



At a Glance

Evaluation of the EPA's e-Manifest System

Why We Did This Evaluation

To accomplish this objective:

The U.S. Environmental Protection Agency Office of Inspector General conducted this evaluation to determine the effectiveness of the EPA's e-Manifest system, including the impact of and efforts to address errors in the system.

The Resource Conservation and Recovery Act requires that a shipping form, called a manifest, accompany hazardous waste shipments. The manifest identifies the type and quantity of hazardous waste being shipped, includes the signatures of all parties involved, and contains instructions for handling the waste.

In 2012, the Solid Waste Disposal Act was amended, requiring the EPA to implement a national electronic manifest system. The EPA estimated that the widespread adoption of electronic manifests would create an annual cost savings of more than \$50 million for state and industry users. In 2014, the EPA stated that its goal was to maximize the full benefits and efficiencies of electronic manifests as quickly as possible.

To support this EPA mission-related effort:

- *Operating efficiently and effectively.*

Address inquiries to our public affairs office at 202-566-2391 or OIG.PublicAffairs@epa.gov.

[List of OIG reports.](#)

What We Found

Neither the EPA nor industry has realized the full benefits of the EPA's e-Manifest system. Although the number of electronic manifests increased from 2019 to 2024, fewer than 0.5 percent of manifests each year were electronic. Because hazardous waste handlers manually transcribe information from paper manifests into electronic data files, the e-Manifest system is vulnerable to data entry errors. Consequently, the very low adoption of electronic manifests contributes to significant data quality issues in the e-Manifest system.

We identified errors related to EPA ID numbers and the shipping volumes of hazardous waste. From 2022 through 2024, submitted manifests had approximately 356,000 different ID numbers for hazardous waste generators. However, about 40 percent of the generator ID numbers were invalid. During the same time, about half of the 1,300 treatment, storage, and disposal facility ID numbers were invalid. In addition, 800 manifests stated shipping volumes exceeding 1,000 tons, with four stating volumes approaching one million tons—probable errors given that it is not feasible for a shipping container to hold 1,000 tons of cargo. Many of the inaccurate data were caused by incorrect transcription of the unit of measurement, incorrect transcription of decimal point placement, or incorrect entry of volume not matching the preprinted unit of measurement on the paper manifest.

The EPA has made efforts to address e-Manifest data errors. In 2023, the EPA issued a compliance advisory identifying that some ID numbers were inaccurate or missing and prompting handlers to address this data quality issue in the e-Manifest system. In July 2024, the EPA published a rule requiring that handlers correct manifest errors within 30 days of a state or federal regulator requesting a correction. As of May 2025, however, the EPA has not authorized any state to implement the rule, meaning that only the agency can request error corrections. Because electronic manifests would help eliminate many of the errors that we identified, we encourage the EPA to continue its efforts to fully adopt electronic manifests.

Without the use of electronic manifests for all hazardous waste shipments, the e-Manifest system will not realize its anticipated cost savings and accuracy benefits.

Recommendations and Planned Agency Corrective Actions

We make two recommendations to the assistant administrator for Land and Emergency Management. The first recommendation is to establish the maximum volume of each container type used to ship hazardous waste, and the second is to implement verification checks in the e-Manifest system to identify when shipping volumes likely exceed the maximum capacity of the container type used. These actions would enable the EPA to identify shipping volume errors recorded on manifests and flag or prevent related data errors in the e-Manifest system. The first recommendation is closed with corrective actions completed, and the second recommendation is resolved with the corrective action pending.