

US EPA ARCHIVE DOCUMENT



Functional Area – Electronic Manifest Creation

This area covers:

- **Processes for initial manifest creation including needed data elements and user templates or waste profiles**
- **Process from initial manifest creation until the generator (or authorized representative) is ready to sign the manifest**

Proposed Requirements

- The system shall generate unique electronic manifest tracking numbers that will be easily distinguished from the tracking numbers currently used for paper manifests.
- The system shall have the capability to provide blocks of pre-assigned manifest numbers or draft manifests including assigned tracking numbers to handlers for use in their data systems.
- The system shall provide the capability to allow for batch uploads of generator/customer specific data from external data systems.
- The system shall provide an interface to allow users to create a manifest and populate required data elements.
- The system shall allow users with appropriate role-based privileges to create/populate data on a specific manifest on behalf of a Generator.
- The system shall support all existing paper manifest data elements.
- The system shall allow users to populate the Generator ID number with an exception code to allow for the transport of PCBs, State-regulated waste, etc.
- The system shall support the off-line creation of manifests.



Functional Area – Electronic Manifest Creation (Cont.)

This area covers:

- **Processes for initial manifest creation including needed data elements and user templates or waste profiles**
- **Process from initial manifest creation until the generator (or authorized representative) is ready to sign the manifest**

Questions for Discussion

- Should e-Manifest have a capability for re-usable manifest templates that can assist in manifest completion when using the system to create the manifest record? For example, upon entering the Generator's EPA ID, the system would populate the address, phone number and waste profile information using the Generator's handler profile data stored in eManifest. The system could also allow the user to select from a pre-defined list of waste profiles for the Generator.
- Should there be logic built in to the system generated electronic manifest tracking number (year indicator, EPA region, transporter type, a flag indicating the manifest is electronic)?
- Does the type of transporter need to be captured (air, rail, road, water)?
- What is the process for users to delete draft manifests? What user(s) can delete a draft manifest when? (Assuming only draft electronic manifests can be deleted)
- Are there additional optional data elements that should be added to the electronic manifest record that do not exist in the paper manifest?
- Are there exception codes that should be used in the place of the Generator ID in cases of the transport of PCBs, State-regulated waste, etc?



Functional Area – Electronic Manifest Workflow General Requirements

This area covers:

- Requirements for the 'chain-of-custody' workflow for generators, transporters and TSDFs
- Data error checking as the manifest is completed
- Offline and online mode requirements
- Electronic signature requirements

Proposed Requirements

- After Generator signature, the system shall maintain a history of all changes to manifest data, including changes in status/chain-of-custody.
- The Generator shall be notified of any changes to the manifest data while the shipment is 'IN TRANSIT'.
- The system shall require all manifest data elements be entered and all e-signatures captured in the proper sequence.
- The system shall allow users to print electronic manifest forms at any time during the workflow.
- The system shall support the ability for Handlers to collect shipment data and perform e-signatures in an offline mode. Data will be uploaded to the system once a connection is established.
- The technology for capturing electronic signatures shall be CROMERR compliant.
- The system shall support the concept of 'signature on behalf of' for users that are authorized to sign as agent of the generator such that the generator is bound by the signature.
- The system shall require users to enter the required metadata for electronic signatures (e.g. first/last name).
- The system shall provide the capability to attach files (scanned supporting documents – exception letters, discrepancy documentation, import/export consent agreements) to the electronic manifest.



Functional Area – Electronic Manifest Workflow General Requirements (Cont.)

This area covers:

- Requirements for the ‘chain-of-custody’ workflow for generators, transporters and TSDFs
- Data validation as the manifest is completed
- Offline and online mode requirements
- Electronic signature requirements

Questions for Discussion

- When the manifest is created in an external system, at what point should the manifest record be created in the e-Manifest system – should there be a specific step to upload the data into the system, or should it happen as part of the workflow – for example, at Generator signature?
- What should the system do to notify generators of any changes that are made while the manifest is ‘IN TRANSIT’?
- Should the system capture ‘signature on behalf of’ authority?



Functional Area – Electronic Manifest Workflow Phase – In Transit

This area covers:

- Requirements for the 'chain-of-custody' workflow specific to the In Transit phase
- Requirements for corrections to manifest data while in the In Transit phase
- Requirements related to the international importing/exporting of hazardous waste

Proposed Requirements

- After the Transporter Acknowledgment section has been e-signed and validated, the system shall modify the status of the electronic manifest from 'READY FOR TRANSPORT' to 'IN TRANSIT'
- The system shall allow users to make and save changes to manifest data prior to e-signature by the TSDf.
- After Generator signature, the system shall maintain a history of all changes to manifest data, including changes in status/chain-of-custody.
- The system shall ensure that only users associated with a specific manifest and authorized entities be allowed to view the information for a specific manifest during all phases of the manifest (creation, transit, receipt, submission, revision, etc)
- The system shall support the creation and processing of manifests for importing waste; the importer of the waste will be identified as the generator.
- The system shall support the creation and processing of manifests for exporting waste; the system shall require the transporter to specify the port of exit and exit date and provide a signature when waste leaves the United States.
- The system shall not require the designated facility section to be completed for exporting waste; the manifest would be completed when transported to port of exit.



Functional Area – Electronic Manifest Workflow Phase – In Transit (Cont.)

This area covers:

- **Requirements for the 'chain-of-custody' workflow specific to the In Transit phase**
- **Requirements for corrections to manifest data while in the In Transit phase**
- **Requirements related to the international importing/exporting of hazardous waste**

Question for Discussion

- Should users be able to view the history of changes to the electronic manifest?



Functional Area – Electronic Manifest Workflow Phase – Received/In-Process/Accepted

This area covers:

- Requirements for the 'chain-of-custody' workflow specific to the Received/In-Process/Accepted phase
- Requirements for discrepancy reporting

Proposed Requirements

- After the Designated Facility Certification section has been e-signed and validated, the system shall modify the status of the electronic manifest from 'IN TRANSIT' to 'RECEIVED/IN-PROCESS'
- The system shall allow authorized e-Manifest TSDF users to mark a particular electronic manifest record as 'ACCEPTED'.
- The system shall allow users to specify the actual accepted weight, quantity and/or type for a shipment at the time the manifest status is marked 'ACCEPTED'.
- The system shall support the reporting of discrepancies for Quantity, Type and Residue.
- The system shall support the full rejection of shipments.
- The system shall support the partial rejection of shipments.
- The system shall require users to enter the new manifest number in the Manifest Reference Number field of the original manifest in the case of partial rejection.
- The system shall change the status of a shipment to accepted after the passage of a specified time (e.g., 90 days) without a status change being made by the TSDF.



Functional Area – Electronic Manifest Workflow Phase – Received/In-Process/Accepted (Cont.)

This area covers:

- **Requirements for the 'chain-of-custody' workflow specific to the Received/In-Process/Accepted phase**
- **Requirements for discrepancy reporting**

Question for Discussion

- How should the user indicate the electronic manifest record status should change from 'RECEIVED/IN-PROCESS' to 'ACCEPTED'?



Functional Area – Data QA

This area covers:

- Data quality assurance (QA) between handlers
- QA between states and Handlers

Proposed Requirements

- The system shall have the capability to generate and distribute a data variance report to specified users when the handler data entered on the manifest does not agree with the e-Manifest Handler record data contained within the system.
- The data variance report shall be generated at each change in manifest status.
- The implementation of data QA/ variance reporting in the system shall not add to Handler burden.
- The implementation of data QA/ variance reporting shall not slow or stop manifest processing/waste transport.



Functional Area – Data QA (Cont.)

This area covers:

- Data quality assurance (QA) between handlers
- QA between states and Handlers

Questions for Discussion

- Should the data variance reports be provided to Handlers as well as states?
- Should the Handler be informed of data variances when a change in manifest status occurs?
- Are there any necessary system requirements for QA between the states and industry?



Functional Area – User Administration

This area covers:

- Requirements for setting up new users, managing users, and deleting users

Proposed Requirements

- The system shall support the concept of user roles (EPA administrator, industry/state administrator, handler, regulator, Emergency Responder, etc.)
- The system shall allow industry/state administrators to create and maintain user profiles for users within their organization.
- The system shall allow industry/state administrators to assign roles to users within their organization.
- The system shall support the concept of user privileges (create, read, update, delete, e-sign, etc.).
- The system shall allow industry/state administrators to assign privileges to roles.
- The system shall allow industry/state administrators to assign privileges to specific users.
- The system shall support an EPA system administrator that will have full system privileges ('super user').



Functional Area – User Administration (Cont.)

This area covers:

- Requirements for setting up new users, managing users, and deleting users

Questions for Discussion

- How should Emergency Responders be registered in the system?
- How should brokers be registered in the system?
- Would it be considered an excessive burden to have states/industry administer user accounts?



Functional Area – Electronic Manifest Format and Communications Standards

This area covers:

- Requirements for what standard formats or communications (encoding protocols, etc) are needed to support electronic manifest creation or data access and QA

Proposed Requirements

- The system shall support interaction with standard data transport protocols.
- The system should be able to adhere to a presentation standard to enable e-Manifest display that is similar to the appearance of paper form, in order to comply with EPA/CROMERR standards.



Functional Area – Electronic Manifest Format and Communications Standards (Cont.)

This area covers:

- Requirements for what standard formats or communications (encoding protocols, etc) are needed to support electronic manifest creation or data access and QA

Questions for Discussion

- What data exchange standards are currently in use by industry?
- What data exchange standards are used by states? At what points in the manifest process should data be transmitted to state systems?



Functional Area – Miscellaneous

This area covers:

- **Requirements that do not map to a functional area**

Proposed Requirements

- The system shall support the concept of an e-Manifest Handler record. The e-Manifest Handler record will be uniquely identified by the EPA ID Number, and will contain the Handler name, address, and phone number.
- The system shall allow the state system administrator role the privileges to create, read, update and delete e-Manifest Handler records.
- The system shall support lookup tables for manifest data elements (for example, hazardous waste codes, Management Method Codes, DOT Hazmat shipping descriptions and codes).



Functional Area – Miscellaneous (Cont.)

This area covers:

- Requirements that do not map to a functional area

Question for Discussion

- What should be the initial source of the e-Manifest handler record (Industry systems, RCRAInfo, etc)?
- Should maintenance of the lookup table data be conducted only by the EPA system administrator, or by state system administrators as well?



Functional Area – Data Access and Reporting

This area covers:

- **What the system will need to do to provide access to the data and provide reports out to various users once manifest data is approved or “final” in the system**

Proposed Requirements

- The system shall provide standardized reporting queries for specified roles.



Functional Area – Data Access and Reporting (Cont.)

This area covers:

- **What the system will need to do to provide access to the data and provide reports out to various users once manifest data is approved or “final” in the system**

Questions for Discussion

- What types of standard reports would be most useful to Handlers?
- What types of standard reports would be most useful to States?



Functional Area – Paper Manifest Processing

This area covers:

- **Requirements for what the system must do to process paper manifests**

Proposed Requirements

- The system shall provide authorized users the capability to enter paper manifest data into the e-Manifest system.
- The system shall require users entering data from paper manifests to provide a scan of the manifest form.



Functional Area – Paper Manifest Processing (Cont.)

This area covers:

- Requirements for what the system must do to process paper manifests

Question for Discussion

- Who should be responsible for entering paper manifest data into the system? It was suggested that EPA do this by default, but that TSDFs be provided the capability to do so.