



Combined Air Emissions Reporting Project “Common Emissions Form” Pilot

AAPCA 2019 FALL BUSINESS MEETING

RALEIGH, NC

AUGUST 28TH, 2019

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U.S. EPA
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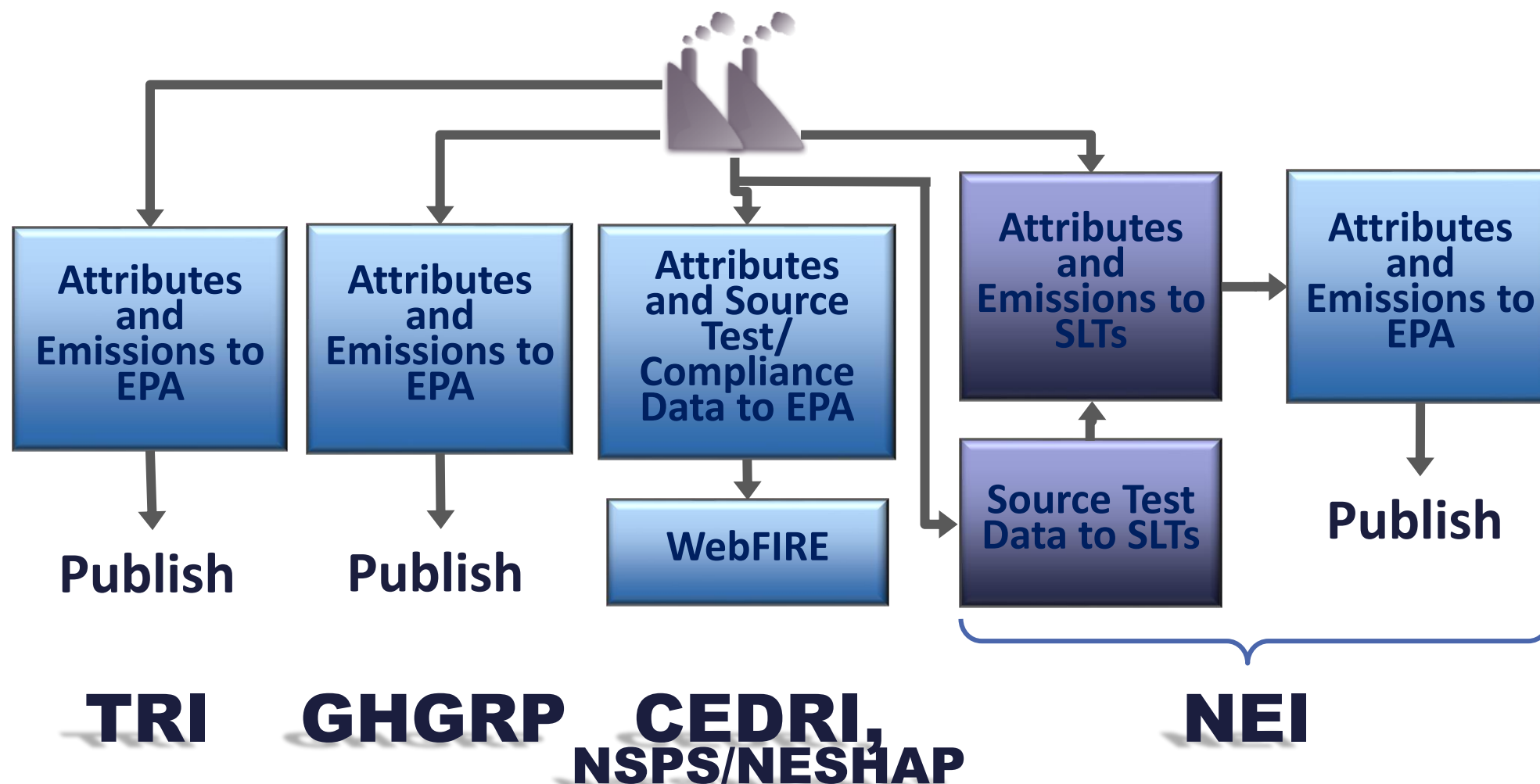
Tammy Manning
NC DEQ
217 West Jones Street
Raleigh, NC 27603

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ME DEP
28 Tyson Drive
Augusta, ME 04333

Goals of this talk

1. Describe the CAER project and the “Common Emissions Form” (CEF) initiative
2. Share draft wireframes for the CEF (ongoing)
3. Elicit feedback

Air Emissions Reporting “As is” State



Acronyms defined on next slide.

What are we building and why?

What: “Common Emissions Form” to streamline air emissions reporting.

Why: Emissions data being reported separately, at different times for:

- Greenhouse Gas Reporting Program (GHGRP),
- National Emissions Inventory (NEI),
- Toxics Release Inventory (TRI),
- Sector/Industry specific via the Compliance and Emissions Data Reporting Interface (CEDRI),
- State/local/tribal (SLT) specific programs

Consequences: duplication and inconsistent data

What are we building and why?

Duplication: time savings from simultaneous reporting of shared data elements

- Data for the same facility – e.g., company name & address
- Input data to emissions estimation:
 - activity data – e.g., BTU of coal, operating hours
 - emission factors – e.g., tons of VOC per MMBTU of coal
- Identical/related pollutants among programs (e.g., toxics to TRI and NEI).

Inconsistent data: reduction of data mismatch between programs for same facility and staff time spent on data reconciliation.

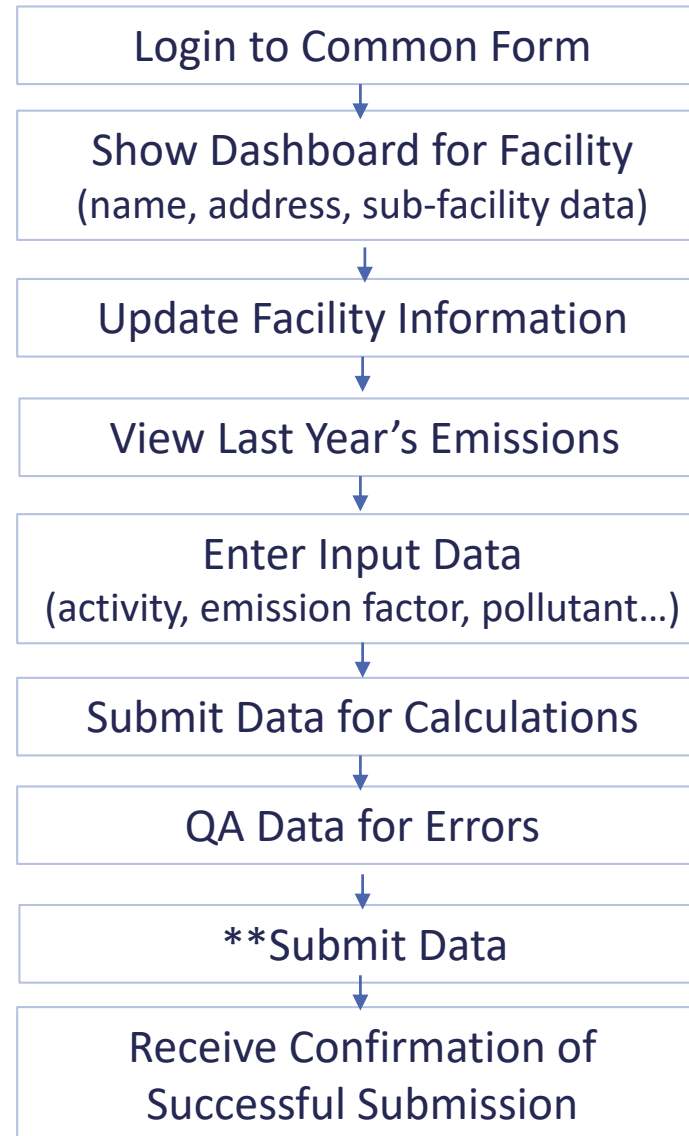
An electronic reporting *tool* that allows facilities to report their emissions data to more than one federal (NEI, TRI, GHGRP & CEDRI*) and state program at the same time.

Users:

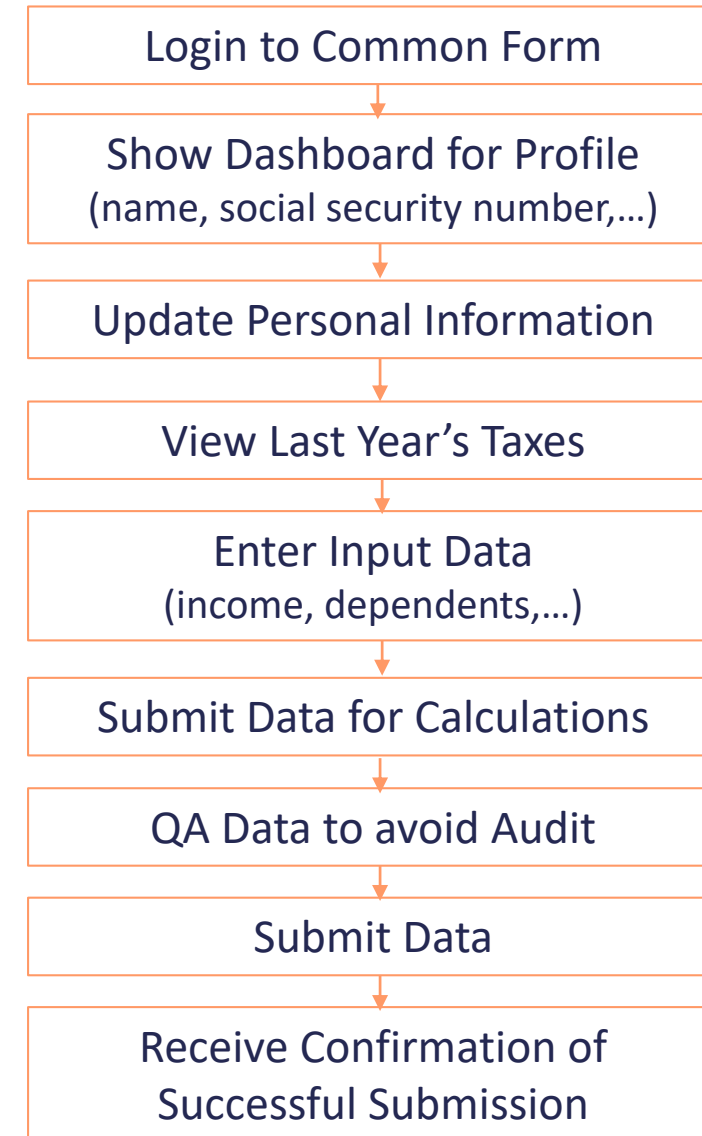
- Facilities reporting
- SLT authorities who review NEI data **

*CEDRI is a system that collects data from a number of sector specific air rules including: RTRs, NSPS: 60, 62, 63, & MATS

Combined Air Emissions Reporting



Online Tax Reporting



Summary of work so far

The Product Design Team (PDT), composed of EPA staff from various programs and SLT staff, has gathered program and SLT user requirements and has ongoing discussions on biweekly calls:

Phase I (January-October 2017)

- QA & QC
- GHG Mapping Study
- NEI/TRI/SLT Sharing
- Emissions Data Model
- Emission Factors Scoping Study

Phase II (January-October 2018)

- GHG Mapping Study (continued)
- NEI/TRI/SLT Sharing (continued)
- Emissions Data Model (continued)
- Confidential Business Information
- State Emission Factors Compendium

More work is needed but we have enough to start building the CEF.

See background slides for more information about the PDT.

CAER CEF Construction

“First Year Pilot” by Fall 2019:

- One “piloting state”, Georgia, and 5 pilot facilities
- One, and *only one* workflow: TRI-NEI-SLT
- Pilot state without/does not want to keep reporting system
- All steps without all features (e.g., no Confidential Business Information, not all calculation methods)
- Not available for “real” reporting (staging only)
- Interaction but no substitution for current systems (TRI-MEweb or EIS)

Minimum Viable Product by June 2020:

All of the above plus additional features, and available for 2019 inventory year reporting

Post MVP:

Onboard more states, add workflows, incorporate more features, incorporate CEDRI...

Guiding Principles

Agile (create in increments, test and improve) vs. waterfall (create exhaustively, then see if it works...)

Essential functionality (all steps) vs. exhaustive (one step exhaustively)

Customizable, flexible: many states may have unique needs, different workflows

Prioritization of input:

1. Essential for federal programs and SLTs (see PDT background slides)
2. GA needs
3. Continuous improvement through SLT and industry feedback

Clean, simple & intuitive: exactly what's needed in each screen (no clutter or excess links), minimum of steps to desired screen, large manuals unnecessary

Guidelines for providing input

1. Focus on **critical** vs. nice to have
2. Focus on **functionality** versus look and feel (must be EPA and 508 compliant)
3. Provide **specific use cases to your state/industry**
4. Ask **clarification questions during demo**, input during Q&A

Facility Dashboard (Industry User)

My Facilities

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

Review
Facility Data

Begin /
Continue
Reporting

Tiarco Chemical

1350 Tiarco Dr
Dalton, GA 30720

Review
Facility Data

Begin /
Continue
Reporting

Add a Facility

My Notifications

▶ Report rejected by SLT

▶ Report submitted to SLT

▼ Report submitted to SLT

Your report for Gilman Building Products, LLC has been successfully submitted to the participating SLT.

To view a copy of record for this submission, click [here](#).

View Facility Information (Industry User)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

Facility Information

EPA Registry ID

110015680798

Program ID

9758611

Program Acronym

CDX: CAER - FRS: EIS

Facility Name

GILMAN BUILDING PRODUCTS LLC

Facility Address

173 PEACHTREE RD
FITZGERALD, GA 31750
BEN HILL COUNTY

Coordinates

31.70528
-83.20667

Operating Status


OPERATING

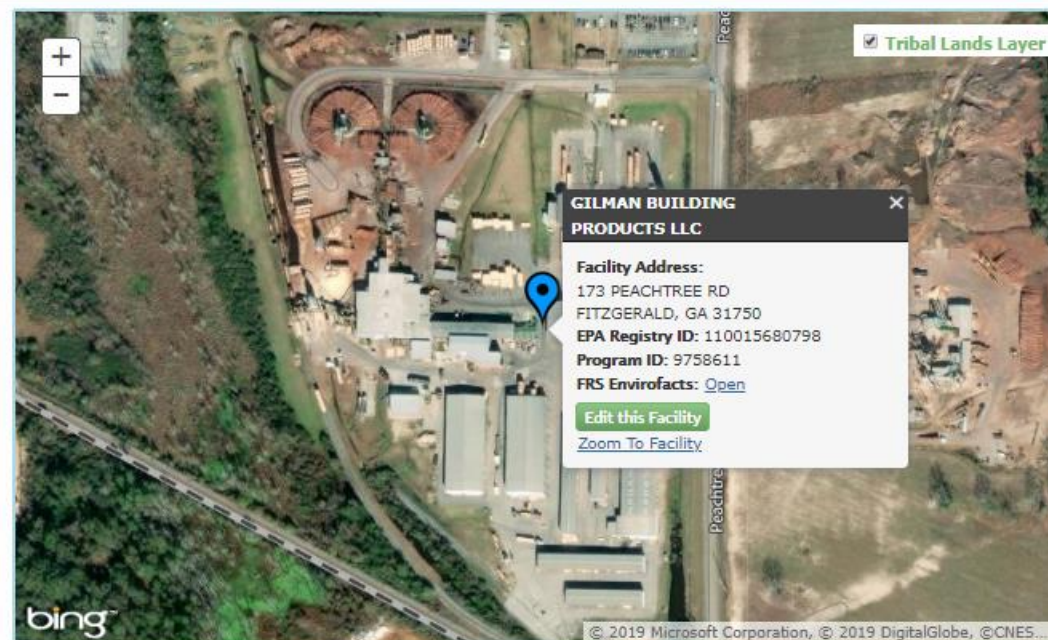
Operating Status Change Year

BIA Code

NAICS Code(s)

 = Primary NAICS

 321999 - All Other Miscellaneous Wood Product Manufacturing




[Map Legend](#)

[Back](#)

Emissions Report Dashboard (Industry Preparer)



Combined Air Emissions Reporting Form

Preparer - JANEDOE  [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#)

[Help](#)

**Gilman Building
Products, LLC**

173 Peachtree Rd
Fitzgerald, GA 31750

Emissions Reports

2019 Report

[Continue](#) | [Run Quality Check](#) | [Notify Certifier](#)

2018 Report

[View](#) | [Download](#)

2017 Report

[View](#) | [Download](#)


2016 Report

[View](#) | [Download](#)

Emissions Report Dashboard (Industry Certifier)



Combined Air Emissions Reporting Form

Certifier - JOHNSMITH  [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#)

[Help](#)

**Gilman Building
Products, LLC**

173 Peachtree Rd
Fitzgerald, GA 31750

Emissions Reports

2019 Report

[View](#) | [Certify](#) | [Return to Preparer](#)

2018 Report

[View](#) | [Download](#)

2017 Report


[View](#) | [Download](#)

2016 Report

[View](#) | [Download](#)

Facility Information (Industry User)

Combined Air Emissions Reporting Form

Preparer - JANEDOE  [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > 2019 Emissions Report

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

▼ Facility Inventory

[Facility Information](#) <

Emissions Units

Release Points

Control Devices

► Emissions Inventory

Report Facility &
Emissions Information

Perform
Quality Checks

Submit
to SLT Authority

Approved
by SLT Authority

Facility Information

Facility EIS ID:	9758611	Latitude:	31.70528	Operating Status:	Operating
Facility Name:	Gilman Building Products, LLC	Longitude:	-83.20667	BIA Code:	-----
Facility Address:	173 Peachtree Rd Fitzgerald, GA 31750 Ben Hill County	Mailing Address:	PO Box 65213 Fitzgerald, GA 31750	NAICS Code(s):	321999

Facility Contact Information

Contact Type:	Responsible Official	Phone Number:	319-319-3119 x001
Contact Name:	John Smith	Email Address:	johnsmith@gilmanbuilding.com
Contact Address:	173 Peachtree Rd Fitzgerald, GA 31750 Ben Hill County	Mailing Address:	173 Peachtree Rd Fitzgerald, GA 31750 Ben Hill County

Facility Contact Information

Contact Type:	Preparer	Phone Number:	319-319-3119 x017
Contact Name:	Jane Doe	Email Address:	janedoe@gilmanbuilding.com
Contact Address:	173 Peachtree Rd Fitzgerald, GA 31750	Mailing Address:	173 Peachtree Rd Fitzgerald, GA 31750

Emission Unit Details (Industry User)



Combined Air Emissions Reporting Form

Certifier - JOHNSMITH [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > **2019 Emissions Report**

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

► Facility Inventory

▼ Emissions Inventory

[Boiler 001](#) <

Process 007

Control 004

Release Point 002

Condenser 001

Generator 001

Generator 002

Incinerator 001

Report Facility &
Emissions Information

Perform
Quality Checks

Submit
to SLT Authority

Approved
by SLT Authority

Emissions Unit Information

Unit ID:	0001	Unit Type Code:	Boiler	Unit Status:	Operating
Unit Description:	Boiler 001	Unit Design Capacity UoM:	UoM	Unit Status Year:	2019
UoM Description:	Description of Unit of Measure Code				

Processes Associated With This Emissions Unit

Process Description	SCC	
Process 007	10320587	

Process Details (Industry User)



Combined Air Emissions Reporting Form

Certifier - JOHNSMITH [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > 2019 Emissions Report

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

► Facility Inventory

▼ Emissions Inventory

Boller 001

[Process 007](#) <

Control 004

Release Point 002

Condenser 001

Generator 001

Generator 002

Incinerator 001

Report Facility &
Emissions Information

Perform
Quality Checks

Submit
to SLT Authority

Approved
by SLT Authority

Process Information

Process ID: 0001	SCC: 10320587	Process Status: Status
Process Description: Process 007	Aircraft Engine Code: Code	Process Status Year: 2019

Operating Details

Avg. Days Per Week: 7	Hours Per Period: 2736	Inventory Year: 2019
Avg. Hours Per Day: 24	Winter Operating Days:	Summer Operating Days:
Avg. Weeks Per Year: 52	Spring Operating Days:	Fall Operating Days:

Reporting Period

Reporting Period: Annual	Operating Type: Permitted	Calculation Param.: Code
Calculation Material: Material	Calculation Value: Throughput Value	Calculation UoM: UoM

Emissions Associated With This Process


Pollutant Name	CAS Number	Total Emissions
----------------	------------	-----------------

Release Points Associated With This Process

Release Point ID	Release Type	Average % Emissions
------------------	--------------	---------------------

Process Details (Industry User)

Combined Air Emissions Reporting Form

Certifier - JOHNSMITH  [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > **2019 Emissions Report**

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

► Facility Inventory

▼ Emissions Inventory

Boller 001

[Process 007](#) <

Control 004

Release Point 002

Condenser 001

Generator 001

Generator 002

Incinerator 001

Process Information

Process ID: 0001 **SCC:** 10320587 **Process Status:** Status
Process Description: Process 007 **Aircraft Engine Code:** Code **Process Status Year:** 2019





Operating Details

Avg. Days Per Week: 7 **Hours Per Period:** 2736 **Inventory Year:** 2019
Avg. Hours Per Day: 24 **Winter Operating Days:** **Summer Operating Days:**
Avg. Weeks Per Year: 52 **Spring Operating Days:** **Fall Operating Days:**



Reporting Period

Reporting Period: Annual **Operating Type:** Permitted **Calculation Param.:** Code
Calculation Material: Material **Calculation Value:** Throughput Value **Calculation UoM:** UoM


Emissions Associated With This Process

Pollutant Name	CAS Number	Total Emissions	
Ammonia	7664-41-7		
Toluene 	108-88-3	17 TONS	
			


Release Points Associated With This Process

Release Point ID	Release Type	Average % Emissions	
Release Point 002	Vertical	100%	
			

Add New Emission (Industry User)

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Combined Air Emissions Reporting Form

Certifier - JOHNSMITH  [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > 2019 Emissions Report [Help](#)

Gilman Building Products, LLC
173 Peachtree Rd
Fitzgerald, GA 31750
2019 Emissions Report

Report Summary

- Facility Inventory
- Emissions Inventory
 - Boller 001
 - [Process 007](#)
 - Control 004
 - Release Point 002
 - Condenser 001
 - Generator 001
 - Generator 002
 - IncIncerator 001

Add an Emission ✕

Emission Information

Process ID: 0001

Reporting Period: Annual

Operating Status: Operating

Calc. Parameter: Output

Calculation Value: 200

Calculation UoM: TONS

Pollutant Name:

CAS/ID:

Calc. Method: Select

Emission Factor:

Desc.:

Total Emissions:

UoM:

Comments:

Approved
LT Authority

Process Status: Status



Process Status Year: 2019

Inventory Year: 2019

Number of Operating Days:

Operating Days:

This Process

Avg. % Emissions	
100%	
	

[EPA Home](#) | [MyCDX](#) | [Combined Air Emissions Reporting \(CAER\)](#) | [CAER Program Contacts](#)

Control Details (Industry User)



Combined Air Emissions Reporting Form

Certifier - JOHNSMITH [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > **2019 Emissions Report**

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

► **Facility Inventory**

▼ **Emissions Inventory**

Boller 001

Process 007

[Control 004](#) <

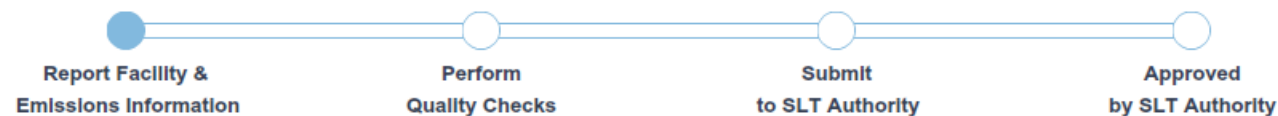
Release Point 002

Condenser 001

Generator 001

Generator 002

Incinerator 001



Control Device Information

Control ID:	0004	Control Description:	Control 004	Operating Status:	Operating
Percent Capture:	74%	Percent Control:	54%		

Control Device Assignment

Control Measure	Connection Type	Control Order	
Process 007	Serial	2	
Release Point 002	Serial	1	

Controlled Pollutants

Pollutant Name	CAS Number	Reduction Efficiency	
Ammonia	7664-41-7	33%	
Toluene	108-88-3	21%	

Release Point Details (Industry User)



Combined Air Emissions Reporting Form

Certifier - JOHNSMITH [Logout](#)

[My Facilities](#) > [Emissions Report Dashboard](#) > 2019 Emissions Report

[Help](#)

Gilman Building Products, LLC

173 Peachtree Rd
Fitzgerald, GA 31750

2019 Emissions Report

Report Summary

► Facility Inventory

▼ Emissions Inventory

Boiler 001

Process 007

Control 004

[Release Point 002](#) <

Condenser 001

Generator 001

Generator 002

Incinerator 001

Report Facility &
Emissions Information

Perform
Quality Checks

Submit
to SLT Authority

Approved
by SLT Authority

Release Point Information

Release Point ID:	0001	Release Point Type Code:	Code	Release Point Status:	Operating
Stack Height Measure:	Measure	Release Point Description:	Release Point 002	Release Point Status Year:	2019
Stack Height UoM:	UoM Code	Exit Gas Flow Rate Measure:	Measure	Fugitive Line Point 1 Lat.:	Lat
Stack Diameter Measure:	Measure	Exit Gas Flow Rate UoM:	UoM Code	Fugitive Line Point 1 Long.:	Long
Stack Diameter UoM:	UoM Code	Exit Gas Temp. Measure:	Measure	Fugitive Line Point 2 Lat.:	Lat
Gas Velocity Measure:	Measure	Latitude Measure:	Measure	Fugitive Line Point 2 Long.:	Long
Gas Velocity UoM:	UoM Code	Longitude Measure:	Measure	RP Program Sys. Code:	Code

Processes Associated With This Release Point

Process Description	SCC	
Process 007	10320587	

Submission Review Dashboard (SLT Reviewer User)

Submissions Pending Review

Instructional text will appear here.

<input type="checkbox"/>	Facility Name	Facility ID	Operating Status	Industry	Last Submittal Year	Actions
<input type="checkbox"/>	Test Facility 1	132185	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 2	894654	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 3	642844	Operating	Industry	2016	Summary View Report
<input type="checkbox"/>	Test Facility 4	21231	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 5	121315	Operating	Industry	2016	Summary View Report
<input type="checkbox"/>	Test Facility 6	984564	Operating	Industry	2017	Summary View Report
<input type="checkbox"/>	Test Facility 7	885498	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 8	94654	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 9	32221	Operating	Industry	2018	Summary View Report
<input type="checkbox"/>	Test Facility 10	984002	Operating	Industry	2016	Summary View Report
<input type="checkbox"/>	Test Facility 11	65012	Operating	Industry	2018	Summary View Report

[Reject and Return to Facility](#)
[Accept and Submit to EIS](#)

My Notifications

39

Pending Review

518

Accepted

7

Rejected

13 new submissions for review

Potential outlier detected

The report for Gilman Building Products, LLC indicates an increase in emissions of 3,400% over the prior year's reported total.

To view and review this submission, click [here](#).

Submission Summary Popup (SLT Reviewer User)

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Combined Air Emissions Reporting Form

Reviewer - JOHNDOE [Logout](#)

Submission Review Dashboard
[Help](#)

Submission Summary
 ✕

Facility: Test Facility 3
 Operating Status: Operating
 Report Year: 2019

Pollutant	Type	Fugitive Amount	Stack Amount	Units	2019 Reported Tons	2018 Reported Tons	Last Submittal Year
CO - Carbon Monoxide	CAP	0	31	Tons	31	48	2018
NOx - Nitrogen Oxides	CAP	0	4	Tons	4	12	2018
SO2 - Sulfur Dioxide	CAP	74	6	Tons	80	89	2018
VOC - Volatile Organic Compounds	CAP	0	139	Tons	139	--	2016
Ammonia	HAP	241	17	Tons	258	212	2018
Flourene	HAP	0	31	Tons	31	38	2018
Nickel	HAP	52	0	Tons	52	--	2016
Toluene	HAP	33	4	Tons	37	74	2018
Total Emissions	--	--	--	--	632	473	--

Print
 Close

Instructional

☐ Facility
 ☐ Test Fa
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for review

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reported

 mission, click

[EPA Home](#) |
 [MyCDX](#) |
 [Combined Air Emissions Reporting \(CAER\)](#) |
 [CAER Program Contacts](#)

Questions/Discussion

- Are there any critical items missing from any of the screens?
- What kinds of flags/QA checks would you want to be able to see?
- What kinds of notifications would you want to be able to receive and how (email, within a specific page, other)?

Additional comments can be provided at the EPA table and/or sent to: caer@epa.gov.

FAQs & Background Slides

Frequently Asked Questions

Can I take advantage of the CEF and still keep my SLT system? Yes. For pilot and MVP we are building one workflow. However, we have anticipated that there may be many workflows in the future. Background slide 37 talks about 4 workflows for NEI data, for example.

I report many facilities and entering one at a time would still be time consuming. Will there be bulk upload? Yes. We are working on that feature so that we can provide a template or schema for bulk uploads.

What about Confidential Business Information (CBI)? One of our PDT R&D teams researched CBI, and we are designing the CEF in such a way that CBI data can be entered to perform calculations, but that data is not sent to EPA. You'd work with your SLT to establish the need for CBI in the CEF.

Will states be obligated to use the CEF? A state may opt-in to the CEF if they would like to. We hope to create a product that users will want to use, but it will not be mandatory.

Frequently Asked Questions

Are there any plans to let facilities opt out of TRI and GHG reporting if they report this data as part of the NEI?

There are no plans to change the TRI or GHG reporting rules to allow for “opt out” of those rules. The goal of the CEF is to enable the facility to enter their data a minimum number of times to report to all the programs. For example, for TRI reporting, the CEF will allow for the automatic transfer of state/NEI reported emissions to pre-populate the air emissions portion of the TRI online form, so that very little additional effort for air reporting for TRI would be needed.

CAER Background

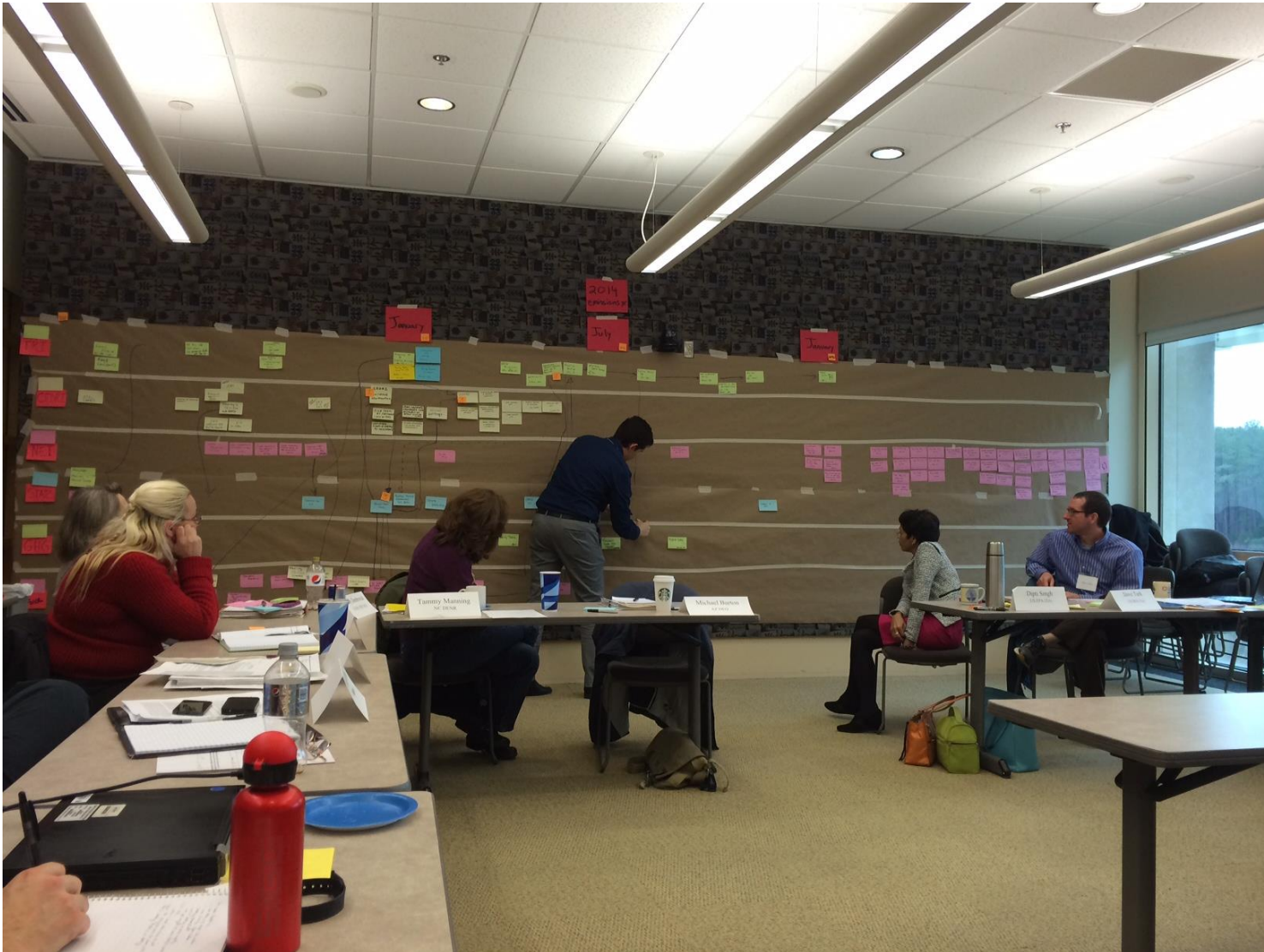
CAER was started to reduce and eliminate duplicative reporting of emissions data by industry:

Lean Event (February 2015) on Air Emissions Reporting

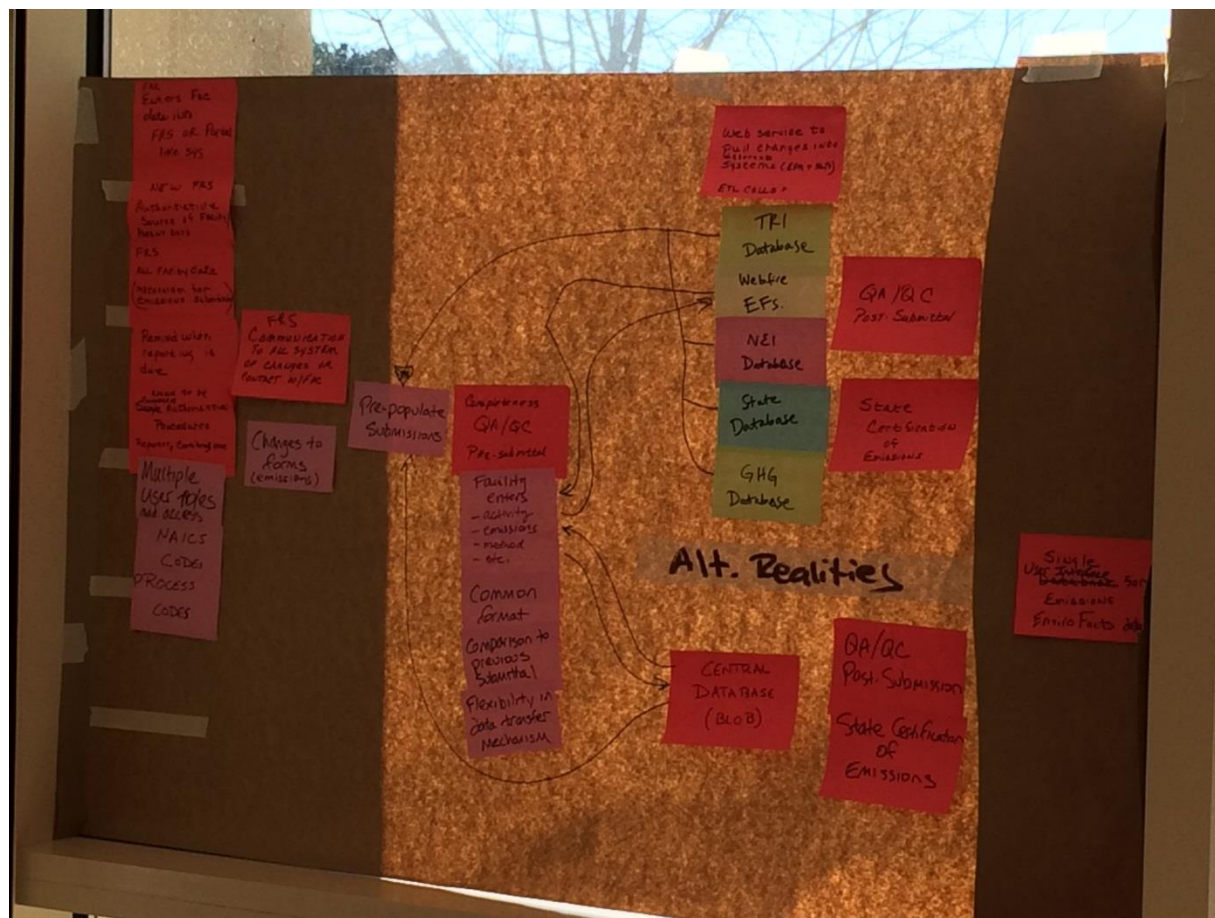
- Industry currently reports to 4 federal programs, each with their own workflows
 - National Emissions Inventory, including states/locals/tribes (SLT)s
 - Toxics Release Inventory (TRI)
 - Greenhouse Gas Reporting Program (GHGRP)
 - Compliance and Emissions Data Reporting Interface (CEDRI)
- ~ 50 + individual steps, much of the data entered is the same
 - E.g., facility data, some activity data used to estimate emissions such as fuel used
- Expected return on investment: \$28 million annually, time and effort savings to
 - Industry: Easier to report emissions to several places at once
 - SLTs, who collect and QA some of the data, and EPA

CAER Background

Current State



CAER Background



Future State

Four Major Federal Air Programs

Toxics Release Inventory (TRI) via TRI-MEWeb:

- 21,000 facilities reporting annually
- 80,000 XML files with over 250 reporting elements per file

National Emissions Inventory (NEI) via Emissions Inventory System (EIS) in 2014:

- Facilities report to their SLT first, then SLT reviews and submits to EPA
- 75 SLT agencies reporting about 86,776 facilities
- 1,477 point source emissions submissions & 196.27 KB is the average submission size
- 1,600 facility data changes & 86.27 KB is average size per submission

Four Major Federal Air Programs

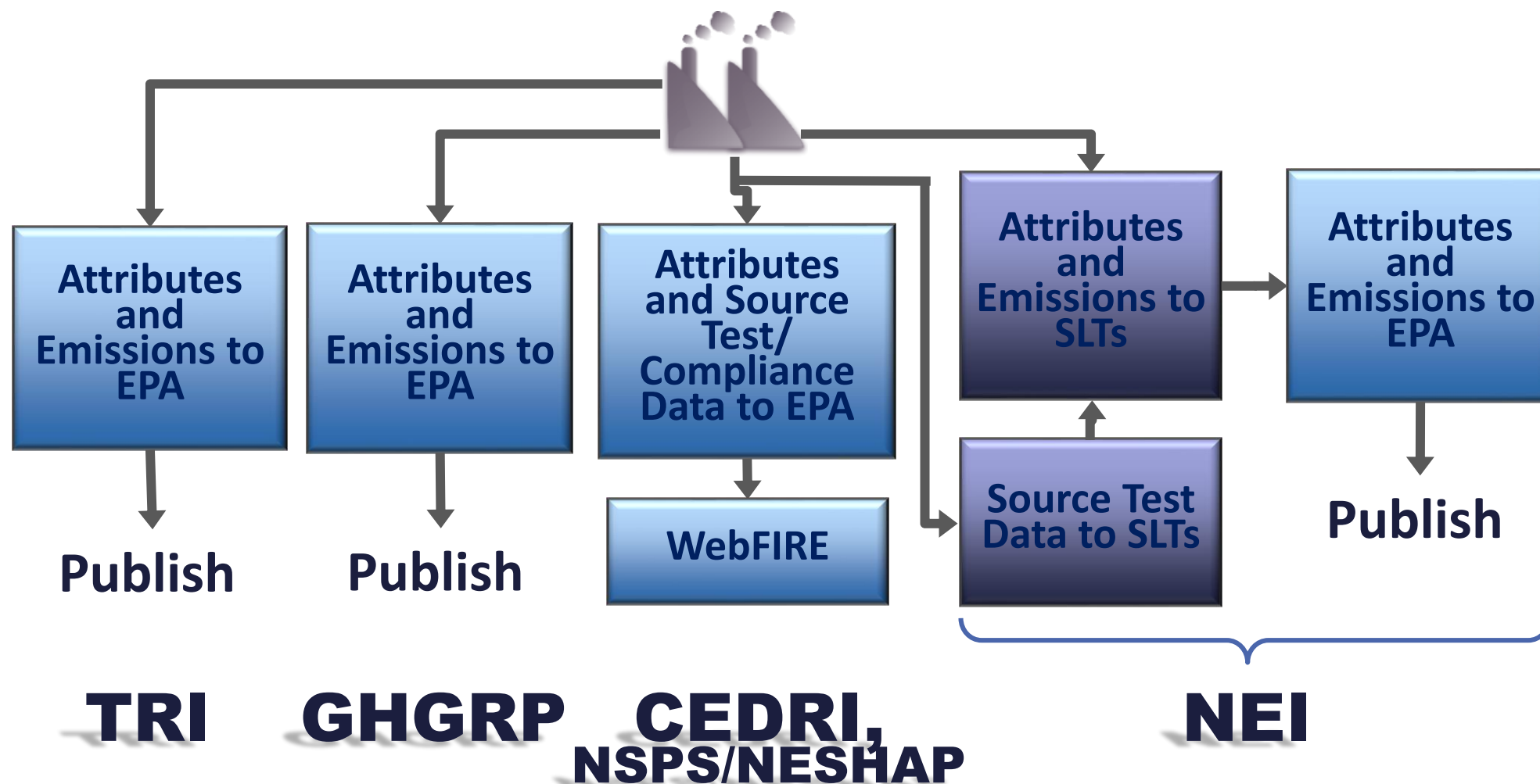
Greenhouse Gas Reporting Program (GHGRP) via Electronic Greenhouse gas Reporting Tool (E-GGRT), annually:

- 8,000 facilities and about
- 1.5 GB for all reports per year (about 150-200 KB per report)

Risk & Technology Review (RTR) and other stack test results via Electronic Reporting Tool (ERT) to Compliance and Emissions Data Reporting Interface (CEDRI) for review:

- 5,900 facilities and 31,000 submissions since 2014, and counting as rules change (10,000 reports this year alone, 8,000 in 2017).
- 43,220 records (size: average 4,062 KB, minimum 1 KB, maximum 589,284 KB)
- CEDRI uses the most storage and bandwidth out of all the OAQPS systems.

Air Emissions Reporting “As is” State



What are we building and why?

What: “Common Emissions Form” to streamline air emissions reporting.

Why: Emissions data being reported separately, at different times for:

- Greenhouse Gas Reporting Program (GHGRP),
- National Emissions Inventory (NEI),
- Toxics Release Inventory (TRI),
- Sector/Industry specific via the Compliance and Emissions Data Reporting Interface (CEDRI),
- State/local/tribal (SLT) specific programs

Consequences: duplication and inconsistent data

What are we building and why?

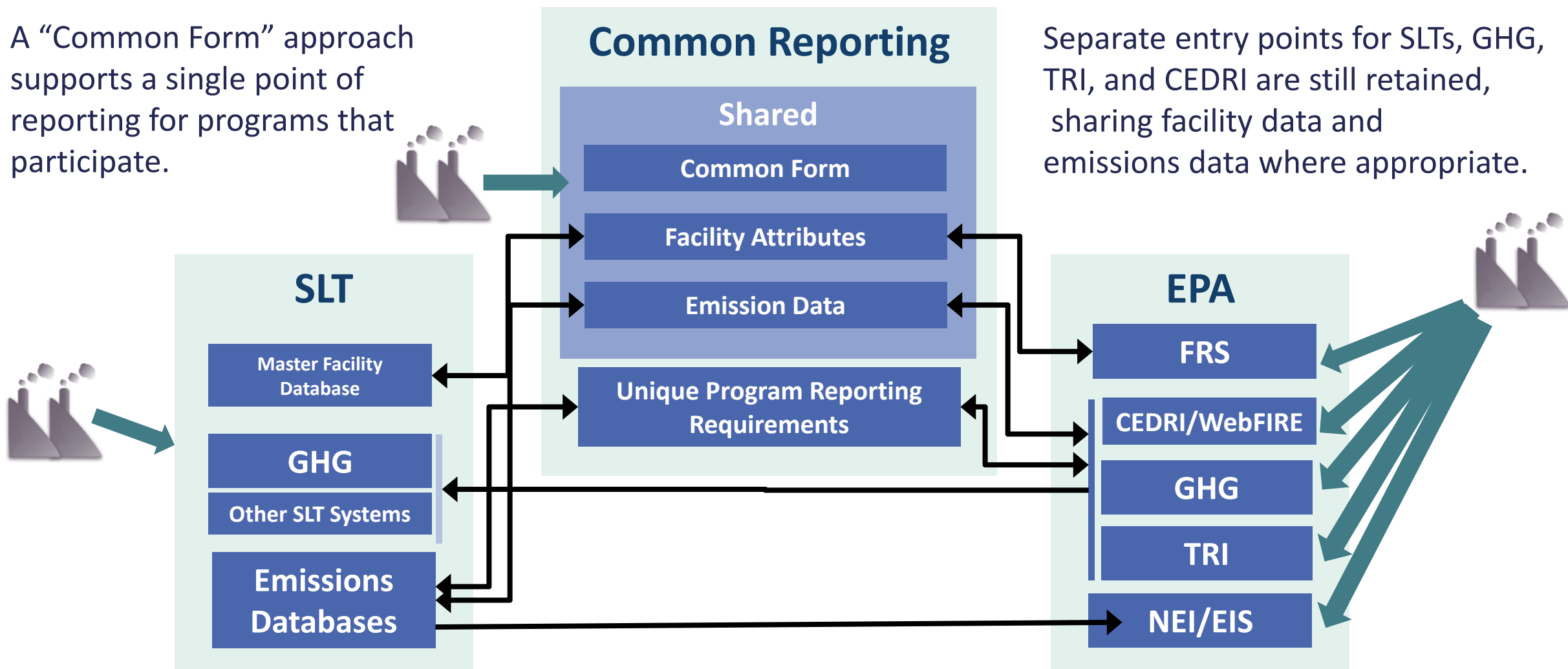
Duplication: time savings from simultaneous reporting of shared data elements

- Data for the same facility – e.g., company name & address
- Input data to emissions estimation:
 - activity data – e.g., BTU of coal, operating hours
 - emission factors – e.g., tons of VOC per MMBTU of coal
- Identical/related pollutants among programs (e.g., toxics to TRI and NEI).

Inconsistent data: reduction of data mismatch between programs for same facility and staff time spent on data reconciliation.

Proposed “Future State” Concept

A “Common Form” approach supports a single point of reporting for programs that participate.



Benefits of Streamlined Reporting

- Reduced industry and SLT burden for air emissions reporting
- Consistent information across air emissions programs
- Improved timeliness and transparency of data
- Improved data quality
- Data made more accessible and useable
- More timely decision making supported

Further details found at: <https://www.epa.gov/e-enterprise/e-enterprise-combined-air-emissions-reporting-caer>

Air Emissions Data Requirements

Broad categories of data of interest across programs:

- **Air emissions:** activity data (e.g., fuels burnt, materials used), emission factors, estimation methods – equations
- **Reporting codes:** control codes, pollutant codes, units of measure, source classification codes, etc.
- **Facility and sub-facility:** facilities, units, processes, release points, controls

Differences amongst programs:

- *Much* shared data, *but not all*, and some similar but not identical
 - E.g., different levels of resolution: facility (TRI) versus sub-facility (NEI)
 - E.g., different calculation method codes for the same calculation method.
- Many *states with own* air programs: state-specific data requirements, and procedures for reviewing reported NEI data.

Workflow Cases

Case 1: State interface and backend are retained (Common Form received data from state interface)

- (a) data goes to state first or (b) state and EPA at same time

Case 2: State interface and backend are retained (Common Form pushes data to state interface)

- (a) data goes to state first or (b) state and EPA at same time

Case 3: Common Form replaces state interface but state database is retained

- (a) data goes to state first or (b) state and EPA at same time

Case 4: State uses Common Form

- State reviews/revises data and signs off prior to use in EIS (new certification process in EIS would be needed)

Cases 1-3 assume the state uses its own system (custom) or SLEIS

Post Lean Event Short Term Wins

In 2016, five projects were aimed at improvements that could be made in a short time frame and would start rendering benefits immediately, without requiring the existence of the CF to become effective:

CAER Implementation plan – the formulation of a path forward to get from the current state to the future state.

WebFIRE search improvements and consolidated expert of industry test data – an initiative to enhance and streamline searches of test data from WebFIRE so that inventory developers can quickly and systematically update and QA data fields.

Identify and eliminate root causes of EPA augmentation for the NEI – an initiative to identify the reasons for the mismatch between inventory data submitted by state, local and tribal (SLT) authorities, and data required by EPA for the NEI. The goal was to reduce the need for EPA staff time (6-12 months) devoted to data augmentation after inventory data submissions.

Web-based Services for Source Classification Codes (SCC) - work that resulted in an SCC search tool and the availability of the “master” SCC table to be available to everyone via web-services. The goal was to provide access to the most updated list of SCCs in a central location, thus eliminating time and effort to find the correct list of SCCs. See: [epa.gov/scc](https://www.epa.gov/scc)

Data dictionary and harmonization of codes tables – an effort to identify differences in similar types of codes needed by different programs and creating crosswalks. The goal was to harmonize codes tables across multiple programs where the same types of codes are needed.

For more details, go to: <https://www.epa.gov/e-enterprise/phase-1-short-term-wins>

Air Emissions Data Requirements

E-Enterprise Facility Team has worked on establishing business rules for (shared) facility data governance

Facility Registry Service (FRS) has worked on the new data model (breaking down the facility into sub-facility components – units, processes, release points, controls)

Emissions Inventory System (EIS)-FRS Team (OAQPS) has worked on the EIS-FRS data transfers.

Webservices for Source Classification Codes (SCCs), codes were moved from EIS to manage codes in one central location; lessons learned for managing other reporting codes via webservices.

WebFIRE (EPA's emission factors database) to be made “webservices able” for the CF.

CAER Product Design Team (PDT) and its Research and Development (R&D) teams, composed of EPA program staff as well as state representatives, has done research on air emissions data requirements, requirements comparisons amongst programs, and issuing recommendations for the CF.

Product Design Research and Development Teams

Were established as part of the E-Enterprise governance of CAER and include staff from EPA and SLTs:

Phase I (January-October 2017)

- QA & QC
- GHG Mapping Study
- NEI/TRI/SLT Sharing
- Emissions Data Model
- Emission Factors Scoping Study

Phase II (January-October 2018)

- GHG Mapping Study (continued)
- NEI/TRI/SLT Sharing (continued)
- Emissions Data Model (continued)
- Confidential Business Information
- State Emission Factors Compendium

For more details including team reports, see: <https://www.epa.gov/e-enterprise/product-design-team>

Air Emissions Data Requirements

Highlights from PDT R&D teams most relevant to one-year pilot:

Emissions Data Model

- Documented data model with the emissions-related data elements needed to support a common emission form

Emission Factors

- Survey of states that identified problems and solutions with SCCs and WebFIRE.
- Emission Factor Compendium containing State specific emission factors.

Quality Assurance/Quality Control (QA/QC)

- Identified and evaluated a common set of emissions data QA/QC procedures for shared emissions reporting

NEI/TRI/SLT Sharing

- Identified and created crosswalks for common pollutants and codes.

Emissions Data Model

Phase I: National survey to determine SLT required data elements, how they process emissions data, and possible interaction with the Common Emissions Form (CEF)

Phase II: Continues the documentation of the emissions-related data elements including the identification of state-specific data elements sufficient to allow for a broader usage by SLTs and EPA CAER programs.

- Research on data elements needed for the CEF:
 - Essential to pilot versus non-essential but necessary in future versions of the form for SLT and NEI
 - Facility data that must be in FRS for the CEF
- Emissions calculator needs that must be met by the CEF

Emission Factors Compendium

Survey to states asking what emission factors they use and how they use them for NEI reporting which pointed to the need for a state-specific database of emission factors that could be shared.

Created business rules for compendium governance, researched venue for the compendium (Virtual Exchange Services in EPA) and recommendations of how the compendium should be used in the CEF.

Pulled together state-specific factors from MN, MI and SC to start the compendium.

Ongoing work (webservices and updates) and discussions so WebFIRE data can also be pulled into the CEF in a similar fashion.

TRI/NEI/SLT

Better defined overlap between TRI and NEI – in terms of numbers of facilities in both programs and quantity of emissions of overlapping pollutants for these facilities overlapping facilities

Quantified emissions differences for overlapping facilities and explored reasons through case studies

Looked at current QA procedures that involve using other program's data for QA (TRI looks at NEI air emissions, NEI looks at TRI reported air waste streams)

Developed crosswalks for common data fields: chemicals (Phase 1), basis of estimate codes and waste treatment codes (Phase 2)

Made recommendations for common form interface and back end calculations that would be needed to support combined air emissions reporting for SLT, NEI and TRI programs

Quality Assurance/Quality Control

Compilation of QA/QC checks and procedures identified from review of states on the team (WY, VA, NC, SC, GA and AZ), EIS/NEI and TRI.

- Routine automated QA/QC checks from EIS, SLEIS and a few other SLT program systems. Members of the team focused on QA checks done on emissions data, but also some non-emissions data such as ranges for release point dimensions.
- Emissions data accuracy and reasonableness QA/QC checks: not broadly applied in automated/electronic manner, but rather as “engineering review” or “manual checks”.

National survey of SLTs: how checks are done by SLTs both automated (not EIS), and manual.

Current CAER PDT State participants:

Names	State	Names	State
Anna Wood	AL	Tammy Manning	NC
Jing Wang, Deborah Basnight	GA	Josh Kalfas	OK
Jordan Garfinkle	MA	Elizabeth Elbel, Stephanie Summers	OR
Stacy Knapp	ME	Chad Wilbanks	SC
Dennis McGeen	MI	Jill Dickey	TX
Chun Yi Wu, Azra Kovacevic	MN	Sue Hines	VA
Elliot Bickerstaff, Deborah Boleware, Matt Carpenter	MS	Ben Way	WY

As of June 2019.

Acronyms

CAER- Combined Air Emissions Reporting	FRS – Facility Registry Service
CDX – Central Data Exchange	GHGRP – Greenhouse Gas Reporting Program
CEDRI – Compliance and Emissions Data Reporting Interface that supports stack test reporting	MVP – Minimum Viable Product
CFS – Common Form System	NCC – National Computer Center at EPA
EF Compendium – State specific emission factors compendium that are not part of WebFIRE or AP-42	NEI – National Emissions Inventory
E-GGRT – Electronic Greenhouse Gas Reporting Tool that supports GHG emissions data reporting	SLT – State, Local and Tribal authorities
EIS – Emissions Inventory System that supports data collection of NEI data	TRI – Toxics Release Inventory
ERT – Electronic Reporting Tool that supports stack testing reporting	TRI-MEweb – TRI emissions data collection system
	WebFIRE – System that houses emission factors needed to estimate air emissions