P2 Tool Quick Start Guide

Introduction

The TRI Pollution Prevention (P2) Search Tool offers easy access to the P2 information submitted by industrial facilities in their Toxics Release Inventory (TRI) reports. This guide demonstrates how you can use the P2 Search Tool to help answer your questions about P2, waste management, and environmental progress at facilities. Click on the questions below to learn about the primary functions of the Tool, scroll through the Tool images and associated text to learn about the different features, or click on a bulleted sub-topic to jump to a specific feature.

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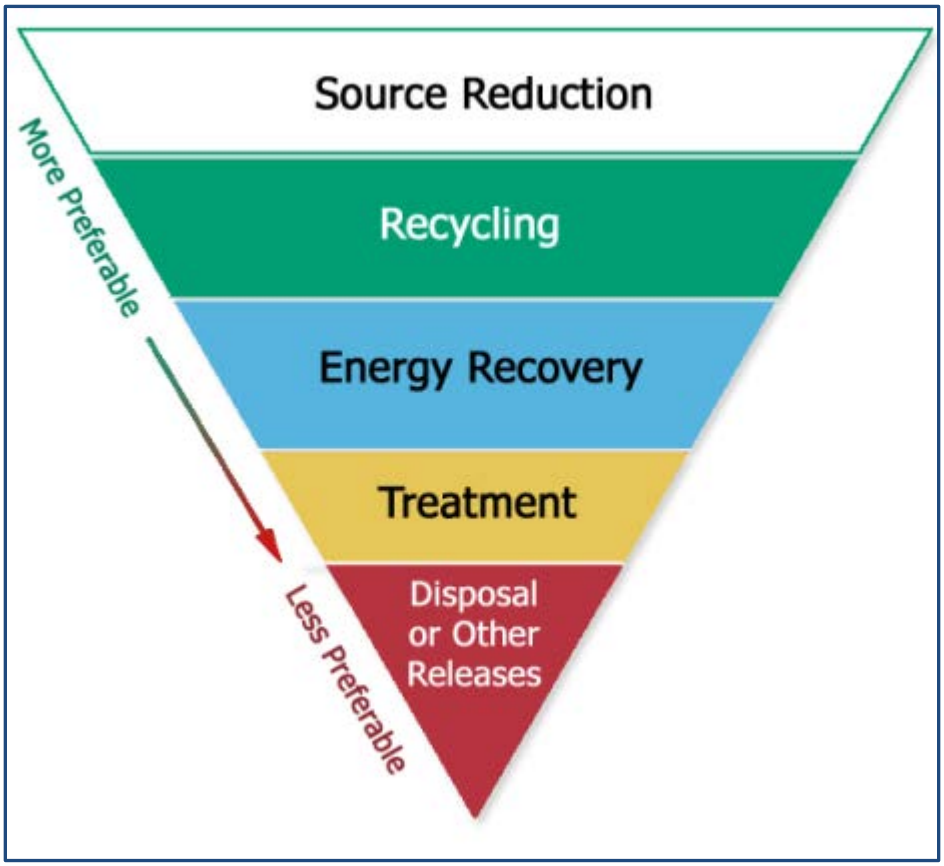
1. P2 information reported to TRI and P2 terminology

TRI tracks each facility's progress towards the goals of the Pollution Prevention Act using the framework provided by the waste management hierarchy (see below). The Pollution Prevention Overview (www.epa.gov/enviro/tri-pollution-prevention-overview) provides a full explanation of the information collected and key P2-related terms.



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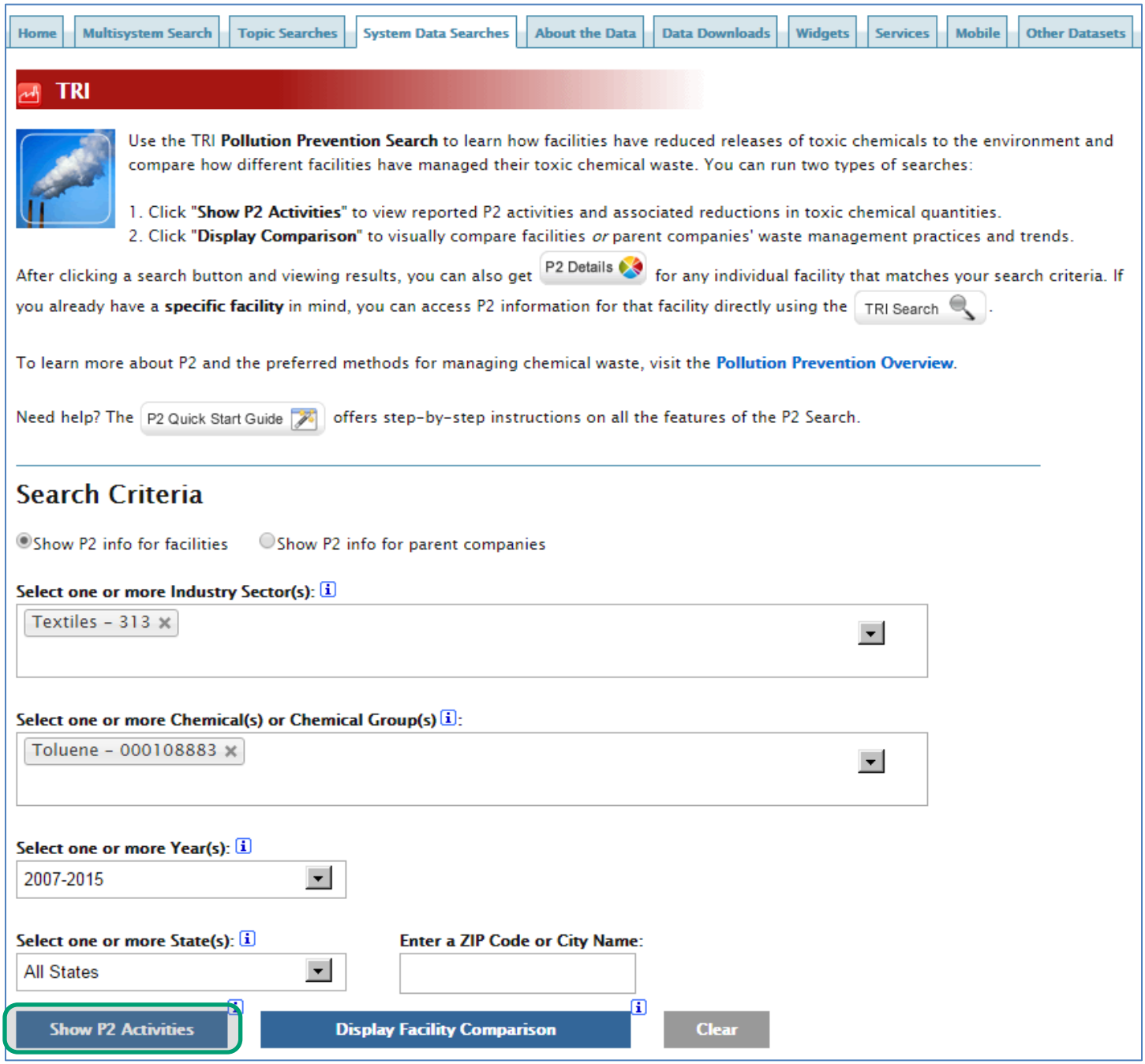
2. Find P2 examples for a specific industry and chemical

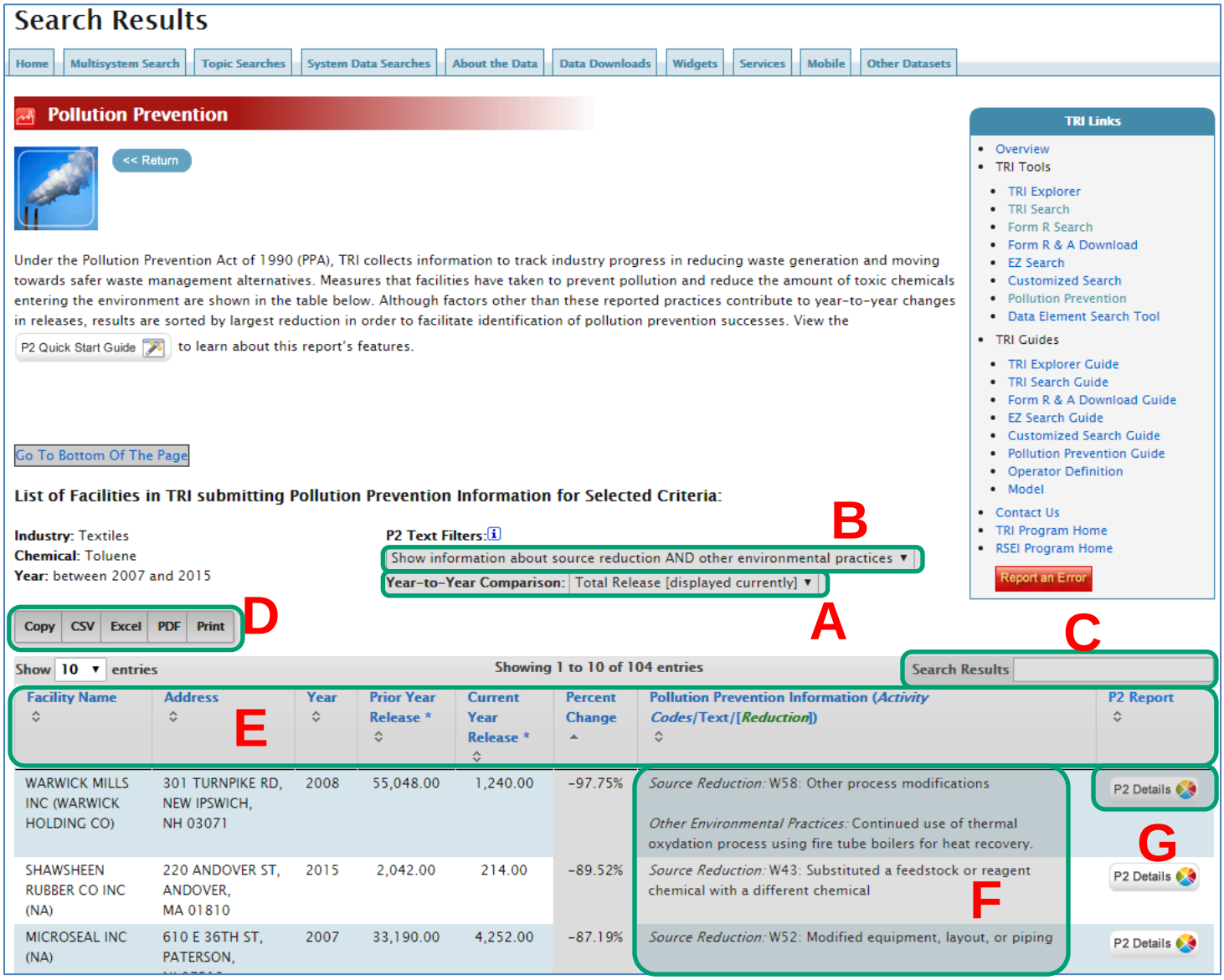
Start at the main P2 search page: www.epa.gov/enviro/facts/tri/p2.html. Select the industry(s) and/or chemical(s) that you want to search for (in this example: textiles and toluene). The chemical options include both specific chemicals (e.g. toluene) and broader chemical groups (e.g., Hazardous Air Pollutants). You can also limit the search to a specific parent company, a specific year, or geography (state, city or zip code). Click on the drop-down arrow again to select multiple industries, chemicals, years, or states, or start typing into the query boxes to quickly narrow the selection options.

From the blue buttons, click "Show P2 Activities" to see a list of facilities and reported P2 activities for the industry-chemical combination.



Overview of P2 Activities Results Page

Your P2 search results will be displayed in the default format, where facilities with the greatest reduction in total releases are listed first. There are several ways to limit and sort search results.



2.A Use the "Year-to-Year Comparison" dropdown to change the waste type shown in the results table. This modifies the prior year, current year and percent change columns to the waste management quantity selected for comparison. You can select total waste (includes quantities recycled, used for energy recovery, treated, or released), total release (on-site releases to air, water, land, and off-site releases), air release, land release, or water release. **For example**, you can select "Air Release" to sort your search results to show facilities reporting P2 with the greatest decrease in on-site air releases.

2.B Use the "P2 Text Filters" dropdown to change what types of P2 information are displayed in the results table. By default, the search results are filtered to show information about source reduction AND other environmental practices. You can also select to filter results by source reduction only, barriers to source reduction, all information in pollution prevention fields, and results that exclude entries with activity codes (W codes) but no descriptive text.

2.C Use the “Search Results” bar to further filter results by entering parameters such as chemical name, state or a specific keyword. (Tip: use spellings that capture multiple forms of search terms.) **For example**, you can search for “substitut” to find source reduction activities related to chemical substitutions (text entries containing substitute, substitution, substituting, substituted, etc). Or type in “W5” if you're interested in process modifications (source reduction codes from W50 to W58).

2.D Use the buttons on the top left to download or print search results in a variety of different formats.

2.E Sort results by column headings (facility name, address, etc.) by clicking the small arrow under the column heading. Or click the column header to view a description of description of the column and how to interpret the data provided.

2.F The "P2 Information" column displays both source reduction activity codes selected in Section 8.10 and optional narratives provided in Section 8.11. Information on other environmental practices and barriers to source reduction is distinguished from source reduction activities through the use of italicized headings.

2.G The P2 Details button opens the P2 Details page for a single chemical with detailed information on waste management practices and P2 activities for the selected facility and chemical.

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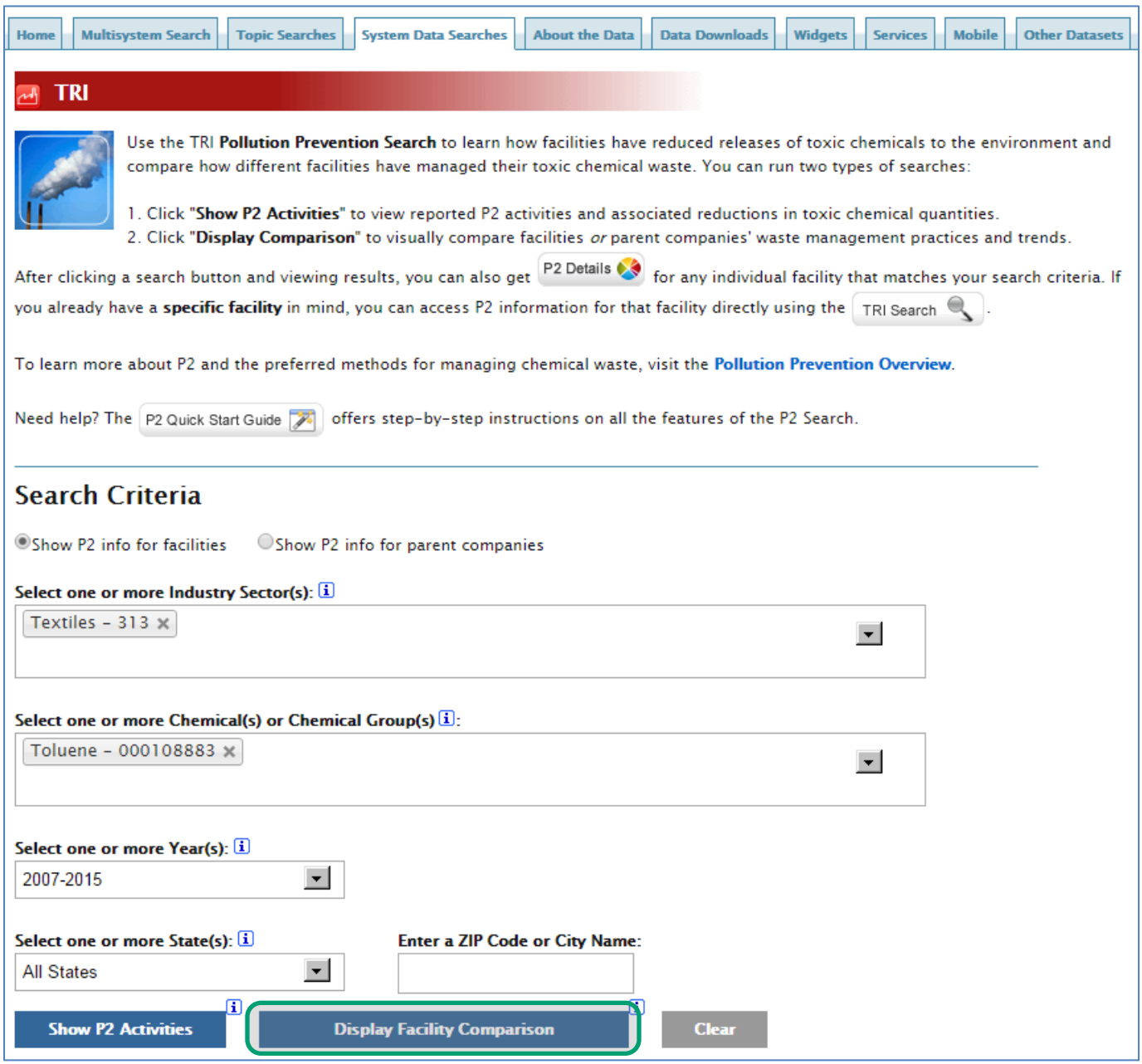
3. Compare P2 progress and waste management practices across facilities

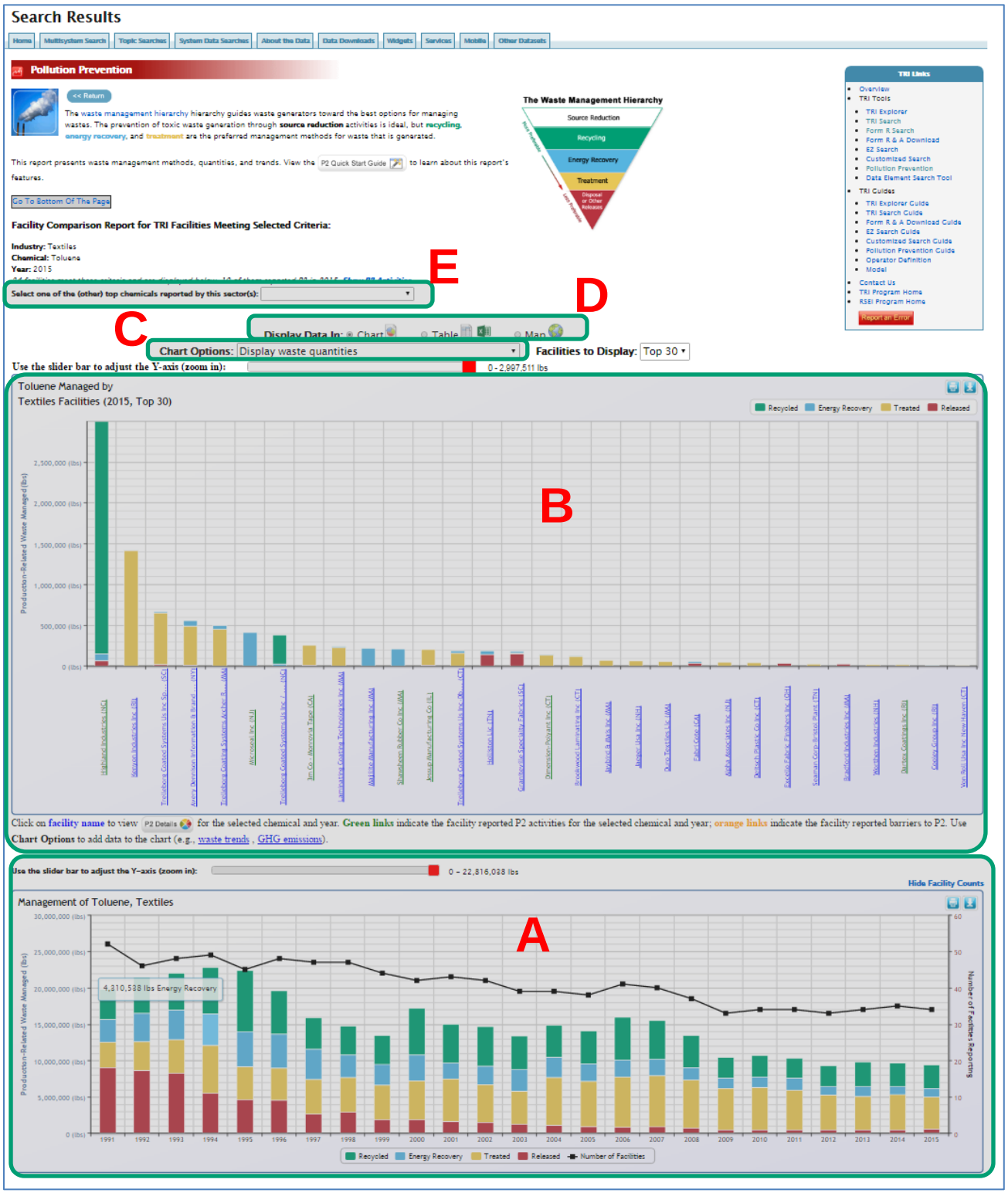
Start at the main P2 search page: www.epa.gov/enviro/facts/tri/p2.html. Select the industry and/or chemical for which you wish to display a report (in this example: textiles and toluene). Note that although you have the option to search for all chemicals reported by single industry or vice versa, selecting a specific industry-chemical combination may provide more meaningful results to compare waste management practices across facilities. You can also limit the search to a specific geography (state, city or zip code). The search defaults to the most recent year if you don't select a year.

From the blue buttons, click "Display Facility Comparison" to see a comparison of how facilities in the selected industry manage the selected chemical.



Overview of Facility Comparison Results Page

Facility comparison results will be displayed in the default format, with waste quantities displayed for the top 30 facilities. This display includes **all** facilities reporting the selected chemical in the selected industry, including those that did not report any P2 activities. There are several ways to modify the display and view additional metrics.



3.A The **chemical management chart** shows the waste management of the chemical for the selected industry over time. The number of facilities reporting the specific chemical and industry is displayed by the black line, which can be turned off using the "Hide Facility Counts" button.

3.B The **facility comparison chart** compares TRI production-related waste management by facility for the selected industry and chemical (in this example, toluene waste in textile manufacturing). Other display options are available such as a five-year trend for TRI waste managed or greenhouse-gas emissions; see 3.C below for more details. Note that production-related waste is reported and displayed for all TRI facilities, not just facilities that implemented P2 activities.

> **Download** or print the figure and underlying data in a variety of formats.
>
> The **facility names** are linked to a facility P2 Details report page and each name is color coded to indicate if the facility reported implementing P2, barriers to P2 or no text entries. For example, names in green indicate that the facility reported P2 information, orange links indicate the facility reported barriers to P2, and blue links indicate that the facility has not reported any P2 information for the selected chemical and year. See 5 below for more information on the P2 Details page.

3.C The "Chart Options" dropdown changes the displayed quantities on the facility comparison chart. Select from the following options:

> **Display waste quantities:** The default option displays the total production-related waste (includes quantities released, recycled, used for energy recovery, and treated) reported by each facility for the specific chemical.
>
> **Display waste quantities as a percentage of total waste:** This option displays the percent of total production-related waste at each facility that is recycled, used for energy recovery, treated, and released and can help you see, for example, which facilities have minimized the share of their waste that is released to the environment.
>
> **Display GHG emissions reported to the GHGRP:** In addition to TRI production-related waste, this option displays the greenhouse gas emissions (in metric tons CO2- equivalent) for all facilities that report to both TRI and EPA's Greenhouse Gas Reporting Program (GHGRP). Note that some sectors (e.g., textiles) do not have many facilities that are required to report to both TRI and GHGRP.
>
> **Display 5-year waste trend:** Displays the 5-Year Waste Trend metric for each facility. This option displays a comparison of current waste levels to past waste levels for each facility on a 3-year rolling average basis. The "5-Year Waste Trend" through 2015 is equal to the percent change in average annual waste from the 2009-2011 period to the 2014-2015 period.
>
> **Display 5-year waste trend normalized:** This option displays the normalized 5-Year Waste Trend metric for each facility. This metric is calculated the same way as the 5-Year Waste Trend, except that waste levels are normalized relative to production using the production ratio/activity ratio values reported by the facility for the chemical.

3.D Use the **Display Options** to toggle between displaying information in charts (shown; the default format), as a downloadable table with facility-level waste management information, or as a map. The table will display all results matching your query while the chart can display 50 facilities at most.

3.E Use this drop-down to re-run the report for a different chemical. The dropdown lists (in order) the 10 chemicals with the most Form R reports for your selected industry(s) and year.

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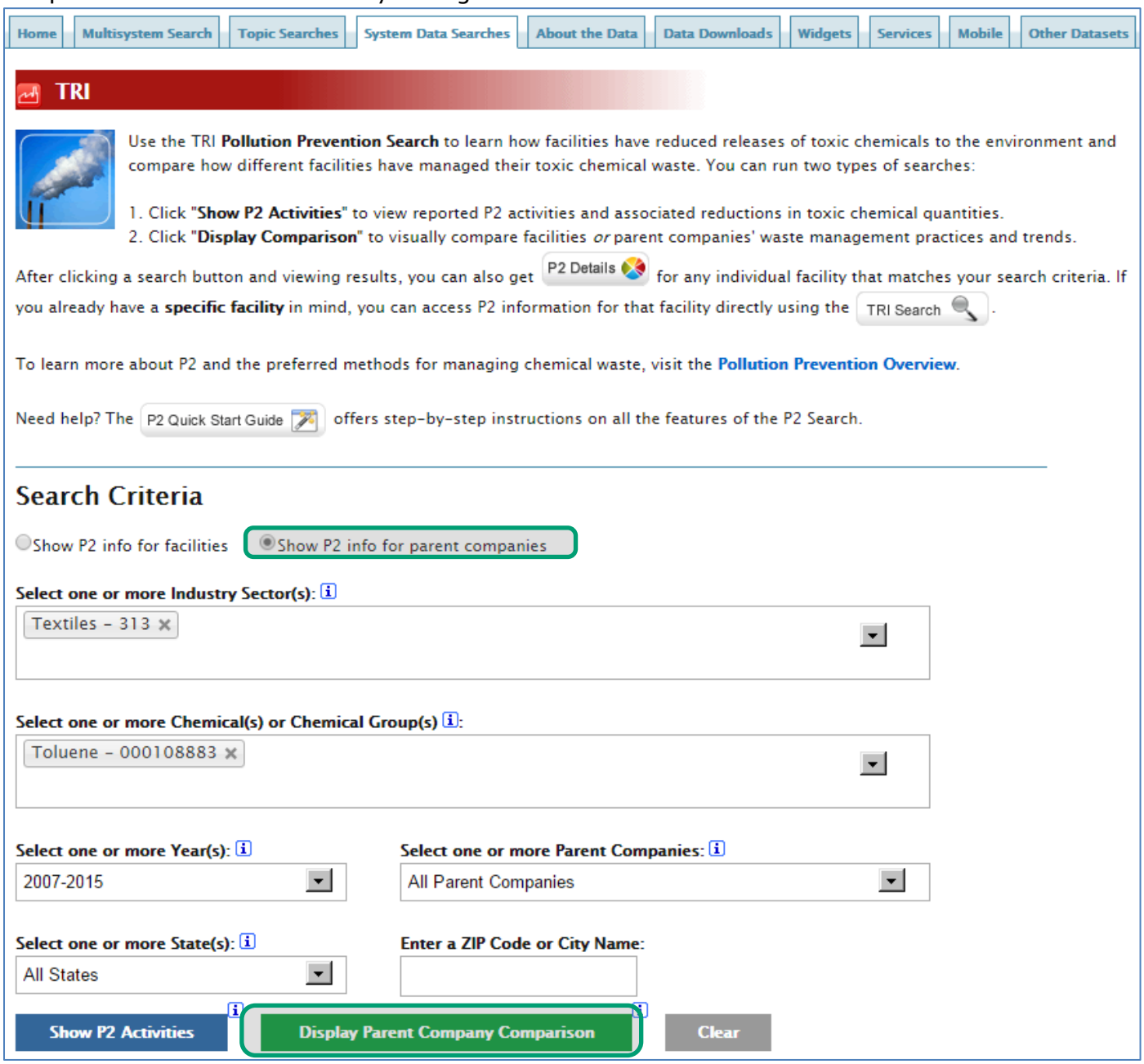
4. Compare P2 progress and waste management practices across parent companies

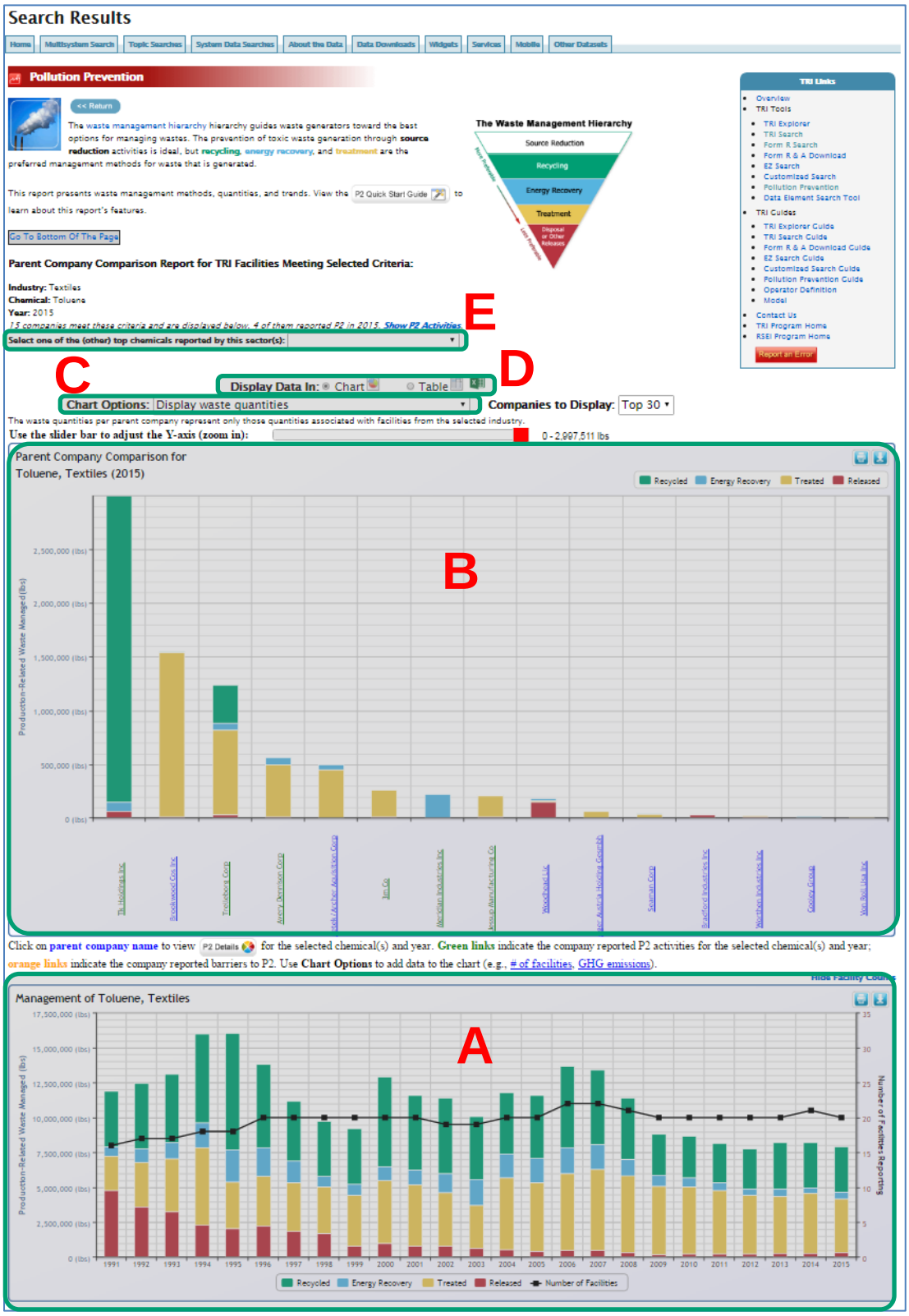
Start at the main P2 search page: www.epa.gov/enviro/facts/tri/p2.html. Select "Show P2 info for parent companies." Select the industry and chemical for which you wish to display a report (in this example: textiles and toluene). The chemical options include both specific chemicals (e.g. toluene) and broader chemical groups (e.g., Hazardous Air Pollutants). You can also limit the search to a specific parent company or geography (state, city or zip code). Select a year. The parent company comparison can only be conducted for one year; the search defaults to the most recent year if you don't select a year.

Click the green button, "Display Parent Company Comparison" to see a comparison of how parent companies in the selected industry manage the selected chemical.



Overview of Parent Company Comparison Results Page

Parent company comparison results will be displayed in the default format, with waste quantities displayed for facilities in the selected industry for the top 30 companies. This display includes **all** companies reporting the selected chemical in the selected industry, including companies whose facilities did not report any P2 activities. There are several ways to modify the display and view additional metrics.



4.A The **chemical management chart** shows the waste management of the selected chemical for the selected industry over time. The number of facilities reporting the specific chemical and industry is displayed by the black line, which can be turned off using the "Hide Facility Counts" button.

4.B The **parent company comparison chart** compares TRI production-related waste management by parent company for the selected industry and chemical (in this example, toluene waste in textile manufacturing). Other display options are available such as a five-year trend for TRI waste managed or greenhouse-gas emissions; see 4.C below for more details. Note that production-related waste is reported and displayed for all TRI parent companies, not just companies that implemented P2 activities.

> **Download** or print the figure and underlying data in a variety of formats.
>
> The **parent company names** are linked to a facility comparison for facilities owned by the parent company and from this report names are linked to the P2 Details report page. The parent company names are also color coded to indicate if any of the company's facilities reported implementing P2, barriers to P2 or no text entries. For example, names in green indicate that the company reported P2 information, orange links indicate the parent company reported barriers to P2, and blue links indicate that none of the parent company's facilities have reported any P2 information for the selected chemical and year. See 5 below for more information on the P2 Details page.

4.C The "Chart Options" dropdown changes the displayed quantities on the parent company comparison chart. Select from the following options:

> **Display waste quantities:** The default option displays the total production-related waste (includes quantities released, recycled, used for energy recovery, and treated) reported by each company for the specific chemical.
>
> **Display waste quantities as a percentage of total waste:** This option displays the percent of total production-related waste at each company that is recycled, used for energy recovery, treated, and released and can help you see, for example, which companies have minimized the share of their waste that is released to the environment.
>
> **Display GHG emissions reported to the GHGRP:** In addition to TRI production-related waste, this option displays the greenhouse gas emissions (in metric tons CO2- equivalent) for all companies that report to both TRI and EPA's Greenhouse Gas Reporting Program (GHGRP). Note that some sectors (e.g., textiles) do not have many facilities that are required to report to both TRI and GHGRP.
>
> **Display 5-year waste trend:** Displays the 5-Year Waste Trend metric for each parent company. This option displays a comparison of current waste levels to past waste levels for each company on a 3-year rolling average basis. The "5-Year Waste Trend" through 2015 is equal to the percent change in average annual waste from the 2009-2011 period to the 2014-2015 period.
>
> **Display number of facilities per parent company:** In addition to TRI production-related waste, this option displays the number of TRI facilities for each parent company.

4.D Use the **Display Options** to toggle between displaying information in charts (shown; the default format) and as a downloadable table with parent company-level waste management information. The table will display all results matching your query while the chart can display 50 companies at most.

4.E Use this drop-down to re-run the report for a different chemical. The dropdown lists (in order) the 10 chemicals with the most Form R reports for your selected industry(s) and year.

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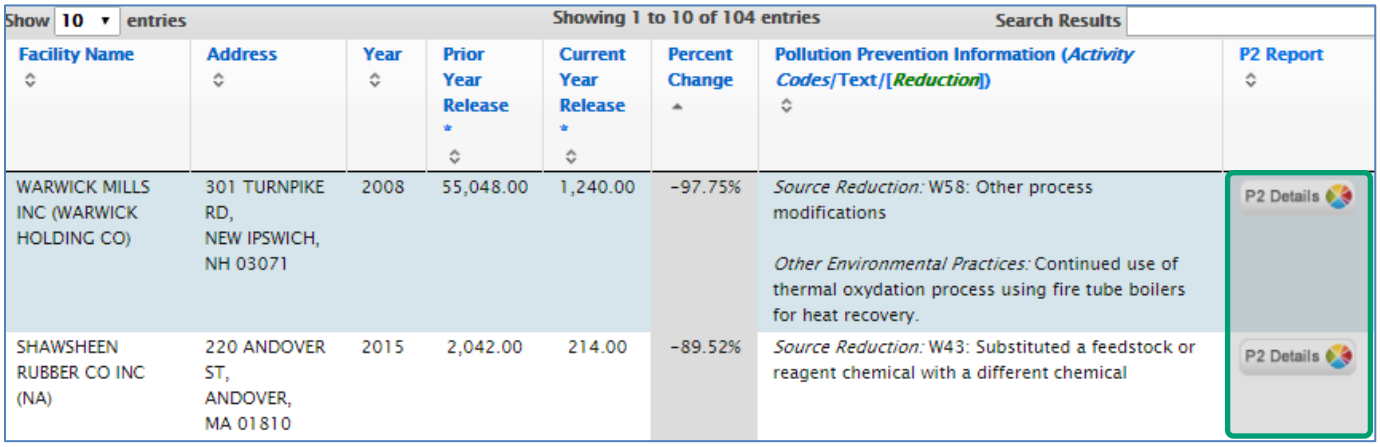
5. Learn about the waste management practices and pollution prevention efforts of a specific chemical at a specific facility

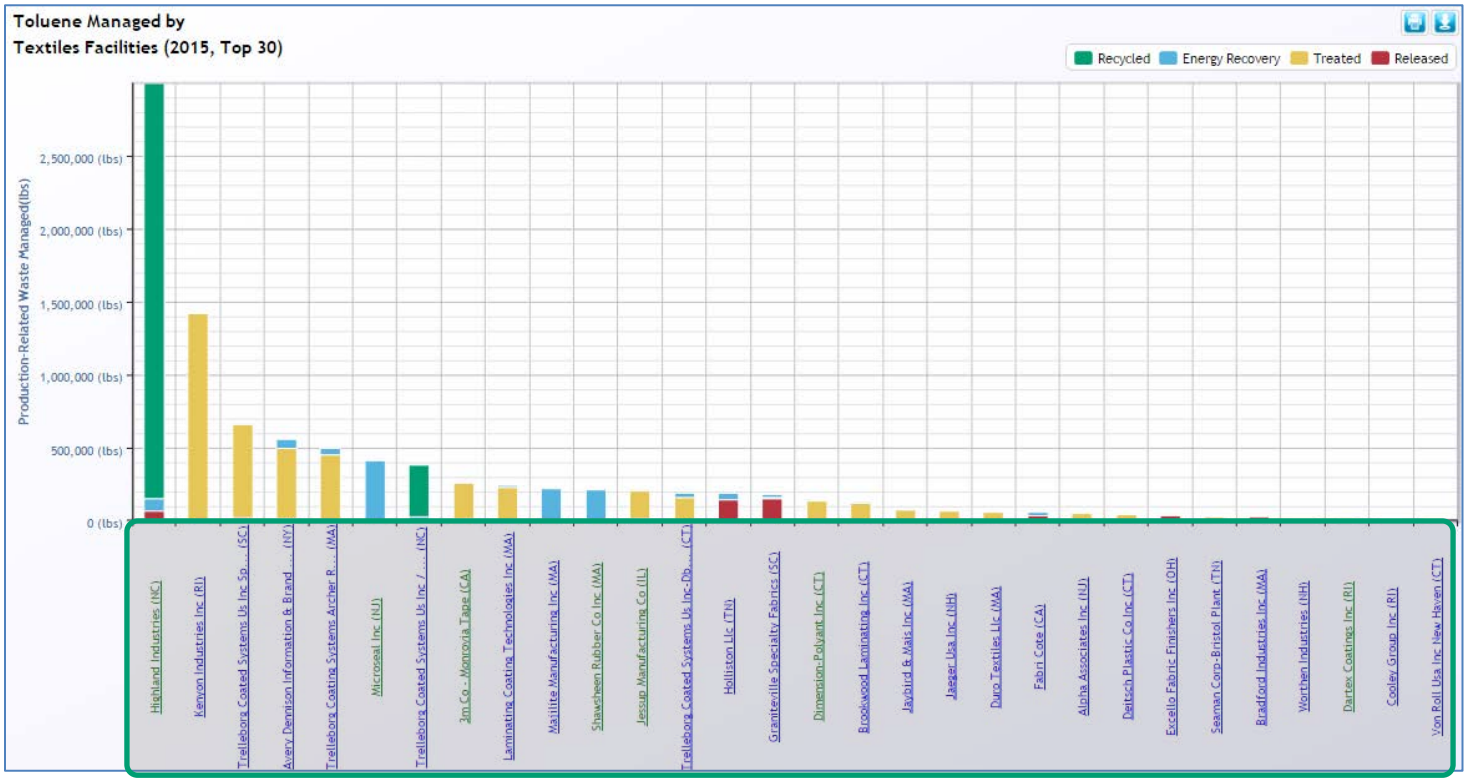
The "P2 Details" page contains detailed information about waste management quantities and practices at a specific facility. The P2 Details button is included in various views and lead to the facility level information. Two ways to find the P2 Details Page are described below. One way is from the P2 Activities – List of Facilities Search Results page. Click on the "P2 Details" button for the facility of interest.



Show 10 entries — Showing 1 to 10 of 104 entries — Search Results

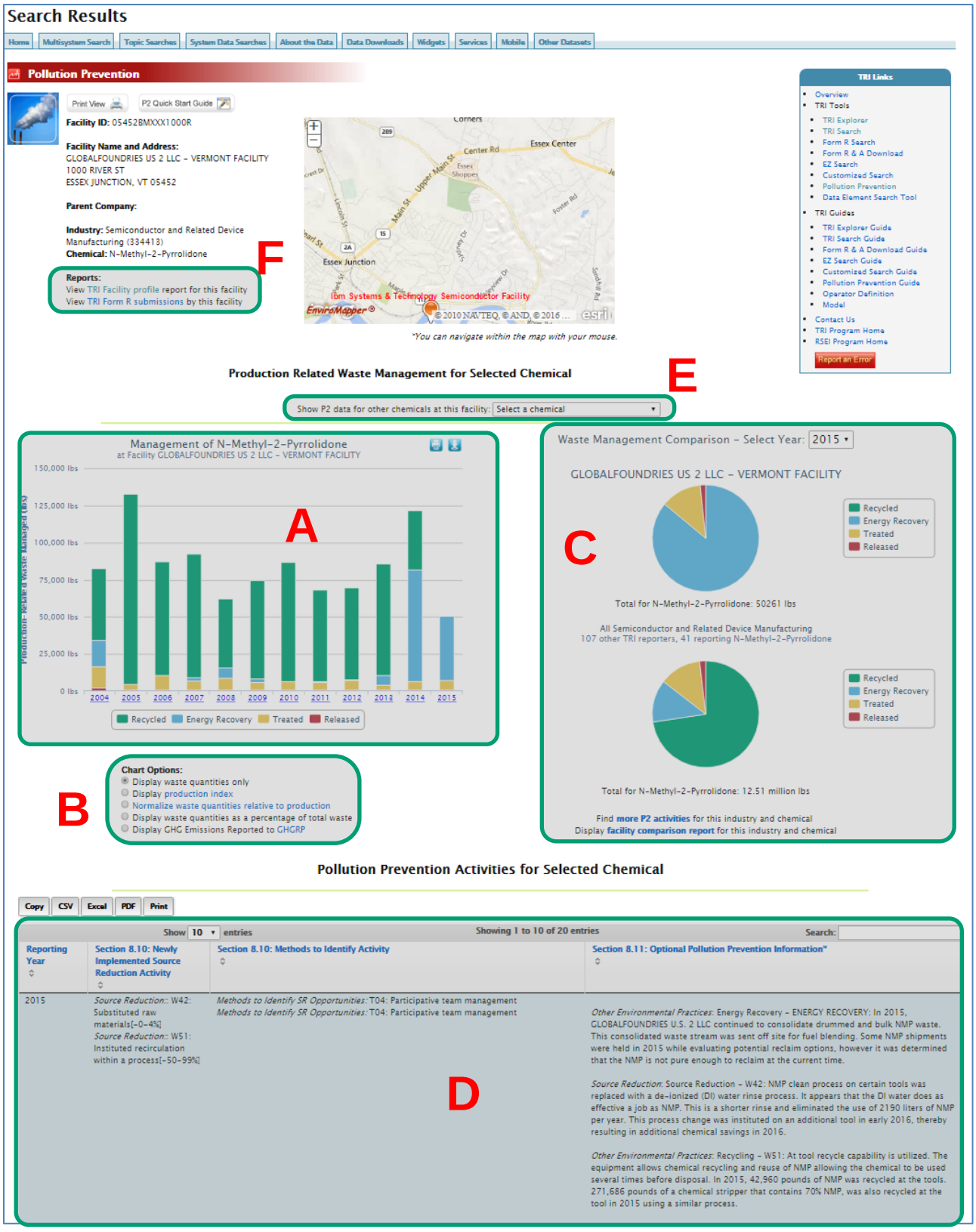
Facility Name	Address	Year	Prior Year Release *	Current Year Release *	Percent Change	Pollution Prevention Information (*Activity Codes*/Text/[*Reduction*])	P2 Report
WARWICK MILLS INC (WARWICK HOLDING CO)	301 TURNPIKE RD, NEW IPSWICH, NH 03071	2008	55,048.00	1,240.00	-97.75%	*Source Reduction:* W58: Other process modifications *Other Environmental Practices:* Continued use of thermal oxydation process using fire tube boilers for heat recovery.	P2 Details
SHAWSHEEN RUBBER CO INC (NA)	220 ANDOVER ST, ANDOVER, MA 01810	2015	2,042.00	214.00	-89.52%	*Source Reduction:* W43: Substituted a feedstock or reagent chemical with a different chemical	P2 Details

Another way to get to the P2 Details page is from the Facility Comparison Results page. Click on a Facility Name displayed on the x-axis of the waste management chart.



Overview of P2 Details Page

Waste management and pollution prevention details are provided for the selected chemical and facility in the format below.



5.A The **chemical management chart** shows how much waste was released, recycled, used for energy recovery, and treated over time. Click on hyperlinked years along the x-axis to see the P2 text reported by the facility for that year (also displayed in the Pollution Prevention chart below).

5.B The "Chart Options" checkboxes change the displayed quantities on the chemical management chart. Select from the following options:

> **Display waste quantities only**: The default option displays the total production-related waste reported by the facility for the chemical.
>
> **Display production index** adds a black line on the chart showing how production at the facility has changed from year to year.
>
> **Normalize waste quantities relative to production** shows the trends in waste quantities per unit of output.
>
> **Display waste quantities as a percentage of total waste** displays the percent of total production-related waste at each facility that is recycled, used for energy recovery, treated, and released and shows you whether the facility has shifted towards preferred waste management techniques like recycling.
>
> **Display GHG Emissions Reported to GHGRP** can also be added to the chart for facilities covered by EPA's GHG Reporting Program.

5.C The waste management comparison chart compares the facility's waste management practices for the specified chemical and year to the rest of the industry's. Switch the displayed year using the dropdown menu at the top of the chart.

> Click on the hyperlinks below the pie charts to view additional P2 information: "More P2 activities" to view a list of P2 Activities for search results for this industry and chemical and "facility comparison report" to compare this facility's P2 progress to other facilities' in the same industry.

5.D The **Pollution Prevention Activities** section lists all pollution prevention information reported by the facility for the selected chemical by year. You can search for keywords, sort by columns, and download the results in a variety of formats.

5.E The "Show P2 Data for other chemicals at this facility" dropdown takes you to the P2 Details page for another chemical reported by the facility. You can also select "Show all chemicals" to view a report of the waste management and P2 for all chemicals at the facility.

5.F The **Reports** section lead to TRI information presented in other data tools. Click the TRI Facility profile link to view the facility's report available from the TRI Search tool. Click the TRI Form R submission link to view a list of all the Form Rs reported by the facility, by year available from the TRI Form R Search tool.

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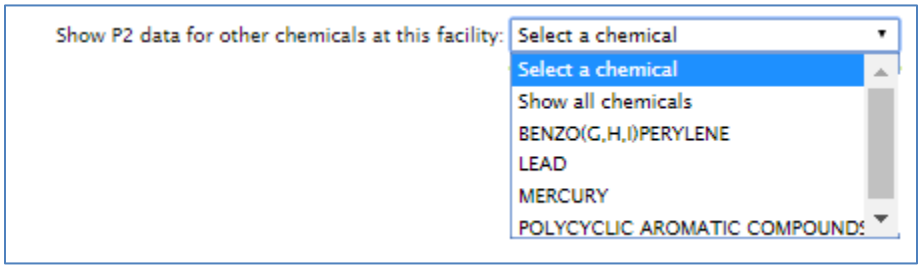
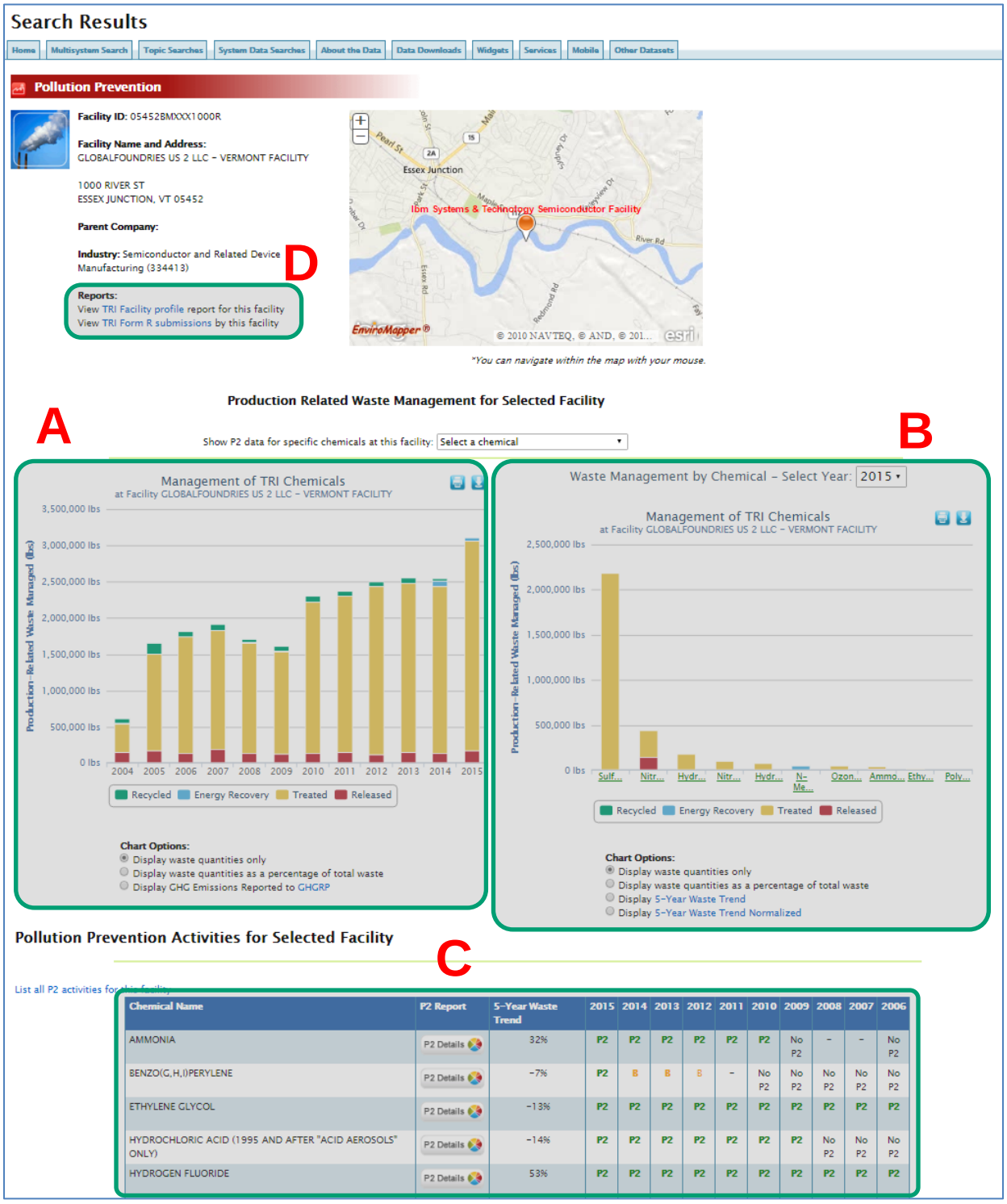
6. Learn about the waste management practices and pollution prevention efforts of a specific facility across all reported chemicals

The facility-level "P2 Details" page contains a summary of the waste management quantities and practices for all of the chemicals reported to TRI at a specific facility. You can navigate there from the chemical-specific P2 Details page. Click the "Show P2 data for other chemicals at this facility" dropdown and select "Show all chemicals".



Overview of Facility-Level P2 Details Page

Waste management and pollution prevention details for all chemicals reported by the facility are provided in the format below.



6.A The chemical management chart shows the total waste released, recycled, used for energy recovery, and treated over time for all chemicals reported by the facility.

The “Chart Options” checkboxes change the displayed quantities on the chemical management chart. Available options are described in section 5B above.

6.B The waste management by chemical chart compares the facility's waste management practices for the top reported chemicals by year. Switch the displayed year using the dropdown menu at the top of the chart. You can click the chemical name to view the P2 Details page for a specific chemical of interest.

The “Chart Options” checkboxes change the displayed quantities on the waste management by chemical chart. Select from the following options:

Display waste quantities only: The default option displays the total production-related waste reported by the facility for the chemical.

Display waste quantities as a percentage of total waste displays the percent of total production-related waste for each chemical that is recycled, used for energy recovery, treated, and released and shows you whether the facility has shifted towards preferred waste management techniques like recycling for each chemical.

Display 5-Year Waste Trend metric for each chemical managed by the facility. This option displays a comparison of current waste levels to past waste levels for each chemical on a 3-year rolling average basis. The "5-Year Waste Trend" through 2015 is equal to the percent change in average annual waste from the 2009-2011 period to the 2014-2015 period.

Display 5-Year Waste Trend Normalized is calculated the same way as the 5-Year Waste Trend, except that waste levels are normalized relative to production using the production ratio/activity ratio values reported by the facility for each chemical.

6.C The **Pollution Prevention Activities** section shows the years in which the facility reported P2 information (TRI Section 8.10 and 8.11) for each chemical. Select "P2 Details" to view the P2 Details page for a specific chemical of interest.

Click “List all P2 activities for this facility” to view all the P2 information reported by this facility.

6.D The **Reports** section lead to TRI information presented in other data tools. Click “TRI Facility Profile” to view the facility’s report available from the TRI Search tool. Click “TRI Form R Submissions” to view a list of all Form Rs reported by the facility, by year available from the TRI Form R Search tool.

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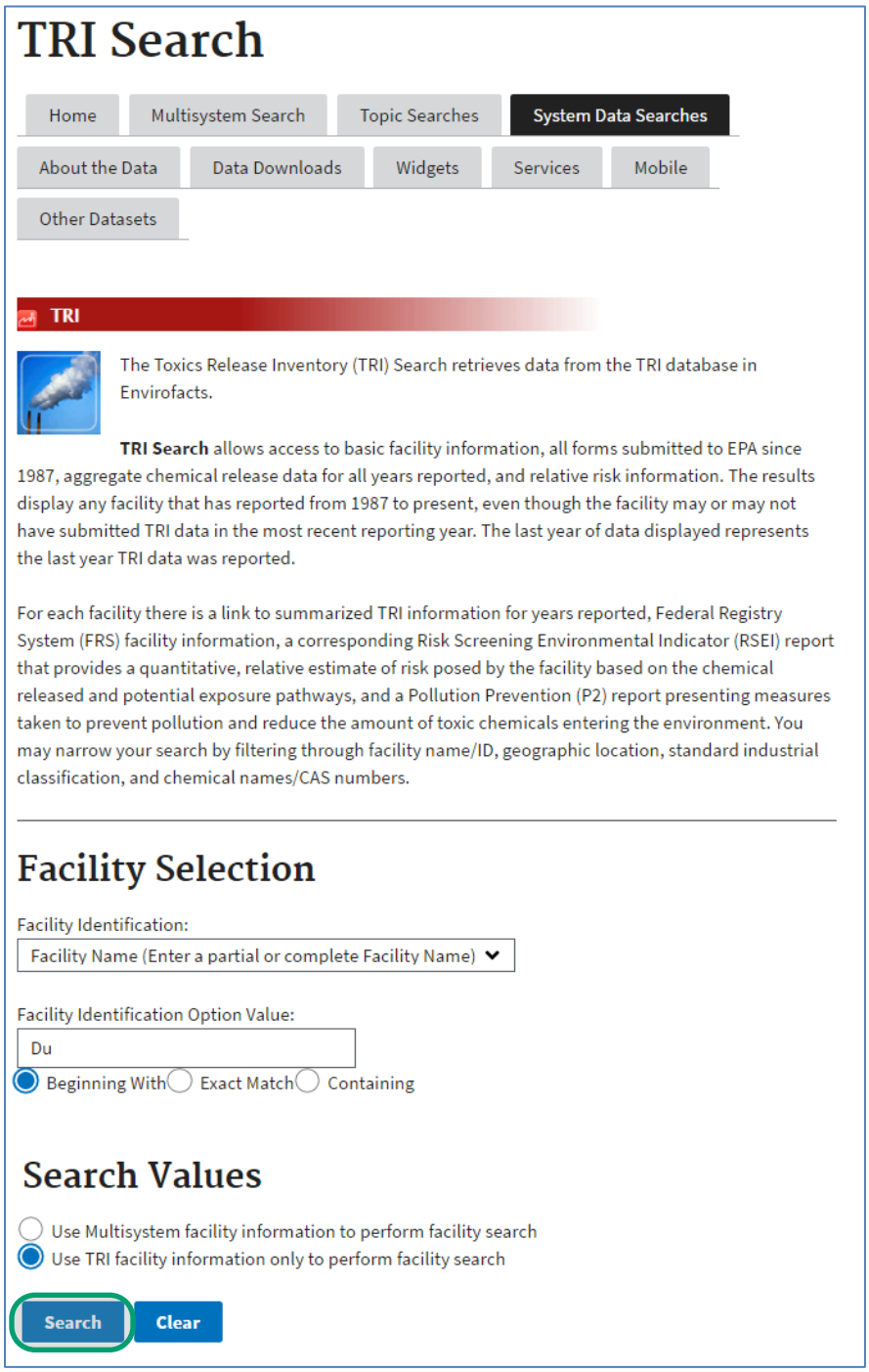
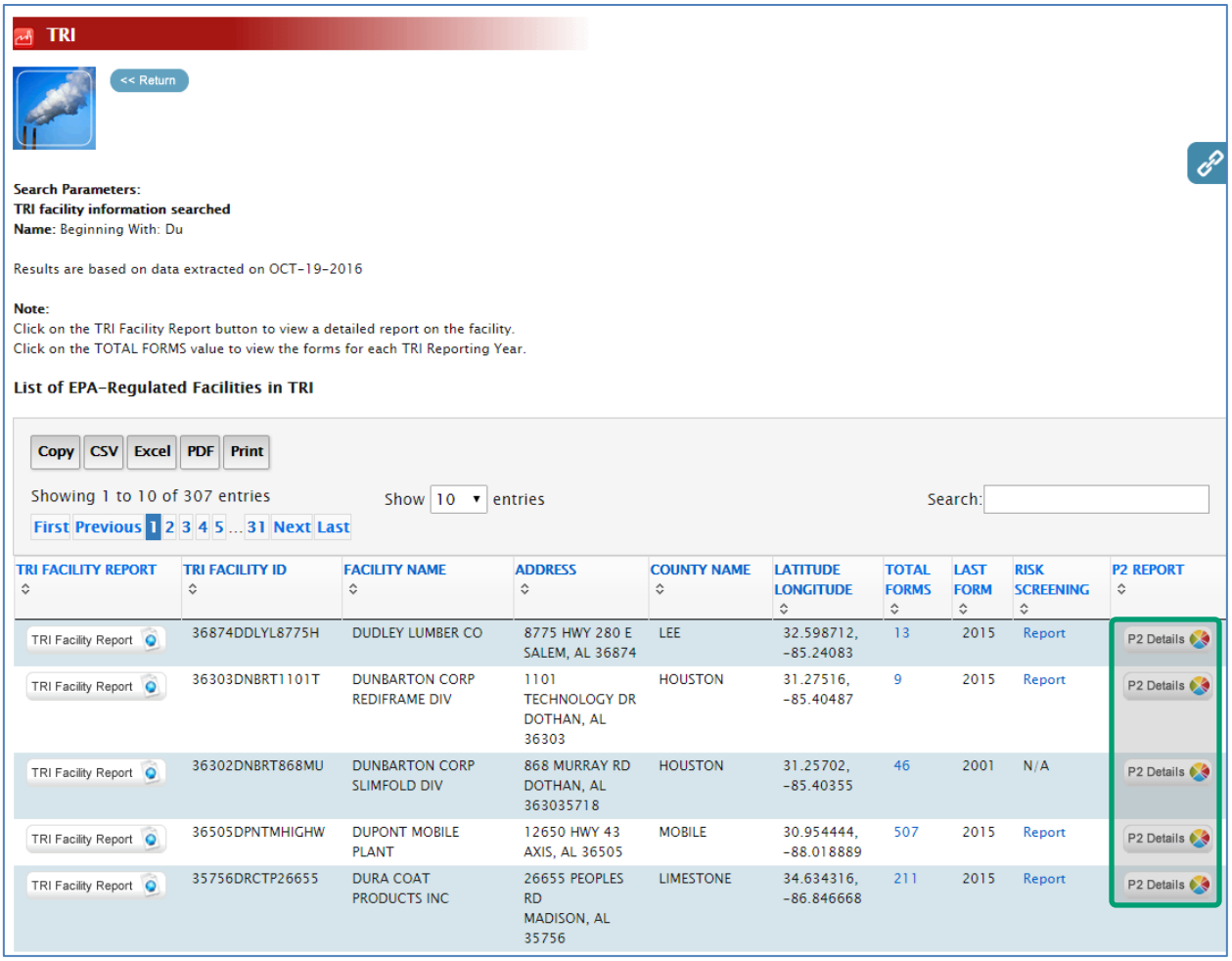
7. Find P2 Information for a Specific Facility

Searching for a specific facility by name is currently possible through the TRI Search query in Envirofacts.

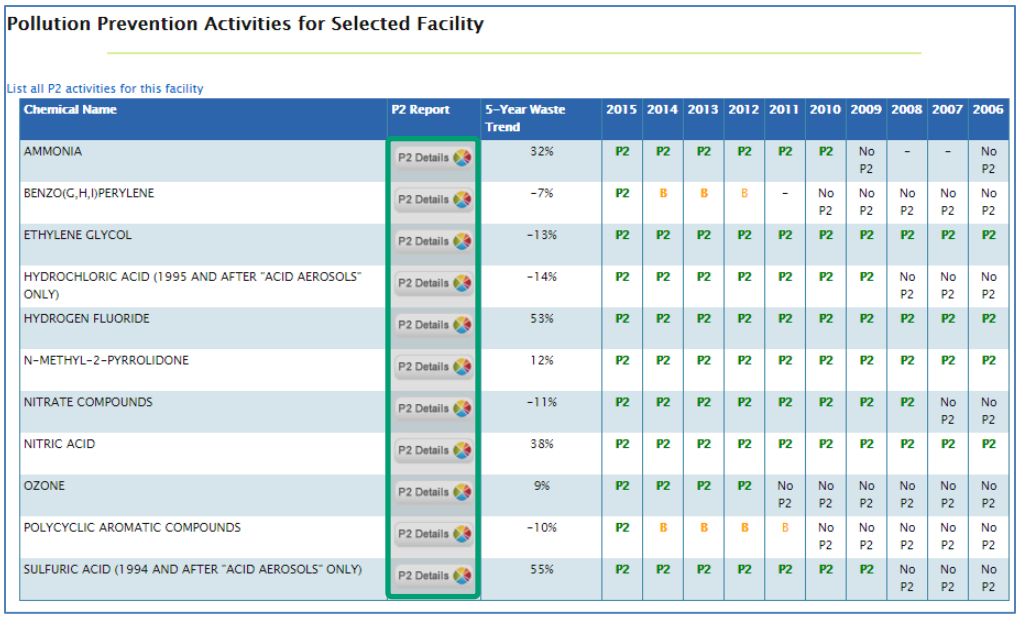
Start at the TRI Search page: www.epa.gov/enviro/tri-search. You can search by facility name or TRI Facility ID (in this example, we search for facilities starting with "Du"). Click "Search" to see a list of facilities meeting your criteria.



The Search Results page shows a list of facilities that meet your search criteria. Select “P2 Details” under P2 Report for the facility you are interested in to navigate to the facility's P2 Report in the P2 Tool.



If the selected facility reported P2 information, a summary table will display at the bottom of the facility's P2 Report showing the years in which the facility reported P2 information (TRI Section 8.10 and 8.11) for each chemical. Select "P2 Details" for the specific chemical of interest to view the detailed information.



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Additional Resources

- TRI Pollution Prevention website
  - Learn more about the types of Pollution Prevention Information collected by TRI.
- TRI P2 Resources website
  - Get access to factsheets, tutorials, articles, and reporting guidance related to P2 information collected by TRI.

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