



# Emissions Inventory Webinar

2023 Inventory and SLEIS Refresher  
February 8 and February 15, 2024

South Carolina Department of Health and Environmental Control  
Healthy People. Healthy Communities.

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## Overview

- Welcome
- What's New
- Inventory Reporting Requirements
- Inventory
- Wrap up

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## Welcome

- Webinar
  - Limitations – approx 30 sec delay
  - Recording should be downloadable by attendees up to 180 days after webinar (please allow several minutes after webinar for Teams to process video file)
  - Use the QA feed in live event or send questions to: [ei\\_submittals@dhec.sc.gov](mailto:ei_submittals@dhec.sc.gov)
  - Materials (powerpoint) will be posted to EI webpage (<https://scdhec.gov/environment/air-quality/compliance-monitoring/emissions-inventory>)

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## Welcome - continued

- Scope of webinar
  - Overview/what's new for 2023 inventories and SLEIS
  - Use SLEIS training videos for “how-to” lessons on navigating SLEIS screens(<https://www.youtube.com/playlist?list=PLqGWmyz3QMps1NO4OioA9-X6QXJVGluR4> OR go to [www.youtube.com/scdhec](http://www.youtube.com/scdhec) and look for SLEIS in DHEC's playlists)

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## What's New

- ePermitting is here!
  - ePermitting not replacing SLEIS
  - Notification of Inventory Due process has changed
    - Inv Due notice on dashboard in ePermitting
    - We also sent notification emails manually - may be last time we do manual notifications
    - We will make the scheduled submission for you in ePermitting after you electronically sign/submit in SLEIS and we determine submittal completeness
  - ESA process has changed
    - We get SLEIS users from ePermitting 'Authorized Users' for each facil

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## What's New - continued

- Process for updating Facility EI/billing contacts has changed
  - Facilities maintain their own info in ePermitting
- Facility General – no longer required with inv submittal
  - Info is updated by facility users in ePermitting
- <https://scdhec.gov/environment/ePermitting/training>

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## What's New

- SLEIS 3.0
  - Many background security enhancements
  - New web address – just drop '/sleis' from original address
    - [sleisprod.dhec.sc.gov](https://sleisprod.dhec.sc.gov)
  - New stuff
    - History
    - Master data
    - Comparison reports

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## What's New – continued

- If H<sub>2</sub>S, DMS, DMDS, or methyl mercaptan reported, should also be summed and entered as TRS for tracking purposes. (only applies to pulp-and-paper facilities. TRS is a pulp-and-paper pollutant only)
- DMS, DMDS, and methyl mercaptan should also be included in total VOC since they are VOCs

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## What's New – continued

- Sent invoices in late January (22<sup>th</sup>) instead of previous July
  - Permanent change for Title V facilities only; no change to minor and CM facility July billing
  - TV bills in ePermitting – dashboard and e-perm auto notif emails
  - We also USPS-mailed invoices – may be last time for hardcopy mail
  - Can pay online in ePermitting or [scdhec.gov](http://scdhec.gov)
  - Can also mail paper check
- Sending Title V invoices in January allows for:
  - Billing to be based on latest reviewed inventory

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## What's New – continued – TV Billing

- Billable emissions provided when inventory review is complete instead of Alert Letters in May – 'Estimated Billable Emissions Report'
- New TV billing policy only changes the timing of the TV invoice
  - All other applicable reporting deadlines remain the same

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## Inventory Reporting Requirements

- Title V Facilities submit their Emissions Inventories on a schedule based on the **POTENTIAL** amount of pollutants emitted
  - Potential emissions listed in Statement of Basis for your TV permit and unincorporated construction permits
- Inv Type A Sources – submit every year:
  - SO<sub>x</sub>, NO<sub>x</sub>, CO ≥ 2500 tons/yr,
  - VOC, PM<sub>10</sub>, PM<sub>2.5</sub>, NH<sub>3</sub> ≥ 250 ton/yr
- All other Title V Sources – submit every 3 years (2014 data, 2017 data , 2020 data, 2023 data, etc.)

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## How do I get started?

- Must have Authorized Users in ePermitting
  - We pulled list of ePermitting Users 1-8-2024
    - You will need to let us know (ei\_submittals@dhec.sc.gov) if you have added anyone since 1-8-2024
    - We will add them to SLEIS once they have accepted invitation in ePermitting
- All 2023 inventory stubs have been created – you can start now!

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## Getting Started – don't forget

- Notes, Notes, Notes!
  - Make note of non-standard decisions
    - When you accounted for an emission elsewhere
    - Something temporarily didn't operate
    - Etc.
  - Helps us understand what you did
  - Use Comments sections in SLEIS – multiple locations/opportunities
  - Anything helps – bullet lists, etc., doesn't have to be complicated
  - In addition to Supporting Documentation

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## Getting Started – don't forget

- SLEIS tables: Factor Table, SCC listing
  - Have been refreshed for 2023 data year
  - Combined 'Reference Tables' workbook – combines SCCs, factor table, and a few code-lookup tables into one excel workbook
  - Download from SLEIS homepage
- Confidential – two copies of supplemental info: public & conf
  - Confidential flag only exists on Process Emissions level
  - Setting confidential flag to 'yes' prevents the emission factor and throughput from being made public
  - Contact us if you have questions

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## Inventory

- Get your permits - active operating and any construction permits not incorporated in TV which operated during reporting year (2023)
- SLEIS reports
- Any reports and/or supplemental sheets from last inventory review (i.e., 2022, etc.)
  - Contact you inventory reviewer if you need any of these.

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## Facility General

- No more Facility General form/sheet required!
- Updates are currently not allowed on SLEIS Facility General screen
- Facility contact information is updated by you in ePermitting
  - We cannot update SLEIS while you are working on inventory
  - Will update after submission during our inv review and provide a 'final' report for your review

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## Inventory – what to report?

- All permitted Emission Units
- All associated processes
- All regulated pollutants
- All Insignificant Activities (at least once)

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## Inventory – what to report? - HAPs/TAPs

- Report if you emit any of these HAPs at any level (HAPs of Primary Concern:
  - <https://www.scdhec.gov/sites/default/files/docs/Environment/docs/HAPs%20of%20Primary%20Concern.pdf>
  - All other HAPs and TAPs should be reported if the facility wide total of that HAP or TAP exceeds 200 lbs
  - <http://www.epa.gov/ttn/atw/orig189.html>
  - <https://scdhec.gov/index.php/regulations-table>
  - All HAPs/TAPs are reported at the Process Emissions Level – no facility-level reporting available

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## Inventory – what to report? - HAPs/TAPs

- TRI
  - Check your amounts reported to TRI vs EI
    - TRI should be close/equal to EI where practical
  - We realize that there are some de minimis reporting levels for TRI
  - EPA asks us for explanation when TRI is significantly different from EI !!

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## Emission Units

- Reported in terms of your current permit
- Be sure to review EU Type code in SLEIS – change/update accordingly
- Operating Status/Status Date – be careful if EU shutdown in EI year or prior

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## Fuel Burning

- Remember to enter fuel amounts in appropriate units, i.e. kgal, mmcf, tons, mmbtu
- Throughput units are driven by SCC and are found in the emission factor table
- Factors in SLEIS are dependent on SCC units – important!
- Multiple factors – specific to boiler type, burner type, etc. – Multiple factors are in SLEIS – use factor spreadsheet as guide

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## Evaporative Loss

- Painting, coating, cleaning operations, etc.
- Calculate emissions using the material balance method
- Spreadsheets, supporting docs – attach in SLEIS
- HAP/TAPs...
  - Make sure your TRI emissions are the same as your Emission Inventory emissions!!!

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## Tanks

- When is detailed storage tank information needed?
  - Tank's capacity is greater than 38.7 cubic meters (10,000 gallons), *or*
  - Stores a hazardous air pollutant, *or*
  - Emits one or more HAPs
- Detailed storage tank information is **not** needed for:
  - Pressurized storage tanks containing fluids such as liquid petroleum gas (LPG), liquid natural gas (LNG), natural gas, or inert gases

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## Tanks

- Tank emissions can be estimated using EPA program TANKS 4.09D
  - Is based on the emission estimation procedures from Chapter 7 of EPA's AP-42
  - <http://www.epa.gov/ttn/chief/software/tanks/index.html>
  - EPA has discontinued support/development of TANKS 4.09D
  - If you wish to use other tank estimation software methods, please ensure calcs are based on AP-42 Chapter 7 algorithms
  - Can do manual calcs with AP-42 Chapter 7 algorithms if desired

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## Other Source Types

- Landfill calculations:
  - Use LandGEM model and formulas in AP-42 Chapter 2.4
- Wastewater Calculations
  - Use Water9 model
- See: <https://www.epa.gov/air-emissions-factors-and-quantification/emissions-estimation-tools>

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## Insignificant Activities

- Traditionally listed on your Title V Permit
- Newer permits do not list Insignificant Activities, but contain requirement to maintain list onsite
- You must submit that list with your supporting docs! (can be attached electronically in SLEIS – preferred)

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## Insignificant Activities - continued

- Emissions from all Insignificant Activities must be reported at least once
  - If all not previously reported, need to report missing IAs in this Inventory
- You may update IA process rates and/ or emissions if you have more representative or newer data
  - May be left alone if they are close approximations of actual emissions

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## Calculations

- Rule effectiveness/control device downtime – take into account when control equipment did not operate as designed – contact EI staff if you have questions
- Emission estimates are required for all regulated air pollutants, including but not limited to: criteria, 112R, HAP, and TAP pollutants
- Include any regulated pollutants in your calculations that have been missed in past inventories

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## Calculations - continued

- The order of preferred methods from best to least desirable are:
  - Material balance calculations (method code 3)
  - Continuous Emissions Monitor (CEM) data (method code 1)
  - Bureau approved and reviewed source test emission factors (method codes 4, 10 (MATS))
  - AP-42, FIRE, or RICE Emission factors (method codes 8, 9, 29)
  - In-house source test (method code 2)
  - Other (method codes 12, 32)

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## Method Code 10 - MATS

- Applicable if you have a factor derived from a Bureau-approved MATS (Mercury and Air Toxics Standard) source test
  - Mainly applicable to EGUs
  - You will need to enter the pollutant emission factors in SLEIS
    - Preferably, throughput units and factor units must match
    - If they don't, use EF Unit code "Other - Non Standard Units", enter the factor AND your manually calc'd emissions tonnage
    - Use Comment field to give actual factor units and test date

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## Stationary RICE – factors and emissions

- Optional procedure to estimate emissions from Stationary Reciprocating Internal Combustion Engines.
  - Choose factors from AP-42 or 40 CFR 60/63
  - Spreadsheet Tool developed to help pick pollutants/factors
  - Companion document to explain intricacies
  - See 'Electronic Reporting Guidance' portion of the EI webpage for tool and details: <https://scdhec.gov/environment/air-quality/emissions-inventory>

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## Stationary RICE – factors and emissions

- If you use the 40 CFR 60 factors you must:
  - Enter the pollutant/factor(s) in SLEIS manually (Process Emissions)
  - Include HAP compliment
  - Use Method Code 8\_0
  - Enter throughput with same units as factor(s) (i.e., lb/MMBTU or lb/HP-hr)
  - All pollutants/factors for the process must use the same throughput units, i.e. lb/MMBTU or lb/HP-hr – no mixed units within polls/factors per process

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## Method Code 4 – Source Test

- Emissions were calc'd based on the results of a Bureau-reviewed source test. Source test emission factors from a source test should be based on emission-per-throughput rate units where possible (i.e. lb/ton, lb/million BTU, etc.) and not a lb/hr factor
  - PM-FIL vs. PM-CON vs. PM-TOT
- Use factor result from most recent source test for entire calendar year
  - Simplified approach vs. previous inventory years
  - Can still average if desired; explain in Supplemental Documentation
- Calculations must be supplied and the date of the source test(s) being used must be indicated
  - Spreadsheets, word files, etc. ok – attach in SLEIS

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## Pitfalls / tips

- Re-check your throughput values especially for fuels
  - Decimal place errors cause big swings in emissions; MCF vs MMCF
- If process has PM-fil, it must also have at least PM10-fil as well, PM2.5-fil also if possible
  - PM2.5-fil should not be > PM10-fil, and PM10-fil should not be > PM-fil
  - Conversely if a process has PM10-fil/PM2.5-fil it must also have PM-fil/PM10-fil
- Total metals in process should be < total PM-fil in process

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## Pitfalls / tips

- VOC total per process must be equal or greater than sum of all VOC compounds in process
  - Same rule for facility-wide VOCs
- If Insignificant Activity has no regulated pollutants (i.e., water tank, etc.) please let us know so we won't continue to ask about it
- Do "sanity check" on overall emissions to uncover obvious data entry errors
  - Please explain any valid large swings vs. previous inventories
  - Use new compare reports
- Please explain/comment processes that are temporarily shutdown vs. permanently shutdown

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## More thoughts...

- Emission units, release points, controls, etc. on your current permit that are not listed in SLEIS must be added to the SLEIS database
  - Contact your individual emissions inventory reviewer if you have questions
- Ammonia, condensable organics, and organic and elemental carbon are precursors to PM 2.5
  - Report any Ammonia, PM 2.5, or its precursors

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## Wrap Up – don't forget

- Complete submittal:
  - Supporting Documentation/calcs – attach in SLEIS - preferred
  - List of Insignificant Activities – attach in SLEIS - preferred
  - Electronic Signature/Submission completed in SLEIS
  - The Supp Docs and Insig Acts should be attached in SLEIS  
\*BEFORE\* electronic signature
- Inventory submittal not considered complete and on-time unless all have been received by us (or postmarked) by due date: March 31, 2024.

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## Resources

- EIIIP Documents, AP-42 and other EPA estimating tools may be accessed at:
  - <http://www.epa.gov/chief>
- BAQ-EI webpage:
  - <https://scdhec.gov/environment/air-quality/compliance-monitoring/emissions-inventory>
- SLEIS Homepage:
  - <https://sleisprod.dhec.sc.gov>
- SLEIS Training Videos:
  - <https://www.youtube.com/playlist?list=PLqGWmyz3QMps1NO4OioA9-X6QXJVGlU4>

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## Resources

- NIST Chemistry Web Book
  - <http://webbook.nist.gov/chemistry>
- EPA's Substance Registry System
  - <http://www.epa.gov/srs>


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## Comments/survey

- Email [ei\\_submittals@dhec.sc.gov](mailto:ei_submittals@dhec.sc.gov) with comments on webinar
- Thanks!

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