Environmental Information Exchange Network

EN2017

Streamlining Air Emissions Reporting with a Common Form

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U.S. EPA, Office of Air Quality Planning and Standards

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INNOVATION AND PARTNERSHIP

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Philadelphia, Pennsylvania

http://www.exchangenetwork.net/en2017

ABSTRACT

This presentation illustrates the air emissions reporting requirements faced by the regulated community and presents the streamlining that could occur through E-Enterprise. The Combined Air Emissions Reporting (CAER) “common form” concept would enable data reporters to provide emissions values once for each year. The common form would provide reporters tools to share data across reporting programs to lower regulatory burden and promote consistency.

Overview

- Permits and air emissions
- “As-is” state
  - Air emissions reporting deadlines
  - Repetitive reporting
  - Inconsistencies caused by the “as is” state
- CAER proposed future state
  - Imagined workflow of the proposed future state
  - Common form potential features and data sharing

Scenario: The Super Cement Plant

- Imagine you are the Environmental Compliance Manager at the Super Cement Plant, a Portland Cement plant in Somewhere, Florida

- How do you meet your reporting requirements for air emissions that occurred in 2014?
  - State/Local/Tribal (SLT) reporting requirements
    - Tied to permit and compliance
    - Data collected feeds to the National Emissions Inventory (NEI)
  - Federal standards for hazardous air pollutants (HAPs)
    - Via the Compliance and Emissions Data Reporting Interface (CEDRI)
  - Greenhouse Gas Reporting Program (GHGRP)
  - Toxics Release Inventory (TRI)

Online PDF Permits Are Just a Start

Florida Department of Environmental Protection

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About Air | Emission Sources | Air Quality Monitoring | Rules and Forms | Publications | About Us

The Basics | Permits | Compliance | Inventory | Vehicles | Asbestos

Emission Sources

Air Permit Documents Search

Owner/Company Name: **SUPER CEMENT, LLC**
Site Name: **SUPER CEMENT SOMEWHERE PLANT**

City: **SOMEWHERE**
County: **HERNANDO**

Major SIC Code: **32 - STONE, CLAY, GLASS AND CONCRETE PRODUCTS**
Title V Facility: **Yes**

Facility ID: **000000000**

Air Compliance and Emissions Information for this Facility

Project Number: 0000000-000-AV
Project Name: TITLE V RENEWAL

Scanned Documents

No scanned documents available

Zipped Permit Documents

Permit Activity	Issue Date	Expiration Date	Posting Date	Permit Status	CAM	Project Documents	Permit Summary
PERMIT RENEWAL	11/20/2013	11/20/2018	11/20/2013	Final	N	Zip File	Summary
			10/01/2013	Proposed	N	Zip File	Summary
			10/01/2013	Draft	N	Zip File	Summary

Air Emissions Data Collection Continuum

- CAER is focused on annual emissions reporting, but there are connections to prior steps

Permit Data Has Value for CAER

Facility Name	Super Cement Plant
Street Address	123 Dusty Road
City, State	Somewhere, FL

Pollutant	Allowable emissions (tons/year)
PM	769
SO_2	130
NOx	1,950
CO	1,560
VOC	117

Applicable Requirements
PSD[1]
NSPS[2]
NESHAP[3]

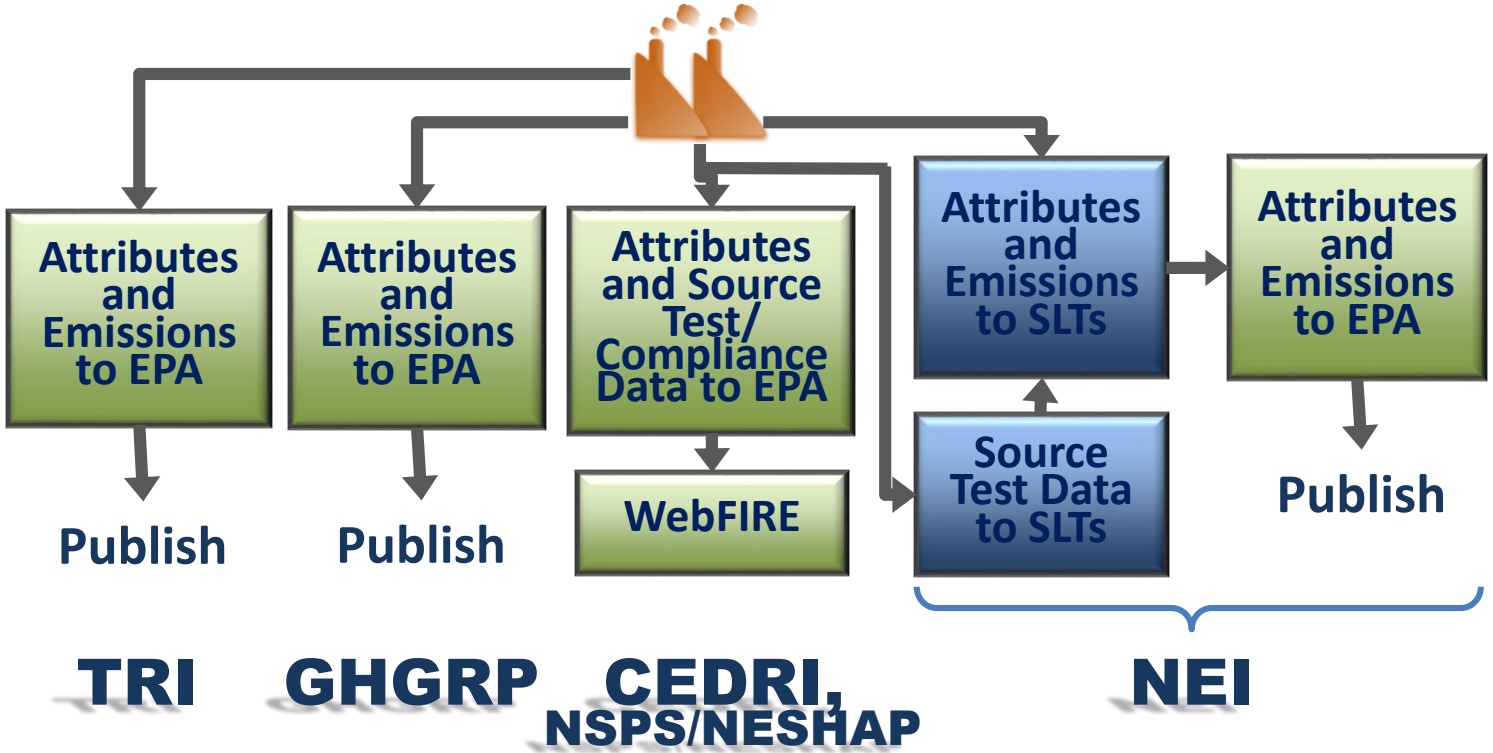
Miscellaneous
Subject to a Maximum Achievable Control Technology (MACT) standard
Diagrams or drawings included

[1] Prevention of Significant Deterioration
[2] New Source Performance Standards
[3] National Emission Standards for Hazardous Air Pollutants

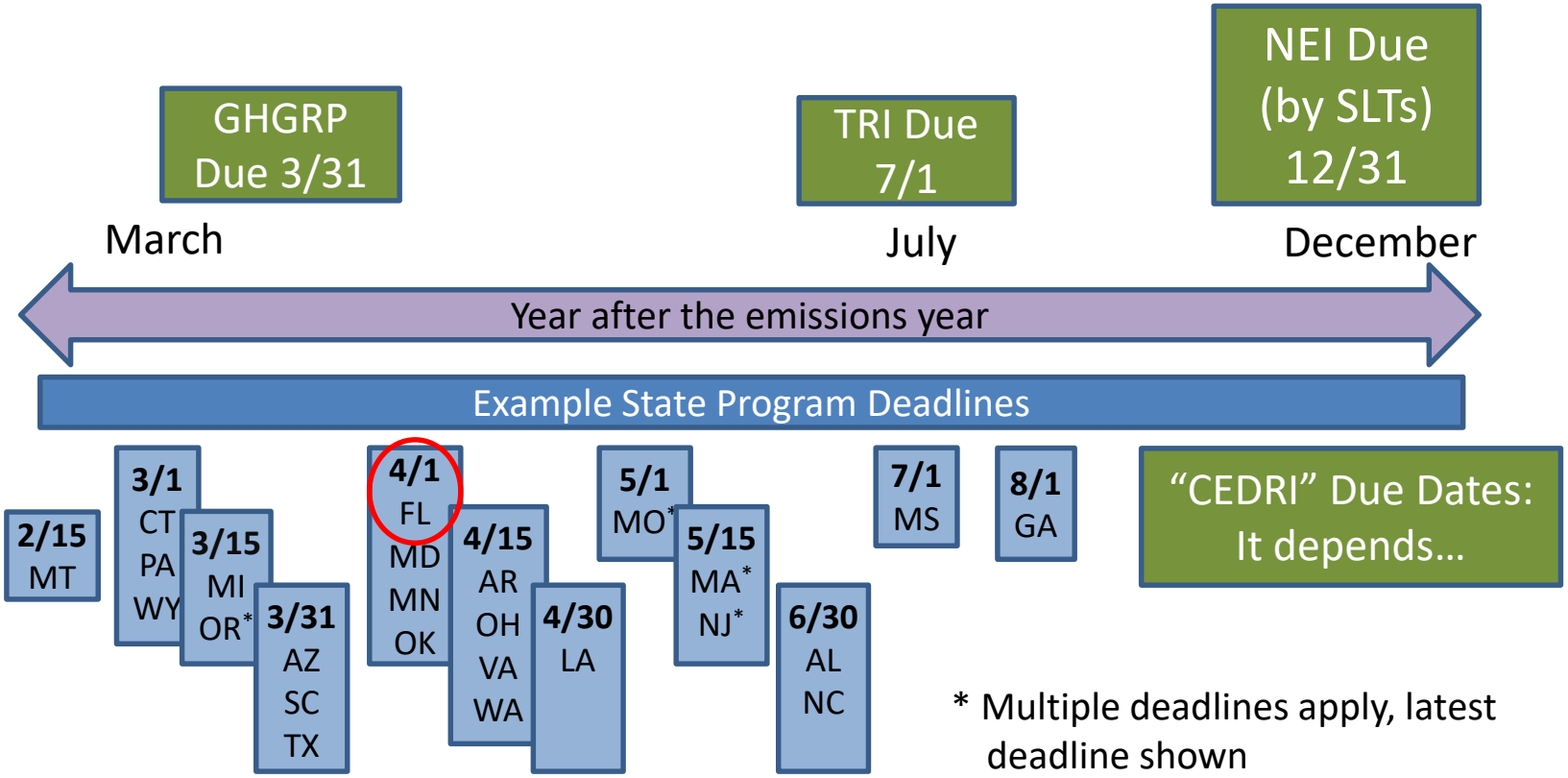
E-Permitting Benefits to CAER

- If e-Permitting collected facility attributes and permit limits in a database (not just a PDF)…
  - Emissions data systems could have advanced notice of which facilities should report
  - Some facility attributes could be prepopulated in emissions reporting forms
  - Compliance checks could be done by comparing e-reported compliance reports versus permit limits

Air Emissions Reporting “As is” State



Emissions Reporting Deadlines



* Multiple deadlines apply, latest deadline shown

Repetitive Reporting

		GHGRP	State (NEI)	TRI	CEDRI
Facility Attributes	Facility information	Yes	Yes	Yes	via CDX
	Industry code (NAICS)	Yes	Yes	Yes	Future option
	Kiln (unit) information	Yes	Yes		Yes
	Release point information		Yes	Fugitive/ Stack	Yes: e.g., exit temp., flow rate
	Emissions process	Fuel	Yes: SCC*		Yes: SCC*
Emissions	Production or throughput	Annual	Annual		Yes
	Emissions	GHGs	CAPs, HAPs, and GHGs	Specific VOCs & HAPs	Various

* Source classification code used to identify emissions process in NEI and CEDRI

What is This Facility, Anyway?

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
EIS	327310	CEMENT MANUFACTURING.	
E-GGRT	562211	HAZARDOUS WASTE TREATMENT AND DISPOSAL.	
RCRAINFO	32731	CEMENT MANUFACTURING	
AIRS/AFS	327310	CEMENT MANUFACTURING.	
E-GGRT	327310	CEMENT MANUFACTURING.	
TRIS	327310	CEMENT MANUFACTURING.	
MN-TEMPO	032731		
RCRAINFO	562211	HAZARDOUS WASTE TREATMENT AND DISPOSAL.	
RMP	562211	HAZARDOUS WASTE TREATMENT AND DISPOSAL.	
MN-TEMPO	562211	HAZARDOUS WASTE TREATMENT AND DISPOSAL.	
AIR	327310	CEMENT MANUFACTURING.	

Cement kilns make cement

Cement kilns can burn hazardous waste

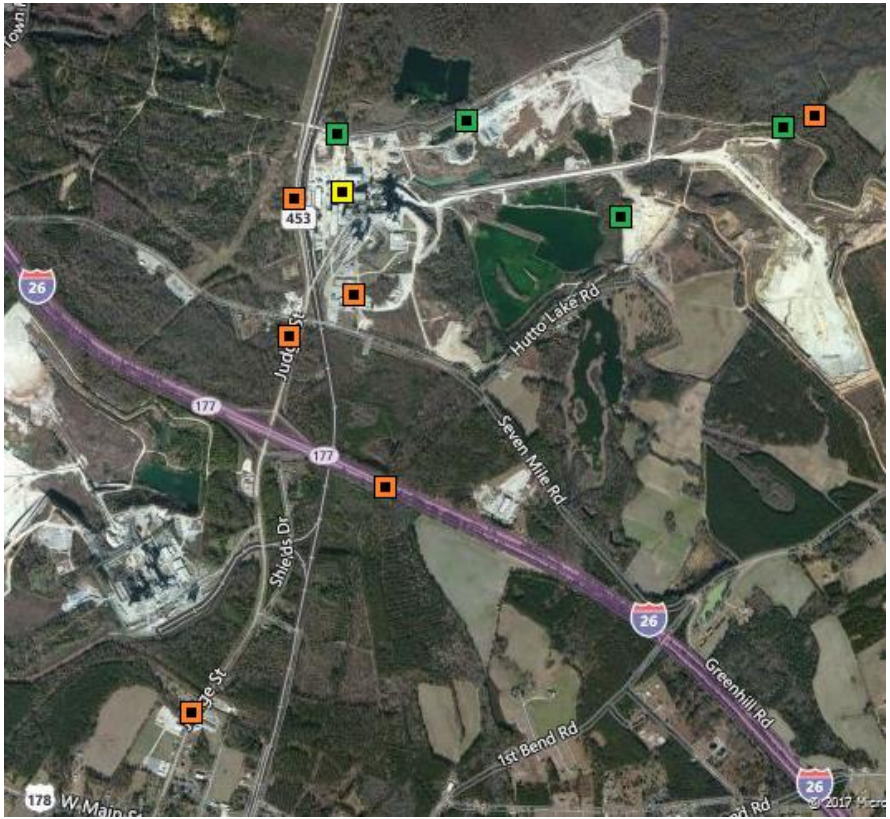
Repetition Can Lead to Differences

Mailing address example (for a different facility)

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	PO BOX 218	HARLEYVILLE	SC	29448	AIRS/AFS
MAILING ADDRESS	PO BOX 218	HARLEYVILLE	SC	29448	SC-EFIS
MAILING ADDRESS	PO BOX 218	HARLEYVILLE	SC	29448	NPDES
MAILING ADDRESS	PO BOX 218	HARLEYVILLE	SC	29448	TRIS
MAILING ADDRESS	P.O. BOX 218	HARLEYVILLE	SC	29448	CEDRI
MAILING ADDRESS	PO BOX 220	BLUFFTON	SC	29910	SC-EFIS
MAILING ADDRESS	CHARLESTON	CHARLESTON	SC		SC-EFIS
MAILING ADDRESS	654 JUDGE ST HWY 453	HARLEYVILLE	SC	29448	SC-EFIS

Different Locations



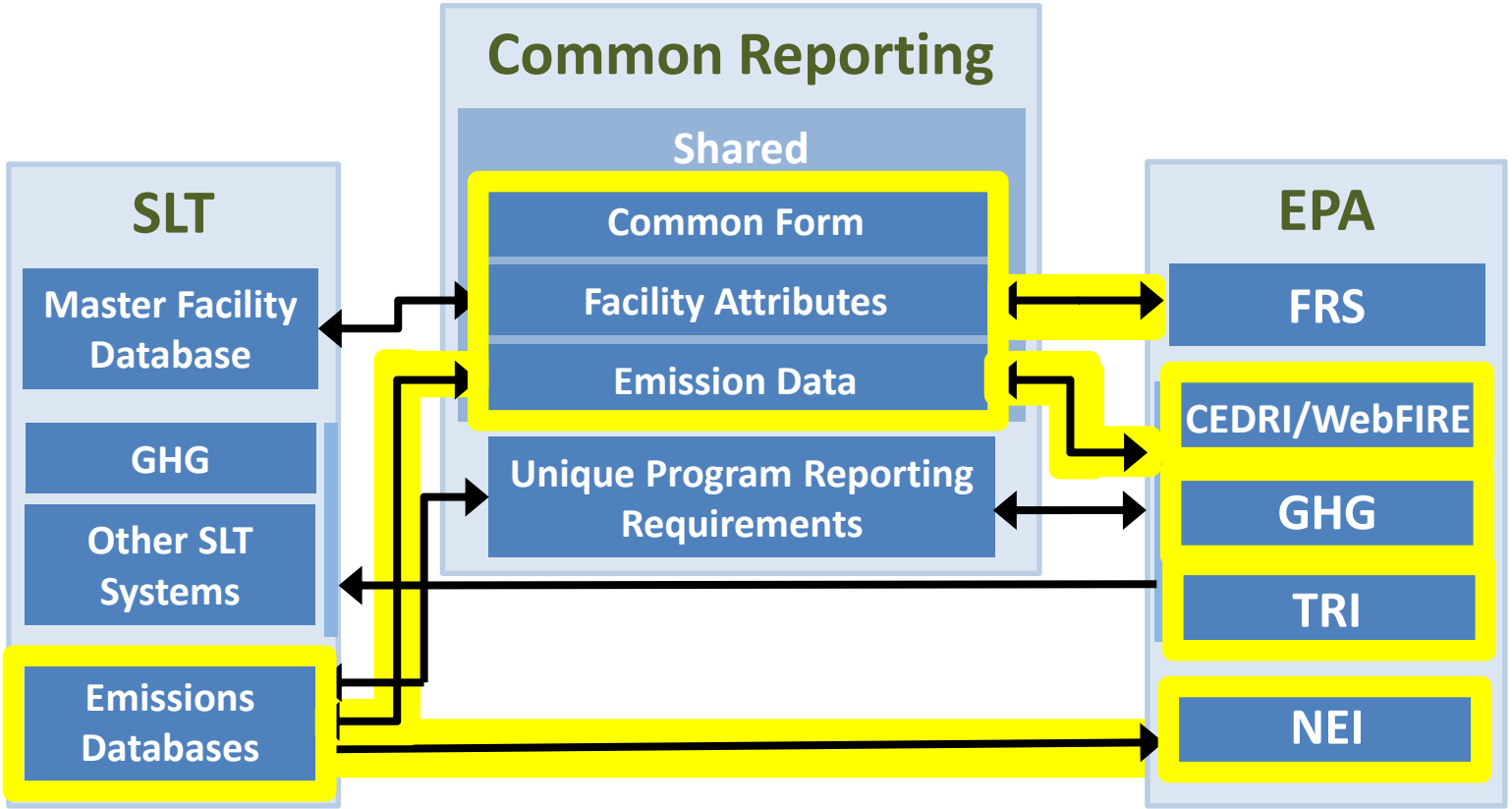
- Facility Registry Service (FRS) Facility Coordinates Viewer
- Best pick
- Not best pick
- Water discharge

Different Emissions in 2014

Pollutant (examples)	Florida	NEI	TRI	GHGRP	CEDRI (lbs/tons clinker)
Benzene (lbs)	15,486	15,486			
Lead (lbs)	77	77	8.3		
NOx (tons)	1,419	1,419			Kiln 1: 7.19 Kiln 2: 4.98
Ammonia (tons)		1.22	1.22		
Zinc Compounds (lbs)			562		
Dioxin/Furans (lbs)			0.0000132[a]		Yes[b]
CO_2 from kilns				732,412 (Tonnes)	1,720

[a] TRI pollutant is "Dioxin and Dioxin-like compounds"
[b] Individual dioxin and furans available in CEDRI

Proposed CAER Future State



Four SLT Workflows Possible

- Example 1: SLT interface and backend are retained (common form received data from SLT interface)
- Example 2: SLT interface and backend are retained (common form pushes data to SLT interface)
- Example 3: common form replaces SLT interface but SLT database *is* retained
- Example 4: SLT uses common form and NEI's Emissions Inventory System (EIS) only

Compare Current vs. Future - Industry

Current

- Login to reporting systems separately, some login sharing via CDX
- Limited use of FRS for facility attributes during data entry
- Update facility attributes separately in each system
- Enter emissions and other related parameters (throughput) separately
- Industry responsible for ensuring consistencies

Proposed Future Ideal

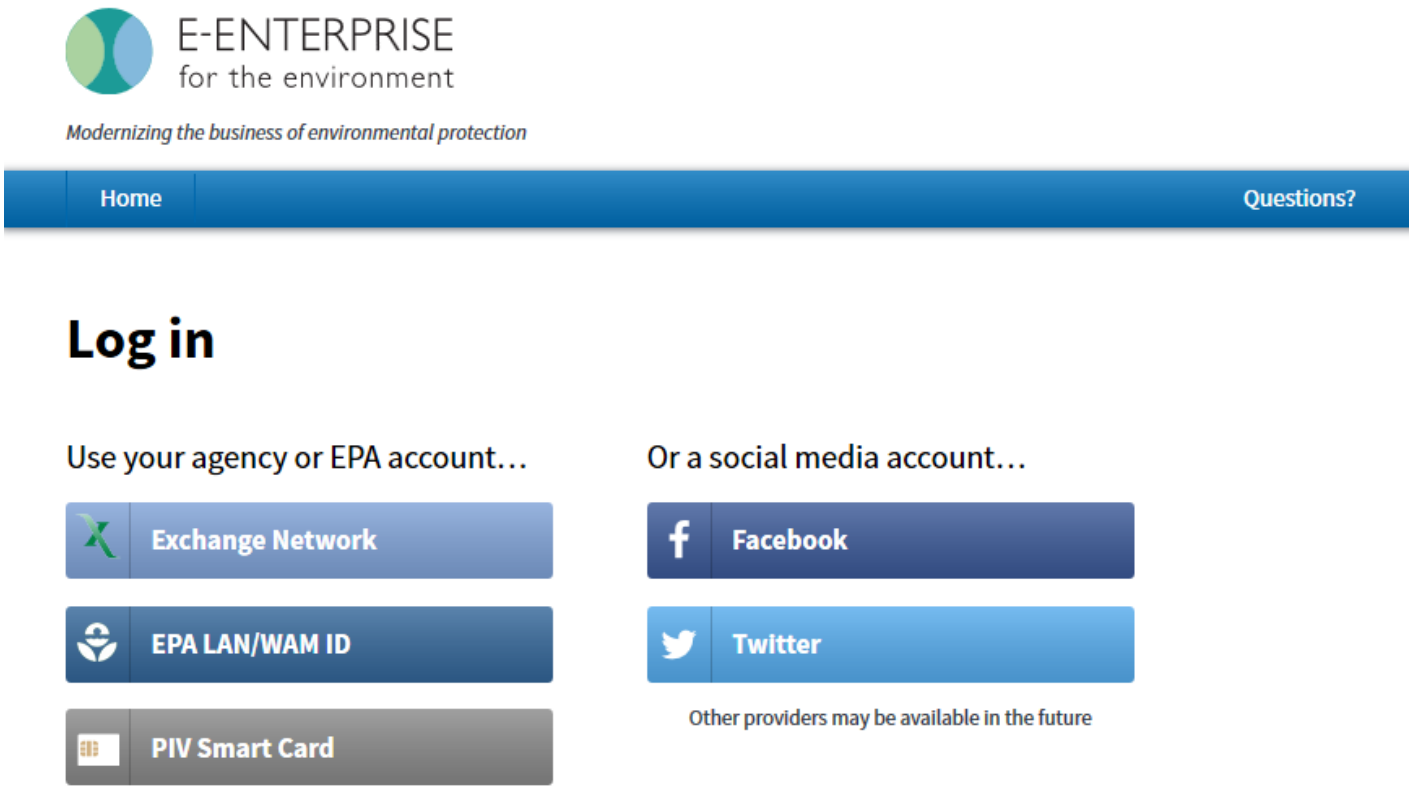
- Single login for access
- Shared facility attributes updated as changes occur
- Data systems get latest shared facility attributes
- Common form can collect emissions
- Where emissions entered elsewhere, could be used to prepopulate the common form
- Data systems help industry to be consistent

Compare Current vs. Future - SLTs

Current	Proposed Future Ideal
• Develop and maintain your own electronic reporting systems • No help with keeping reporting consistent across programs or using CEDRI-based test data for inventories • Labor after the fact if questions arise about inconsistencies	• EPA electronic reporting is an option that you can leverage • You can keep your current parts of your reporting system if you want • Common form promotes use of CEDRI-based emission rates • Common form promotes data sharing and consistency

Imagined CAER Workflow

For “Super Cement”



E-ENTERPRISE
for the environment

Modernizing the business of environmental protection

My account | FAQs | Log out | Logged in as: Mhouyoux_Via_WAM

Workbench | Set location | Somewhere, FL (12345) | Questions?

CDX Central Data Exchange

My Facilities | Add Facilities

Manage Facilities (4 facilities managed)

List View | Map View

Filter:

Export Options

EPA Registry ID	Program ID	Facility Name	Facility Address	
110000365550	Pending	SUPER CEMENT, LLC	123 CRUSTY RD, SOMEWHERE, FL 12345	View/Edit Details Remove

Showing 1 to 1 of 1 facilities

Previous | 1 | Next

Save Selected Facilities

My Facilities | Add Facilities

Facility Details

< Back to My Facilities

EPA Registry ID

00000000000

Program ID

CEDRI000000

Program Acronym

CDX: CEDRI - FRS: CEDRI

Facility Name

SUPER CEMENT COMPANY, LLC

Facility Address

123 CRUSTY RD,
SOMEWHERE, FL 12345
HERNANDO COUNTY

NAICS Code(s)

= Primary NAICS

327310
562211

Sub-facility Components Add Sub-facility Component(s)

Number of Units	**6**
Number of Processes	**8**
Number of Release Points	**3**
Number of Control Methods	**2**

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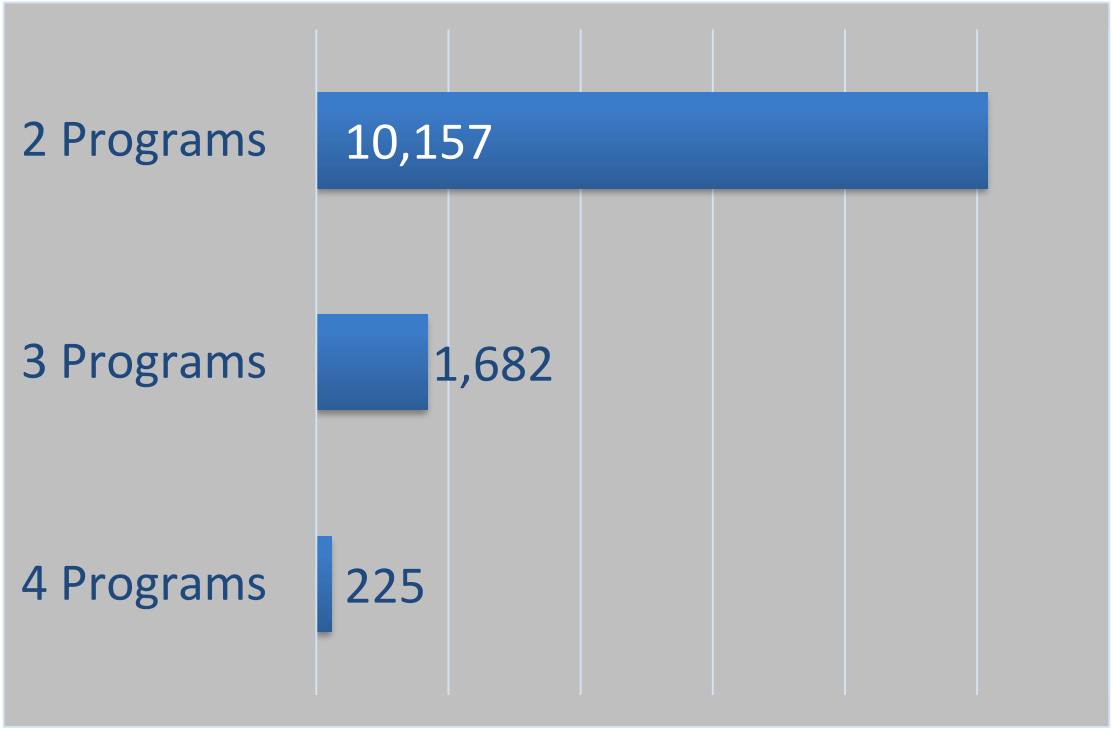
My Reporting Requirements

SUPER CEMENT COMPANY, LLC

Program	Due By	Status	Report with…
Portland Cement NESHAP 40 CFR Part 63, Subpart LLL	12/19/2014	Complete	CEDRI
Greenhouse Gas Reporting Program 40 CFR Part 98, Subparts A, C, H	3/31/2015		e-GGRT
Florida Annual Operating Report FL 62-210.900(5)	4/1/2015		Common Form
Toxics Release Inventory 40 CFR Part 371	7/1/2015		TRI-MEweb

Estimated Facilities Reporting to Two or More Air Programs



- Considered CEDRI, GHGRP, NEI, and TRI only
- SLT and NEI program treated as one program
- Estimated using FRS matches in 2015

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Workbench | Air Emissions | Set location | Somewhere, FL (12345) | Questions?

2014 Common Emissions Form

Bulk Upload

SUPER CEMENT COMPANY, LLC

Unit: Kiln 1 (000131) | **State Unit ID:** 509913 | **Unit Type:** Cement Kiln

SCC: 30500606 | **State Process ID:** 509913 | **Industrial Processes; Mineral Products; Cement Manufacturing (Dry Process); Kiln**

Pollutant	Throughput	Emission Rate	Emissions
Benzene			
CO2		[from GHGRP]	[from GHGRP]
PM2.5		[from CEDRI/WebFIRE]	

Common Form Potential Features

- Import of emission rates
  - Facility or unit-specific factors from WebFIRE (obtained from CEDRI)
  - Average factors from WebFIRE or alternative sources
- Emissions pre-population
  - From submissions earlier in reporting year (GHGRP?, TRI?, or even SLT system)
  - Show emissions from prior year for reference and to promote QA
- Emissions
  - Show facility requirements (resolution and pollutants)
  - Support voluntary emissions reporting
  - Support on-screen direct entry, on-screen calculators, and bulk upload
- Pre-submission quality assurance, flag large changes
- Data Sharing

Common Form Data Sharing

- Common form could support all pollutants subject to air emissions reporting for multiple programs
- When SLT data due after GHGRP, common form could pull data from GHGRP, show at facility or unit level
  - Common form could help GHGRP emissions to be apportioned to meet the SLT requirement or support voluntary submission
- When SLT data due before TRI, common form could sum SLT data and send to TRI to prepopulate TRI-MEweb (e.g., NH3, HAPs)
  - TRI requires other media (water, land)
- When TRI data due before SLT, TRI could be used to prepopulate common form at facility level, for comparison to process-level collected by state

Conclusions

- E-Permitting is where streamlining of air emissions reporting should start
  - Data must be stored in database and not only a PDF
- Current state of air emissions reporting promotes inefficiencies and inconsistencies
  - Industry and government share an interest in efficiency and consistency
- Proposed CAER future state common form could provide opportunities for reduced burden and improved consistency across programs