

# U.S. EPA Tracking Initiatives to Improve Hazardous Waste Shipping Procedures

The e-Manifest  
Radio Frequency Identification

# Overview of the Current Manifest System

- The central element of the current manifest system is the paper trail--a document showing who is in the control of the hazardous waste at a given time and where the waste will ultimately be disposed or recycled.
- The current manifest regulations require:
  - The use of specific paper forms,
  - The use of "by hand" signatures to show the chain of custody of hazardous waste shipments,
  - All manifest copies to be physically carried with the waste shipment

# EPA's Newly Proposed Electronic Manifest System

- An electronic manifest system is an electronic tracking system equivalent to the paper manifest system.
- Instead of using the hard copy manifest form, waste handlers could prepare the form electronically and submit it to the appropriate state government officials via the internet.
- At this time, the focus of development efforts are on domestic hazardous waste traffic, but the EPA is open to including import/export shipments in the e-Manifest if this is found to be feasible.

# Benefits of the E-Manifest System

## ECONOMIC

- Estimated potential annual savings of \$100 million to users and U.S. states
- Estimated unit savings of \$23-\$40 per manifest



## EFFICIENCY

- Nearly real-time shipment tracking for users
- Enhanced inspection/enforcement capabilities for regulators
- More rapid notification and response to problems
- One-stop data submission to U.S. states
- Elimination of storage space required for paper manifest archival

# Regulatory Stage

- The e-manifest was originally proposed in May 2001, but public comments criticized the proposed decentralized approach.
- Following stakeholder input, the U.S. EPA is now working on a second proposal with a new approach.
  - The new approach will rely on one electronic national system hosted by the U.S. EPA as opposed to many private or state electronic systems that would need to link up.
- The U.S. EPA hopes to issue a rule authorizing the use of the e-manifest in 2007. However, additional legislature will be needed for user fees to support the costs of the e-manifest system before the system becomes active.

# Radio Frequency Identification

- The U.S. EPA recently received a grant to conduct testing on using radio frequency identification in place of paper manifests for the purpose of import/export border crossings of hazardous waste.
- Hazardous Waste shipments would be equipped with small, inexpensive tags that contains information from the U.S. manifest (type, quantity, generator, destination, etc.)
- The tags would be quickly scanned by RFID readers located at Customs ports, reducing transport time and costs associated with crossing the border, and air pollution created by idling trucks.
- RFID could be linked with the proposed e-manifest system.

