

SLEIS Enhancement Work by Oklahoma Department of Environmental Quality

Presented by

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Emissions Inventory Section, Oklahoma DEQ

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SLEIS Origins

- Needs identified during 2008 Emissions Inventory Conference, following launch of EIS
- Consortium formed with Arkansas DEQ as the lead agency
 - Oklahoma was NOT part of this consortium
- Exchange Network Grant awarded in FY2009 to design new EI collection software
- Consortium contracted with Windsor Solutions in 2010 to build the State and Local Emissions Inventory System (SLEIS)

SLEIS Original Design

- The original design was done by and for agencies collecting several dozen to a few hundred reports per year
 - Top data element in hierarchy was “facility”
- Oklahoma collects many more reports than this
 - About 13,600 reports collected for 2020 NEI and 5,600 reports collected for 2021.
 - We needed a “higher” data element
 - Created “company” module








SLEIS Reporting Cycle Basics

- Agency staff determine which facilities are required to report for the upcoming reporting year and set Reporting Requirement to Online by mid December
- Agency staff create report “stubs” by beginning of January
- Facility users start reports, add required data, and submit by April 1
- Agency staff must load, review, complete, and promote reports to Master Facility Inventory
- Reports can be reopened for Amendment and must then be resubmitted, loaded, reviewed, and promoted

Enhancements Already in Place

- Company Module
- Bulk report management for Agency Users

What would you like to do?

 Add Company	 Add Facility	 Administer Application	 View User Accounts	 Generate Reports	 Manage Reports	 Submit EPA Data
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Find Company

For direct access to a company, enter a company identifier or name.

Find Facility

For direct access to a facility, enter a facility identifier or name.

My Companies and My Facilities



State & Local
Emissions Inventory System

Welcome EMISSIONS INVENTORY SECTION

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My Companies

Identifier	Name	Company Roles	Actions
3327	TEST - OK DEQ AQ COMPANY - A	Administrator, Submitter, Viewer	
3431	TEST - OK DEQ AQ COMPANY - B	Administrator, Editor, Submitter	
4446	TEST - OK DEQ AQ COMPANY - C	Administrator, Editor, Submitter	



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TEST - OK DEQ AQ COMPANY - C Facilities

Filter:

Identifier	Name	Facility Roles	Ready for Submission	Actions
20959	TEST - GENERIC OIL AND GAS 1			
20960	TEST - GENERIC OIL AND GAS 10			
20961	TEST - GENERIC OIL AND GAS 2			
20962	TEST - GENERIC OIL AND GAS 3			
20963	TEST - GENERIC OIL AND GAS 4			
20964	TEST - GENERIC OIL AND GAS 5			
20965	TEST - GENERIC OIL AND GAS 6			

TEST - OK DEQ AQ COMPANY - C

Company Identifier:
4446

Mailing Address:
123 my house
Oklahoma City, , 73101-1677
US

Phone: (405) 702-0100
Fax:

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

Authorized Company Users

2 users at this company have access to emissions report data.

[View Company Users](#)



Managing Company Users







Authorized Company Users

2 users at this company have access to emissions report data.

[View Company Users](#)

- Company Users have these roles at ALL facilities that belong to a company
- A single form can be submitted to gain access to multiple companies and/or facilities.

Company Users

Name	Email	Company Roles	Status	Actions
Bret Smith	bret_smith@windsorsolutions.com	Editor, Submitter	Active	  
EMISSIONS INVENTORY SECTION	aei@deq.ok.gov	Editor, Submitter, Administrator	Active	  



Templates for Multiple Facilities



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My Companies

Identifier	Name	Company Roles	Actions
3327	TEST - OK DEQ AQ COMPANY - A	Administrator, Submitter, Viewer	
3431	TEST - OK DEQ AQ COMPANY - B	Administrator, Editor, Submitter	
4446	TEST - OK DEQ AQ COMPANY - C		

TEST - OK DEQ AQ COMPANY - C Reports

I want to: for Reporting Period:

Facility Identifier	Facility Name	Report Status	Select all/none <input type="checkbox"/>
20959	TEST - GENERIC OIL AND GAS 1	Not Started	
20962	TEST - GENERIC OIL AND GAS 3	In Process	<input type="checkbox"/>
20963	TEST - GENERIC OIL AND GAS 4	In Process	<input type="checkbox"/>
20964	TEST - GENERIC OIL AND GAS 5	Not Started	

Actions:
View/Print Reports
Start Reports
Import Data Files
Validate Reports
Submit Reports

Only those facilities required to report are visible here

Template Files for Multiple Facilities

Processes.csv excerpt

	A	B	C	D	E	F	G	H	I	
1	ReportYear	CompanyId	CompanyName	FacilityId	FacilityName	EmissionUnitId	EmissionUnitDesc	ProcessId	ProcessSCC	ProcessDesc
2	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185226	Example Spray Booth	311272	40400250	Example Surface Coating
3	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185777	Example Boiler	311717	10100601	Example Boiler Process
4	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	195413	Example Engine	322698	20200251	Example Engine Process
5	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	195413	Example Engine	331735	20200253	Testing stuff
6	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	203381	Open Burning	331549	50200201	Open Burning
7	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	208238	Test Tank	336928	40400305	Test Tank Breathing
8	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185196	0.50 MMBtu _hr Heat-Treat	311237	10100602	Process Heaters - Natural Gas
9	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185198	Piping Components	311239	31000220	Natural Gas Production - All Equipt Leak Fugitive
10	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185199	Storage Tanks - Crude Oil	311240	40400302	Oil and Gas Field Storage and Working Tanks - Fi
11	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185199	Storage Tanks - Crude Oil	311241	40400301	Oil and Gas Field Storage and Working Tanks - Fi
12	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185199	Storage Tanks - Crude Oil	311242	40400300	Oil and Gas Field Storage and Working Tanks - Fi
13	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185201	Load-1 Crude	311244	40400154	Bulk Terminals - Tank Truck Vapor Leaks
14	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185202	Load-2 Water	311245	40400154	Bulk Terminals - Tank Truck Vapor Leaks
15	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185205	203 HP CAT G3306 TA	311250	20200252	Natural Gas - 4-cycle Rich Burn
16	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185209	Portable Flare	311254	31000205	Crude Oil Production - Flares
17	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185210	Storage Tanks - Produced Water	311255	40400315	Oil and Gas Field Storage and Working Tanks - Fi

ProcessEmissions.csv excerpt

	A	B	C	D	E	F	G	H	I	J
1	ReportYear	CompanyId	CompanyName	FacilityId	FacilityName	EmissionUnitId	EmissionUnitDesc	ProcessId	ProcessDesc	PollutantCode
2	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185226	Example Spray Booth	311272	Example Surface Coating	VOC
3	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185777	Example Boiler	311717	Example Boiler Process	CO
4	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185777	Example Boiler	311717	Example Boiler Process	NOX
5	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	185777	Example Boiler	311717	Example Boiler Process	PM10-PRI
6	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	195413	Example Engine	322698	Example Engine Process	CO
7	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	195413	Example Engine	322698	Example Engine Process	VOC
8	2022	4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	203381	Open Burning	331549	Open Burning	CO
9	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185196	0.50 MMBtu _hr Heat-Treat	311237	Process Heaters - Natural Gas	CO
10	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185196	0.50 MMBtu _hr Heat-Treat	311237	Process Heaters - Natural Gas	NOX
11	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185198	Piping Components	311239	Natural Gas Production - All Equipt Leak Fugitives	VOC
12	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185199	Storage Tanks - Crude Oil	311240	Oil and Gas Field Storage and Working Tanks - Fixt	VOC
13	2022	4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	185199	Storage Tanks - Crude Oil	311241	Oil and Gas Field Storage and Working Tanks - Fixt	VOC

Bulk Report Management



State & Local
Emissions Inventory System

Agency Users Only








Welcome

Welcome to the Oklahoma DEQ SLEIS Agency application.

To view the current status of batch uploads and requested reports, [click here](#).

What would you like to do?



 Add Company	 Add Facility	 Administer Application	 View User Accounts	 Generate Reports	 Manage Reports	 Submit EPA Data
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Find Company

For direct access to a company, enter a company identifier or name.

 × Go

Find Facility

For direct access to a facility, enter a facility identifier or name.

 × Go

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Bulk Report Management

Agency Reports

I want to: **Accept/Load Reports** for Reporting Period: 2022 and Company: Search... Filter:

Company Identifier	Company Name	Facility Identifier	Facility Name	Report Status	Promoted Date	Select all/none	Actions
4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	Submitted		<input type="checkbox"/>	

Agency Reports

I want to: **Validate Reports** for Reporting Period: 2022 and Company: Search... Filter:

Company Identifier	Company Name	Facility Identifier	Facility Name	Report Status	Promoted Date	Select all/none	Actions
4446	TEST - OK DEQ AQ COMPANY - C	20962					
4446	TEST - OK DEQ AQ COMPANY - C	20963					

Agency Reports

I want to: **Complete Reports** for Reporting Period: 2022 and Company: Search... Filter:

Company Identifier	Company Name	Facility Identifier	Facility Name	Report Status	Promoted Date	Select all/none	Actions
4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	Under Review		<input type="checkbox"/>	

Agency Reports

I want to: **Promote Reports** for Reporting Period: 2022 and Company: 4446 - TEST - OK DEQ AQ COMPANY - C Filter:

Company Identifier	Company Name	Facility Identifier	Facility Name	Report Status	Promoted Date	Select all/none	Actions
4446	TEST - OK DEQ AQ COMPANY - C	20962	TEST - GENERIC OIL AND GAS 3	Completed	2023-07-17 15:15:42	<input type="checkbox"/>	
4446	TEST - OK DEQ AQ COMPANY - C	20963	TEST - GENERIC OIL AND GAS 4	Completed	2023-07-17 15:15:42	<input type="checkbox"/>	

Upcoming Enhancements

- Oklahoma DEQ received an Exchange Network Grant to make additional enhancements to SLEIS
- Items we are currently pursuing fall into a few categories:
 - Things for Facility Users that will speed up data entry and increase data accuracy
 - Things for Agency Users that will speed up review of reports
 - Additional QA/QC

Enhancements for Facility Users

- A Copy and Paste feature
 - Allows facility users to copy emission units, release points, processes, control devices *and* their connections to each other, then paste this set of objects at the same or a different facility
- Summary Reports across Facilities
 - Allows facility users to access reports that contain information about multiple facilities (e.g. total emissions reported by the company, API/US Well numbers for all facilities)
- Add fields to Template files
 - Single facility template files only have equipment IDs, not descriptions. Single facility files also lack company/facility info, year info. Add these fields so they match the batch downloaded templates

Enhancements for Agency Users

- API/US Well number collection, QA/QC
 - OK DEQ collected emissions inventories from around 10,000 oil and gas production sites in 2020.
 - API/US Well numbers associated with these sites are used for our non-point NEI submittal
 - Enhancements will:
 - Move the location of this field to allow additional QA/QC
 - Conditionally require an API number based on selected Oil and Gas Facility Category
 - Create report for Agency users to download a list of all API numbers and their associated company/facility

Streamlined Permit Terminations

- Emissions Inventories are required until permit is terminated
 - When reports are submitted with facility status of Permanently Shutdown, this does not automatically end the requirement to submit future EIs
 - Enhancement aims to fill this gap
 - Populate text certifying need to terminate the permit(s)

Enhanced QA/QC

- Pollutants and pollutant groups
 - SLEIS already has an IsPM/IsVOC flag for each pollutant
 - Enhancement will:
 - Require the sum of the reported emissions for all pollutants where IsPM=Yes to be less than or equal to the reported emissions for PM-10 Primary
 - Require the sum of the reported emissions for all pollutants where IsVOC=Yes to be less than or equal to the reported emissions for VOC
 - When a pollutant is reported and IsPM=Yes, require that PM-10 Primary also be reported
 - When a pollutant is reported and IsVOC=Yes, require that VOC also be reported

Enhanced QA/QC

- Prevent value of 0 being reported as throughput
 - Occasionally, users do this instead of updating equipment status to Temporarily Shutdown (TS). We want them accurately reporting equipment statuses.
- Clear the Status Year when the status changes.
 - Status Year is required when status is NOT Operating. “Stale” status years may persist if status changed to TS one year, then back to Operating in later year.
 - Helps prevent incorrect submissions of status years to EIS

Enhanced QA/QC

- Consistency between Operating Statuses
 - A significant amount of time is spent by EI staff ensuring logical consistency among operating statuses for a facility and its equipment and processes.
 - This enhancement will help by enforcing a set of business rules that require consistency between:
 - The facility status and all other equipment and process statuses
 - An emission unit and all of its associated processes
 - A set of processes and their associated release point(s)
 - A set of processes and their associated control device(s)

Exchange Network Grant

- Upcoming enhancements are being paid for with Exchange Network Grant funds
 - 3-year Grant cycle, to be fully paid Summer 2024.
- Most enhancements should be made available to other agencies with an active maintenance contract with Windsor Solutions
- We would be happy to demo!

Thank you! Questions?

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