



Hazardous Waste e-Manifest Advisory Board June 2019 Meeting

Charge Questions

1. Identifying “Pain Points” Preventing Wider Adoption of Electronic Manifests (Chapters 2, 3, 4, 5)

EPA seeks to understand specifically the barriers, challenges, or issues preventing greater adoption of electronic manifests.

- a. What are the main challenges **generators** face with using fully electronic manifests? EPA specifically requests information regarding the nature of the challenge, whether there’s a certain step in the process (e.g., user registration or electronic signature) that is causing friction, and whether there are actions EPA can take, such as training or engagement, to assist with these challenges.
- b. What are the main challenges **transporters** face with using fully electronic manifests? EPA specifically requests information regarding the nature of the challenge, whether there’s a certain step in the process (e.g., user registration or electronic signature) that is causing friction, and whether there are actions EPA can take, such as training or engagement, to assist with these challenges.
- c. What are the main challenges **receiving facilities** face with using fully electronic manifests? EPA specifically requests information regarding the nature of the challenge, whether there’s a certain step in the process (e.g., user registration or electronic signature) that is causing friction, and whether there are actions EPA can take, such as training or engagement, to assist with these challenges.

2. Modifying User Registration to Encourage Use of Electronic Manifesting (Chapter 6.1)

- a. What is the feasibility and the likelihood of generators and transporters adopting the electronic manifest if they could, for example, in lieu of user registration:
 - Handler creates an electronic manifest and sends a link to the generator or transporter;
 - Generator/transporter opens the link to the manifest and adds their email address or personal cell phone number to the manifest;
 - e-Manifest sends a unique code to the generator/transporter’s email/phone;
 - Generator/transporter then signs the document, using the adds the unique code as a one-time signature credential.
- b. Assuming that a phone number and/or email address are not, by themselves, sufficient proof of identity, what strategies short of biometry can be employed to link the delivered code to an individual of known or ascertainable identity?
- c. How best can EPA provide customer service to those entities that would utilize this solution (i.e., use of an email or text message notification to validate their signature) and steer them through this process?
- d. Are there any drawbacks or concerns related to a “no-user registration” process?

3. Third-party Applications and Biometrics to Encourage Electronic Manifesting (Chapters 6.2 and 7)

- a. Assuming a waste handler invests in a device by which to execute biometric signatures, what obstacles could a third-party application, particularly one that leverages biometrics, present to the user community? Are there things EPA can do to minimize integration/implementation hurdles?
- b. How best could EPA's e-Manifest program promote and support implementation of these solutions with industry and states?
- c. In terms of a recommended configuration for deploying a third-party application, we ask the Board members to please comment on the importance of each of its components, including:
 - i. The form factor – e.g., cell phone, tablet, or laptop PC – for the portable device on which electronic manifests will be displayed and presented to users.
 - ii. Discuss advantages and drawbacks of each of the aforementioned form factors, considering the following factors:
 - A. Display area required to show manifest data to users comfortably, clearly, and in a human readable format as required by Cross Media Electronic Reporting Rule (CROMERR);
 - B. Cost of deploying devices in the field;
 - C. Durability of the device over time and in the settings (e.g., outdoors) where it will be used;
 - D. Availability of a reliable power source for the device while in the field;
 - E. Need for access to a network connection at the time of signature;
 - F. Suitability for connecting to appropriate peripherals, e.g., signature pads, printers, power supplies; and
 - G. Ease of use in entering, displaying, and correcting data.
- d. What are the primary factors governing whether or not the service industries are willing to make investments in such devices? Are there particular device/system features that would decisively foreclose adoption?
- e. Is the stakeholder community widely aware that EPA has evaluated and approved an approach that relies on digitized signatures and which would, thereby, work offline and without prior registration? If so, are there features of this approach that make it unattractive?
- f. Is a biometric signature tool that requires network connection at the time of signature worth pursuing, or its biometry worth pursuing only if it can eliminate the need for a network connection at the time of signature?
- g. How useful would it be for EPA to provision a web-based signature tool (that also works on a smartphone) that, for any user already registered to the e-Manifest system, can be called without login from anywhere that has a network connection (such as an industry-owned system or smartphone application) to present all documents awaiting signature by that user

and, then, permit individual or bulk signature of those document by a single application of the user's signature credentials?

- h. Should EPA, in consultation with the Advisory Board, select one technology for use in e-Manifest or should we allow multiple technologies to be used provided they are subject to the same performance standards?

4. Other Options for Encouraging Electronic Manifesting

- a. Are there other options that EPA should explore, such as regulatory or policy changes, that would facilitate greater use of electronic?