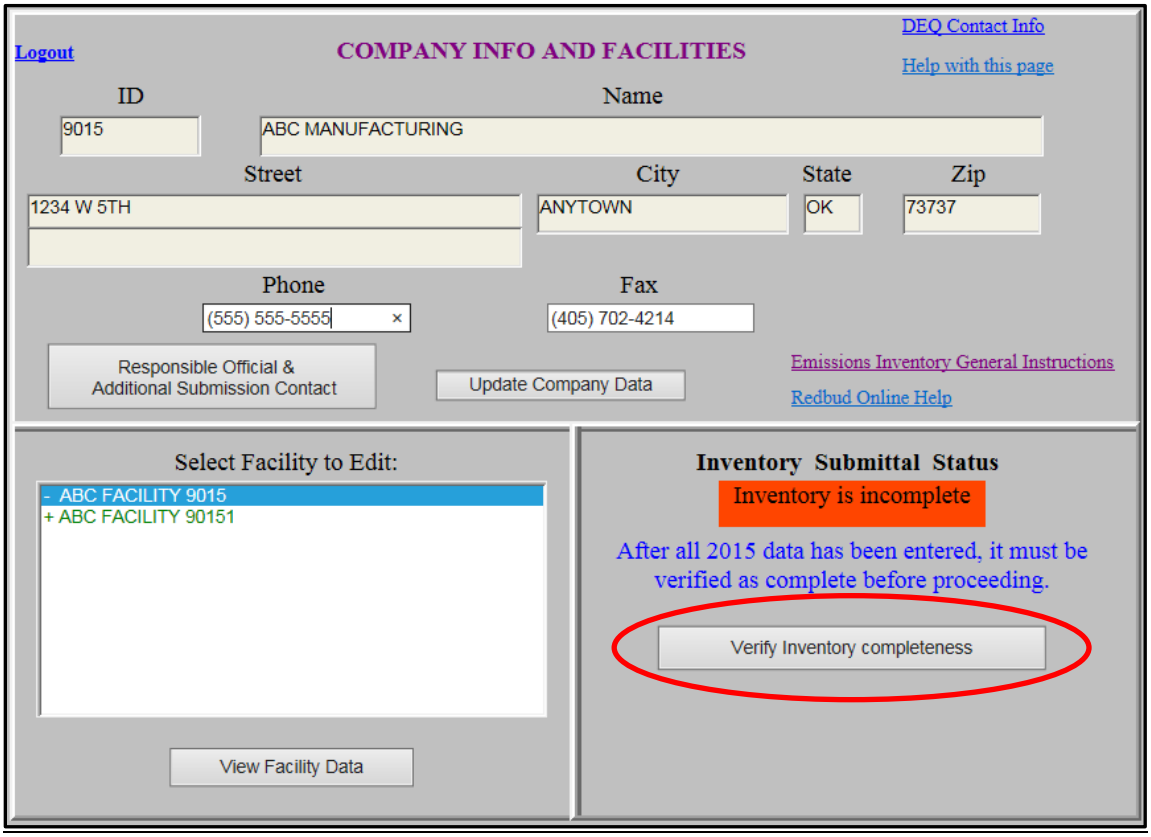
Emissions Panel

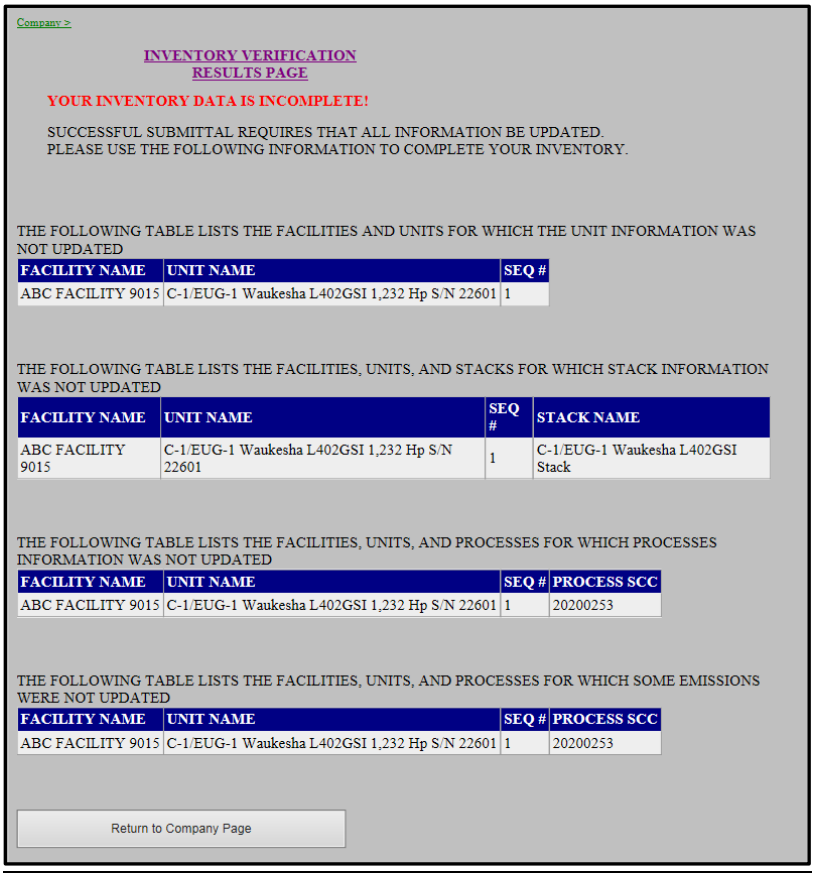


$$CO = 673\ MMscf \times \frac{84\ lbs\ CO}{MMscf} \times \frac{1\ ton}{2000\ lbs}$$

$$CO = 28.266\ Tons$$

Verify Completeness





Company >

INVENTORY VERIFICATION RESULTS PAGE

YOUR INVENTORY DATA IS INCOMPLETE!

SUCCESSFUL SUBMITTAL REQUIRES THAT ALL INFORMATION BE UPDATED.
PLEASE USE THE FOLLOWING INFORMATION TO COMPLETE YOUR INVENTORY.

THE FOLLOWING TABLE LISTS THE FACILITIES AND UNITS FOR WHICH THE UNIT INFORMATION WAS NOT UPDATED

FACILITY NAME	UNIT NAME	SEQ #
ABC FACILITY 9015	C-1/EUG-1 Waukesha L402GSI 1,232 Hp S/N 22601	1

THE FOLLOWING TABLE LISTS THE FACILITIES, UNITS, AND STACKS FOR WHICH STACK INFORMATION WAS NOT UPDATED

FACILITY NAME	UNIT NAME	SEQ #	STACK NAME
ABC FACILITY 9015	C-1/EUG-1 Waukesha L402GSI 1,232 Hp S/N 22601	1	C-1/EUG-1 Waukesha L402GSI Stack

THE FOLLOWING TABLE LISTS THE FACILITIES, UNITS, AND PROCESSES FOR WHICH PROCESSES INFORMATION WAS NOT UPDATED

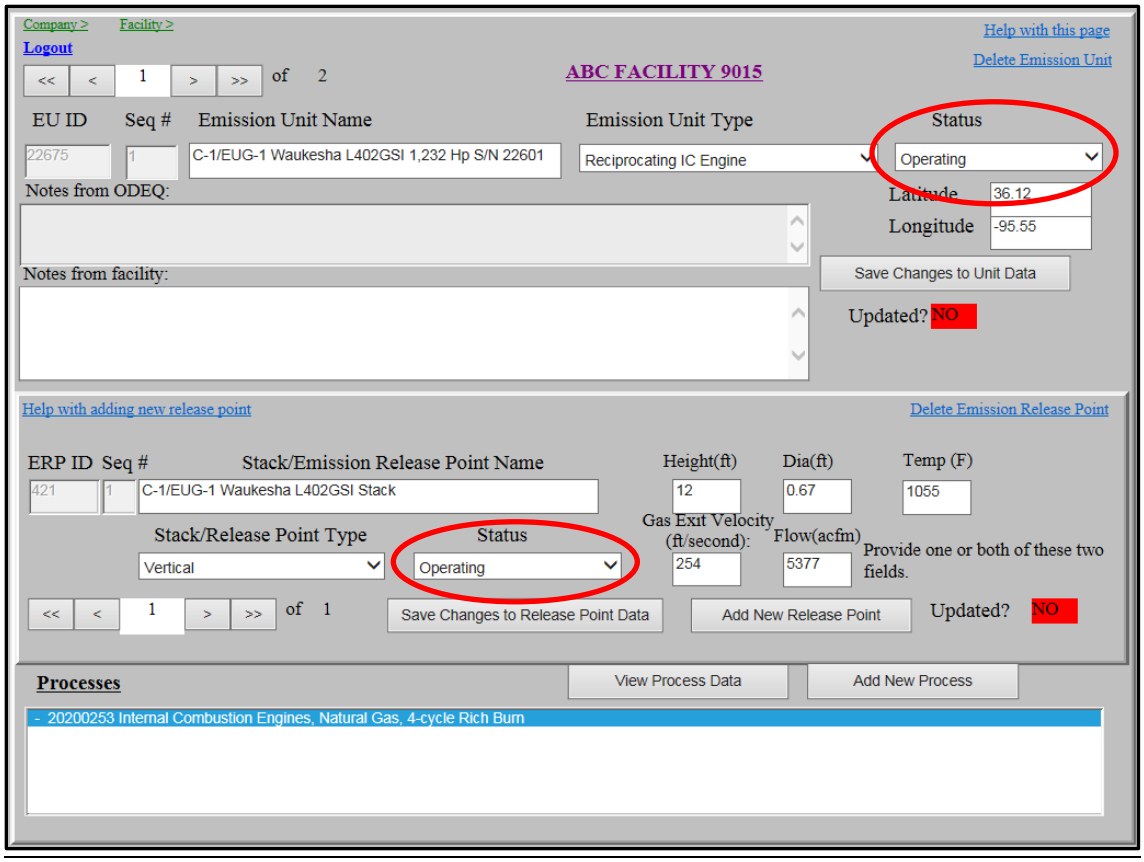
FACILITY NAME	UNIT NAME	SEQ #	PROCESS SCC
ABC FACILITY 9015	C-1/EUG-1 Waukesha L402GSI 1,232 Hp S/N 22601	1	20200253

THE FOLLOWING TABLE LISTS THE FACILITIES, UNITS, AND PROCESSES FOR WHICH SOME EMISSIONS WERE NOT UPDATED

FACILITY NAME	UNIT NAME	SEQ #	PROCESS SCC
ABC FACILITY 9015	C-1/EUG-1 Waukesha L402GSI 1,232 Hp S/N 22601	1	20200253

Return to Company Page

Emission Unit



Company > Facility >

Logout

Help with this page

Delete Emission Unit

<< < 1 > >> of 2

ABC FACILITY 9015

EU ID: 22675 | Seq #: 1 | Emission Unit Name: C-1/EUG-1 Waukesha L402GSI 1,232 Hp S/N 22601 | Emission Unit Type: Reciprocating IC Engine | Status: Operating

Notes from ODEQ:

Latitude: 36.12

Longitude: -95.55

Notes from facility:

Save Changes to Unit Data

Updated? NO

Help with adding new release point

Delete Emission Release Point

ERP ID: 421 | Seq #: 1 | Stack/Emission Release Point Name: C-1/EUG-1 Waukesha L402GSI Stack | Height(ft): 12 | Dia(ft): 0.67 | Temp (F): 1055

Stack/Release Point Type: Vertical | Status: Operating | Gas Exit Velocity (ft/second): 254 | Flow(acfm): 5377

Provide one or both of these two fields.

<< < 1 > >> of 1

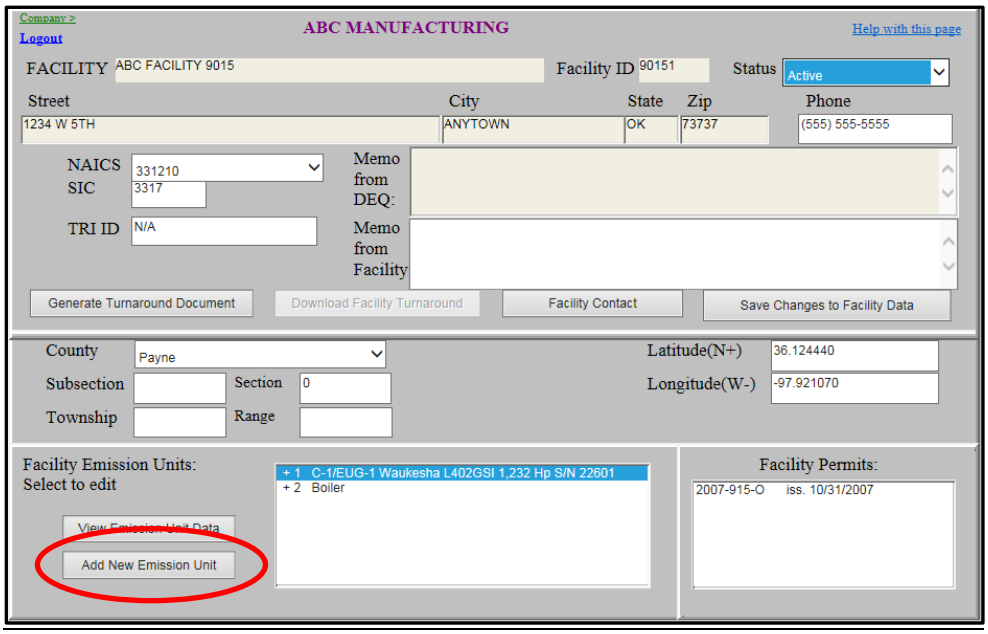
Save Changes to Release Point Data | Add New Release Point | Updated? NO

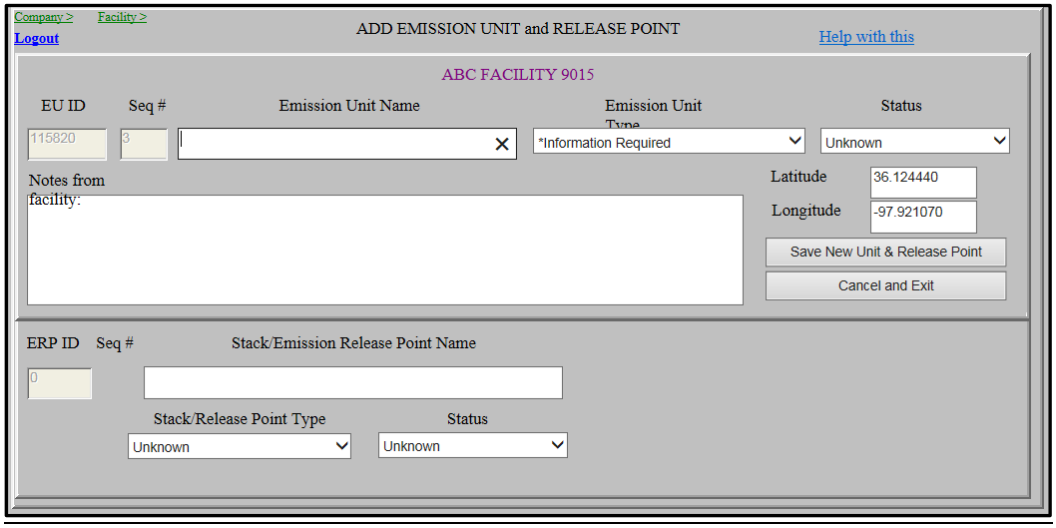
Processes

View Process Data | Add New Process

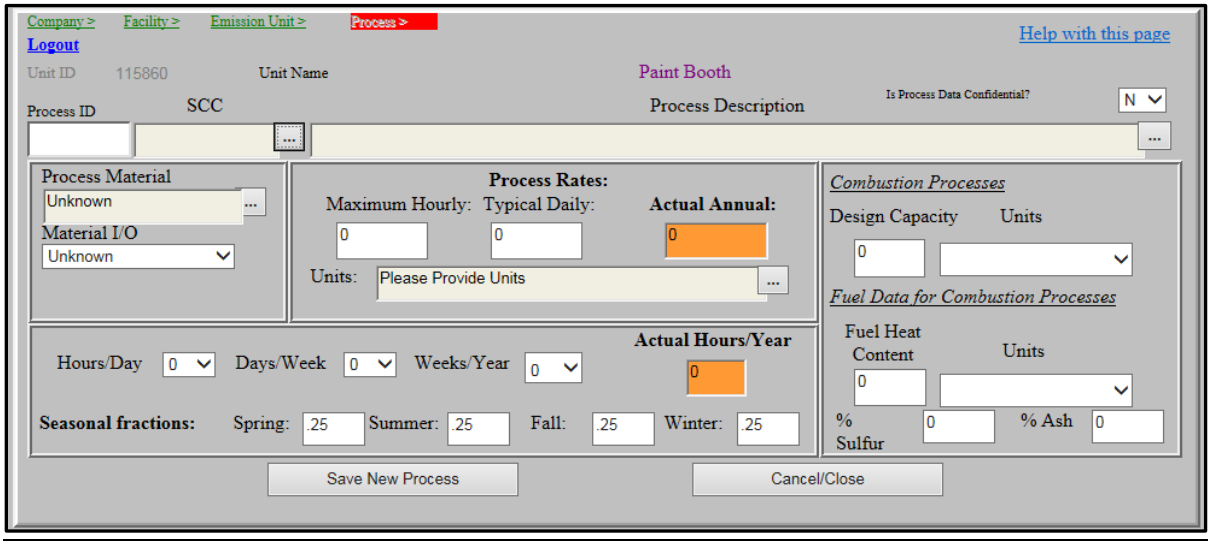
- 20200253 Internal Combustion Engines, Natural Gas, 4-cycle Rich Burn

Add New Emission Unit

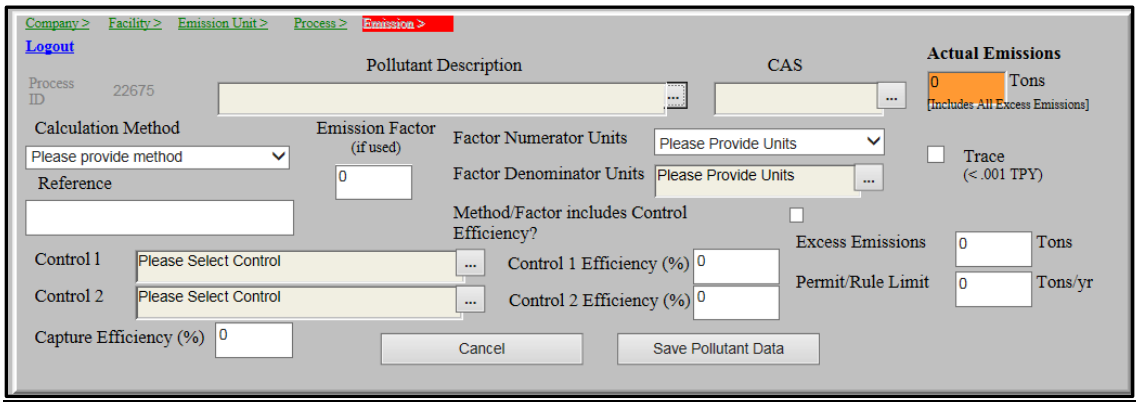




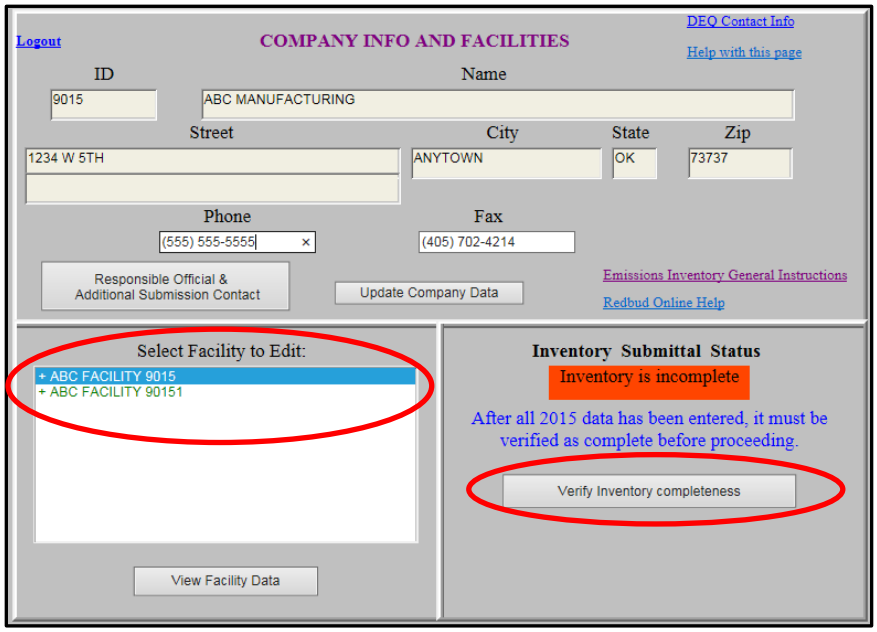
Add New Process Unit



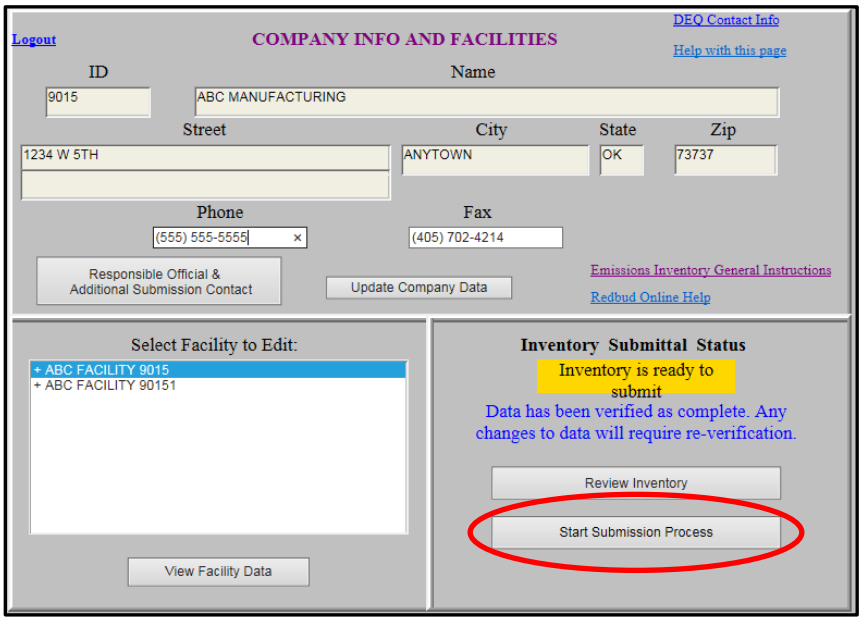
Add New Pollutant

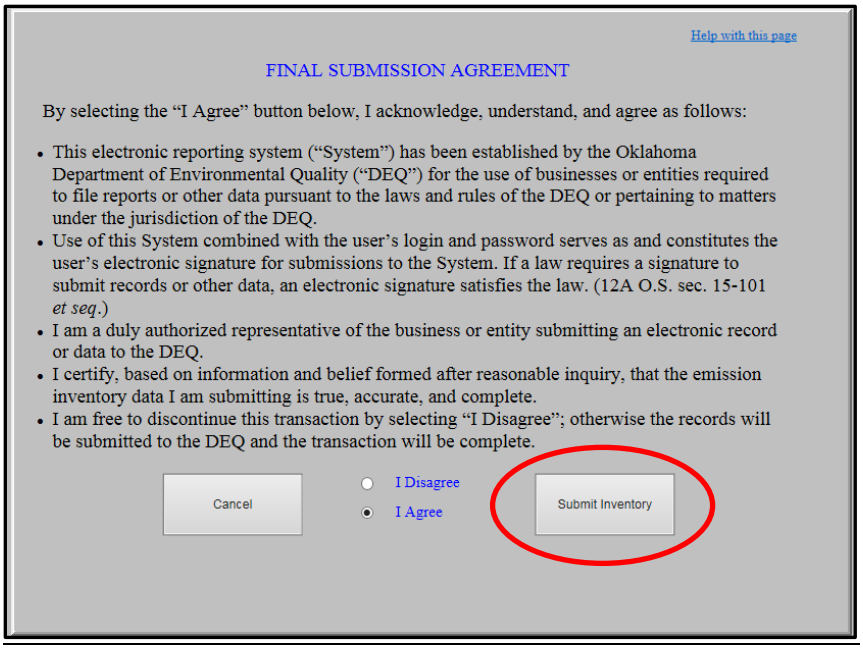


Submission Process - Verify Completeness

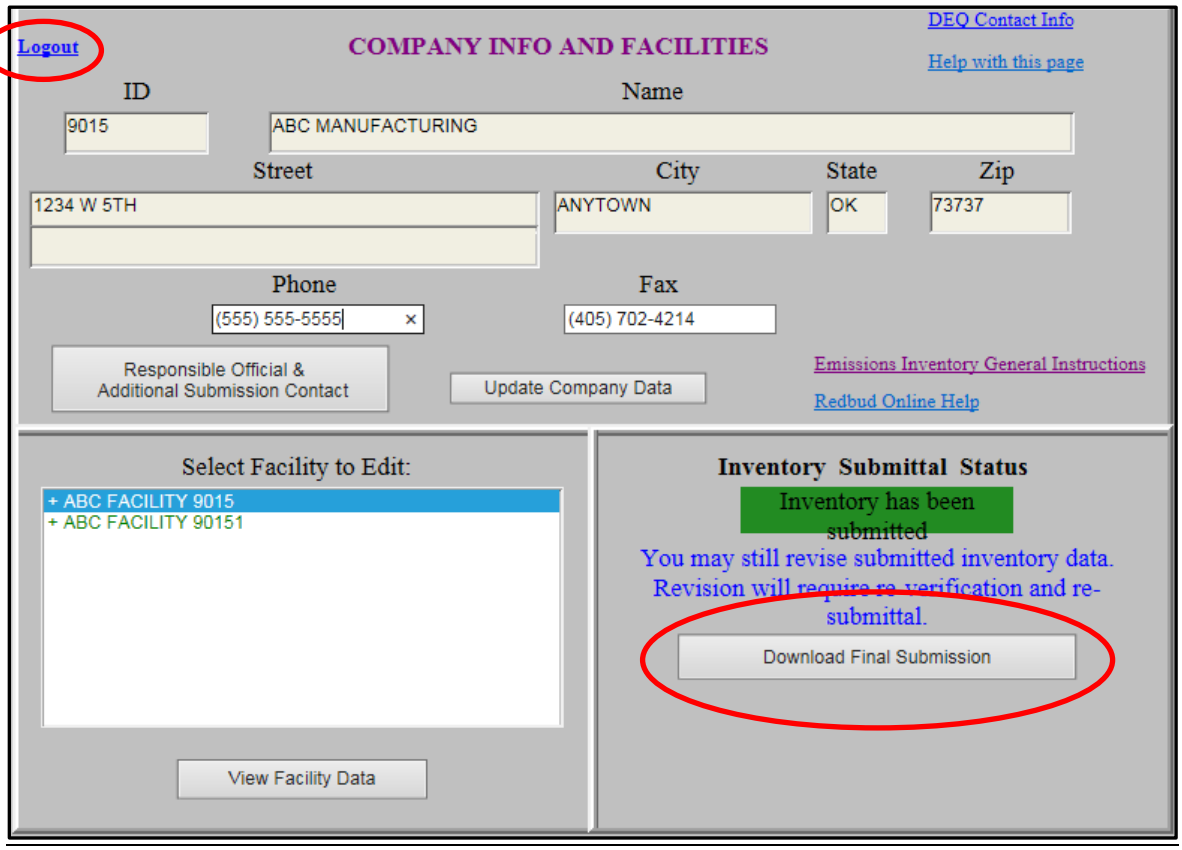


Start Submission

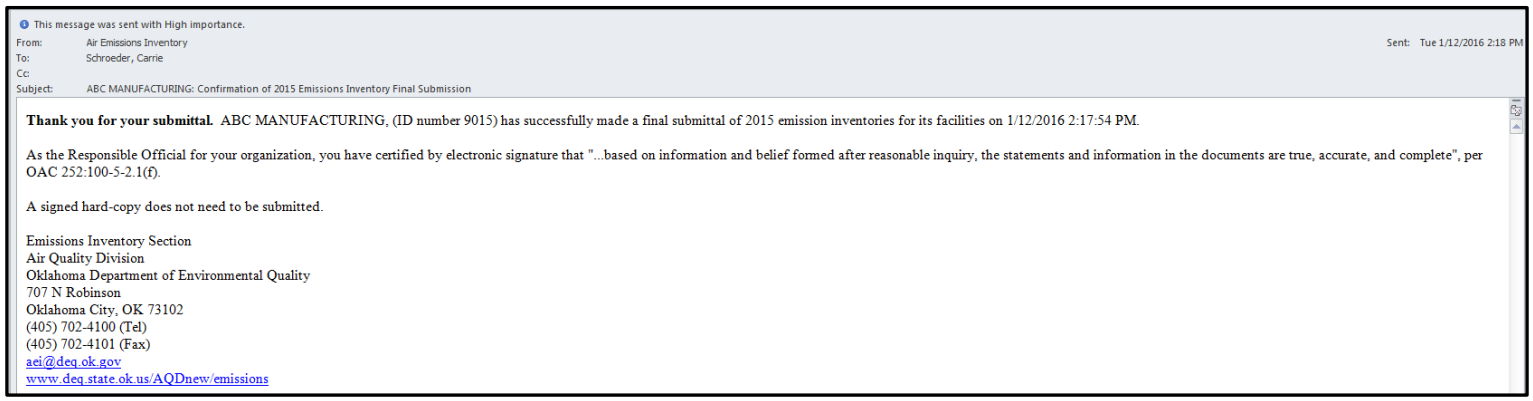




Submitted



Confirmation Email



This message was sent with High importance.

From: Air Emissions Inventory
To: Schroeder, Carrie
Cc:
Subject: ABC MANUFACTURING: Confirmation of 2015 Emissions Inventory Final Submission
Sent: Tue 1/12/2016 2:18 PM

Thank you for your submittal. ABC MANUFACTURING, (ID number 9015) has successfully made a final submittal of 2015 emission inventories for its facilities on 1/12/2016 2:17:54 PM.

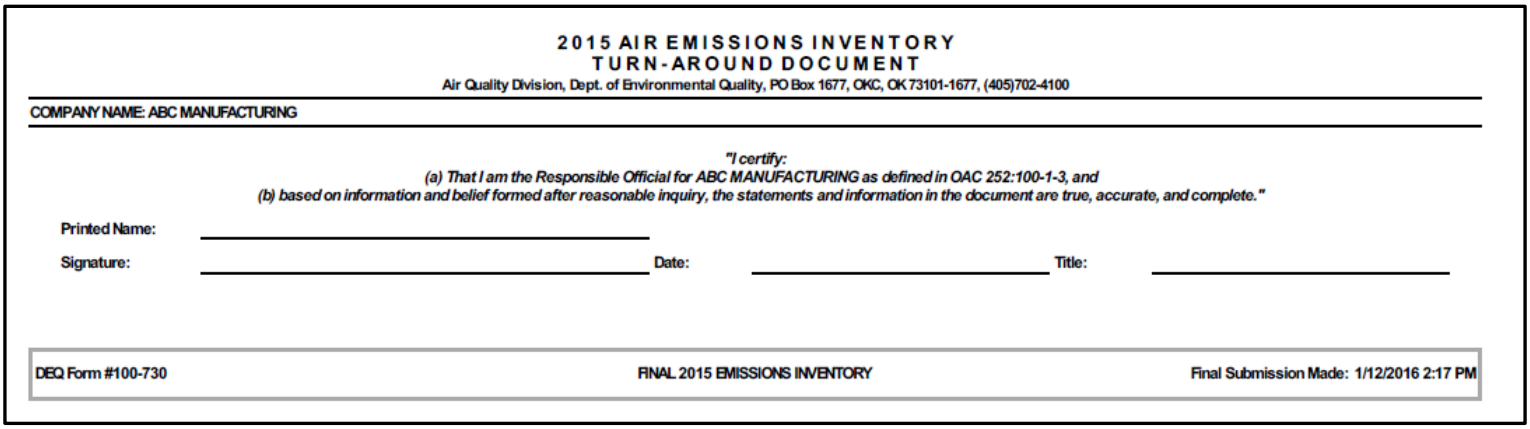
As the Responsible Official for your organization, you have certified by electronic signature that "...based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete", per OAC 252:100-5-2.1(f).

A signed hard-copy does not need to be submitted.

Emissions Inventory Section
Air Quality Division
Oklahoma Department of Environmental Quality
707 N Robinson
Oklahoma City, OK 73102
(405) 702-4100 (Tel)
(405) 702-4101 (Fax)
aei@deq.ok.gov
www.deq.state.ok.us/AQDnew/emissions

Inventory Corrections

- **Corrections during the reporting season:**
  - **Make all changes in Redbud & Resubmit.**
  - **Last submission overwrites any earlier submissions.**
- **Corrections after the reporting season:**
  - **Cannot be entered online in Redbud.**
  - **Download a Turnaround Document (TAD) at any time.**
  - **Enter all corrections in Red on a hardcopy of your TAD.**
  - **Corrections must be certified by the Responsible Official with an original signature & mailed to our office.**
  - **The signature page at the end of the Redbud TAD can be used to certify inventory amendments.**



2015 AIR EMISSIONS INVENTORY
TURN-AROUND DOCUMENT
Air Quality Division, Dept. of Environmental Quality, PO Box 1677, OKC, OK 73101-1677, (405)702-4100

COMPANY NAME: ABC MANUFACTURING

"I certify:
(a) That I am the Responsible Official for ABC MANUFACTURING as defined in OAC 252:100-1-3, and
(b) based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

Printed Name: _____

Signature: _____ Date: _____ Title: _____

DEQ Form #100-730 | FINAL 2015 EMISSIONS INVENTORY | Final Submission Made: 1/12/2016 2:17 PM

Helpful Resources

- **DEQ**
  - **DEQ Contacts**
    - Who to contact for over 300 possible inquires: http://www.deq.state.ok.us/mainlinks/contacts.htm
  - **Environmental Complaints Reporting Hotline (24/7)** 800-522-0206
  - **Air Quality General Inquiries** 405-702-4100
  - **Air Quality Permitting** 405-702-4100 ask for Permitting
    - Information on applicability determinations, obtaining/modifying/cancelling a permit, new regulations affecting permitting
  - **Air Quality Compliance and Enforcement** 405-702-4100
    - Information on inspections, stack testing, excess emissions and other notifications
    - For specific contacts or industry types, see this web page: http://www.deq.state.ok.us/aqdnew/ComplianceEnforcement/Contact.htm
  - **Air Quality Emissions Inventory** 405-702-4100 or aei@deq.ok.gov
    - Information on Annual Emissions Inventory reporting, changing Responsible Official, and Annual Operating Fees
    - General Instructions, SCC's, and Oklahoma Regulated Air Pollutants help: http://www.deq.state.ok.us/aqdnew/emissions/
    - WebFire - EPA's online database that contains emission factors: http://cfpub.epa.gov/webfire/
    - For specific contacts, see this web page: http://www.deq.state.ok.us/aqdnew/emissions/EIcontact.htm
  - **Emergency Planning & Community Right-to-Know Act (EPCRA) Reporting (Land Protection Division)**
    - Information on Tier II reporting, TRI reporting, Tier II fees, and specific contacts for assistance: www.deq.state.ok.us/LPDnew/saratitleiii
    - EPA's website: www.epa.gov/epcra
- **Green House Gas Reporting Program (GHGRP) - EPA**
  - EPA's GHGRP tracks facility-level emissions from the largest sources of greenhouse gas emissions in the United States. DEQ is not involved in the implementation or reporting of the Greenhouse Gas Inventory.
  - For information on the GHGRP including EPA's applicability tool and Electronic Greenhouse Gas Reporting Tool (e-GGRT): www.epa.gov/ghgreporting
- **Air Pollution Training Institute (APTI-Learn) - EPA**
  - EPA's self-instructional training provides information for air regulators, air quality professionals, energy professionals, community members, and others interested in learning more about EPA's regulations: www.apti-learn.net/LMS/EPAHomePage.aspx

Air Quality Workshop Questionnaire

OU Schusterman Center, Tulsa, Oklahoma
February 4, 2016

Please take a moment to offer suggestions to help us improve our workshops in the future.

- Did you find the expanded workshop subjects helpful to you?

- Do you have any suggestion on ways to improve the workshop?

- Are there any topics not included in our workshop that would be beneficial?

Please provide your contact information if you would like us to follow up with you:
(Please print)

Name_____

E-mail_____

Phone_____

Important Air Quality Acronyms

ACC	Annual Compliance Certification
ACO	Administrative Compliance Order
AEL	Alternate Enforcement Letter
AP-42	EPA's Compilation of Air Pollutant Emission Factors
AQD	Air Quality Division
BACT	Best Available Control Technology
C&E	Compliance and Enforcement
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CHIEF	Clearinghouse for Inventories and Emission Factors
CMS	Compliance Monitoring Strategy
CO	Consent Order
CSAPR	Cross-State Air Pollution Rule
CY	Calendar Year
DEQ	Department of Environmental Quality
EE	Excess Emissions
EF	Emission Factor
e-GGRT	Electronic Greenhouse Gas Reporting Tool
EI	Emission Inventory
EPA	US Environmental Protection Agency
EPA RM	EPA Reference Method
EPCRA	Emergency Planning and Community Right-to-Know Act
FCE	Full Compliance Evaluation
FEL	Federally Enforceable Limit
FY	Fiscal Year
GHGRP	Greenhouse Gas Reporting Program
GP	General Permit
GP-ASNF and SNF	General Permit Area Source NESHAP and Small NSPS Facilities
GRI-GLYCalc	Software that estimates emissions from glycol dehydration units
HAP	Hazardous Air Pollutants
HPV	High Priority Violation
I/O	Input/Output
LandGEM	Landfill Gas Emissions Model
LDAR	Leak Detection and Repair
LPD	Land Protection Division
MACT	Maximum Achievable Control Technology
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMHC	Non-Methane Hydrocarbons
NMNEHC	Non-Methane, Non-Ethane Hydrocarbons
NOI	Notice of Intent
NOV	Notice of Violation
NSPS	New Source Performance Standard
NSR	New Source Review
OAC	Oklahoma Administrative Code
PBR	Permit By Rule
PCE	Partial Compliance Evaluation
PM	Particulate Matter
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
QA/QC	Quality Assurance/Quality Control
RAP	Regulated Air Pollutant
RO	Responsible Official
ROAT	Regional Office at Tulsa (of ODEQ)
SAR	Semi-Annual Report
SARA	Superfund Amendments Reauthorization Act
SCC	Source Classification Code
SDS	Safety Data Sheet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SSM	Start-up, Shutdown, Malfunction (or Maintenance)
SUSD	Start Up, Shutdown
TAD	Turn Around Document
TANKS	EPA software that estimates VOC/HAP emissions from storage tanks
TCEQ	Texas Commission on Environmental Quality
THC	Total Hydrocarbons
TPY	Tons Per Year
TRI	Toxics Release Inventory
TV	Title V
VOC	Volatile Organic Compound
VRU	Vapor Recovery Unit
WebFIRE	Web Factor Information Retrieval System