**Combined Air Emissions Reporting System (CAERS)**

**Data Governance Policy**

Last updated: 8/21/2024

# Goal

The purpose of this Data Governance Policy is to provide a set of guidelines on who can access data in the Combined Air Emissions Reporting System (CAERS), by what process this access can happen, how data in CAERS is stored and until when.

This document provides background for and answers to the following questions:

**Data Entry:**

* + When a State/Local/Tribal (SLT) authority (and the industry users reporting to them) enter data into CAERS, who owns the data, and at what point are the data available to EPA? Data *ownership refers to which group has final decision-making authority over the contents of the information before that information is passed on to other steps of the overall collection process* that involves owners/operators, SLTs, and the EPA.

**Data Modification:**

* + Before public release, who can modify or edit the data and when?

When are publicly released, and who is responsible for making corrections that get identified after that time?

The content of this document is not an EPA regulation but is in line with the U.S. EPA Enterprise Data Management Policy Directive No. 2135.2 from 07/07/2005.

This CAERS Data Governance Policy will be updated as future workflows with other EPA and SLT reporting systems are incorporated into CAERS. Updates may also occur after air emissions reporting rule revisions (see the Background section).

# Audience

The audience for this Policy includes:

* all EPA and SLT air emissions program staff and SLT delegates (such as contractors) who perform data management functions and activities in CAERS.
* industry reporters who submit reports in CAERS to meet their air emissions reporting obligations as per applicable federal and state rules, as well as contractors who work in CAERS on their behalf.

# Background

Currently, various air emissions reporting SLT and federal U.S. EPA programs require industry to report air pollutant emissions to separate EPA and SLT reporting systems at different times of the year. This leads to redundancy and reporting burden for both industry and government because there is overlap in some of the data required to be reported to each. Examples of shared data include facility and sub-facility information, activity data, and some pollutants.

Through CAERS, air emissions reporting is being streamlined for industry reporters, SLT authorities, and EPA staff. The iterative CAERS development will consolidate emissions reporting across multiple emissions reporting programs so that regulated entities can provide the latest facility attributes, emissions estimation input data, and shared emissions data only once. Currently, CAERS is an EPA electronic system that:

* collects and performs quality checks on air emissions reports from industry for criteria air pollutants (CAP), annually and/or triennially, per the [Air Emissions Reporting Rule](https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr) (AERR), which is currently being updated and finalized. The Air Emissions Reporting Rule (AERR)[[1]](#footnote-1), requires state and local agencies to report emissions annually, including some low-risk personal identification information (PII)[[2]](#footnote-2). Data collected is used by EPA to build the [National Emissions Inventory (NEI)](https://www.epa.gov/air-emissions-inventories/national-emissions-inventory-nei).
* collects additional data per State, Local, and Tribal Air Emissions Reporting rules as applicable. State and local regulations provide those agencies the authorities to collect data through CAERS[[3]](#footnote-3). These are, for example:
	+ Arizona Administrative Code, Title 18, Chapter 2, Section 327 (R18-2-327)
	+ Georgia Rules for Air Quality Control 391-3-1-.02(6)(a)4.
	+ Rules of the Department of Environmental Quality, Idaho Administrative Procedures Act (IDAPA) 58.01.01, “Rules for the Control of Air Pollution in Idaho
	+ Maine Department of Environmental Protection Rules Chapter 137
	+ Mississippi Code § 49-17-17(g)
	+ Montana Code Annotated Title 75, Chapter 2, Part 2, Section 201 (75-2-201)
	+ Rhode Island Air Pollution Control Regulation 14, section 14.2.1
	+ Washington D.C., Title 20, Chapter 3
* While rare, there may be situations where data is required to be reported under a FIP or other federal rules outside of the AERR.
* shares relevant hazardous air pollutant (HAP) that has been reported in CAERS with the [Toxics Release Inventory](https://www.epa.gov/toxics-release-inventory-tri-program) (TRI). The Toxic Chemical Release Reporting: Community Right to Know rule[[4]](#footnote-4) requires companies that release pollutants to the environment to report annually, including some PII.

CAERS allows SLTs to collect additional data when state air emissions reporting rules require additional information beyond that required by EPA’s regulations. CAERS supports data consistency across SLT and EPA emissions collection programs for each industry reporter by allowing reporting to a single system, which can reduce industry reporting burden and burden for SLT staff and EPA staff data manipulation and review.

CAERS also supports reporting of Hazardous Air Pollutant (HAP) emissions data that both the National Emissions Inventory and the Toxics Release Inventory have in common. CAERS provides the common data elements to the TRI reporting system (TRI-MEweb) so that an industry reporter may use shared data entered in CAERS in their TRI report where appropriate. This approach reduces the need to re-calculate and re-enter the data separately into TRI-MEweb.

# Types of Data

There are two types of data of concern to CAERS users:

**CDX Registrant Data:** Preparers, certifiers and SLTs reviewers enter low-risk consumer Personal Identifiable Information (PII) directly in the process of registering in CDX, including: registrant name, affiliation, as well as work related mailing address, phone number, and email.

**Air Emissions Data:**  CAERS collects many data elements broadly categorized as “emissions data” as defined by 40 CFR § 2.301 and include both facility attributes (e.g., facility name, address, industry codes) and annual emissions emitted from the facilities and associated information (e.g., the pollutant, emission factor, activity). The definition of “emissions data” from the CFR ensures that no emissions data collected by CAERS (or otherwise) is considered confidential.

# CAERS Users Roles

CAERS roles and users fall under the following categories:

**CAERS Developer:** EPA staff or contractors who develop and enhance the CAERS system. Developers are not authorized to edit data (i.e. the content of facility reports) in the CAERS production environment unless requested to do so by an EPA administrator, and/or per request from an SLT Reviewer or industry user through the EPA administrator.

**EPA Administrator:** EPA staff who may edit data either:

* on behalf of the EPA NEI or TRI program office staff as appropriate and where applicable, for quality assurance purposes, and with full knowledge of SLT Reviewers and Industry Reporters, or
* per SLT staff request for quality assurance purposes and with full knowledge of Industry Reporters, who may have initiated the request for the change.

**SLT Reviewer:** Reviewers can view industry reports to perform advanced quality assurance, and per the AERR and SLT-specific air emissions reporting rules, may enter, edit, certify, and submit reports on industry’s behalf where appropriate.

**Industry Reporters:**

**Preparers:**  Industry staff or contractors authorized by the facility responsible official, who may enter air emissions data information to complete required reports. Preparers may edit but are not able to certify and submit reports.

**NEI Certifiers:** Authorized staff from the facility who may prepare, certify, and submit reports for the SLT to review, and for purposes of complying with the AERR.

# High Level Data Workflow in CAERS

Currently, CAERS supports the data collection workflow shown in Figure 1 below. As an overview, this workflow involves industry prepares entering the emissions data via CAERS, followed by industry certifiers submitting the data to the SLT, both to meet AERR as well as SLT specific requirements. Then, the SLT reviewers perform advanced quality assurance (QA) to the submitted data and work with industry preparers and certifiers to correct any problems with the data. Finally, once an industry report has been approved, the SLT reviewers submit the data to the NEI program to meet their AERR reporting requirements.

In addition to these critical workflows, SLT staff have access to the data stored in CAERS through reports and a web service. This access is available for data that SLT reviewers have already submitted to the NEI program as well as for the data that is still in advanced QA and has not yet been submitted.

CAERS also supports revisions of emissions data after the SLT reporters have already submitted data to the NEI program. This can occur when a problem in the data is identified by industry reporters, SLT reviewers, or EPA staff. Depending on the timing of such a finding, a SLT reporter may need to resubmit data to the NEI program.

Figure 1. High Level CAERS Workflow



# CAERS Access and Data Ownership

## Access via CDX

Limited EPA staff and contractors have access to the data in CAERS. The contractors that access CAERS are covered by relevant clauses identified in the Agency’s cyber security checklist and/or by the Rights in Data clause (FAR 52.227-14). The EPA hosts CAERS in the Central Data Exchange (CDX).

As a program service under CDX, CAERS is covered by the CDX security plan. All CAERS users (Contractors, EPA staff and SLT Reviewers, as well as Industry Reporters) must be registered in CDX. The registration process involves signing an Electronic Signature Agreement (ESA) and identity validation that serves to ensure that only authorized users may access CAERS.

## Reporting by Industry

Contact information (considered to be PII) is collected in CDX upon registration. These data may be used only by the SLT to whom facilities report their air emissions, for outreach throughout the review/reporting process. (e.g., send email reminders to facility points of contact (POC)s about approaching deadlines, or to reach out to them with questions about their emissions report.) Users authenticate based on CDX credentials but the data they see is retrieved based on facility IDs and report IDs, not based on personal identifiers.

Once Industry Reporters have their CDX account and access to CAERS, they must request access to specific facilities to report to. Within CAERS they select the facility they wish to report. SLT Reviewers ensure that the user request is legitimate and correct, and only then will they allow the reporter access to report data for that facility. Industry Reporters may only view and edit data for facilities they have been authorized to access. Industry Reporters are not able to view data for facilities other than their own.

Once access has been granted by the SLT to the Industry Reporter, the reporter may enter required contact information and emissions data. Per the [Cross-Media Electronic Reporting Rule](https://www.epa.gov/cromerr)[[5]](#footnote-5) (CROMERR), after an emissions report has been completed, the NEI Certifier will view and access the copy of record before certification of the report. There is opportunity for the NEI Certifier to repudiate a certified and submitted report if the reporter does not recognize the submission.

Once the emissions report has been certified and submitted, and the SLT has opened it for review, the report is locked and cannot be altered by any of the users. The official copy of record for that report is saved so that any of the users may access it.

To unlock the report and edit it, the SLT Reviewer must push the report back to the Industry Reporter. Once that edit has been completed, the report is re-certified and re-submitted and CAERS keeps the copy of record of the most recently updated report as the official copy of record.

Once a report has been certified, if the facility also reports to TRI, HAP data are added and provided to TRI-MEweb. A reporter in TRI-MEweb is given the option to use data reported to CAERS to prepopulate the relevant form in TRI-MEweb. While data shared with TRI-MEweb come from a certified report in CAERS, such a certification is not considered to be a certification of a TRI report. A TRI report in TRI-MEweb that contains data from CAERS must still be certified separately within TRI-MEweb. Once in TRI data ownership applies per TRI data governance policy.

Since CDX accounts belong to an individual, and their account is associated with their current organization, the account should be deleted by the industry reporters if they will no longer be reporting for that organization. A CDX account may not be shared by multiple industry reporters or transferred from one industry reporter to another.

Within CAERS, an industry reporter is allowed access to each facility. An industry reporter that will no longer be a Preparer or NEI Certifier for a given facility must notify the SLT staff immediately. SLT staff may remove their access to the facility per industry reporter request, or as soon as they notice that the staff person is no longer in that role for a facility.

Updated instructions for industry reporters to onboard with CDX and CAERS are provided in annual trainings at the beginning of the year. These trainings are posted on the [CAERS website](https://www.epa.gov/combined-air-emissions-reporting/combined-air-emissions-reporting-system-caers).

## SLT Access, Reviews, and Data Ownership

Each SLT has a Program System Code (PSC), enabling it to work with data for the facilities registered under that PSC. SLTs may not see facility information reported to other PSCs. All emissions reports in CAERS are owned by the SLT in question, that is, the data contained in the reports sent to their PSC. These data are available to the SLT to retrieve for it’s own internal use.

SLT reviewers must have a CDX account allowing them access to that SLT’s industry reports only. Also, per CROMERR, as part of their onboarding process, SLT Reviewers are required to explain their process for ensuring that they can correctly identify the NEI Certifier for each facility in CAERS before allowing them access to a facility’s report. SLT Reviewers must also sign rules of behavior to ensure appropriate use and stewardship of their data within the EPA CAERS system. In addition to emissions data, some contact information is reported inside CAERS as per EPA and SLT regulations. SLT Reviewers who will no longer be in that role, must remove their CDX accounts, or notify the EPA administrator or the Help Desk to have their account removed.

Data reported in CAERS must meet program definitions to be considered of good quality. CAERS has mechanisms in place so that some data changes may be precluded where not permissible by either the EPA or the SLT to avoid incorrect data from being submitted in a report.

* For example, SLTs may request that certain data fields only be changed by SLT staff, not industry reporters, to ensure compliance with reporting requirements. SLTs may have the facility name and physical address locked, and industry may request a change to that information from the SLT.
* Similarly, some NEI-related data fields may be locked so that only the EPA Administrator may change these data fields to meet EPA quality assurance program requirements, and not allow the SLT or the industry reporter to do so. A locked data field may be edited per industry or SLT request by the EPA administrator. When there is an issue with a locked data field, the EPA Administrator will consult with the SLT to determine the correct course of action and ensure the SLT has weighed in on the issue. For example, facility latitude and longitude coordinates (lat/longs) are typically locked by EPA to avoid lat/longs being entered in a way that does not meet the definition of facility centroid as per the AERR. The industry reporter, through SLT staff, may make a request to the CAERS Administrator for a revision of such lat/longs who will then work with EPA staff to resolve the issue.

Note that SLT ownership of the data does not extend to the SLT submitting data that does not meet the AERR definition for a given data field. Note however, that CAERS intakes data fields specific to the SLT’s program requirements in addition to the federal ones. Thus, an SLT, whose definition of a data field is different from that of the federal program, may request to have the data field included in CAERS for industry to report. For example, SLTs may request additional pollutants or groups of pollutants to be reported in CAERS while industry is reporting other pollutants at the same level of detail and for the same types of emissions generating processes. Data fields specific to the SLT and not shared with EPA’s programs are not sent to EPA, but do remain in CAERS for the SLT to access.

CAERS contains a history and log features that allow tracking of significant changes made to the report, such as who has certified and submitted, who has created an attachment, where an emission factor has been automatically updated by the system. All these changes are visible to the NEI Certifier who must agree with the content of the report before certifying and submitting it.

The content of a locked report cannot be changed by an EPA Administrator, an SLT Reviewer, or an Industry Reporter (as described in the Reporting by Industry section). Because an SLT Reviewer must push a report back for it to be unlocked, changes to a report can only be made with the SLT’s knowledge. Any changes must come with that report being re-certified, so that the NEI certifier must be aware of any edits made to the report before re-certification and re-submission.

Once the SLT has reviewed an industry report and moves on to approve it, it uses CAERS to send the report to EPA’s Emissions Inventory System (EIS), which is the collection system for the National Emissions Inventory. EPA augmented data (for example, gap-filled emissions data estimated by HAP augmentation or speciation), that is used to build the EPA’s National Emissions Inventory is then considered to be finalized and public. The data contained in the NEI is owned by EPA.

# Additional Considerations

CAERS is public facing. Customers with password protected accounts have access to the information they have entered voluntarily and that other users have shared with them. All EPA systems are subject to review per the Freedom of Information Act[[6]](#footnote-6) (FOIA) with exceptions as specified. However, both open and certified and submitted reports may still be considered as drafts and thus, in a deliberative stage, because final data will be contained in the NEI and TRI where applicable when these inventories are finalized.

Furthermore, none of the data contained in emissions inventory reports in CAERS is considered Confidential Business Information (CBI). If an SLT has cause to sustain an owner or operator’s claim of CBI, that SLT may handle the report with CBI outside of CAERS and the report entered in CAERS may be modified to represent a more generic version of the report to ensure the relevant CBI cannot be inferred from the report.

CAERS maintains data in perpetuity per [National Archives Records Administration](https://www.epa.gov/records/epa-records-policy-and-guidance) (NARA) policies and procedures.

1. Legal Authorities: 23 U.S.C. §101; 42 U.S.C. §7401 -7671q; in 40 CFR Part 51, subpart A. [↑](#footnote-ref-1)
2. The [PII confidentiality impact level](https://csrc.nist.gov/glossary/term/pii_confidentiality_impact_level)—low, moderate, or high— indicates the potential harm that could result to the subject individuals and/or the organization if PII were inappropriately accessed, used, or disclosed. See: [NIST SP 800-122](https://doi.org/10.6028/NIST.SP.800-122) [↑](#footnote-ref-2)
3. Legal Authorities 42 U.S.C. §7401 -7671q [↑](#footnote-ref-3)
4. Legal Authorities: 42 U.S.C. §11023; 42 U.S.C. §11048; in 40 CFR Part 372. [↑](#footnote-ref-4)
5. Legal Authorities:[7 U.S.C. 136](https://www.govinfo.gov/link/uscode/7/136) to 136y; [15 U.S.C. 2601](https://www.govinfo.gov/link/uscode/15/2601) to 2692; [33 U.S.C. 1251](https://www.govinfo.gov/link/uscode/33/1251) to 1387; [33 U.S.C. 1401](https://www.govinfo.gov/link/uscode/33/1401) to 1445; [33 U.S.C. 2701](https://www.govinfo.gov/link/uscode/33/2701) to 2761; [42 U.S.C. 300f](https://www.govinfo.gov/link/uscode/42/300f) to 300j-26; [42 U.S.C. 4852d](https://www.govinfo.gov/link/uscode/42/4852d); [42 U.S.C. 6901-6992k](https://www.govinfo.gov/link/uscode/42/6901); [42 U.S.C. 7401](https://www.govinfo.gov/link/uscode/42/7401) to 7671q; [42 U.S.C. 9601](https://www.govinfo.gov/link/uscode/42/9601) to 9675; [42 U.S.C. 11001](https://www.govinfo.gov/link/uscode/42/11001) to 11050; [15 U.S.C. 7001](https://www.govinfo.gov/link/uscode/15/7001); [44 U.S.C. 3504](https://www.govinfo.gov/link/uscode/44/3504) to 3506; in 40 CFR Part 3 [↑](#footnote-ref-5)
6. Legal Authorities: [5 U.S.C. 552](https://www.govinfo.gov/link/uscode/5/552), [552a](https://www.govinfo.gov/link/uscode/5/552a), [553](https://www.govinfo.gov/link/uscode/5/553); [28 U.S.C. 509](https://www.govinfo.gov/link/uscode/28/509), [510](https://www.govinfo.gov/link/uscode/28/510), [534](https://www.govinfo.gov/link/uscode/28/534); [31 U.S.C. 3717](https://www.govinfo.gov/link/uscode/31/3717); in 40 CFR Part 2. [↑](#footnote-ref-6)