# e-Manifest

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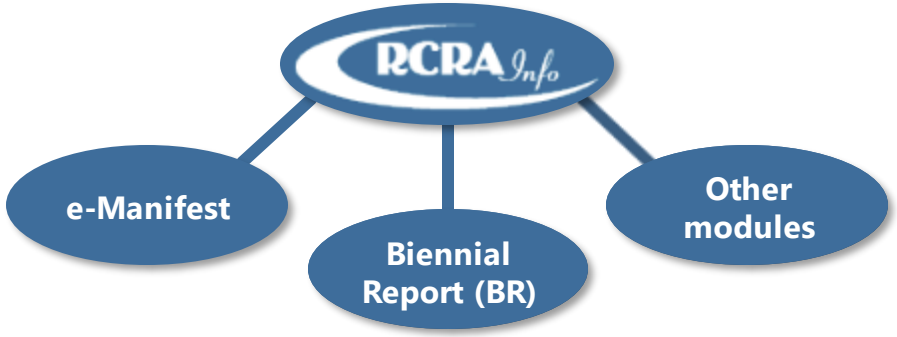
# e-Manifest 101

# e-Manifest 101

- **e-Manifest is…**
  1. A modernized, electronic, national system for tracking hazardous waste shipments
  2. A one-stop hub for the reporting and recordkeeping of the uniform hazardous waste manifest data (and more)
  3. A module in EPA's RCRAInfo web application (https://rcrainfo.epa.gov)

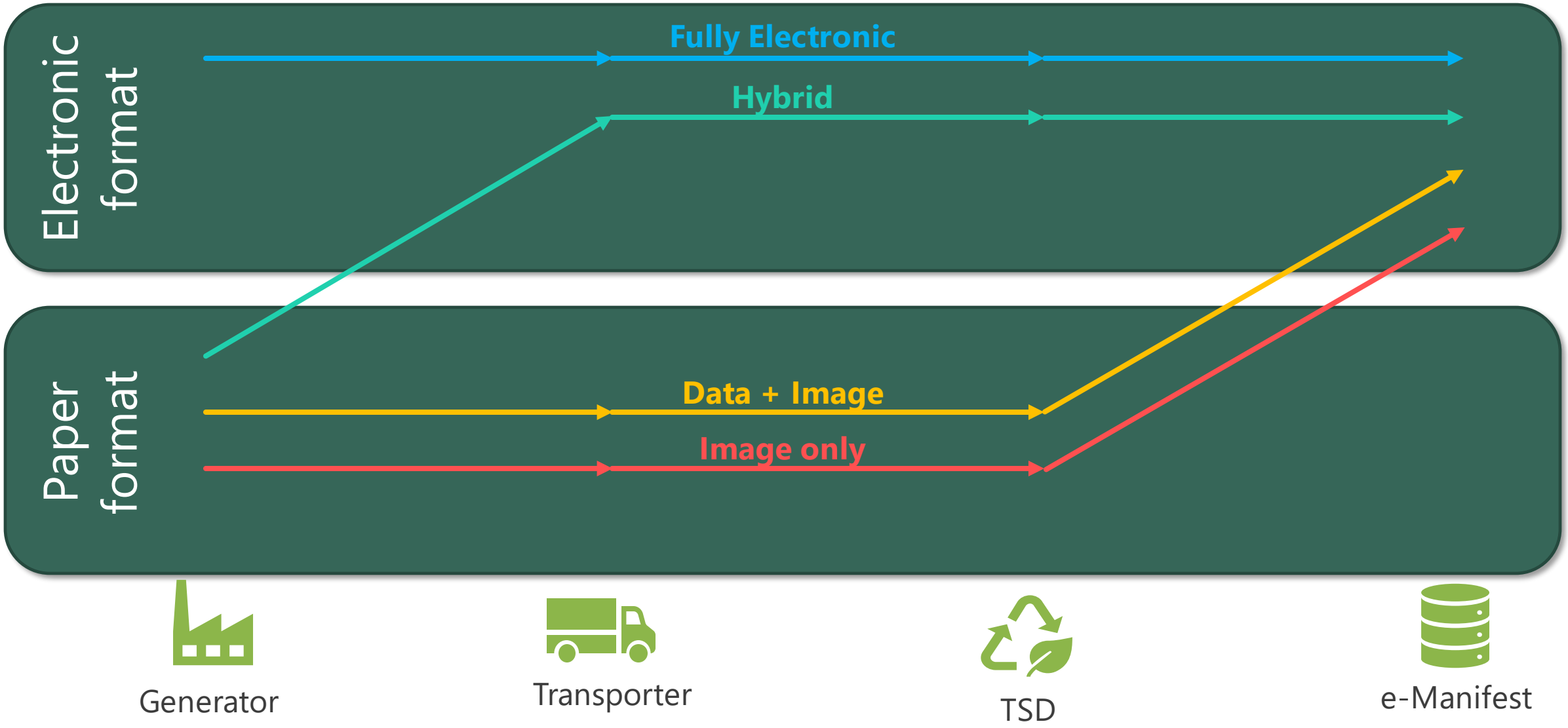
- All manifests **(including paper!)** that accompany HW shipments that are required by federal or state regulations to be manifested must be submitted to the e-Manifest system



# Benefits for Industry

- Regulatory recordkeeping requirements
  - e-Manifest captures all manifests, not just electronic manifests
- Easy electronic corrections process
- Electronic manifests can be signed from your smartphone/tablet OR by remote users (see Remote Signer section)
- e-Manifest also has a *Hybrid* option for instances where the generator is not registered in RCRAInfo
- Stable API for integration with pre-existing industry systems
  - Potential Biennial Reporting (BR) integration in the future
- **And more!**

# e-Manifest 101 - Signature location



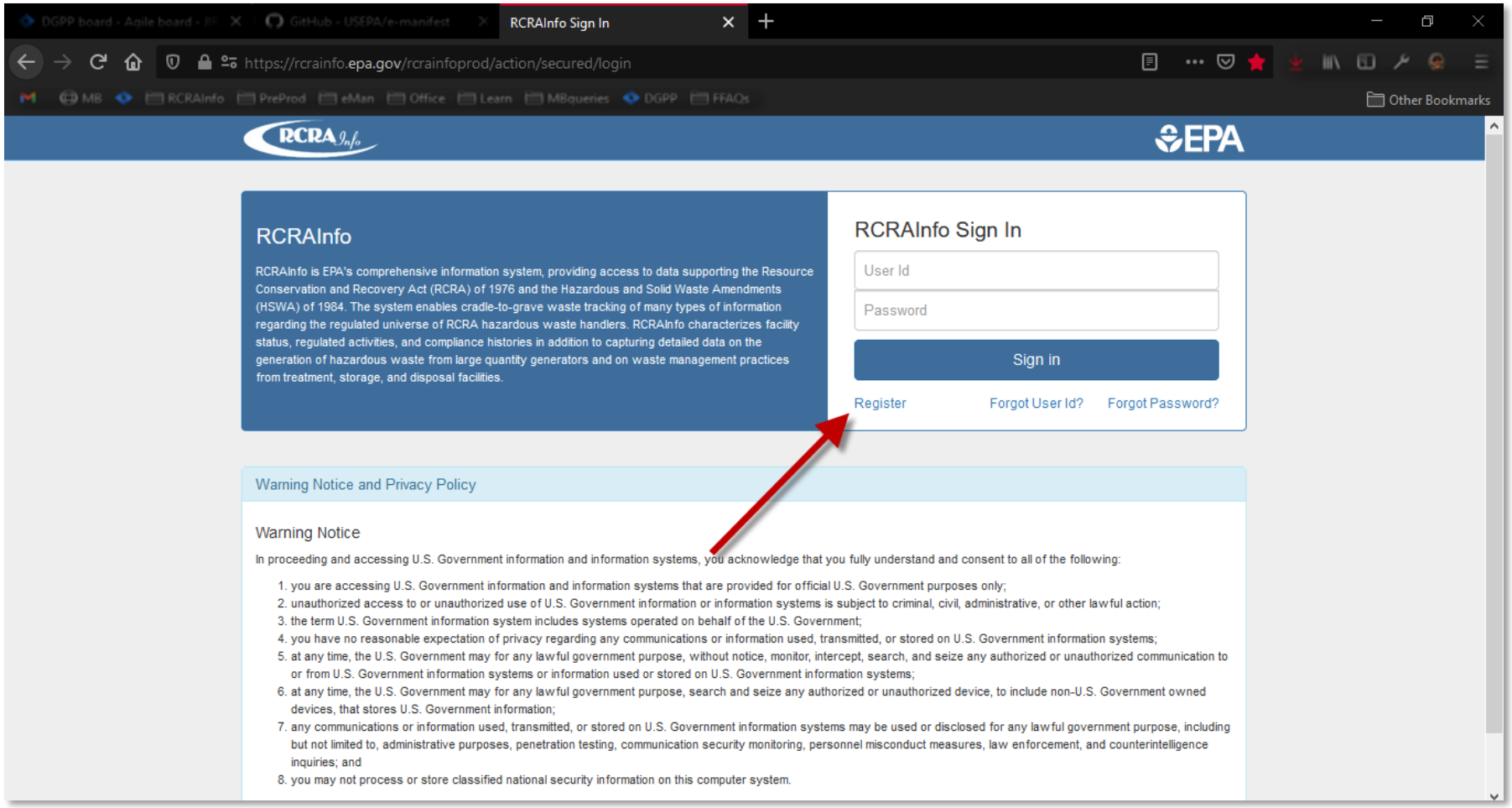
# e-Manifest Jumpstart

Getting set up for regulatory recordkeeping and electronic manifesting

# Step 1: Register

- For the remainder of the slides, we will assume you have you have an EPA ID
  - If not please complete form 8700-12, which can be found at the below link
    - https://www.epa.gov/hwgenerators/instructions-and-form-hazardous-waste-generators-transporters-and-treatment-storage-and
  - You may be able to apply for an ID electronically in RCRAInfo with myRCRAid, depending on your state.
    - https://www.epa.gov/e-manifest/frequent-questions-about-e-manifest#user_question18

**Step 1: Register** → Step 2: Request Access → Step 3: Quick Sign



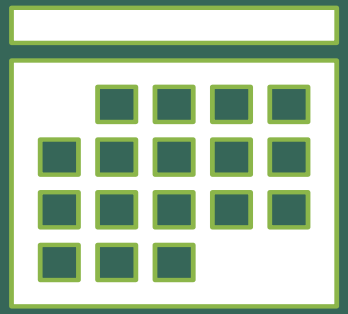

Visit RCRAInfo https://rcrainfo.epa.gov

**Step 1: Register** → Step 2: Request Access → Step 3: Quick Sign

1 Visit RCRAInfo
https://rcrainfo.epa.gov

2 Register as an Industry User

3 Create a 90-day reminder to reset your password



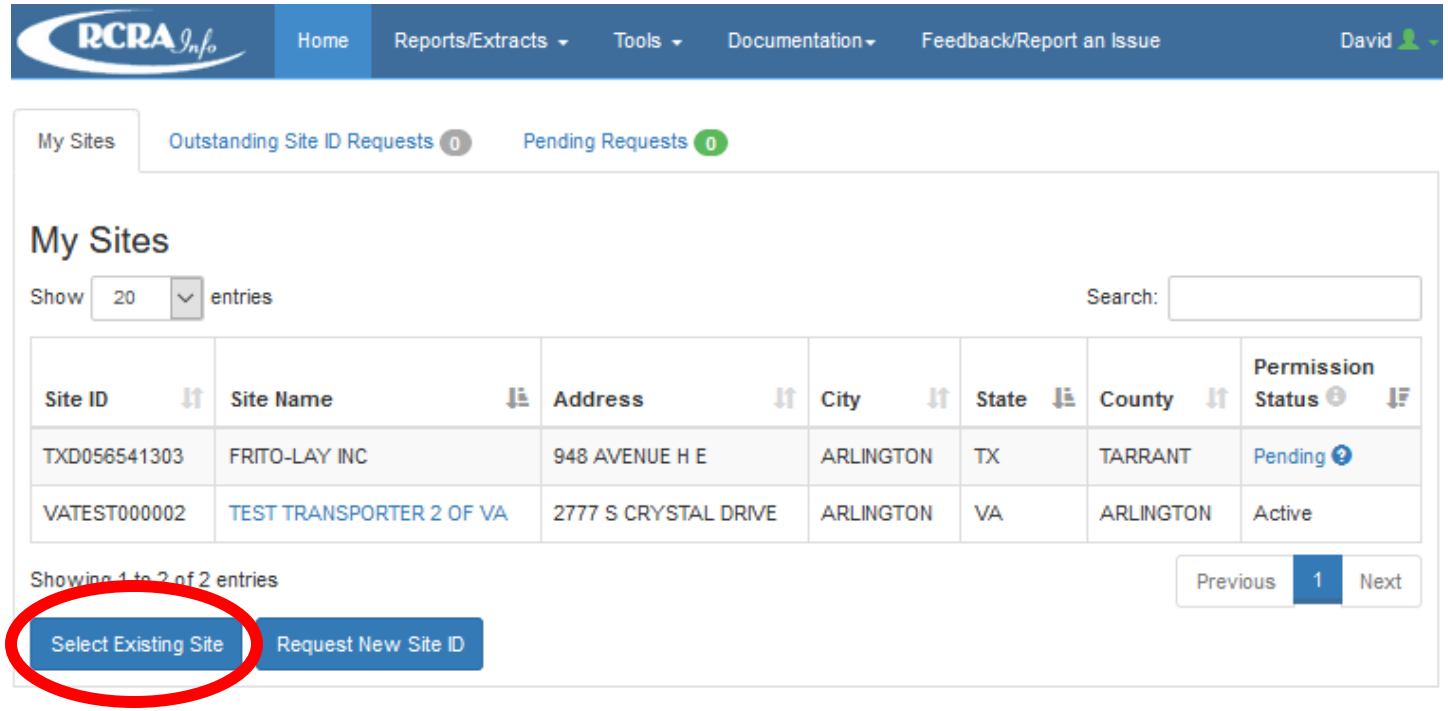
# Step 2: Request Access

- You've successfully registered for a user account, now it's time to request access to your site
  - EPA and authorized states will administer site access request for an EPA ID until that site has a Site Manager
    - The Site Manager can then approve or deny additional users for that EPA ID

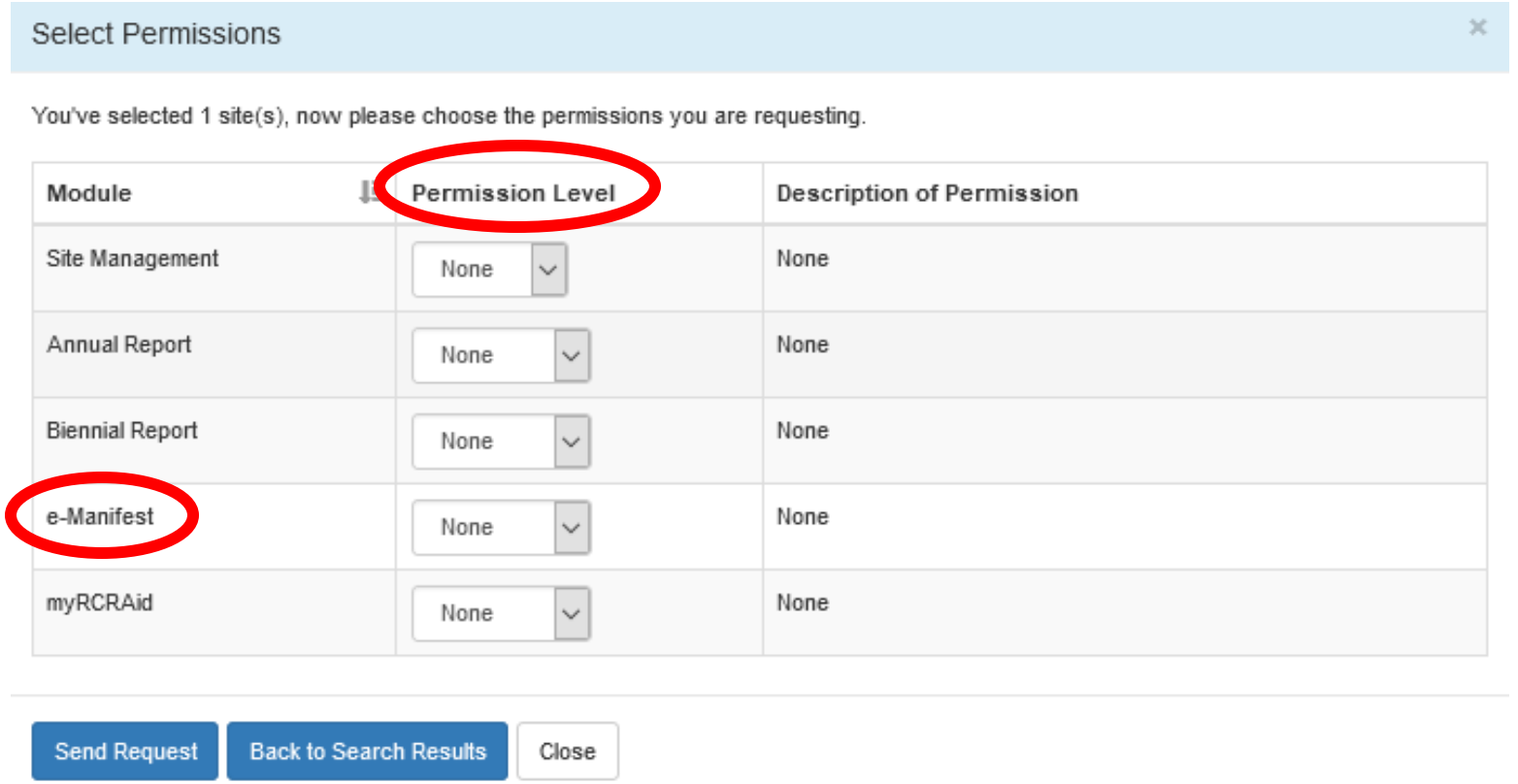
Slideshow Nomenclature

**Site = Site ID = EPA ID**

- **Select Existing Site**
  - For sites that already have an EPA ID
- **Request New Site ID**
  - If you do not have a site ID and operate in a state that has opted into myRCRAid, you can acquire EPA IDs electronically



Step 1: Register → **Step 2: Request Access** → Step 3: Quick Sign




- There's different levels of site access for each module, which do you choose?
  - https://www.epa.gov/e-manifest/frequent-questions-about-e-manifest#user_question6

Step 1: Register → **Step 2: Request Access** → Step 3: Quick Sign

- Different levels of site access

**Site Manager**

- Approve users, view invoices & submit payments, hold an API key/ID
- Submit completed manifests and corrections
- Create, edit and sign manifests
- View manifests

**Certifier**

- Submit completed manifests and corrections
- Create, edit and sign manifests
- View manifests

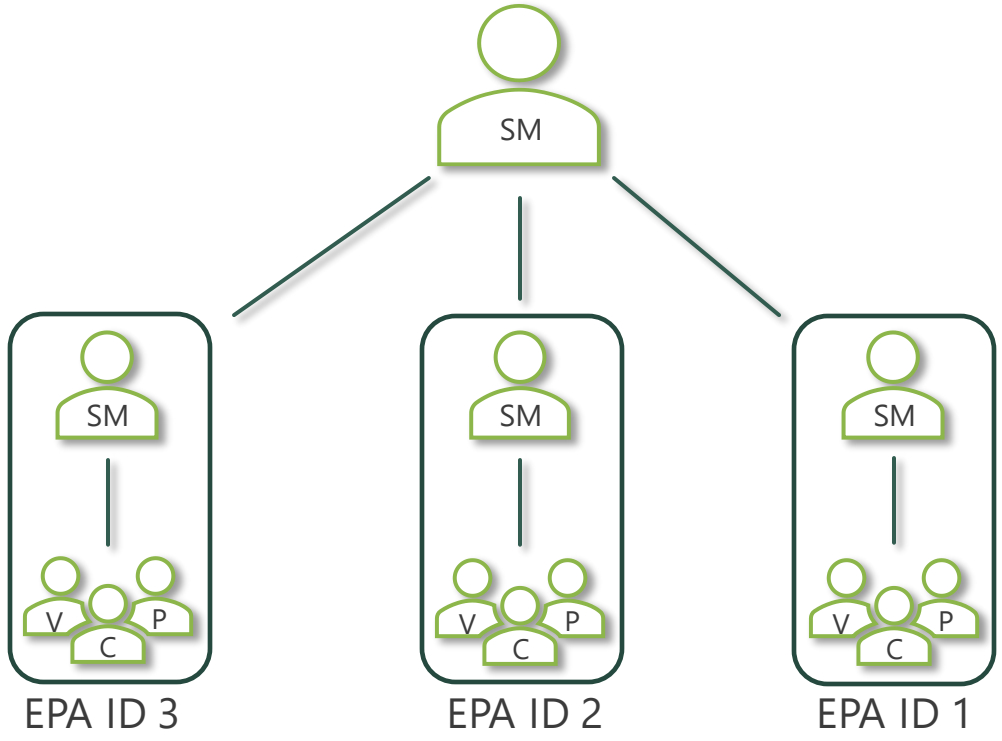
**Preparer**

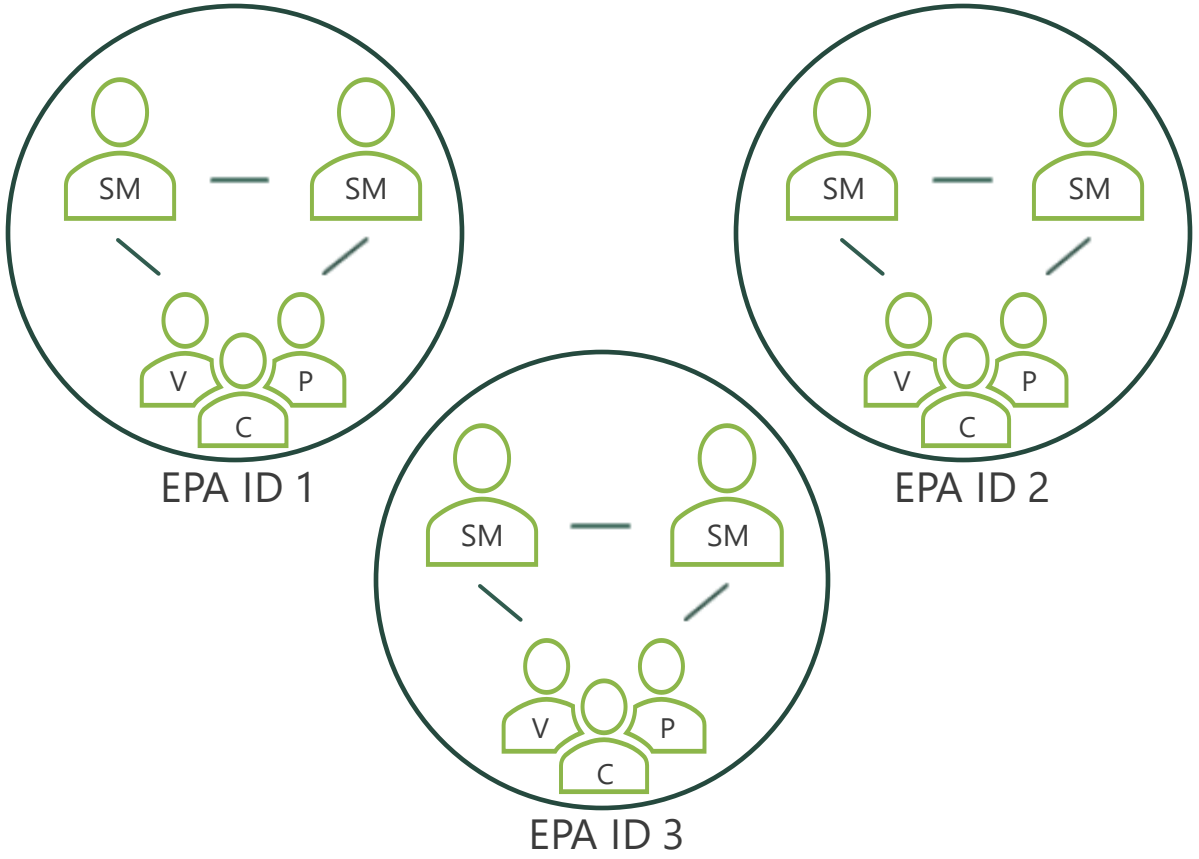
- Create, edit and sign manifests (Quick/Quicker (Remote) Sign only)
- View manifests

**viewer**

- View manifests

- Multiple ways to organize permissions for companies that have multiple sites
  - Ideally, we want redundant Site Managers for each site ID



# You're Registered!

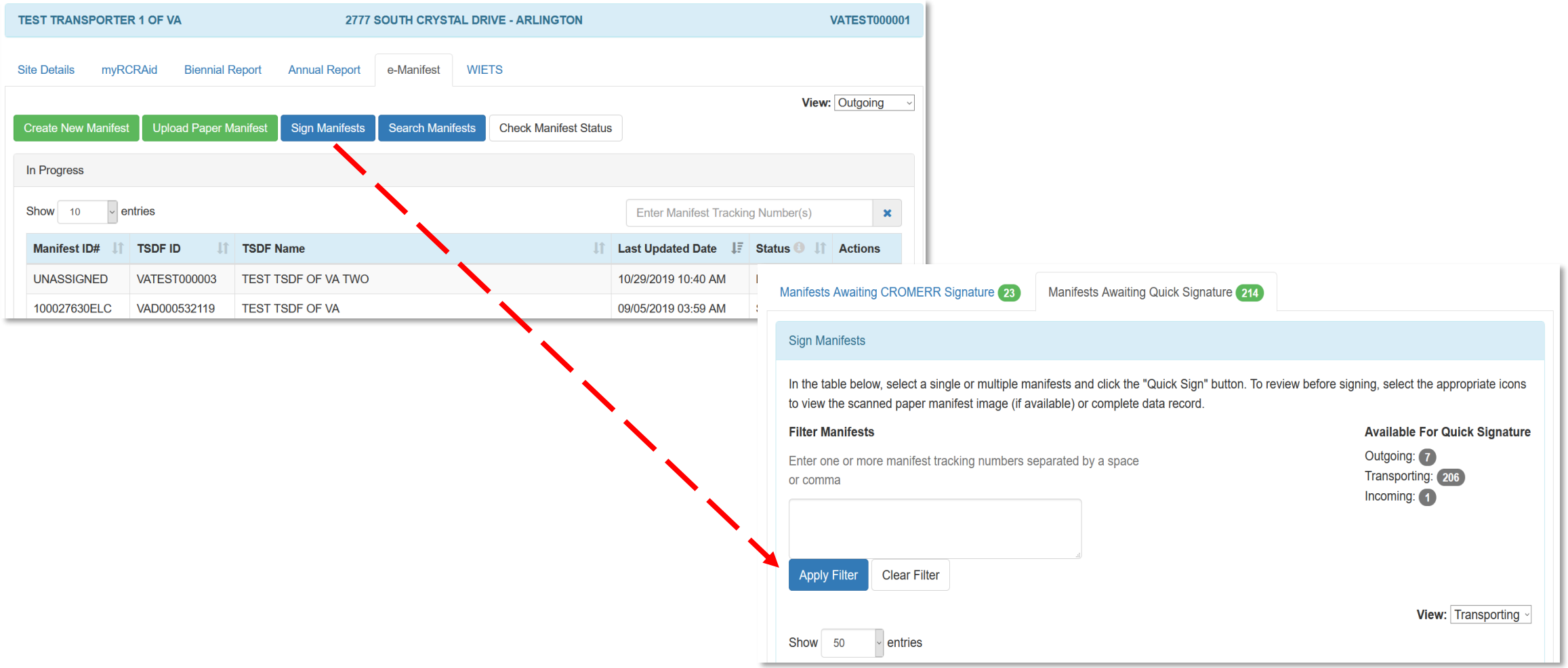
- Here a short list of things you can do to get jumpstarted:
  - Complete your Electronic Signature agreement (ESA)
    - Required for users with Certifier and Site Manager permission (only need to complete once)
    - This will let you submit corrections if you find manifest data that does not match up with what you expect (see below)
  - Add coworkers
    - As site manager you can approve/remove other RCRAInfo users for your site, even other site managers
    - Adding another site manager ensures that if you're on vacation or leave the company, there's another person there who can approve new people
  - Get familiar with RCRAInfo
    - Checkout Learning Zen (under the Documentation dropdown menu) for some quick training
  - Verify your site's data
    - Checkout out the e-Manifest tab to inspect manifests that have been uploaded by your TSDF(s) with your site's ID
      - **Verify your site's data and make sure that there are not any serious data quality issues such as another company using your ID, missing manifests that were not uploaded, incorrect waste line info. If you can think of it, we've seen data qualities with it.**
        - As a site manager (or someone with Certifier level permission in the e-Manifest module) you can submit corrections
      - If everything looks good, you can use RCRAInfo as your site's method of official recordkeeping for manifests to meet regulatory requirements
    - Check out Reports/Extracts to pull your site data in easily readable formats (pdf/csv).
  - Currently, your password needs to be reset every 90 days
    - Set a reoccurring reminder in your work calendar to reset your password if you don't get on frequently
  - If you think of some way we could improve RCRAInfo, a feature idea, you see a bug, or you have an issue of any kind, submit a ticket with the **Feedback/Report and Issue**; We love feedback!

# Step 3: Quick Sign

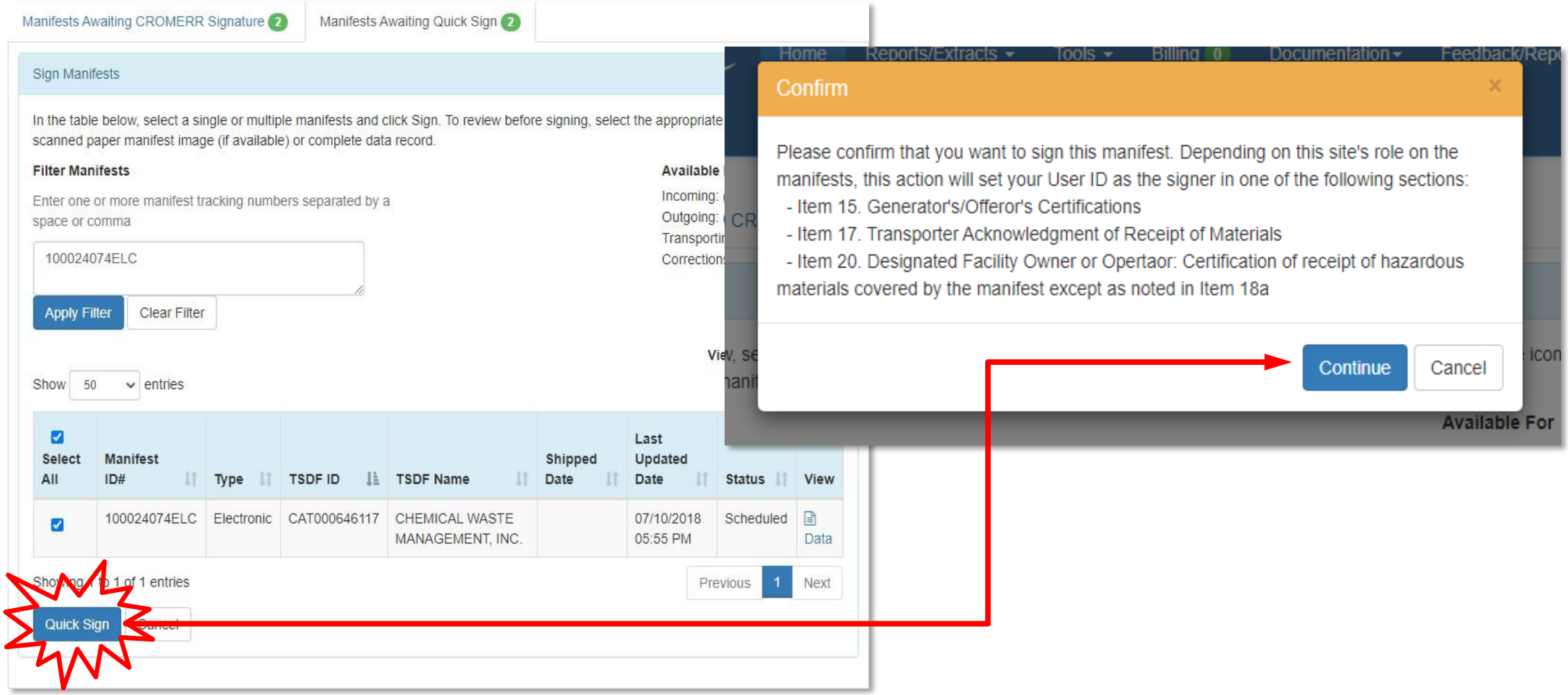
- You've registered for an account, you've got access to your Site ID, someone wants you to sign an electronic manifest
  - You have 2 options for electronically signing
    - Quick/Quicker (Remote) Signatures: fewer clicks, sufficient for Generators, Transporters, and initial TSDF signatures; Preparer level can use
    - CROMERR-compliant signatures: required when submitting the final, completed manifest/corrections
- We'll focus on Quick Sign today

| CROMERR Process | Quick/Quicker (Remote) Sign Process |
|---|---|
| **Registration Steps** | **Registration Steps** |
| 1. User creates account | 1. User creates account |
| 2. User requests access to site as Certifier or Site Manager | 2. Users requests access to site as a Preparer |
| 3. User performs identity validation | **Quick Signature Steps** |
| 4. User creates challenge questions for signatures | 1. User clicks "Quick Sign" |
| **Signature Steps** | **Quicker (Remote) Signature Steps** |
| 1. User clicks "Sign" | 1. User enters field personnel name and date |
| 2. User must re-enter password | 2. User clicks "Quick Sign" |
| 3. User answers challenge questions | |
| 4. User clicks "Sign" | |

- You're all set up! It's time to electronically sign manifests



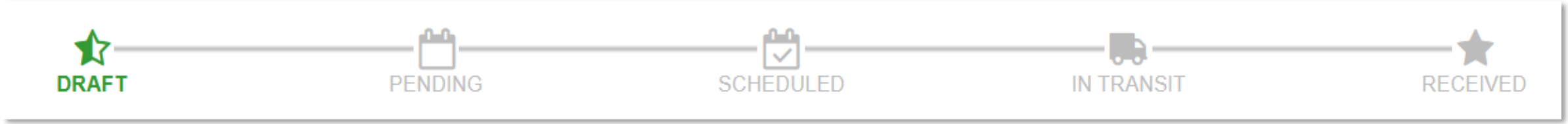
- You're all set up! It's time to electronically sign manifests



# Electronic Workflow

A Theoretical Introduction to the e-Manifest Workflow

# Status 1: Draft




## Description

A working draft of a potential manifest without a Manifest Tracking Number (MTN)

## Who can view

Only the site that drafted can view

## Who can Edit

Site that drafted

- Preparers
- Certifiers
- Site Managers

## Who Can Sign

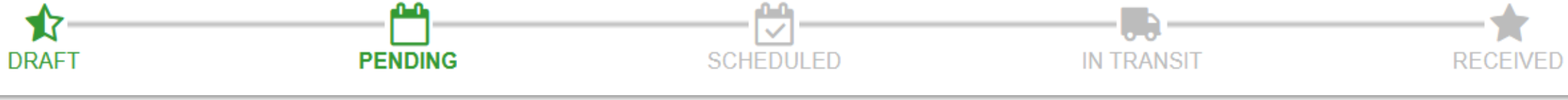
Not applicable

- Needs to be moved to pending or scheduled by entity that drafted

## Notes

Any type of handler can initiate a draft electronic manifest

# Status 2: Pending




## Description

A manifest with an MTN (ELC suffix) waiting for approval to be set to the *Scheduled* status by the TSDF

## Who can view

All handlers that are listed on the manifest can view

## Who can Edit

All handlers that are listed on the manifest

- Preparers
- Certifiers
- Site Managers

## Who Can Sign

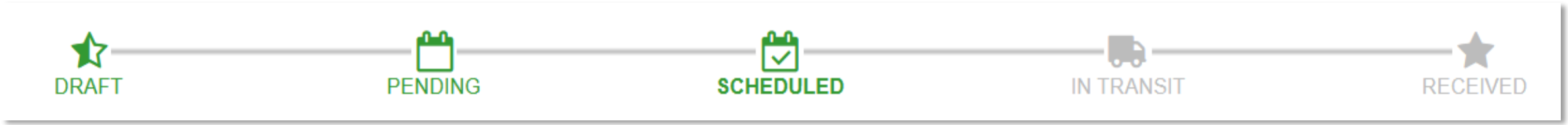
Not applicable

- Needs to be moved to Scheduled by the receiving facility

## Notes

Only the TSDF can move *Pending* manifests to the *Scheduled* status

# Status 3: Scheduled




## Description

Hazardous waste shipment scheduled with the TSDF and ready for pickup by the initial transporter

## Who can view

All handlers that are listed on the manifest can view

## Who can Edit

All handlers

- Preparers
- Certifiers
- Site Managers

## Who Can Sign

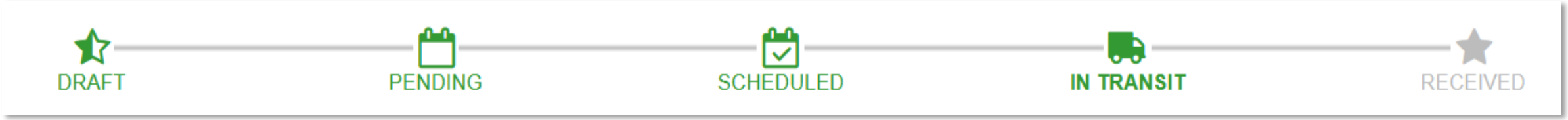
1. Fully Electronic:
   - Generator and Transporter sign electronically
   - Transporter prints copy for DOT requirements
2. Hybrid:
   - Transporter signs electronically
   - Transporter and generator print and sign 2 copies
     - 1 for Transporter
     - 1 for generator's records
     - Normal printer can be used (non-impact)

## Notes

Before being moved to scheduled, this manifest can become a hybrid or fully electronic manifest

- Hybrid is the only option if the generator is not registered

# Status 4: In Transit




## Description

Fully Electronic or Hybrid manifest accompanying a hazardous waste shipment in flight

## Who can view

All handlers on the manifest can view

## Who can Edit

Handlers who have not signed

- Some fields are no longer editable (e.g., previous handlers)

## Who Can Sign

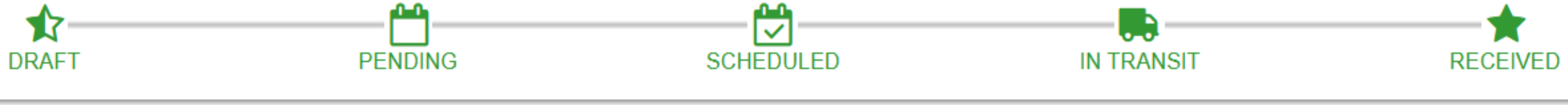
Non-initial transporter when applicable (see Notes)

## Notes

This status is skipped if there is only 1 transporter

# Status 5: Received (Ready for Signature)

e-*Manifest*




## Description

A Hazardous waste shipment in that is ready to be signed by the TSDF to signify change in custody (see Who Can Sign)

## Who can view

All handlers on the manifest can view

## Who can Edit

Handlers who have not signed

- Some fields are no longer editable (e.g., previous handlers)

## Who Can Sign

TSDF

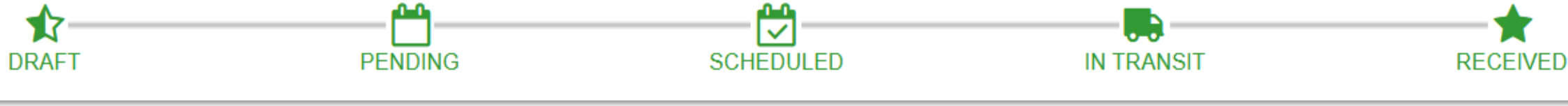
- CROMERR-compliant signature
- Quick sign

Quick Sign can be used to signify change in custody, but a CROMERR signature is necessary to certify and move the manifest to the *Signed-Complete* status

## Notes

Electronic manifest can either be accepted, rejected

# Status 6: Received (Signed-Complete)




## Description

A completed manifest that can be found in the e-Manifest module for all handler's digital records

## Who can view

All handlers listed on the manifest

## Who can Edit

Corrections can be submitted by any handler

- Corrections need to be certified with a CROMERR signature (Certifier or Site Manager)

## Who Can Sign

Not Applicable unless a handler is submitting corrections

## Notes

**Done, Hurray!**

# Remote Signer

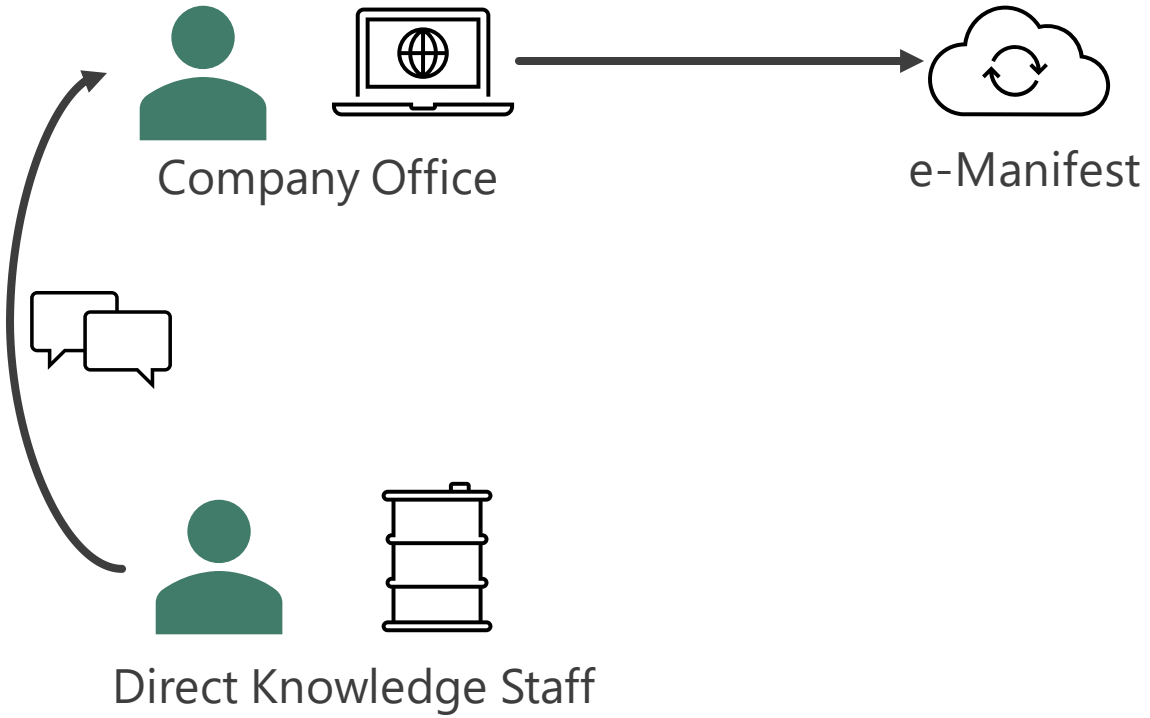
# Signatures Overview

- On Site and Remote Signatures are **either-or** options to provide situational flexibility

| Signature Type / Purpose | Who | Where | How |
|---|---|---|---|
| On Site Signature (Quick Sign)<br>• Generator<br>• Transporter<br>• Initial TSDF receipt | Registered e-Manifest user located on site with direct responsibility for the shipment | e-Manifest | Registered user with direct responsibility for the shipment logs into RCRAInfo with their own account and executes quick signature |
| Remote Signature<br>• Generator<br>• Transporter<br>• Initial TSDF receipt | Registered e-Manifest user located remotely, who is authorized by field personnel with direct responsibility for the shipment (unregistered individual) | e-Manifest | Registered remote user logs into RCRAInfo with their own account, enters name of the field personnel and date, then executes the electronic signature |
| | User of internal company system that integrates with e-Manifest via API | Internal System | User initiates signature event in internal system, then that system calls e-Manifest quicker-sign API, providing name of field personnel with direct responsibility for the shipment and date to the API |
| CROMERR Signature<br>• Final TSDF submission<br>• Corrections | Registered e-Manifest user with Certifier or Site Management Permission | e-Manifest | Registered Certifier or Site Manager logs into RCRAInfo provides password, second factor answer and electronically signs |

# Remote Signer

- Provides a method for:
  1. Signing through system-to-system communication
  2. Signing without direct internet access
  3. Unregistered individuals to sign electronic manifest through registered coworkers




https://www.epa.gov/e-manifest/e-manifest-rulemakings-and-policies

# Remote Signer Policy – For Industry Systems

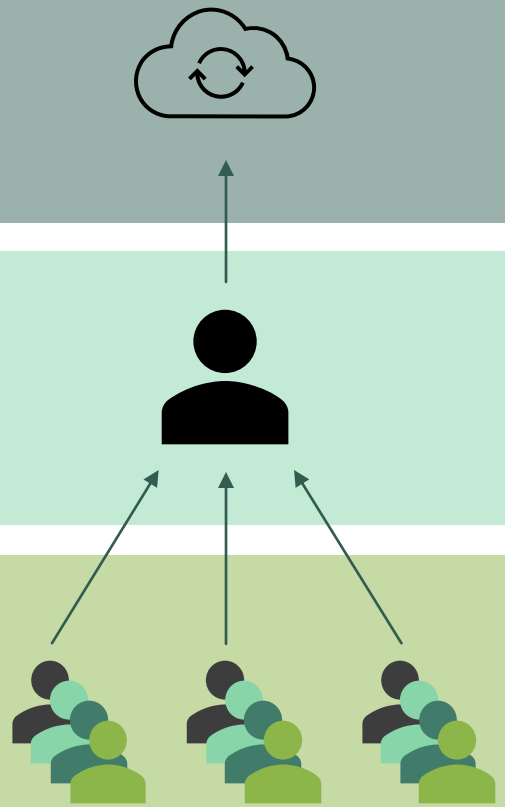
## e-Manifest

## Registered Users

Needs to appropriate access in e-Manifest (e.g., Site Manager signing through services)

## Unregistered Users

Could also be users without network access



Log in to e-Manifest and sign

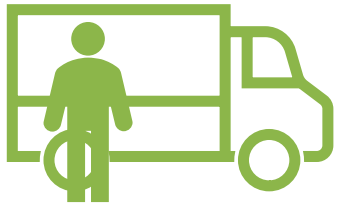
e-Manifest "Quicker-Sign" service call (API)

Text message, email phone call, radio

Internal system event (button click)

# Remote Signer Policy - Using RCRAInfo

**1**



The individual (Field Personnel) directly responsible for the hazardous waste is ready to take custody of the shipment.

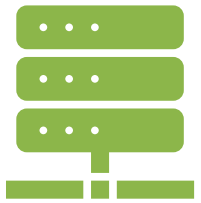
**2**

The Field personnel communicates that the manifest(s) is ready to be signed and authorizes the Remote Signer to initiate the electronic signature.

**3**

The Remote Signer logs into RCRAInfo (with their own username and password) and signs the corresponding electronic manifest(s).

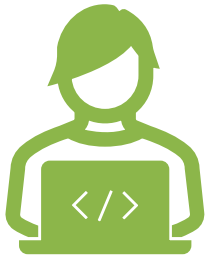
**4**



The electronic manifest(s) is successfully signed, the valid and enforceable signature is stored in the e-Manifest system. The status is communicated back to the Remote Signer through the RCRAInfo user interface.

# Remote Signer Policy – For Industry Systems

**1**

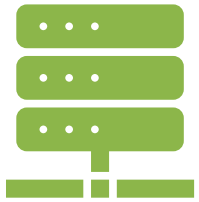


The Site's hazardous waste management software is configured to interface with RCRAInfo using the Remote Signer's API credentials.

**2**

The field personnel logs into their site's hazardous waste management software and initiates the electronic signature. The electronic signature is sent as a request to the e-Manifest system through the API.

**3**

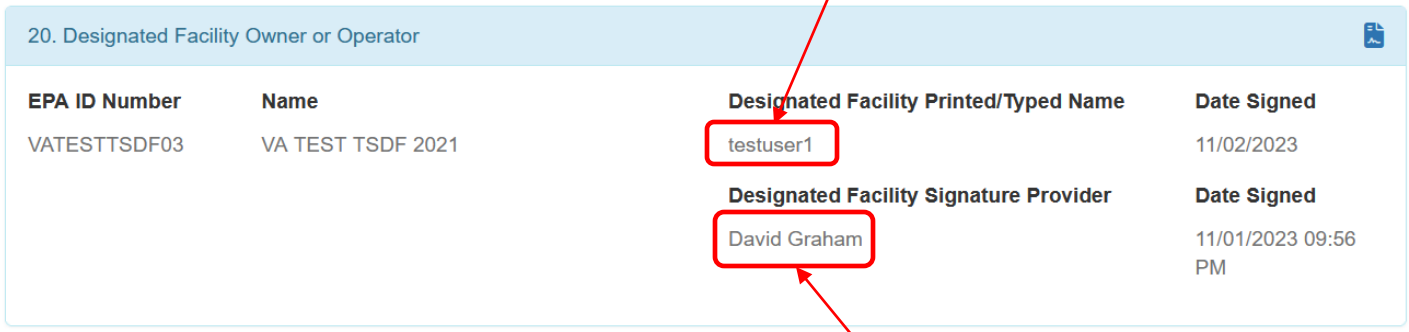


The electronic manifest(s) is successfully signed, the valid and enforceable signature is stored in the e-Manifest system. The status of the electronic signature process is communicated back hazardous waste management software.

# Remote Signer Result

- The registered user and unregistered user's name are both recorded on the manifest.

Unregistered User




Registered User

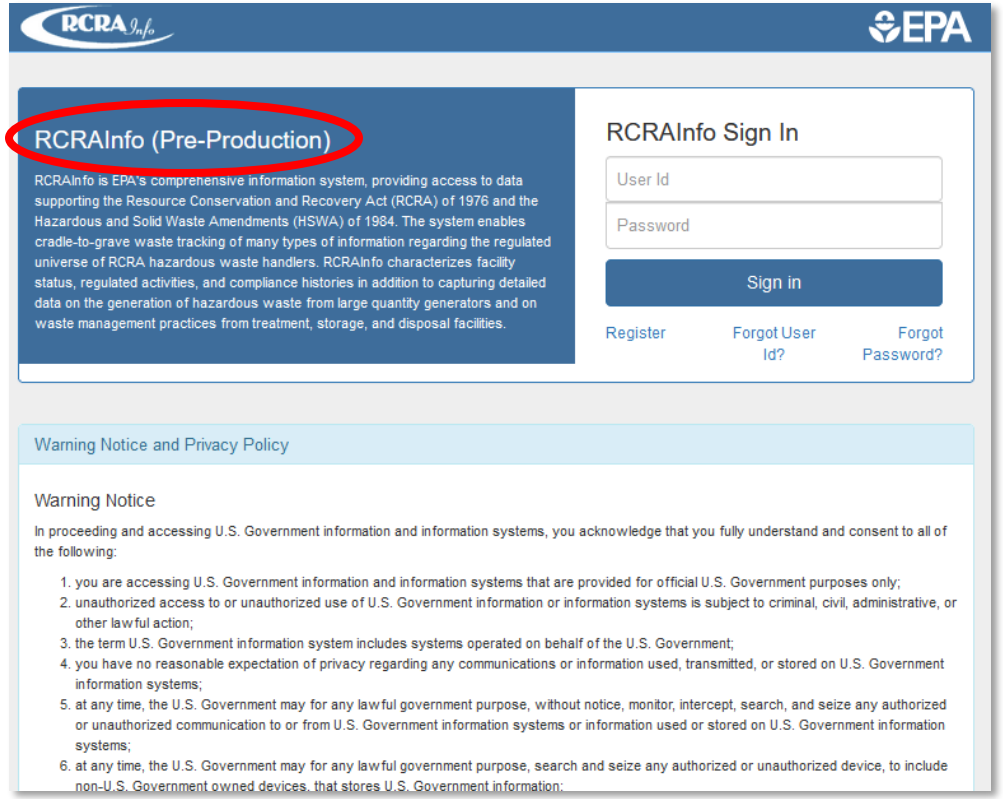
# Get Involved

How to contribute to the future development of the program

# Try e-Manifest in the Test Environment (Pre-Prod)

e-*Manifest*

- Pre-Prod is publicly available
  - You can dry-run electronic/hybrid manifesting with your next shipment
  - Test the integration of your system with the e-Manifest API
  - Give feedback/report issues on newly developed features
  - Suggest enhancements!
- https://rcrainfo**preprod**.epa.gov



# Integrate your system via our API

- The e-Manifest Application Programming Interface (API) is robust and stable
- Currently, The API allows users to
  - Create/update/correct/delete manifests
  - Quicker (Remote) Sign manifests
  - Pull site information
  - Deep link directly to (bulk) sign manifests
  - Look up waste/source/management method codes +
  - and more!

You can find more information on the e-Manifest Github repo (USEPA/e-Manifest)

https://github.com/USEPA/e-manifest

# Useful Links

- RCRAInfo (links to help documentation, video library, data reporting tool inside)
  - https://rcrainfo.epa.gov/
- Subscribe to our low-volume mailing lists
  - https://public.govdelivery.com/accounts/USEPAORCR/subscriber/new
- e-Manifest program website
  - https://www.epa.gov/e-Manifest
- e-Manifest FAQs
  - https://www.epa.gov/e-manifest/frequent-questions-about-e-manifest
- e-Manifest webinars
  - https://www.epa.gov/e-manifest/monthly-webinars-about-hazardous-waste-electronic-manifest-e-manifest

# Contact the e-Manifest Team

- Scott Christian, Technical Lead
- Stephen Donnelly, Program Manager
- David Graham, State & Industry Implementation Lead
- Bryan Groce, Policy Lead
- Fred Jenkins, e-Manifest Advisory Board Designated Federal Officer, and e-Manifest Program Communications Lead
- Amanda Kohler, Chief, Permits Branch
- Kyle Markley, Electronic Adoption Lead
- William Nicholas, Data Lead
- Thomas Reaves, Security Lead

# Thank you

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