

# Transcript for Clean Air Act Data Flows Tutorial with Accessible Instructions

This tutorial narration is spoken over a video recording capturing movement on-screen. Actions are described within brackets.

## Introduction

ECHO data focuses on compliance and enforcement-related information for EPA-regulated facilities.

ECHO collects compliance and enforcement information from EPA as well as state, local, and tribal environmental agencies for environmental statutes - such as the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and Safe Drinking Water Act - that are reported into EPA national databases. ECHO also incorporates other EPA environmental data sets to provide additional context for analyses and compiles them into a single database known as the ECHO Datamart.

This tutorial focuses on Clean Air Act data, specifically data on stationary sources of air pollution. It provides an overview of the Clean Air Act reporting requirements and explains how compliance data are reported to EPA and how ECHO uses the data to derive the compliance history information displayed on the Detailed Facility Report.

## Reporting Air Compliance Data to EPA

Facilities work with delegated agencies (state, local, tribal, territorial, or commonwealth governments) to report air stationary source compliance information on a regular basis. Delegated agencies report enforcement data.

Agencies report this information manually through an online EPA form or share these data through an EPA-state data exchange system called the Central Data Exchange. Data are then stored in an EPA-owned national database known as the Integrated Compliance Information System for Air.

The information provided to EPA includes facility information, compliance monitoring activities, violation determinations, and enforcement activities. EPA compliance and enforcement activities also are reported.

## ECHO Data Flow: High Level

ECHO extracts air compliance data on a weekly basis. Completeness and comparability checks are performed on the data extract. Following the completion of successful quality assurance (or QA) checks, the ECHO Datamart is refreshed with the updated data. Another set of QA checks are performed on the refreshed data, including web service comparisons, consistency checks, and quarter end-date checks. Data are mapped to a format to support display in the Detailed Facility Report on the ECHO website.

Note: ECHO displays the most recent data extraction date on the Compliance Summary Data Table [*The tutorial navigates to an example DFR page (<https://echo.epa.gov/detailed-facility-report?fid=110000344814>). Using arrow keys, scroll down to the Compliance Summary Table and read the value in the Data Last Refreshed column*].

## ECHO Data Mapping Details

Now let's look at how the ECHO Datamart maps air compliance data to create the Three-Year Compliance History by Quarter table and the Enforcement and Compliance Summary table on the Detailed Facility Report.

First, ECHO displays a subset of violations of clean air regulations that warrant additional scrutiny, known as High Priority Violations, to ensure enforcement agencies respond in an appropriate matter and if needed have access to federal assistance. HPVs in the Clean Air Act Enforcement Response Policy sharpen the focus on violations that are most likely to be significant for human health and the environment or for maintenance of strong Clean Air Act programs.

These violations are indicated by "H", "P", and "V". Enforcement agency, violated Clean Air Act program, pollutants in violation, and a Day Zero Date, the earliest date that the enforcement agency identifies the violation as an HPV, are recorded together as a unique case file record.

Next ECHO identifies dates for actions associated with each HPV. These include discovery dates, notification dates, and addressing and resolving action dates for each case file.

ECHO populates the Three-Year Compliance History by Quarter table for a facility using the information contained in the case file including Statute, Violation Type, Agency, Programs, and Pollutants.

The Day Zero Date and the resolved date are placed in the quarters they occur, and arrows are placed in the in-between quarters to indicate that the facility continues to have a violation status from the zero date until the resolved date.

If the Day Zero date and the resolved date occur in the same quarter, both dates are displayed in the cell.

If there is no resolved date reported for the violation, the arrows continue to the current quarter indicating that the violation has not been resolved in the data system.

Other violations of federal Clean Air Act regulations that are not classified as HPVs are known as Federally Reportable Violations, or FRVs.

ECHO collects information including the enforcement agency, violated Clean Air Act program, pollutants in violation and FRV determination dates, or the date a violation is identified, into one case file.

ECHO populates the Three-Year Compliance History Table with information from the case file.

State and local environmental agencies submit data in accordance with minimum EPA requirements. In so doing, these agencies have varied processes for how they provide such information. To accommodate for this variation in FRV reporting, EPA has updated the ECHO display of data to allow the states/locals to choose to report FRVs consistent with one of the following approaches. EPA may consider implementing additional approaches in the future.

Approach 1: Agencies use the FRV Determination Date and the Resolved Date to display an FRV date range in ECHO. The earliest FRV determination date and resolved date for each case file are placed in the appropriate cells applying the same logic that is used for displaying the HPVs [*Example is shown on Three-Year Compliance History by Quarter table*].

This means that if no FRV resolved date is reported, a violation will remain open, as indicated by arrows, up to the most current quarter.

Approach 2: Agencies use only the FRV Determination Date to display in ECHO the date when the FRV was identified.

In this case a date range is not shown and a caveat displays, reading “FRV resolved dates not indicated” [*The caveat is displayed above the Three-Year Compliance History by Quarter Table. Select the “Clean Air Act FRV Date Information” icon link.*].

Next, ECHO uses the identified HPV and FRV violations to update the Facility Level Status row.

Any quarters containing an HPV are red [*On the Three-Year Compliance History by Quarter Table, quarters 6 through 9 have red boxes that read “High Priority Violation”*].

Quarters containing an FRV determination date are yellow and the facility-level status reads “Violation Identified” [*On the Three-Year Compliance History by Quarter Table, quarter 5 is shaded yellow and reads “Violation Identified”*].

For agencies using approach 1 an open violation reads “Violation-Unresolved” [*On the Three-Year Compliance History by Quarter Table, quarters 10 through 12 are yellow and reads “violation unresolved”*]. Quarter with no identified violations are blue [*On the Three-Year Compliance History by Quarter Table, quarters 1 through 4 are shaded blue and read “No Violation Identified”*].

If an agency uses approach 2, an open violation reads “No Violation Identified” and is blue [*On the Three-Year Compliance History by Quarter Table, quarters 10 through 12 are shaded blue and read “No Violation Identified”*].

Note that if a violation exists at any time during the quarter then the entire quarter is labeled “Violation Identified” [*On the Three-Year Compliance History by Quarter Table quarter 5 is highlighted*]. In quarters with both HPV and FRV violations, the Facility Status will display “High Priority Violation” [*On the Three-Year Compliance History by Quarter Table, quarter 6 is highlighted*].

Finally, ECHO updates the Clean Air Act compliance status in the Enforcement and Compliance Summary table using the data in the Three-Year Compliance History by Quarter table.

If the most recent quarter, quarter 12, has an HPV, then the compliance status reads “High Priority Violation” and is colored red [*On the Three-Year Compliance History by Quarter Table, Quarter 12 is shaded red and reads “High Priority Violation”*]. The compliance status on the Compliance Summary Table is shaded red and reads “High Priority Violation”].

If agencies use approach 1 for reporting FRV dates, ECHO applies the following display rules:

If there is no HPV in quarter 12, but there is an FRV within quarter 12, the compliance status displays “Violation Identified” and is colored yellow [*On the Three-Year Compliance History by Quarter Table quarter 12 is shaded yellow and reads “Violation Identified”*]. The compliance status on the Compliance Summary Table is shaded yellow and reads “Violation Identified”].

If there is no HPV or FRV in quarter 12, the current compliance status reads “No Violation Identified” and is colored blue [*On the Three-Year Compliance History by Quarter Table, quarter 12 is shaded blue and reads “No Violation Identified”*]. On the Compliance Summary Table, the compliance status is shaded blue and reads “No Violation Identified”].

If agencies use approach 2 for reporting FRV dates, then ECHO applies the following display rules:

If there is no HPV in quarter 12, but there is an FRV within the last 4 quarters, the compliance status reads “Violation within 1 Year” and is colored yellow [*On the Three-Year Compliance History by Quarter Table, quarters 9, 10, and 12 are shaded blue and read “No Violation Identified”. Quarter 11 is shaded yellow and reads “Violation Identified”. On the Compliance Summary Table, the compliance status is shaded yellow and reads “Violation w/in 1 Year”*].

If there is no HPV in quarter 12 or FRV within the last 4 quarters, the current compliance status reads “No Violation Identified” and is colored blue [*On the Three-Year Compliance History by Quarter Table quarters 9 through 12 are shaded blue and read “No Violation Identified”. On the Compliance Summary Table, the compliance status is shaded blue and reads “No Violation Identified”*].

Keep in mind that facilities may not be in violation for the entire quarter even though it might appear that way in this table [*On the Three-Year Compliance History by Quarter Table, quarter 11 is highlighted and shaded red and reads “High Priority Violation”. The date range for the violation displayed is 08/04/2019 – 09/02/2019*].

For more detailed information, a monthly view of the Compliance History is available for the last three years on a rolling 12-month timeframe [*The top of the Detailed Facility Report page is displayed. In the Customize Report section, select “Monthly” option under “Compliance History Timeframe”. Using arrow keys, scroll down to the Three-Year Compliance History by Month Table. Use the “Select Timeframe” bar to scroll horizontally to view additional months within the timeframe*].

Additionally, an option is available to download the compliance history data as a csv file for further analysis [*Select the “Download Data” button on the top right of the Three-Year Compliance History by Month Table. A CSV file is displayed*].

## **Conclusion**

This tutorial explained the flow of Clean Air Act data from initial reporting to display in ECHO. The techniques ECHO uses, including tables, colors and dates, to display the data are meant to help users quickly and easily digest a large amount of information to gain a complete picture of a facility’s compliance over time.

For more information see the help documentation on the ECHO website and the ECHO tutorials page. [*Select the Help button located on most pages within ECHO and press Enter.*]

Additional tutorials will explain the data flow for Clean Water Act and the Resource Conservation and Recovery Act [*Additional tutorials are available from <https://echo.epa.gov/help/tutorials>*].