Good afternoon and welcome to today’s presentation. Before we get started, let’s review a few housekeeping items. Audio is available for this presentation through your computer’s mic and speakers or by telephone. Your call-in number as well as your access code is in the control panel box on the right-hand side of your screen. All attendees have been muted to minimize background noise. If you have a question during the presentation, please type it in to the questions box on the upper right-hand side of your screen. We will have dedicated time to answer questions during the presentation. If you’re experiencing any technical difficulties, please contact us and we’ll try to troubleshoot the issues. A recording of the presentation will be available on the ECHO website in the next week. And lastly, a survey will appear on your web browser at the end of the webinar, so please make sure to provide your comments and feedback to us. And with that, I’ll pass it on to our first speaker, Tanvi Gambhir.

Hi everyone, my name is Tanvi Gambhir and I work for Eastern Research Group supporting the ECHO website. I’d like to welcome you to the Advanced ECHO series of webinars. The purpose of today’s training is to demonstrate tools available in ECHO to access Hazardous Waste handler data. Hazardous Waste is regulated under the Resource Conservation and Recovery Act or RCRA. The intent of RCRA is to establish a national system for ensuring safe solid waste management. The term “solid waste” includes both hazardous and non-hazardous waste, but also encompasses discarded semi-solids, liquids, and contained gases. Solid wastes are considered “hazardous” when they are known to be harmful to human health or the environment when not managed properly.

ECHO presents data for facilities that manage hazardous waste, who are subject to the Subtitle C requirements of RCRA. RCRA Hazardous Waste regulations are described in 40 CFR parts 260 to 282.

Now, I would like to take a few moments to introduce everyone to ECHO to make sure we are all beginning from the same starting point. The U.S. Environmental Protection Agency (EPA) provides public access to its regulatory compliance and enforcement data through the Enforcement and Compliance History Online website, which we call ECHO.

Data included in ECHO indicate how a facility is regulated, when an inspection occurred, whether violations were found and whether any enforcement actions were taken.

ECHO presents the compliance history for more than one million EPA-regulated facilities. This includes three-year compliance status history and five-year inspection and enforcement history for Clean Air Act stationary sources, Clean Water Act permitted dischargers, and Safe Drinking Water Act public water systems in addition to the RCRA hazardous waste handler data that is the focus of today’s webinar.

Data are reported by EPA and state and local agencies.

ECHO itself is not a data system of record. ECHO pulls data weekly from several EPA program data systems, such as the Integrated Compliance Information System, the Resource Conservation and Recovery Act Information System, the Safe Drinking Water Information System, and the Facility Registry System. It also pulls select data from EPA’s Envirofacts, including the Toxics Release Inventory and
Greenhouse Gas pollutant release data. The About the Data page on the ECHO website provides links to the data sources themselves, as well as specific information on when data are refreshed.

ECHO provides a number of features to help you access and understand environmental data, such as the Facility Search and Enforcement Case Search. You can use these tools to search for facilities that match specific characteristics of interest and then choose specific reports to view detailed environmental information.

Let’s now focus on the topic of today’s webinar: demonstrating the tools in ECHO to access Hazardous Waste handler data. As I mentioned at the beginning, ECHO includes data about facilities that manage hazardous waste that are pulled from the “RCRAInfo” EPA data system. Data available for hazardous waste handlers include information on facility designations, compliance with federal and state regulations, and corrective actions or cleanup activities.

Note that ECHO focuses on compliance and enforcement-related data and does not include all data from RCRAInfo. You can access additional information through the RCRAInfo Web access page.

RCRA data in ECHO can be queried from the Hazardous Waste Facility Search. EPA designed the Hazardous Waste Facility Search to be versatile for many user groups, including public users looking for information about hazardous waste in their community, regulated facilities, environmental compliance inspectors, and researchers evaluating data on hazardous waste compliance. Today we’ll demonstrate several features by answering five questions.

We would like to remind you to enter any questions you have into the question box. We will have a question and answer session at the end of the presentation.

**How can I find Hazardous Waste compliance information for facilities in a specific location?**

The Hazardous Waste Facility Search is a subset of the ECHO Facility Search tool. It is useful for anyone interested in facility compliance information in their community or at a specific location. For this example, we will show you how to run a search, and we will demonstrate how to customize the search results table and download the data. To access this search, select “Search Options” from the ECHO home page and look for the “Hazardous Waste Facility Search” link.

The search criteria on this page are similar to those available in the All Data Facility Search, with additional criteria that are specific to the hazardous waste program. Once on the Facility Search page, you can always change your search type using this dropdown.

Collapsing the sections on the page shows that search criteria are organized into 6 main sections.

You can search by various geographic, facility, enforcement and compliance, pollutant, and demographic characteristics. In the hazardous waste search, some of these options are specific to RCRA. For example, under Facility Characteristics, you can select a specific RCRA universe such as “Large Quantity Generator” or “Small Quantity Generator.”

Help information for the Facility Search can be accessed by clicking one of the question mark icons in the search criteria sections or the “Help” icon above the search criteria selection box.
Now, let’s run an example hazardous waste search. Under Enforcement and Compliance, let’s specify the “Number of Current Violations” as “4 or More Violations.”

Searching for facilities with violations will return facilities with RCRA violations reported in the most recent quarter. A quarter in ECHO is defined as any of the three-month periods from January to March, April to June, July to September, or October to December.

Notice that as you select criteria, the “Search Criteria Selected” box automatically updates to show your selections.

Now, click “Search.”

As a note about violation data, ECHO displays this data based on information entered into RCRAInfo. In many cases, this reflects determinations made by EPA or states after conducting inspections or reviewing facility reports. This designation assists government agencies in tracking resolution of violations and does not necessarily represent the actual duration of a problem.

By default, the Search brings you to a results page with an interactive map and a table of the search results.

When there are too many search results to display individually, the results table automatically groups them by state, county, or zip code. In this case, the results are grouped by state. For this example, let’s look at facilities in Missouri. Now, we see individual facility names in each row of the table and the map displays the facility locations.

One of the most useful features on the results page is the ability to customize the columns included in the results table.

You can choose columns from various categories, such as Facility Information, Inspections, Enforcement Actions and Pollutants. For this example, let’s select “Date of Last Record Review” and “Days Since Last On-Site Inspection” from the Inspections section. Click “Update Columns” to add these to the results table.

Let’s see which facilities were most recently inspected by sorting on the “Days Since Last On-Site Inspection” column.

The search results table can also be downloaded. To do this, use one of the two download buttons to the right of the “Customize Columns” button. “Download Data” gives you options to select the format of the data, either in a CSV, Excel, or GEOJSON format.

Clicking on the “Quick CSV Download” button will immediately generate a CSV file of the current search results.

Note that some of the column headings in the downloads may slightly differ from the results table. The Results Guide provides descriptions of all the data fields in the search results and lists the corresponding download file field names.

You can access the Results Guide by clicking the “Results Guide” link above the table.

Let’s move on to the next example.
How can I keep track of compliance information about facilities in my company?

Now, let’s identify potential ways that users who are interested in information for particular facilities can use the ECHO Hazardous Waste Search.

There are different approaches you can use to search for facilities. We will demonstrate how to search using the facility name and EPA identifier to reach the same result. We will also explain the logic behind these search criteria.

Now let’s say that we work for a company with many facilities across the United States that needs to monitor environmental compliance. First, we can look for facilities operated by this company by searching for the facility name.

The default logic, “Contains Each Term,” will return facilities with names that include both the words “Advanced” and “Technologies” in any order. We would like to be more specific, so will change the name search logic to “Matches Exact Phrase.” “Matches Exact Phrase” indicates ECHO will search for facility names that contain the words “Advanced Technologies” in this exact order, without any characters between them.

As we can see, there are about 22 results produced. Most have “Advanced Technologies” in the facility names shown in the data table, but two are listed that do not seem to match our search criteria. This occurs because ECHO does not restrict facility name searches to only the facility name associated with the hazardous waste program source data system (i.e., RCRAInfo). It looks for names across other EPA systems to find the greatest number of potential matches. In other words, if a facility has a matching name listed under another environmental program, that facility will appear in the search results. The facility names associated with each program are available on the Detailed Facility Report (DFR), which we will show you shortly.

Let’s answer another common question: Is there a more direct way to search for hazardous waste handlers?

The answer is Yes, the best way to track particular handlers in ECHO is by using the EPA RCRA ID. The RCRA ID is the unique identifier for hazardous waste handlers in RCRAInfo and ECHO. Users may already know the RCRA ID they are interested in, or they may find it by using the ECHO search results. Here is the column in the search results table that lists the RCRA ID.

Let’s copy the RCRA IDs for the facilities we are interested in so that we can paste them into the search form.

Clicking on “Modify Search” will bring you back to the search page and keep your criteria selections.

If you want to clear any of these selections from the initial search, simply click the corresponding “x” button. The “x” button at the top of the Search Criteria box can be used to clear all selections. Let’s clear our selections and use only the RCRA IDs.

We can run a search by entering RCRA IDs directly into the Facility ID Number field. Note that the Facility ID Number allows you to enter multiple IDs, either separated by commas or copied and pasted from a spreadsheet column.

This time, the search results display exactly the three facilities we were looking for.
Let’s look at how we can access more information from the Detailed Facility Report (DFR). To view a DFR, click the hyperlinked facility name or “C” icon in the results table. Regulated facilities can use this report to check their compliance data as reported to EPA for the last three years.

So, how do we read the DFR?


Generally, when reading the report from top to bottom, information will flow from overall summaries to more detailed information, split out by each environmental program. In this example, we will focus on the Facility Characteristics section. We will highlight other sections of the DFR in later examples.

We can see information associated with each program or permits listed in each row, with RCRA or other program systems listed in the “System” column in each table.

The Facility Address table shows the Facility Names in each program, which are values we searched for using the Facility Name criteria. You may notice some variation in the names and addresses, which may be due to differences in reporting requirements or when the information was reported. This is why we recommend searching iteratively by facility name to identify and narrow the scope of facilities of interest.

However, what if we notice an error with the street address associated with the FRS row? EPA’s Facility Registry Service, or FRS, is a system that links records from different EPA databases under one ID. ECHO has a feature to allow users to report suspected errors directly to EPA.

At the top of the DFR, click “Report Data Error” to enable the error reporting feature. Now, there will be icons on the page next to specific data for which you can report an error. Let’s scroll down to the facility address table and see the Report Error link that now appears next to that row of data.

If there is not an error reporting symbol next to the table or row with the suspected error, we could submit a general error report by clicking “Report a General Error.”

When reporting an error, please include a clear description of where you identified the error and what you believe to be the correct value.

Next to the error reporting button is a link to the Data Dictionary. The Data Dictionary provides descriptions of every term on the DFR. You can also use the Print button to print or save a PDF copy of the DFR.

Furthermore, the DFR has a unique URL, so users may save, bookmark, or link directly to the report for their facility or permit of interest to periodically check facility and compliance information.

Our next example is:

How can I identify facilities with TRI land releases or waste transfers in my state?

In this example, let’s look at chemical release and transfer data reported through EPA’s Toxics Release Inventory or TRI. This information is not used for compliance but can provide a more comprehensive
picture about the waste managed at a facility. This example may be useful for researchers, communities, or anyone interested in chemical waste management, recycling, and disposal.

Under the Emergency Planning and Community Right-to-Know Act (EPCRA), the TRI program collects data on toxic chemical releases and pollution prevention activities reported by industrial and federal facilities and provides this information to the public. ECHO provides some information about facilities that report to TRI on the Hazardous Waste Search Results.

Let’s say we are interested in learning about waste management volumes for an industry that has facilities in my state, for example, Illinois.

Let’s search for Chemical Manufacturing using a North American Industry Classification System, or NAICS code. If you do not know the specific NAICS code, use the keyword search to identify a code.

Let’s also look for facilities that reported to the TRI in the current reporting year.

We can look at the TRI data by using Customize Columns. Let’s add TRI IDs, TRI On-Site Land Releases, and TRI Off-Site Chemical Transfers. Let’s also remove the columns associated with Compliance Status or Inspections.

One thing to note is that not all Hazardous Waste Handlers may report to TRI, so you may find facilities that do not have TRI IDs when running other searches. Facilities that report to TRI must meet specific criteria: The facility must be in a TRI-covered industrial sector, employ 10 or more full-time employees, and must exceed any one activity threshold for manufacturing, processing, or otherwise using a TRI-listed chemical during a given year. Lack of data does not indicate the facility is noncompliant or has made a reporting error.

The On-Site Land Releases and Off-Site Chemical Transfers provide information about the total pounds of TRI-listed chemicals released or managed in 2019, the most current reporting year available. On-site land releases may include disposal of chemicals in landfills or surface impoundments, underground injection, or other disposal methods. Off-site transfers represent chemicals that were transferred to another location for recycling, treatment, or disposal. Most of the chemical manufacturing facilities in these results reported transferring chemicals off-site. We can get more information from the DFR.

TRI Release data are included in the Pollutants section of the DFR.

The pollutants section provides a summary of the last ten years of TRI data. The first table shows a history of chemical quantities reported as released or transferred by year. This table includes other management methods besides those for solid waste, such as chemical releases to air and water.

The second table lists the pounds of each chemical released or otherwise managed by year. We can sort this table to see the chemicals with the greatest volume managed in any year.
Note that if you are interested in more detailed TRI information, such as the waste management practices for each chemical, EPA provides this through another agency website, Envirofacts. We encourage you to view the TRI Pollution Prevention Report in Envirofacts to further explore this data set, as well as the TRI program website epa.gov/tri to learn more about TRI.

Let’s move on to the next example.

**How can I use ECHO to prepare for a hazardous waste facility inspection?**

Let’s look at how an inspector can use ECHO as part of the planning process for a multimedia inspection. First, we can click the “View More Search Options” toggle to view all the available search criteria.

We will focus on search criteria in the Facility Characteristics and Enforcement and Compliance sections. Search criteria available in these sections can help prioritize facilities of interest for potential inspections.

First, let’s select the Large Quantity Generator criterion, under Universe.

Large Quantity Generators are sites that produce 1,000 kilograms or more of hazardous waste per month or one kilogram or more of acute hazardous waste per month.

Since we are planning for a multimedia inspection, we would like to search for hazardous waste facilities that also have a Clean Water Act permit.

We can narrow our search to look for facilities without recent inspections. Under the Enforcement and Compliance section, set the Time Since Last Inspection to “none within 2 years.” Note that while we selected years using the slider, you could also designate a specific date range.

As a reminder, more information about these criteria is available in Facility Search Help, which can be accessed by clicking the question mark icon in each section.

Let’s view the results using the interactive map.

As you can see, over 5,000 facilities meet the criteria we selected.

You can also apply criteria without having to go back to the search form by using the “Explore Enforcement and Compliance” checkboxes on the right. The counts tell us how many of these facilities meet these criteria. We will select “Facilities with Current Violations.”

Now, our results have been reduced to about 300. We demonstrated earlier how to narrow down the search results using the data table. This time let’s use the interactive map to zoom in on areas of interest.

We can see that there are several facilities near Chicago that have serious noncompliance status. Let’s zoom in on this group of facilities.

We can view summary information about each of these facilities by clicking on the map pin.

The pop-up provides the name, location, and a brief compliance history for the facility. Clicking on the map pin also highlights the facility in the data table below the map and expands a Facility Summary panel on the right.
In the data table, we can see that this facility has had two On-Site Inspections in the past 5 years. Now that we have a rough sense of this facility’s compliance status, let’s open the Detailed Facility Report to view more information.

As we saw earlier, the Detailed Facility Report is a compilation of detailed data for a single facility. Let’s look at the enforcement and compliance information available on this report.

We can go directly to the Enforcement and Compliance information by clicking the page jump at the top navigation bar.

This section presents several tables with compliance or enforcement information.

The Compliance Monitoring History table lists recent state or federal inspections. Here we can see the exact date and type of the official RCRA inspection that was indicated in the search results.

The Compliance Summary Data table lists information similar to the facility summaries seen on the map pop-up but also lists the applicable permit or program IDs and date that data were last refreshed in ECHO.

The Three-Year Compliance History by Quarter table presents violation details, broken down into quarterly periods for each program. Past violation information can be useful for an upcoming inspection, as it may indicate where to focus efforts when at the facility.

We can identify the violation type, the reporting agency (EPA or State), and the start and end of violation status changes.

In this example, we can see 5 separate RCRA violations listed. These violations are unresolved, as represented by the arrows in the table. Resolving these violations may require a facility report review or an on-site inspection.

The violation column shows the statute subpart number and name. ECHO maintains a webpage listing contact information for state agency websites. We have provided a link to this page in the PowerPoint slides.

The Enforcement Actions tables may also contain details on informal or formal actions taken against a facility. In this example, we see that written informal actions have been taken by EPA.

Our last example is:

**How can I use the Hazardous Waste Dashboard to understand compliance and enforcement activities in my state?**

Now, let’s take a look at the newly released Hazardous Waste Dashboard to see how we can use the charts to understand compliance and enforcement activities in a state.

The Dashboard allows users to explore compliance and program metrics related to Hazardous Waste facilities for the ten most recent federal fiscal years.

Data are sourced from the Resource Conservation and Recovery Act Information system (RCRAInfo) and EPA’s Facility Registry Service (FRS). As we mentioned before, RCRAInfo is the EPA database containing
data for compliance and enforcement activities conducted for hazardous waste handlers. FRS is the source for the FRS Registry ID, Federal Facility Flag, and Tribal Names. Data are updated weekly.

You can choose to filter by geographic criteria, such as Facility or Activity State, EPA Region, and Tribe Name, and also Universe, Lead Agency, or Federal Facility.

For this example, let’s select facilities located in the state of Louisiana, and classified as Large Quantity Generators.

The dashboard is organized in a structure logical to the scope and activities of federal compliance and enforcement programs. As we can see, there are 6 tiles of the dashboard, each with several charts showing metrics over time.

- Facilities, which displays information about facilities regulated under RCRA Subtitle C;
- Inspections, which displays information about compliance monitoring activities;
- Violations, which displays how many facilities have violations over time;
- Significant Noncompliance, which displays how many facilities are designated as significant noncompliers;
- Enforcement Actions, which displays information about EPA and state enforcement activity; and
- Penalties, which displays information about penalties at facilities that had alleged violations.

As we can see in the Facilities chart, the number of large quantity generators regulated slowly increased over time, peaking in 2018.

Let’s take a closer look at fiscal years 2018 to 2021. Note that the counts for fiscal year 2021 are relatively low since the fiscal year started this October. We can look at the data for these years by using the lasso feature to select multiple years.

On the Inspections chart, we see that the year with the highest number of facilities inspected was 2018. We can hover over the year in the X axis to see that of those, 1 was led by EPA.

Let’s look at Significant Noncompliance. The number of significant noncompliers over this time period is relatively stable.

Let’s drill down into the SNC chart for the year 2020.

As we can see, there are 10 facilities with SNC. Now, let’s use the “Details” option on the chart drop down menu to see more information about these facilities.

A table with information about the facility and SNC determination are shown.

Additionally, the table includes links to the Detailed Facility Report. Let’s go to the detailed facility report for BASF Corporation.

If we scroll down to the Enforcement and Compliance section of the DFR, we can see in the Three-Year Compliance History by Quarter table that the facility was deemed a significant noncomplier as the result of a compliance evaluation in December 2019, the first quarter of fiscal year 2020.

For those that are new to using this dashboard, we recommend checking out a feature called “Tour this Dashboard” The tour shows, step-by-step, the location of and how to use the dynamic components.
within the page. You can go through the tour at your own pace to learn more about how to interact with the dashboard. For example, this step explains how to select and apply values from a filter dropdown menu.

If you have any questions about the dashboards, you may click on the “Help” button to view more detailed documentation. The help page goes into more detail (than we have) about data sources, using the dashboards, and chart types.

This concludes our last example. Before we take questions, we’d like to summarize the key takeaways. The ECHO Hazardous Waste Facility Search and Dashboard provide many ways to search for and view facilities that are regulated under the RCRA Subtitle C Hazardous Waste Program. Today, we demonstrated real-world examples of using the Hazardous Waste Facility Search, and Hazardous Waste Dashboard charts and interpreting compliance data on the Detailed Facility Report.

These are links to ECHO resources, as well as websites mentioned during this demonstration. If you want to learn more about other features available on our website, we recommend beginning with the quick start guide and viewing the short video tutorials.

We are always seeking to improve the website and would love to hear your feedback. We especially would like recommendations on what data fields in RCRAInfo to add to the DFR or as search criteria. Please use the Contact Us link to provide suggestions at any time.

Now, let’s answer the questions submitted though the questions box.

Thank you Tanvi, appreciate it. We have a few questions from audience members. This is just a friendly reminder if you have a question send it in via the questions box, which is towards the bottom of your control panel. The first question we have, an audience member asked: “Why are some facilities not listed in ECHO?”

ECHO includes facilities regulated under four main environmental statutes. In terms of the scope of the demonstration today, this is for hazardous waste facilities regulated under Subtitle C of RCRA. Other facilities in ECHO include facilities regulated under the Clean Water Act, Safe Drinking Water Act, and Clean Air Act. There are other facilities that are regulated that are outside of the datasets pulled into ECHO. We are always looking to incorporate more datasets and more information in the future. I am not sure the context of the question, but often users have trouble searching and finding specific facilities in ECHO. So, the example we did today, iteratively searching by facility name is one really good approach for finding and identifying facilities you know that are regulated. And also we have some other tips on our frequently asked questions page to help with searching and finding specific facilities. Next question please.

Great, thank you. A couple audience members asked if the slides were going to be available. The slides and a recording of the presentation will be made available in the near future following this webinar. Please stay tuned and look at the ECHO website for that information. An audience member asked: “If the data is incorrect, what should we do?”

The first thing to do is use that report data error feature on the top of the Detailed Facility Report. And you will also notice in ECHO if you are looking at other features, we have that ability on some of the other report pages as well. We suggest you be as specific as possible so that the error can be routed to
the appropriate data steward or appropriate agency, either EPA or a state that can correct the data. If there is any follow up needed, or for some reason you have some further questions, or something may not directly be a data error you can always use the contact us link at the top right of the page to follow up. And if you have already submitted an error and have the error notification number, that can be really helpful for us as well.

Great, thank you. Another audience question here, someone asked, “What would explain a facility showing noncompliance in ECHO for a quarter when there is no underlying noncompliance found in ICIS?”

Information in ECHO is pulled in from ICIS, which is one of the source databases, weekly and typically that is over the weekend. And because of that weekly refresh schedule, sometimes the information may be out of sync if something was updated in the source system during the week and then that may not be reflected in ECHO until the following Sunday or Monday typically. That’s a typical difference in information that we see. If you have a specific question about a facility, I encourage you to please follow up with us using the Contact Us page and we can help troubleshoot or look into any specific issue in more detail.

Great, thank you. Another audience question, someone asked “Will ECHO show VSQGs or just SQGs and LQGs.

This is referring to the universe of hazardous waste facilities. Do we still have a search page up? Thanks Amanda. These are codes corresponding to particular types of hazardous waste facilities. So yes, ECHO includes Small Quantity Generators, and Very Small Quantity Generators, which are the VSQG, and then LQG stands for Large Quantity Generators. So, all that information is here and then we have a search criterion if you like to narrow your search on a particular universe of hazardous waste handlers.

Great, thank you so much. A couple other audience questions coming in. “How can you tell what the description or specific reason for a RCRA SNC is?”

The most detailed information is going to be in the detailed facility report about what the violation is and what the severity of that violation, the corresponding severity of the violation. Within the data dictionary, we have more detailed information about what those mean. And if you have any additional questions from that, contact us through the help link at the top.

Great, thank you. One other audience question just came in: “Is there international transfer of hazardous waste information?”

Good question. So, the TRI program handles transfer of waste within the United States. I do not believe ECHO has any information about transfer outside of the U.S., but other countries also maintain datasets similar to TRI about waste handling and transfer information.

Great, thank you. Appreciate that answer. Another audience question just came in: “Is your team available to meet regarding a training event for a firm.”

Please contact us about the specific request.

Great, thank you. Another question just came in: “Is there a quick way to sort by violation type?”
Yes, if you are running a search and you are on the search results page, you can sort on any of the columns. For example, what we can see here you can sort on the number of quarters on noncompliance. There are other columns available related to noncompliance or violations that you can sort on to compare facilities within your search results.

Great, thank you so much for that answer. With that, I am turn things over to Madeline with EPA for closing remarks.

Great, thank you Colby. Hello everyone, my name is Madeline LaPatra and I conduct training and outreach for ECHO at the EPA. On behalf of all of us involved with this training, we thank you for participating in this webinar. If you think about any additional questions about using ECHO, please feel free to contact us using the contact us link in the top right of any ECHO page. I also wanted to remind you that a brief survey will open up as soon as this webinar ends. We would really appreciate your feedback. Thank you again and I hope you have a great week.