



TR-MEweb Modernization 2016 TRI National Conference



Washington, DC
October, 2016

Agenda



- What is TRI-MEweb?
- Why Modernize?
- Background
- What's New?
- TRI-MEweb Outcomes
- Timeline

The screenshot shows the TRI-MEweb user interface. At the top, there is a navigation bar with the TRI-MEweb logo, a 'Provide Feedback' button, and a 'Log Issue/Enhancement' button. The user is logged in as 'TRIDPCTWO - CERTIFIER - tridpc2@gmail.com' with a 'Log out' link. Below the navigation bar, there are menu items: 'My TRI', 'Facility Management', 'Forms', 'Submission History', and 'Help'. On the right side, there are 'Preferences' and 'Help Chat' icons.

The main content area is divided into several sections:

- Welcome to TRI-MEweb!**: A message with instructions to use links or a dropdown menu. The dropdown shows 'I need to: select an action'.
- Your RY 2016 Snapshot**: A section with a dropdown menu set to 'All Facilities'. Below it is a donut chart showing two segments: a green segment labeled 'Certified for RY 2016' with a value of 1, and a cyan segment labeled 'In progress' with a value of 1.
- User Profile**: A section with an 'Edit' link. It displays user information: Name: Jane Doe, CDX User ID: TRIDPCTWO, Email Address: tridpc2@gmail.com, Phone: (202) 555-5555, and CDX User Role: Certifying Official.
- What is new in TRI-MEweb?**: A list of updates:
 - TRI-MEweb modernization factsheet (PDF)
 - New RY 2016 reporting requirements
 - TRI-MEweb enhancements
- Release Trends**: A section with a dropdown menu set to 'TRI DEMO FACILITY (2203WTRDMF1261F)'. Below it is a line graph showing 'Pounds' on the y-axis (0 to 1) and 'No reporting history available' in the center. A 'See More' link is at the bottom right.

On the right side of the interface, there is a 'Notifications' panel that says 'You have no notifications.'

What is TRI-MEweb?



- TRI-MEweb is the web application used by TRI facilities to report their annual TRI data
- First released in 2006 and updated over the years
 - The only way to submit TRI data to EPA since Electronic Reporting Rule (ERR) introduced in 2014
- Separates collection and management of facility and chemical data
- Leverages Services provided by EPA:
 - CDX: user authentication, LexisNexis for ESA, Copy of Record Storage, etc.
 - TRIPS: pre-population of forms, eFDP reports and data storage
 - FRS: exchanges facility info (name, lat/long), POTWs, off-site transfer sites
 - SRS: retrieves chemical names/aliases
 - Office of Water: water bodies with REACH codes

21,518 facilities reported 80,840 chemicals in RY 2015

Why Modernize?



There are three main reasons why we modernized TRI-MEweb

1.- Simplify Reporting & Reduce Reporting Burden



- Feedback From User Community provided insight on what was working and what was not working
 - Survey provided to TRI facilities reporting in May 2016
 - Industry participation in beta testing in September 2016
 - Help Desk statistics combined with Data Processing Center metrics identified additional areas for improvement

Why Modernize?



2.- Standardize Architecture & Leverage New Technologies



- Outdated framework that requires more coding than the modern framework used throughout
- CDX NGN node upgrade and new platform stack configuration for TRI-MEweb allowed for new features/technologies to be developed



3.- Operations & Maintenance

- Years of patches, enhancements, and work-arounds increased development and support burden.

Modernization background



- Kick-off meeting was held in October 2014 (nearly 2 years)
- 58 core requirements were identified from the TRI-MEweb legacy system to be transitioned into Modernized version

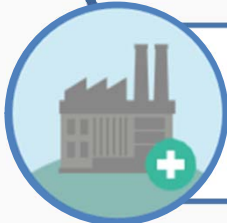
| Section name | Legacy |
|---------------------|-----------|
| Welcome | 5 |
| Account management | 4 |
| Facility management | 8 |
| Form preparation | 15 |
| Error checking | 14 |
| Certification | 12 |
| Totals | 58 |

- CDX, TRI regulatory branch and IT operation staff involved in developing additional RY 2016 enhancements
- New IT SLC tools used (JIRA, Confluence) that lead to more efficient collection of comments by EPA and an accelerated review/development process by Contractor

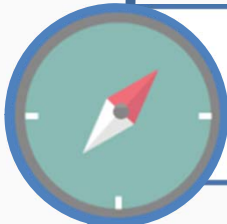
What's New?



Over 59 new features and enhancements



Improved online help



Simplified navigation, management of facility accounts, and user profile information



Enhanced error checking and simplified certification process

TRI-MEweb Enhancements & New Features



| Total Primary Requirements/Enhancements | |
|---|------------|
| Primary Requirements cross-over | 58 |
| RY 2016 Enhancements | 13 |
| Modernization enhancements | 19 |
| Added platform features | 50 |
| Total Enhancements | 140 |

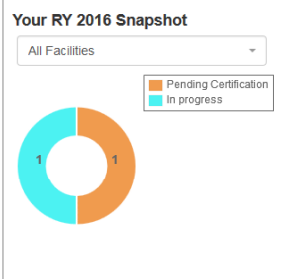
- Enhancements highlighted
 - Redesigned Welcome page
 - New mapping widget for POTW in 50 mile radius around facility
 - Enhance error navigation through entire form
 - On demand request of access keys
 - SMS text verification during certification
 - Graphical confirmation of Federal and State/Tribe submission



Welcome Screen

Welcome to TRI-MEweb!
 Use the links above to navigate through TRI-MEweb or use the dropdown below to get started:

I need to:



User Profile [Edit](#)

Name: Jane Doe
CDX User ID: TRIDPCTWO
Email Address: tridpc2@gmail.com
Phone: (202) 555-5555
CDX User Role: Certifying Official

- What is new in TRI-MEweb?**
- TRI-MEweb modernization factsheet (PDF)
 - New RY 2016 reporting requirements
 - TRI-MEweb enhancements

Notifications

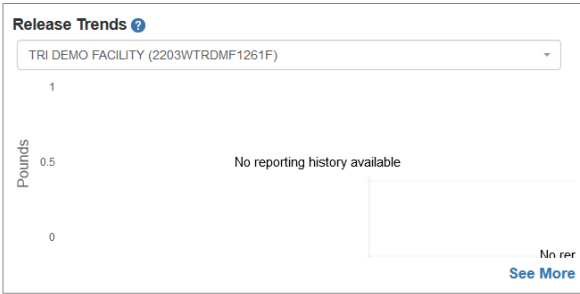
TRIFID Signature Agreements ✕

The following TRIFID signature agreements are unsigned. Click a TRIFID below to sign your agreement for that facility or [click here](#) to sign all agreements at once:

- 2203WTRDMF1261F

You cannot certify forms for these facilities until you have signed your TRIFID signature agreement.

← Returning Users



Welcome to TRI-MEweb

Before you start preparing your TRI forms, you need to add a facility to your account. TRI-MEweb will guide you through the process of adding a facility to your account and starting your forms. Click **Add a facility** to get started.

[Add a facility](#)

Do I need to Report?

The TRI threshold screening tool allows you to determine if your facility is required to report. This tool is external to TRI-MEweb.

[Threshold Screening Tool](#)

TRI-MEweb Tutorials

Review the TRI-MEweb tutorials before getting started to learn how to prepare forms. These tutorials will guide you through the reporting process.

[TRI-MEweb Tutorials](#)

User Profile [Edit](#)

Name: Jane Doe
CDX User ID: TRIDPCTWO
Email Address: tridpc2@gmail.com
Phone: (202) 555-5555
CDX User Role: Certifying Official

Need Help?

Contact the CDX Help Desk: **Phone:** (888) 800-1995 **International Callers:** (970) 494-5500 **E-mail:** helpdesk@epacdx.net

[Help Chat](#)

Notifications

Add a Facility ✕

You need to add a facility to your account before starting your TRI forms.

New Users →

POTW



POTW
Form R, Part II, Section 6.1 [Need Help?](#)

RY 201
2203WTRDMF1261
Chlorin

POTW / POTW Widget

Add POTWs

POTW Search Results (126 POTWs found)

List View | [Map View](#)

Refine your search criteria by clicking [Change](#).

Select the checkbox next to one or more POTWs and click **Proceed with Selections** to continue. The **Proceed with Selections** button is not displayed until at least one POTW has been selected.

Search Criteria: 12601 FAIR LAKES CIR, FAIRFAX, VA 22033

[Change](#)

Filter:

[Export Options](#)

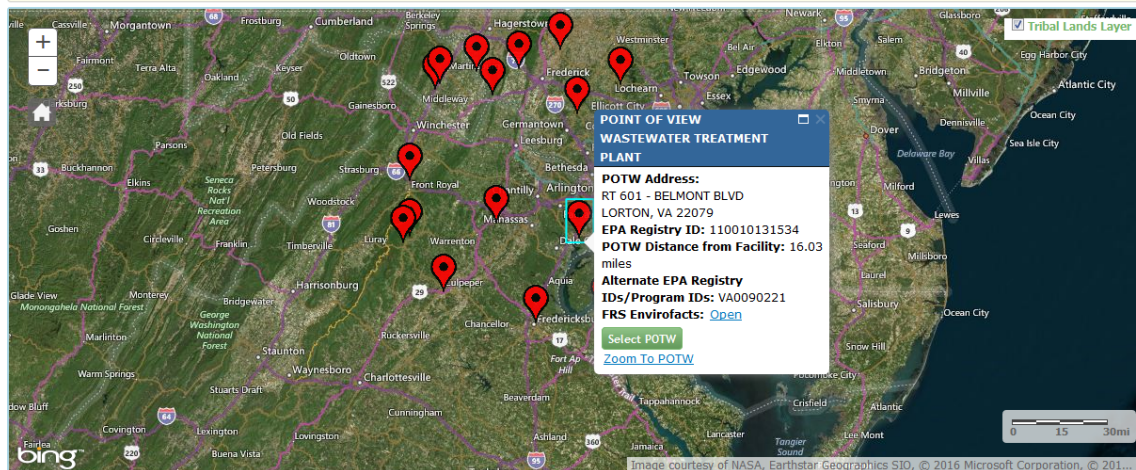
| <input type="checkbox"/> | EPA Registry ID | POTW Name | POTW Address |
|--------------------------|-----------------|-------------------------------------|--|
| <input type="checkbox"/> | 110028103317 | ADAMSTOWN WWTP | FREDERICK C FREDERICK, M FREDERICK 6 |
| <input type="checkbox"/> | 110000571774 | ADVANCED WASTEWATER TREATMENT PLANT | 731 FROST A WARRENTON FAUQUIER 9 |
| <input type="checkbox"/> | 110009767350 | ALDIE WASTEWATER TREATMENT PLANT | 39506 JOHN ALDIE, VA 20 |

POTW
Form R, Part II, Section 6.1 [Need Help?](#)

RY 2016
2203WTRDMF1261F
Chlorine

Search Criteria: 12601 FAIR LAKES CIR, FAIRFAX, VA 22033

[Change](#)



50 mile radius →

Submission Preparation



TRI-ME WEB | Provide Feedback | Log Issue/Enhancement | DPCTWO - CERTIFIER - triopc2@gmail.com (Log out)

My TRI | Facility Management | Forms | Submission History | Help | Preferences | Help Chat

Part 1 | 3/4: Activities and Uses/Max On-Site | 5: On-Site Releases | 6: Off-Site Transfers | 7: On-Site Recycling | 8: Waste Management | 9: Misc. Information

Facility Information Part 1

RY 2016
2203WTRDMF1261F
1,2,4-Trichlorobenze...

| 4.1 - 4.5 Facility Name and Address Need Help? | | | |
|--|--|--------------------------------------|--------------------------|
| TRIFID 2203WTRDMF1261F | Facility Address 12601 FAIR LAKES CIR FAIRFAX, VA 22033 Fairfax | BIA Code ---- | Facility Type Neither |
| Facility Name TRI DEMO FACILITY | Mailing Address Same as physical address | NAICS Code(s) 327910 (Primary) | |

5. Parent Company Name Information [Need Help?](#)

No U.S. Parent Company (for TRI reporting purposes)

4.6 Facility Dun & Bradstreet Number(s) [Need Help?](#)

Dun & Bradstreet Numbers Not Applicable

[Optional: Use this comment box to explain why your facility does not have a Dun and Bradstreet number]

Prev (Form Home) | Save | Next (Contact Information) | Check for Errors

Your Form

1,2,4-Trichlorobenzene (2016)

View Form

Form Status

| Critical Errors | Possible Errors | DQAs |
|-----------------|-----------------|------|
| 24 | 0 | 1 |

Show Error List

Enter Error Navigation Mode

Error List

Chemical: 1,2,4-Trichlorobenzene (000120821)
TRIFID: 2203WTRDMF1261F
Facility: TRI DEMO FACILITY
Reporting Year: 2016
Form Status: Available for Editing

| Critical | Possible | Data Quality Alert |
|----------|----------|--------------------|
| 24 | 0 | 1 |

| Action | Message | Comment |
|--------|---|--|
| Fix | You have not properly completed your public contact information. You must provide a name and phone number. Optionally, you may provide an e-mail address. | Please provide an optional comment here. |
| Fix | You have not properly completed your technical contact information. You must provide a name and phone number. Optionally, you may provide an e-mail address. | Please provide an optional comment here. |
| Fix | The Maximum Amount of the Toxic Chemical Onsite cannot be blank. Please enter the maximum amount of the toxic chemical onsite at any time during the calendar year using the appropriate code from the list provided. | |
| Fix | Activity and uses of the toxic chemical cannot be blank. You must check all options that apply. If you select the "Yes" option for Manufacture (3.1), Process (3.2), or Otherwise Use (3.3), you must also check one of the appropriate checkboxes. If you have selected "Process" or "Otherwise Use" as a manufacture... | |

Data Quality Alerts

Error checker →



Email Access Key

My TRI | Facility Management | Forms | Submission History | Help | Preferences | Help Chat

Add Facility

Add Facility / Existing Facility

Step 1: Enter TRIFID

Enter the TRI facility ID (TRIFID) of the facility you wish to access and click **Check TRIFID**. If you do not know your facility's TRIFID, click the **I don't know this information** button so you can search for your facility by its address.

TRIFID: 2203WTRDMF1261F

Step 2: Enter Access Information

Enter your facility's access key or technical contact information from a prior year's form. After you have enter your access k click **Authenticate**. If you do not know this information you may request the access to be email to you by clicking on the **Er** may click **Authenticate at a later time** to add the facility to your account with limited access.

TRIFID: 2203WTRDMF1261F
Name: TRI DEMO FACILITY
Address: 12601 FAIR LAKES CIR, FAIRFAX, VA 22033

Enter Access Key

Access Key: [Email me the access key](#)

--OR--

Enter Technical Co

Technical Contact Name:

Technical Contact Phone Numbe

Requested Access Key

Inbox x



no-reply@epacdx.net

to me

1:54 PM (38 minutes ago)



Thu Sep 29 13:54:22 EDT 2016

Jane Doe

Below is the requested access key:
TRIFID: 2203WTRDMF1261F
Access Key: T9FFBF13

If you would like to add this facility to your account, head to the [Add Facility](#) page.

If you have any questions, please contact the CDX Help desk using the information below:

Phone (toll-free): [+1 \(888\) 890-1995](tel:+18888901995).

Phone (toll): (970) 494-5500.

Email: helpdesk@epacdx.net

The CDX Help Desk is available Monday through Friday, 8:00 AM to 6:00 PM Eastern Time.

Access Key via email

SMS Verification



TRI-ME web Provide Feedback Log Issue/Enhancement

My TRI Facility Management Forms Submission History Help

TRIFID Signature Agreement

TRIFID Signature Agreement

Toxics Release Inventory (TRI)
TRIFID Signature Agreement

eSignature Widget

1. Log in to CDX
User: TRIDPCTWO
Password: [masked]
Welcome Jane Doe

2. Verification
 Answer Secret Question
 Send Text Message
Text message will be sent to: (***) ***-0952
Message and data rates may apply.
Send

Enter PIN below:
644530
Verify

Date Signed
Name
CDX User ID
Email Address
TRIFID

Jane Doe

(1) Certify that I am the responsible party for the establishments responsible for the TRIFIDs listed on this document.

(2) Understand and agree to the terms and conditions of the TRIFID Signature Agreement.

(3) Certify, under penalty of law that the information provided in this document is, to the best of my knowledge and belief, true, accurate, and complete. I understand that providing false information may result in penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

AT&T LTE 11:49 AM 42%
+1 (202) 750-9290
Text Message Today 11:48 AM
US EPA CDX: Your Electronic Signature Secret PIN code is: [644530](#)
If you have not asked to sign/certify a document, please contact the CDX Help Desk at [1-888-890-1995](tel:1-888-890-1995) or helpdesk@epacdx.net.
10/04/2016 11:48 AM EDT
_8033c84e-feaf-4b6f-af09-6645c5127e83

Submission Confirmation



My TRI Facility Management **Forms** Submission History Help

Preferences Help Chat

Submission Confirmation

Federal Submission

Your form(s) are being sent to EPA.



Form(s) certified and sent to EPA on September 29, 2016 2:20 PM EDT. You will receive a confirmation email shortly.

TDX State Submission

Since some or all of your states participate in the EPA's TRI data exchange program, the following forms are being sent to EPA and your state.



| State or Tribe | TRIFID | Facility Name | Facility Address | Chemical | CAS # | Form Type | Revision / Withdrawal | View Form(s) |
|----------------|-----------------|-------------------|---|----------|-----------|-----------|-----------------------|---------------------------|
| Virginia | 2203WTRDMF1261F | TRI DEMO FACILITY | 12601 FAIR LAKES CIR, FAIRFAX, VA 22033 | Chlorine | 007782505 | R | N/A | View Form |

Form(s) certified and sent to state(s) on September 29, 2016 2:20 PM EDT. You will receive a confirmation email shortly.

[I want to certify more forms](#)

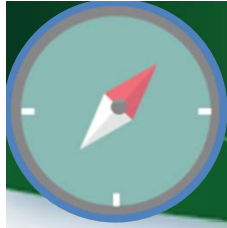
[Take me to my submission history](#)



Improved Online Help



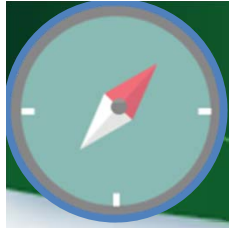
- Search on regulatory topics, TRI chemicals, or specific form sections from a centralized tool
- View context sensitive tips via instructional language, hover text, and icons
- Use short tutorial segments to learn how to complete certain tasks in TRI-MEweb
- Launch a live chat from anywhere in the software
- Access contact information for the CDX Help Desk and TRI Information Center



Simplified Navigation



- Navigate fewer pages to add facility, prepare and certify forms
- New My TRI pages for new users and returning users
- Quick actions dropdown to jump into specific pages of the application
- RY Snapshot displays summary of form statuses for current reporting year
- Important notifications for pending tasks on Welcome page
- Dynamic navigation bar that shows error status
- Email links to go directly to your form



Simplified Profile/Facility Management



- Update user profile information (i.e., registered email in CDX)
- Link a facility to a TRI-MEweb account by answering simple questions
- Verify TRI facilities in 50 mile radius for new reporters
- Manage multi-establishments more easily
- Request a facility access key directly from TRI-MEweb rather than through the CDX Help Desk
- View chemical release trends for each facility
- Preferences to personalize your experience



Streamlined Error Checking & Submission



- View relevant errors while preparing form sections
- Validate facility and form data in a single step
- Facility critical errors are now included in Error Navigation Mode
- Certifiers can return individual forms pending their certification to preparer with notes
- Use SMS verification during certification instead of answering one of the 5 questions they provided
- New Submission Confirmation page displays graphically forms being sent to EPA and States/Tribes

Modernization outcomes



- Reduced operations and maintenance of source code

| | Legacy TRI-MEweb | Modernized TRI-MEweb | Difference |
|----------------------|------------------|----------------------|-------------|
| Lines of Code | 197,891 | 76,194 | ↓ 121,697 |
| Number of Files | 1,121 | 716 | ↓ 405 |
| Deployment File Size | 83,749 MB | 61,850 MB | ↓ 21,899 MB |

- Reduced call center operations costs (40% of calls)
 - Access key requests to CDX call center
 - SMS Text verification for certification
- Increased data quality
 - Mapping of POTWs, FRS Widget, improved error checking



Modernization outcomes

- Less time required for industry to electronically report to TRI
 - Reduced number of pages

| Page Counts Reductions | | | |
|----------------------------|------------|-----------|----------------------------------|
| Section | Current | Future | Comment |
| Welcome | 16 | 2 | User Guide absorbed 11 pages |
| Facility Management | 16 | 4 | CDX/FRS Widget replaces 10 pages |
| Form Preparation | 129 | 70 | Simplified flow replaces 35 JSPs |
| Form Validation | 16 | 3 | UI simplification |
| Submission / Certification | 16 | 5 | Consolidate workflow |
| Total | 193 | 84 | 56% reduction |

What makes outcomes possible?



- Built on Java 1.8 - latest common libraries and security.
- Tomcat 8 application server allows for the best performance and latest security.
- Common frameworks such as Spring and Hibernate help provide common libraries for integrating the application with the latest security and database access.
- Common modules to implement rules and auditing provides for common code sharing throughout the application.
- More client-side scripting allows for better performance, cleaner user interface and better user experience
- Leveraging more CDX services

Timeline



- User Acceptance Testing in November 2016
- Load Testing- November 12, 2016
- Public release January 9, 2017



Invitation to TRI-MEweb Demonstration Exhibit booth



Thank you
Questions?

Juan Parra

Parra.juan@epa.gov

202 566-0499