

US EPA ARCHIVE DOCUMENT

SUPPORTING STATEMENT FOR

**INFORMATION COLLECTION
REQUEST NUMBER 801**

**"MODIFICATIONS OF THE
HAZARDOUS WASTE MANIFEST
SYSTEM - PROPOSED RULE"**

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1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) TITLE AND NUMBER OF THE INFORMATION COLLECTION

This ICR is titled "Modifications of the Hazardous Waste Manifest System - Proposed Rule," ICR number 801.#.

1(b) SHORT CHARACTERIZATION

RCRA section 3002(a)(5) directs EPA to "...establish requirements respecting...use of a manifest system and any other reasonable means necessary to assure that all such hazardous waste generated is designated for treatment, storage, or disposal, and arrives at treatment, storage, or disposal facilities...for which a permit has been issued..." Under this authority, EPA published regulations for a manifest system on February 26, 1980 (45 FR 12724).¹ EPA established requirements for manifest completion, transmittal, and recordkeeping for hazardous waste generators at 40 CFR Part 262, Subpart B, for transporters at Part 263, Subpart B, and for treatment, storage, and disposal facilities (TSDFs) at Parts 264 and 265, Subpart E. EPA also requires the use of the Uniform Hazardous Waste Manifest (UHW or manifest). The UHW consists of a federally required portion (i.e., federally required data elements in Blocks 1-20) and a state-optional portion (i.e., Blocks A-K on the manifest reserved for optional state use).² Currently, more than 20 states require waste handlers to complete state-optional blocks on the UHW, resulting in a patchwork of state program requirements.

EPA is now proposing to modify the manifest system to minimize unnecessary burden on hazardous waste handlers resulting from variable state requirements, encourage the use of automated technologies in the manifest cycle, and make other needed improvements to the manifest system. Specifically, EPA is proposing to eliminate many of the state-optional blocks from the manifest form and make the manifest completely uniform and universally accessible (i.e., obtainable from states, commercial printers, TSDFs, as specified). EPA also is proposing standards for the completion, transmittal and recordkeeping of electronic manifests, as an alternative to the current paper form. Finally, EPA is proposing other needed fixes to the manifest system, e.g., special manifesting procedures for international shipments, rejected loads, and container residues.

In Sections 1 - 5 of this ICR, EPA presents a comprehensive description of the federal manifest system as modified by the proposed rule. That is, the ICR describes the new information collection requirements in the proposed rule, as well as the existing manifest requirements that would be modified or otherwise left in place by the rule. (The Agency has attempted to distinguish between proposed and existing/modified requirements throughout this ICR.) In Section 6, EPA estimates the total annual burden and cost to respondents and government associated with the modified manifest system. In addition, EPA compares in Section 6(f) the annual burden and cost of the modified manifest system to the burden and cost of the present manifest system to estimate burden impacts from the rule.

In the following paragraphs, EPA describes the information collection requirements of the federal manifest system, as modified by the proposed rule.

GENERATOR REQUIREMENTS

Existing 40 CFR 262.20 requires generators transporting, or offering for transportation, hazardous waste for offsite management or disposal to prepare a manifest (8700-22) and, if necessary, continuation sheets (8700-22A). Generators must prepare these forms in accordance with sections 262.20 and 262.23, 262.54, and 262.60, as appropriate, as well as the instructions in the appendix to Part 262. Generators must transmit and keep records of the manifest in accordance with existing sections 262.23, 262.40, 262.44, 262.54, and 262.60, as appropriate.

¹ EPA intended the manifest to serve three primary purposes: to serve as a tracking device which creates clear lines of accountability among the participants in the hazardous waste systems; to serve, together with other EPA and DOT requirements, to protect human health and the environment during the transportation of hazardous waste by providing information on the waste to persons handling the waste and to emergency response personnel; and to provide the principal basis for EPA's recordkeeping and reporting requirements.

² Pursuant to the 1995 Paperwork Reduction Act, this ICR examines only federal information collection requirements. It does not address state requirements (e.g., state-optional elements of the manifest).

The proposed rule would modify the existing manifest form and amend the generator manifest requirements to enable them to complete, keep records of, and transmit either paper or electronic manifests. Generators using a paper form must continue to comply with the existing manifest requirements, as discussed above. Generators using an electronic manifest must comply with new requirements proposed at 40 CFR 262.24, 262.25, and 262.26 for manifest use, signature, and electronic systems/security, as well as existing manifest requirements, as applicable (e.g., 40 CFR 262.40).

Finally, the proposed rule would slightly change the manifest completion requirements for hazardous waste imports and exports (e.g., to make it more clear on the manifest itself that the shipment is either an import or an export). Transporters importing hazardous waste also would be required to leave a copy of the manifest at U.S. Customs, as is currently the requirement for exports.

Manifest Completion: Domestic and International Shipments

Under 40 CFR 262.20, as amended by the proposal, generators may use a paper or electronic manifest format when manifesting their hazardous waste. Generators using a paper form must prepare their manifest on EPA Form 8700-22 and, if necessary, Form 8700-22A, according to the instructions in the appendix to Part 262. Generators using an electronic format must use either the Electronic Data Interchange (EDI) format described in proposed section 262.20(a)(3)(i), or the Internet Forms format described in proposed section 262.20(a)(3)(ii).

The proposed rule also would amend 40 CFR 262.54, which currently requires primary exporters of hazardous waste to complete the manifest according to sections 262.20 through 262.23, except as provided under section 262.54(a)-(d). The proposed rule would amend section 262.54(c) by requiring that, in the International Shipment block, the primary exporter check the export box and enter the point of exit (city and State) from the United States.

In addition, the rule would amend 40 CFR 262.60, which currently requires the importer to prepare a manifest in accordance with section 262.20, except as modified by section 262.60(b)(1)-(2). The proposed rule would add a new section 262.60(d), requiring that, in the International Shipment block, the importer check the import box and enter the point of entry (city and State) into the United States.

Finally, EPA would modify the manifest form (e.g., by requiring a unique, pre-printed manifest tracking number on each manifest and eliminating the requirement for a 5-digit manifest document number).

Acquiring the Manifest

The existing 40 CFR 262.21 requires the generator to obtain blank manifest forms from the state to which the shipment is manifested (consignment state), if it supplies a manifest. If it does not, the generator must obtain new forms from its own state (generator state). If neither supplies a manifest, the generator may obtain a manifest from any source.

The proposed rule would revise section 262.21 by providing that blank manifest forms may be obtained from several sources (i.e. any state agency that prints manifests, commercial form printers, and TSDFs and preparers). The source of the manifests (i.e., manifest printer) must be registered with EPA to ensure consistency with the required federal specification for a universal manifest form. The source must not print the manifest form without submitting an application to EPA and subsequently receiving approval of its prefix and (sequential) numbering system. The application must contain the information specified in proposed section 262.21(c)(1).

Manifest Transmittal and Recordkeeping

The proposed rule would require generators using the paper manifest to continue following the existing requirements for manifest transmittal and recordkeeping at 40 CFR 262.23, 262.40(a), and 262.44(a), as applicable. The proposed rule would establish new transmittal requirements for electronic manifests at proposed 40 CFR 262.24 and require them to comply with the existing recordkeeping requirements at 40 CFR 262.40(a) and 262.44(a).

In addition, the proposed rule would add a new requirement at 40 CFR 262.60(e) for generators to provide an additional copy of the manifest to transporters for delivery to the U.S. Customs official at the point of entry

into the U.S. Finally, generators must continue to comply with the existing requirements for exports (e.g., provide transporter with an Acknowledgment of Consent) and reclamation agreements, if applicable.

Standards for Electronic Manifests: Signatures, Security, and Systems

Proposed 40 CFR 262.25 and 262.26 would establish standards for electronic signatures on the manifest, maintenance of computer systems/security, and transmission/receipt of electronic manifests. The proposed rule would require that all electronic manifests be signed with electronic signatures which meet either the digital signature standard described at proposed section 262.25(c) through (f), or the secure digitized signature standard described at proposed section 262.25(g).³ Individuals that want to use the digital signature must subscribe to a Certification Authority, operating in accordance with an applicable Certificate Policy and designated Public Key Infrastructure (PKI), in order to receive a digital certificate. The Certification Authority will issue digital certificates to individual subscribers who establish sufficiently their identity in accordance with the applicable Certificate Policy, as provided by proposed section 262.25(f).

In addition, proposed section 262.25(f)(3) provides that any person who has reason to believe that a private key has been lost or compromised shall report that fact immediately to the Certification Authority, who shall act on that information promptly and shall update the affected certificate's status in accordance with the Certificate Policy's procedures.

Proposed 40 CFR 262.26(a) provides that electronic copies of manifests, which are electronically signed in accordance with section 262.25, and which are generated or maintained by electronic systems that meet the security requirements of section 262.26(c), will be considered the legal equivalent to paper copies bearing handwritten signatures, for the purposes of satisfying any requirement to initiate, use or transmit a manifest, or to retain a manifest copy or produce it for inspection.

Electronic systems used to satisfy the requirements in these regulations to initiate, use, transmit, or retain records of manifests, must employ controls and procedures to ensure the authenticity and integrity of their electronic records, and to ensure that the signer of these records cannot readily repudiate the signed records as genuine, as provided at proposed section 262.26(c). Proposed section 262.26(c)(1) requires validation of computer systems by an independent, qualified information systems security professional who has prepared a written assessment of the system and has certified that the system generates and processes data accurately and reliably, that the system performs consistently and as intended, that the system is fully interoperable with any other electronic manifest system(s) with which the system exchanges electronic manifests, that the system is designed and can be operated to meet the computer security standards of this section and good security practices common to trusted electronic commerce systems, and that appropriate precautions have been taken to ensure that these security measures cannot be avoided or defeated.

Proposed section 262.26(c)(9) requires the establishment of controls on distribution of, access to, and use of systems documentation that describes how the system operates, how the system components must be installed and configured, how system security features are implemented, or how the system is maintained. These controls extend as well to changes or revisions to system documentation or operating procedures.

Proposed section 262.26(c)(10) requires the establishment of, and adherence to, written policies that hold individuals accountable and responsible for actions initiated under their electronic signatures, in order to deter record and signature falsification.

Proposed 40 CFR 262.26(f), (h), and (j) establish procedures for transmitting and receiving the electronic manifest. Proposed section 262.26(f) provides that, when an electronic manifest transmission is received, the recipient shall promptly generate and transmit to the sender an acknowledgment that confirms the receipt of translatable data. Proposed section 262.26(h) requires that, if a positive acknowledgment is not received within 12 hours of a transmission, then the person who initiated the transmission shall promptly re-transmit the electronic manifest. (If a person is unable to initiate or transmit a manifest electronically, it must use the paper

³ A "digital signature" means an electronic signature that is based on private key/public key cryptography, and which allows both the identity of the signer and the integrity of the data to be verified. A "secure digitized signature" means an electronic signature that is created with a system which includes a digitizer device that collects signature input from an electronic stylus, and which includes software which can process signature input as specified.

manifest required under section 262.20(a)(2).) Finally, proposed section 262.26(j) provides that each person who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received. The transmission log shall be maintained without modification and retained for three years among the person's manifest records.

Exception Reports: Completion, Submission, and Recordkeeping

The proposed rule would not modify the existing procedures for generators to prepare and submit exception reports under 40 CFR 262.42.

TRANSPORTER REQUIREMENTS

Existing 40 CFR 263.20, 263.21, and 263.22 detail the completion, transmittal and recordkeeping requirements of manifests or shipping papers for hazardous waste transporters, including those exporting hazardous waste outside the U.S. In accordance with these requirements, transporters must complete specified parts of the manifest (or shipping paper, as provided in section 263.20(e)(2)), retain a copy of the manifest (or shipping paper), transmit copies to specified parties, and ensure that the original manifest or shipping papers accompany the waste to its destination.

The proposed rule would amend existing 40 CFR 263.20 by (i) requiring transporters that import or export hazardous waste from the United States to sign and date the manifest in the International Shipments block to indicate the date that the shipment either entered or left the United States; (ii) requiring transporters importing hazardous waste into the United States to provide a copy of the manifest to the U.S. Customs official at the point of entry into the United States (transporters exporting hazardous waste must provide a copy to U.S. Customs under existing requirements); and (iii) establishing procedures for transporters to use electronic manifests, as an alternative to the paper manifest. EPA also would modify the procedures for transporters to re-manifest shipments that cannot be delivered to the designated facility (263.21) and add a new section 262.23 to provide standards for electronic signatures, electronic systems/security, and transmission/receipt of electronic manifests.

Hazardous Waste Transporters (except as exempted by 40 CFR 263.20(e) and (f))

The proposed rule would revise the requirements at existing 40 CFR 263.20 to enable the transporter to use of a paper or electronic manifest. Section 263.20(b), as amended, would provide that, except for certain rail and water transporters exempted under sections 263.20(e) and (f), transporters transporting hazardous waste outside the U.S. (263.20(g)) and transporters transporting hazardous waste pursuant to a reclamation agreement (263.20(h)), the transporter must sign (by hand or electronic signature) and date the manifest acknowledging acceptance of the waste from the generator before transporting the hazardous waste. If the generator participates in an electronic manifest system, but the transporter is not able to accept or sign electronic manifests, then the transporter must acknowledge acceptance of the hazardous waste by signing by-hand and dating a paper copy of the manifest or other shipping paper. A transporter participating in an electronic manifest system must use an electronic signature in accordance with the provisions of proposed section 262.25. Before leaving the property, the transporter must return or transmit a signed paper or electronic copy of the manifest to the generator.

In addition, the transporter must ensure that a paper copy of the manifest or other shipping paper accompanies the shipment and is readily available and recognizable; and for shipments involving an electronic manifest, ensure that the manifest is transmitted to the next transporter or to the designated facility prior to or at the time of the delivery of the shipment, as required by section 263.20(c), as amended.

A transporter who delivers a hazardous waste to another transporter or to the designated facility must obtain the date of delivery and a handwritten or electronic signature of the transporter or designated facility; retain a copy in accordance with existing section 263.22; and give the remaining paper copies of the manifest, or transmit an electronic copy of the manifest, to the accepting transporter or designated facility, as required at section 263.20(d), as amended.

Water (bulk shipment) Transporters Regulated Under Existing Section 263.20(e)

The rule would not modify existing 40 CFR 263.20(e) for water transporters. Under section 263.20(e), the requirements of sections 263.20(c), (d), and (f) do not apply to water (bulk shipment) transporters if the

hazardous waste is delivered by water (bulk shipment) to the designated facility; a shipping paper containing specified information required on a manifest and, for exports, and EPA Acknowledgment of Consent accompanies the hazardous waste; the person delivering the waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and a copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with section 263.22.

Rail Transporters Regulated Under Section 263.20(f)

The proposed rule would revise the existing manifest requirements for rail transporters at 40 CFR 263.20(f) to enable the use of paper or electronic manifests. Under section 263.20(f)(1), as amended, initial rail transporters must sign (by-hand or with an electronic signature) and date the manifest acknowledging acceptance of the hazardous waste; return or transmit a signed copy of the manifest to the non-rail transporter; and forward at least three paper copies or an electronic copy of the manifest to the next non-rail transporter, the designated facility, if the shipment is delivered to that facility by rail, or the last rail transporter designated to handle the waste in the United States; and retain a copy of the manifest and rail shipping paper in accordance with section 263.22.

Rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator certification, and signatures) and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste at all times, as required by existing section 263.20(f)(2).

When delivering hazardous waste to the designated facility, a rail transporter must obtain the date of delivery and handwritten or electronic signature of the owner or operator of the designated facility on the manifest, or a handwritten signature on the shipping paper (if the manifest has not been received by the facility) and retain a copy of the manifest or signed shipping paper, as required under section 263.20(f)(3), as amended. When delivering hazardous waste to a non-rail transporter, a rail transporter must obtain the date of delivery and the handwritten or electronic signature of the next non-rail transporter on the manifest and retain a copy of the manifest, as required under section 263.20(f)(4), as amended. Before accepting hazardous waste from a rail transporter, a non-rail transporter must sign (by hand or with an electronic signature) and date the manifest and provide a copy to the rail transporter, as required by section 263.20(f)(5), as amended.

Transporters Who Transport Hazardous Waste Into and/or Out of The U.S. (263.20(g))

The proposed rule would amend 40 CFR 263.20(g), which currently applies only to exports. Under section 263.20(g), as amended, transporters who transport hazardous waste into and/or out of the United States must sign and date the manifest (by hand or with an electronic signature) in the International Shipments block to indicate the date that the shipment either entered or left the United States; retain one copy in accordance with existing section 263.22; return a hand-signed or electronically signed copy to the generator; and provide a paper or electronic copy of the manifest to a U.S. Customs official for imports at the point of entry and for exports at the point of departure from the United States. In addition, in the case of exports, the transporter also must ensure that a copy of the EPA Acknowledgment of Consent also accompanies the waste, as required by section 263.20(c)(3).

Transporters Who Transport Hazardous Waste Pursuant To A Reclamation Agreement (263.20(h))

The rule would not revise existing 40 CFR 263.20(h). Section 263.20(h) provides that transporters can be exempt from the requirements of sections 263.20 and 263.22 when transporting a small quantity generator's waste pursuant to a reclamation agreement in accordance with existing section 262.20(e). These transporters are required to record data items on a log or shipping papers, carry the record to the reclamation facility, and retain these records, as required by existing section 263.20(h).

Compliance with the Manifest

Under existing 40 CFR 263.21(a), the transporter must deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to the designated facility listed on the manifest; the alternate designated facility, the next designated transporter; or the place outside the United States designated by the transporter. Existing section 263.21(b) requires that, if the hazardous waste cannot be delivered in accordance

with section 263.21(a), the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

The proposed rule would amend section 263.21 by providing at section 263.21(b)(1) that, if the hazardous waste cannot be delivered in accordance with paragraph (a) of this section because of an emergency condition other than rejection of the waste by the designated facility, then the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

Under proposed section 263.21(b)(2), if hazardous waste is rejected by the designated facility listed on the manifest, the transporter must obtain the date of rejection and signature of the owner or operator of the designated facility on the manifest, retain one copy of the manifest in accordance with section 263.22, and give the remaining copies of the manifest to the rejecting designated facility. The procedures for facilities to manifest rejected wastes under 40 CFR 264.72(d), (e), and (f), or 40 CFR 265.72(d)(e) and (f) for interim status facilities, apply to any rejected wastes.

Standards for Electronic Manifests: Signatures, Security, and Systems

As provided in proposed 40 CFR 263.23(a), if a transporter of hazardous waste participates in an electronic manifest system, the electronic system used by the transporter to originate, use, transmit, or store electronic manifests must be designed and operated in accordance with the system controls, procedures, and computer security requirements described in proposed 40 CFR 262.26, as required by proposed section 263.23(a). Except where a provision of Part 263 specifically requires a paper copy of the manifest or a handwritten signature, manifest copies which are electronically signed in accordance with proposed section 262.25 and which are originated, transmitted, or maintained by electronic systems that comply with section 263.23(a), will be considered the legal equivalent to paper manifest copies bearing handwritten signatures. Proposed section 263.23(e) provides that the definitions and procedures set forth in proposed section 262.26(e), (f), (g), (h), and (i) are incorporated by reference and apply to transporters participating in electronic manifest systems. In addition, a transporter who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 263.23(f).

Notification of Discharge of Hazardous Waste

The rule would not revise the existing requirements for transporters to notify authorities of a hazardous waste discharge. In the event of a discharge of hazardous waste during transportation, existing 40 CFR 263.30(a) requires the transporter to take appropriate immediate action to protect human health and the environment, for example, notifying local authorities. Section 263.30(c) requires an air, rail, highway, or water transporter who has discharged hazardous waste to give notice, if required by 49 CFR 171.15, to the National Response Center and to report in writing as required by 49 CFR 171.16, to the Department of Transportation. Section 263.30(d) requires a water (bulk shipment) transporter who has discharged hazardous waste to give the same notice as required by 33 CFR 153.203 for oil and hazardous substances, if not already required under 33 CFR 153.203. Water (bulk shipment) transporters, as soon as they have knowledge of any discharge of hazardous waste, must immediately notify the National Response Center (NRC), U.S. Coast Guard, as required by 33 CFR 153.203. If the direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated on-scene coordinator (OSC) for the geographic area where the discharge occurs. If it is not possible to notify the NRC or the predesignated OSC immediately, reports may be made immediately to the nearest Coast Guard unit, provided the transporter notifies the NRC as soon as possible.

TREATMENT, STORAGE, AND DISPOSAL FACILITY (TSDF) REQUIREMENTS

Existing 40 CFR 264.71(a) or (b) or 265.71(a) or (b) require TSDFs receiving hazardous waste accompanied by a manifest (or a shipping paper, received from a rail or water (bulk shipment) transporter, containing all of the information required in a manifest except for the EPA identification numbers, generator's certification, and signatures) to sign and date the manifest (or shipping paper); note any significant discrepancies on each copy of the manifest (or shipping paper); give copies of the manifest (or shipping paper) to the transporter and generator; and retain a copy of the manifest (and shipping paper) for three years.

In addition, under existing section 264.72 and 265.72, the TSDF also is required to attempt to reconcile manifest discrepancies (i.e., between the quantity or type of waste described on the manifest or shipping paper and

the actual quantity or type of hazardous waste received) and, if necessary, submit a discrepancy report to EPA. Finally, if the TSDF accepts a hazardous waste for treatment, storage or disposal from any offsite source without an accompanying manifest or shipping paper and the waste is not otherwise excluded under section 261.5, the facility must prepare and submit to EPA an unmanifested waste report on EPA Form 8700-13B, as required by sections 264.76 and 265.76.

The proposed rule would amend sections 264.71(a) and (b) and 265.71(a) and (b) to enable the designated TSDF to receive, transmit and keep records of an electronic manifest, as an alternative to the paper manifest. The rule also would add new procedures at sections 264.72 and 265.72 for TSDFs to re-manifest rejected loads and residues. In addition, the rule would revise sections 264.76 and 265.76 to remove references to EPA form 8700-13B; rather, the rule would clarify that TSDFs need only submit a note that contains the required information. Finally, the rule would establish standards at new section 264.78 and 265.78 for electronic signatures, electronic systems/security, and transmission/receipt of electronic manifests.

Manifest: Completion, Transmittal and Recordkeeping

The proposed rule would amend existing sections 264.71(a) and (b) and 265.71(a) and (b) by providing that, if a facility receives hazardous waste accompanied by a manifest (or shipping paper, for certain rail or water shipments), or identifies a manifest discrepancy (i.e., discrepancy in quantity/type, full or partial load rejection, or regulated container residue) in connection with a shipment accompanied by a manifest, the TSDF or his agent must sign (by hand or electronic signature) and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received; note any significant discrepancies in the manifest on each copy; immediately return to the transporter a signed paper or electronic copy; immediately (for electronic manifests) or within 30 days of delivery (for paper manifests) send a copy of the manifest to the generator; and retain a paper or electronic copy for at least three years from the date of delivery. Note that, as required by proposed section 264.71(a)(1) and 265.71(a)(1), a TSDF participating in an electronic system must use an electronic signature in accordance with proposed section 262.25 to sign manifest copies electronically.

If an owner or operator participates with a generator in an electronic manifest system, but receives a hazardous waste shipment from a transporter that does not participate in an electronic system, the owner or operator must conduct the following activities, as required by proposed section 264.71(a)(6) or 265.71(a)(6): hand-sign and date a paper copy of the manifest or shipping paper provided by the delivering transporter, and immediately give the transporter the copy of the hand-signed manifest or shipping paper; electronically sign and date the electronic manifest covering the shipment that was forwarded to the facility by the generator, to certify that the hazardous waste covered by the manifest was received; note any significant discrepancies in the manifest (as defined in §264.72(a)) on the electronic manifest; immediately return the electronically signed electronic copy of the manifest to the generator; and retain at the facility an electronic copy of each manifest for at least three years from the date of delivery.

Discrepancy Reports, Rejected Loads, and Residues

Existing 40 CFR 264.71 and 264.72 or 265.71 or 265.72 provide that, upon noting a significant discrepancy between the quantity or type of waste described on the manifest or shipping paper and the actual quantity or type of hazardous waste received, facility owner/operators are required to note any significant discrepancy in the manifest and attempt to reconcile the discrepancy; if it is not reconciled within 15 days after receiving the waste, the facility owner/operator must immediately submit to EPA the manifest or shipping paper in question, as well as a letter describing the discrepancy and efforts to reconcile it. [Note: Existing 40 CFR 264.72(a) and 265.72(a) describe a “manifest discrepancy” as differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Existing section 264.72(a)(1) and 265.72(a)(1) also define “significant discrepancies” (e.g., for bulk waste, variations greater than 10 percent in weight).]

In the proposed rule, EPA would amend the definition of “manifest discrepancy” to include “rejected loads” and “residues”. A rejected load is a shipment of hazardous waste that the TSDF receives, but cannot accept, either because of restrictions in the TSDF’s permit, or due to capacity limitations. As a result, the TSDF must forward the waste to an alternate facility that can accept the waste. If the TSDF is unable to deliver the waste to an alternate facility, then the TSDF must return the shipment to the original generator. A residue is the regulated hazardous waste that remains in containers such as drums and in vehicles used for transport (such as tanker cars or

box cars) after most of the contents of the container has been removed, but which exceeds the quantity limits for “empty” containers set forth in 40 CFR 261.7(a). As a result, the TSDF must either forward the containers to an alternate facility that has the ability to remove the residue or return the regulated container to the original generator. The rule establishes manifest procedures at proposed 40 CFR 264.72(d) - (g) and 265.72(d) - (g) for TSDFs that originate a rejected load or residue.

Unmanifested Waste Report: Completion and Submission

Pursuant to existing 40 CFR 264.76 and 265.76, if the TSDF accepts a hazardous waste for treatment, storage, or disposal from any off-site source without an accompanying manifest or a shipping paper as described in section 263.20(e)(2), and the waste is not excluded from the manifest requirement under 40 CFR 261.5, the facility owner/operator must prepare and submit to EPA an unmanifested waste report within fifteen days of receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B (Unmanifested Waste Report).

The proposed rule would modify existing 40 CFR 264.76 and 265.76 by allowing TSDFs to submit a typed, handwritten, or electronic note instead of the current Report. The typed, handwritten, or electronic note must be legible and contain the information listed at proposed 40 CFR 264.76(a) or 265.76(a) (i.e., the same information as currently required in the Report).

Standards for Electronic Manifests: Signatures, Security, and Systems

As provided at proposed 40 CFR 264.78(a) or 265.78(a), if a an owner/operator of TSDF participates in an electronic manifest system, the electronic system used by the TSDF to originate, use, transmit, or store electronic manifests must be designed and operated in accordance with the system controls, procedures, and computer security requirements described in proposed 40 CFR 262.26. Except where a provision of Part 264 or 265 specifically requires a paper copy of the manifest or a handwritten signature, manifest copies which are electronically signed in accordance with proposed section 262.25 and which are originated, transmitted, or maintained by electronic systems that comply with section 264.78(a) or 265.78(a), will be considered the legal equivalent to paper manifest copies bearing handwritten signatures. Proposed section 264.78(e) and 265.78(e) provide that the definitions and procedures set forth in proposed section 262.26(e), (f), (g), (h), and (i) are incorporated by reference and apply to owner/operators of TSDFs participating in electronic manifest systems. In addition, an owner/operator who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 264.78(f) or 265.78(f).

2. NEED FOR AND USE OF THE COLLECTION

2(a) NEED AND AUTHORITY FOR THE COLLECTION

EPA's authority to require use of a manifest system stems primarily from RCRA 3002(a)(5). (See also RCRA §§ 3003(a)(3) and 3004.) Regulations are found in 40 CFR Part 262 (Generators), Part 263 (Transporters), and Parts 264 and 265 (Treatment, Storage and Disposal facilities). EPA published regulations for a manifest system on February 26, 1980. (See 45 FR 12724; February 26, 1980). Following is a description of the need for the modifications to the manifest system:

(1) Revised Form

EPA proposes to change the system for manifest acquisition to require the use of a universal form. One of the main advantages of converting to a universal form will be that manifest users can obtain the form from a number of sources. In particular, EPA proposes to allow state agencies, TSDFs, and commercial business form printers (e.g., Standard Register or Labelmaster) to distribute the form. In order to allow states that choose to track manifests to continue to do so, EPA is proposing to require distributors of manifests to register with the Agency. The purpose of the registry would be two-fold: 1) to ensure that the forms are printed according to the prescribed federal format (i.e., the universal format) and 2) to ensure that a unique number for each manifest will be preprinted on the form.

In revising the federal portion of the manifest form, EPA would require that each manifest include a unique, pre-printed manifest tracking number and an emergency phone number. (The Agency also would require completion of new information for international shipments, rejected loads, and container residues, as applicable, as discussed separately in this subsection.)

(a) Manifest Tracking Number

Under the proposal, the current fields for the generator's manifest document number (i.e., the generator's U.S. EPA ID number plus a unique 5-digit number that the generator assigns to each manifest) and the state manifest document number (a state-optional block) would be replaced with one mandatory field that will be called the manifest tracking number (Item 3).⁴ Note that the generator's EPA ID number would still appear on the form; however, it would not be part of the manifest tracking number. The manifest tracking number will be pre-populated with a unique preprinted number that would be supplied by the manifest printer (i.e., either the state, TSDF, or commercial printer). The manifest printer would receive approval from EPA to assign these numbers. The manifest printer would employ its numbering scheme to ensure that it preprinted a unique manifest tracking number on each manifest. The proposal would eliminate an "optional" field from the current manifest, and a new mandatory field would replace two existing fields on the manifest. This system is needed to enable the Agency to make blank manifest forms universally accessible (i.e., from states, commercial printers, and TSDFs, as specified).

(b) Emergency Phone Number

EPA proposes to designate one space on the manifest for Emergency Response information. DOT currently requires generators to use an Emergency Response phone number for most shipments of hazardous materials including all hazardous wastes that are manifested. (See 49 CFR 172.604.) While hazardous waste shipments must be shipped with an Emergency Response phone number, the current manifest does not contain a separate block for this information. DOT requires an emergency response phone number in addition to other information to identify the waste. This information is important in aiding emergency responders in dealing with an emergency involving hazardous wastes.

(2) International Shipments

Under the current regulations for exports, transporters are required to leave a copy of the manifest with U. S. Customs at the port of exit and enter the date the shipment left the U.S. in the Special Handling Block of the manifest, with the transporter's signature attesting to when the shipment leaves the U.S. According to a national transporters' association, the current rules are not well understood, and have resulted in inadvertent violations by transporters. This is due, in part, to the lack of clear instructions on the manifest itself. In addition, to the degree that the lack of clarity results in incomplete submissions, EPA is not able to accurately track exports of hazardous waste. To address these concerns, the Agency is proposing to make the export requirements more clear on the manifest itself, by providing explicit fields to record this data.

For imports of hazardous waste, a manifest is required to accompany the waste entering the U.S. However, under the current regulations, the transporter is not required to leave a copy of the manifest with U.S. Customs, although certain ports encourage the collection of import manifests. The proposal would standardize this practice, and these import manifests could be collected by Customs to be turned over to EPA's Import/Export program for tracking purposes. In addition, for international shipments within the OECD (Organization for Economic Cooperation and Development), of which the U.S. is a member, an OECD tracking form is required to be sent to EPA, in the case of imports covered by the OECD Rule.

Requiring a copy of the manifest for an import to be left with U.S. Customs would help ensure better consistency with the OECD requirements. Finally, a similar requirement for import manifest copies to be left with U.S. Customs has been proposed in connection with pending legislation to ratify the Basel agreement. Once the U.S. ratifies the Basel agreement, import data will need to be reported to the Basel Secretariat. Thus, EPA is proposing to require transporters to leave a copy of all import manifests with U.S. Customs at the point of entry to

⁴ Under the current regulations, the state manifest document number is a state optional element. Many states which track manifest shipments provide forms with manifest document numbers preprinted in Block A, or provide blocks of state manifest document numbers for those who wish to print their own forms.

the United States to be more consistent with international agreements, as well as to be able to track data on imports of hazardous waste.

(3) Manifest Automation

On September 4, 1996, EPA published a "Notice of Agency's General Policy for Accepting Filing of Environmental Reports via Electronic Data Interchange (EDI)" (61 FR 46684). The September 4, 1996 policy sets forth the basic approach for EPA to implement EDI for environmental reporting. The policy does not mandate the use of EDI; rather, it establishes a consistent framework for implementing EDI across EPA programs, so that the benefits of EDI may be maximized. The policy specifically recognizes that other methods of conducting electronic commerce would emerge, and that EDI may not be appropriate for all types of facilities and reports.

EPA first endorsed EDI for environmental reporting in its earlier "Policy on Electronic Reporting," 55 FR 31030 (July 30, 1990). This initial EPA policy statement was intended to promote a uniform Agency approach to electronic reporting that was compatible with current industry and government practices. The policy advocated a standards-based approach grounded on the use of American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 standard formats and communications protocols for EDI.

In accordance with this policy, EPA is proposing to allow waste handlers (generators, transporters, and treatment, storage or disposal facilities) the option of preparing, transmitting, signing, and storing their manifests electronically. The manifest automation standards include three major components: (1) the EDI and Internet Forms file standards for the electronic manifest; (2) a proposed standard for electronically signing the manifest with electronic signatures; and (3) a proposed set of computer security standards for computer systems that would create, process, and store electronic manifest records. EPA believes that standards in these three areas are most essential to the successful implementation of an automated manifest. EPA is proposing an automated approach to manifesting hazardous waste, because the Agency believes that automated technologies present tremendous potential for reducing the significant paperwork burdens of the current manifest system. EPA also believes that automated manifests will give rise to the exchange of higher quality manifest data, and to more timely and efficient access to this data. As a result, both the tracking of hazardous waste shipments by waste handlers and the management of state hazardous waste programs should be more effective.

Further, this action is consistent with the requirements of the Government Paperwork Elimination Act (GPEA). GPEA generally mandates that agencies accept, by October, 2003, electronic documents and electronic signatures for the transactions that agencies conduct with the public and with regulated parties.

While the transition to fully automated systems will surely take some time to implement, the Agency is motivated by a desire to transform the manifest quite dramatically from its current paper-based approach to one that supports paperless manifest completion and transmission. The Agency further desires to establish an "open" or non-proprietary set of standards that will allow the information technology community broad latitude to develop innovative hardware and software solutions. EPA believes that its proposed approach to manifest automation will allow automation options to develop for both large and small facilities, so that many may benefit from the greater efficiencies available with an automated system. EPA emphasizes, of course, that the automated manifest will be an option available to those who wish to use it; it is not the Agency's intent to mandate its use. Those entities that are more comfortable with the paper form will still be able to obtain and use the paper manifest form to track their hazardous waste shipments.

This approach is consistent with EPA's efforts across all its environmental programs to promote the adoption of electronic reporting, and to ensure implementation in a consistent manner that is compatible with current practices in the private sector. EPA is evaluating all of its programs for regulatory and procedural barriers to the use of electronic records and reports. Thus, this proposal aims at both eliminating impediments to automation in the current manifest regulations, and at developing standards that will promote consistent and widespread implementation of an automated waste tracking document.

(4) Rejected Loads and Residues

EPA proposes to improve the tracking of rejected loads and container residues by adding new requirements for completing the manifest to further clarify procedures for returning rejected shipments or container residues back to the generator. EPA is proposing these changes in response to stakeholder

recommendations made during the prior Negotiated Rulemaking and an audit conducted by EPA's Office of Inspector General (OIG) in 1995. The OIG's audit identified several areas where the Agency could make changes to improve the manifest system so that the manifest system provides generators, EPA, or the states with the means to track hazardous waste to its final destination. The OIG audit also provided three specific recommendations related to residues and rejected loads. EPA believes the changes suggested by the Negotiated Rulemaking stakeholders and the OIG will improve hazardous waste tracking.

(5) Unmanifested Waste Reports

Current regulations found at 40 CFR 264.76 and 265.76 require TSDFs to submit EPA form 8700-13B, which must be designated 'Unmanifested Waste Report.' However, EPA announced in the January 28, 1983 FR that it was deleting EPA form 8700-13B and its predecessor, EPA form 8700-13, which had appeared in the May 19, 1980 FR. Although both forms were linked to annual reporting requirements at that time and were supposed to be adapted for unmanifested waste reporting, EPA deleted them due to the change from annual to biennial reporting. EPA never published a new form for unmanifested waste reporting and the form now required for biennial reporting, EPA form 1300-A/B, 'Hazardous Waste Report Instructions and Forms,' is not adaptable for unmanifested waste reporting. Although EPA never published a replacement form for reporting unmanifested waste, the regulations still require this form which is generally unavailable to those seeking a copy. The proposed rule would clarify that TSDFs need only prepare and submit a note to EPA containing specified information.

2(b) USE AND USERS OF THE DATA

Following is a description of the use and users of the manifest data that would be generated from the proposed modifications.

(1) Revised Form

In developing the revised form, EPA has eliminated several unnecessary data elements from the manifest. EPA also has made the manifest completely uniform, enabling waste handlers to obtain their blank manifests from any source (i.e., states, commercial printers, TSDFs, as specified). The streamlined manifest will also be less burdensome to complete. Finally, a universal form also enables EPA to fully automate the manifest system. In revising the federal portion of the manifest form, EPA would now require that each manifest include a unique, pre-printed manifest tracking number and an emergency phone number.

(a) Manifest Tracking Number

The advantage of requiring a unique, pre-printed manifest tracking number on each manifest is that it would allow waste handlers to acquire uniquely numbered manifests from numerous sources, without having to obtain a different set of forms from each State in which it does business. Also, large TSDFs would be able to register and print their own manifests for use by their multi-state customers, and would no longer need to stock multiple state formats of the manifest.

(b) Emergency Phone Number

EPA hopes that the additional instructions for emergency phone numbers (as well as a reduction in other optional phone numbers on the manifest) will facilitate the emergency response process by making it clearer which number is to be used in an emergency. It also would make the EPA manifest requirements consistent with DOT's requirements for shipping papers, creating less confusion among the regulated community.

(2) International Shipments

The proposed rule would clarify the procedures for transporters to complete the manifest for export and import shipments. These data elements will facilitate the tracking of international shipments by EPA (e.g., OECA) and other countries. The rule also would standardize the transporter requirements for export and import shipments. Currently, transporters exporting hazardous waste must leave a copy of the manifest with the U.S. Customs official at the point of departure from the U.S.; however, there is currently no similar requirement for transporters importing hazardous waste into the U.S. The proposed rule would standardize this practice for

imports, eliminating potential confusion that transporters may have regarding import vs. export shipment procedures.

(3) Manifest Automation

EPA anticipates that the automated manifest will affect all types of hazardous waste handlers, including large and small quantity generators, transporters, and treatment, storage, and disposal facilities. The Agency is making every effort to extend the availability of automated manifesting to all types of waste handlers. For example, large generators and TSDFs may well find it convenient and economical to extend EDI systems already in place for financial/purchasing information to their waste management departments. These larger facilities may adopt a traditional EDI model, that involves transmitting the standard EDI formats across secure Value Added Networks or VANs, or choose to deploy a non-traditional EDI model which uses secure E-mail technology to pass EDI transaction sets over the Internet. Mid-sized firms and some small entities may find it more practical to implement the automated manifest as a web form which they access and complete while connected to the Internet.

In addition, this proposed approach would reach further to many other small generators, who would not otherwise find it practical or efficient to obtain or use their own computer equipment to transmit only a handful of manifests. This applicability to small generators is possible because transporters picking up shipments could use remote, portable devices to obtain a generator's electronic signature on the electronic manifest. In addition, a small generator might also authorize a preparer to initiate and sign the electronic manifest for the generator. The proposed rule would clarify that, as with the existing paper manifest system, a generator may authorize another person (e.g., a contractor, transporter or TSDF) to complete and sign the manifest on the generator's behalf. Thus, the proposal may well impact all varieties of hazardous waste shipments and handlers.

(4) Rejected Loads and Residues

EPA proposes to improve the tracking of rejected loads and residues by adding new requirements for completing the manifest to further clarify procedures for returning rejected shipments or container residues back to the generator. In general, the new regulations would require TSDFs to issue a new manifest for a rejected load or residue that is sent off-site, either back to the generator or to an alternate facility. EPA is proposing to modify the discrepancy block on the manifest to more clearly indicate residues and rejected loads. Space would be provided to identify the material affected by the discrepancy and the reason for the discrepancy. The new procedures would assist the generator or alternate designated facility, as applicable, in understanding the circumstances and final disposition of the waste.

(5) Unmanifested Waste Reports

The rule proposes changes in the way a TSDF may submit the 'Unmanifested Waste Report' to the EPA Regional Administrator, which is required within 15 days after accepting the waste at a TSDF. Currently, EPA requires TSDFs who accept unmanifested waste to prepare an "Unmanifested Waste Report" (form 8700-13B) for waste that should normally be shipped using a manifest. (See 40 CFR 264.76 and 265.76) Under this proposal, a typed, handwritten, or electronic note may be submitted instead of this report.

3. THE RESPONDENTS AND THE INFORMATION COLLECTED

3(a) RESPONDENTS AND SIC CODES

The following is a list of SIC codes associated with large and small quantity generators, transporters, and TSDFs affected by the manifest information requirements covered under this ICR:

(1) Generators

- 22 - Textile Mills
- 27 - Printing and Publishing
- 30 - Rubber and Miscellaneous Plastic
- 34 - 39 Machinery and Mechanical Products

261 - 266 Pulp and Paper
 281 - Industrial Inorganic Chemicals
 282 - Plastic Materials, Synthetic Resins, etc.
 283 - Drugs
 284 - Soap, Detergents, etc.
 285 - Paints, Varnishes, etc.
 286 - Industrial Organic Chemicals
 461 - Pipelines, except Natural Gas
 517 - Wholesale Petroleum Marketing
 551 - Motor Vehicle Dealers (New and Used)
 721 - Laundry Cleaning and Garment Services
 723 - Crop Preparation Services for Market, except Cotton Ginning
 726 - Funeral Services and Crematories
 739 - Miscellaneous Business Service
 753 - Automotive Repair Shops
 2821 - Plastic Materials
 2822 - Synthetic Rubber
 2823 - 2824 Synthetic Fibers
 2421, 2499, 2800 - Lumber and Wood Products
 2865, 2869, 2900 - Organic Chemicals Petroleum Refining and Related Products
 3011 - Tires and Inner Tubes
 3080 - Miscellaneous Plastic Products
 3111 - Leather Tanning and Finishing
 3253 - Ceramic Wall and Floor Tile
 3292 - Asbestos Products
 3300 - Primary Metal Industries
 3400 - Fabricated Metal Products, not elsewhere classified
 3500 - Industrial and Commercial Machinery and Computer Equipment
 3600 - Electronics and Other Electrical Equipment & Components, except Computer Equipment
 3700 - Transportation Equipment
 3851 - Ophthalmic Goods
 4200 - Motor Freight Transportation Warehousing
 4900 - Electric, Gas, and Sanitary Services
 5093 - Scrap and Waste Materials
 8000 - Health Services
 8220 - Colleges, Universities, Professional Schools, and Junior Colleges
 8730 - Research, Development, and Testing Services
 8999 - Services, not elsewhere classified
 9511 - Air and Water Resource and Solid Waste Management
 9711 - National Security
 9900 - Nonclassifiable Establishments
 9999 - Nonclassifiable Establishments

(2) Transporters

42 - Hazardous Waste Transporter
 47 - Hazardous Waste Transporter

(3) Treatment, Storage, and Disposal Facilities (TSDFs)

4953 - Commercial TSDF

3(b) INFORMATION COLLECTED

The following subsections summarize the data items and respondent activities required for each information collection discussed in this ICR. The information collection requirements are divided into separate categories for generators, transporters, and TSDFs and are further categorized into subsections as follows:

- GENERATOR REQUIREMENTS
 - (1) Manifest: Completion, Transmittal, and Recordkeeping
 - (2) Standards for Electronic Manifests: Signatures, Security, and Systems
 - (3) Exception Reports: Completion, Submission, and Recordkeeping
- TRANSPORTER REQUIREMENTS
 - (1) Manifest: Completion, Transmittal, and Recordkeeping
 - (2) Compliance with the Manifest
 - (3) Standards for Electronic Manifests: Signatures, Security, and Systems
 - (4) Notification of Discharge of Hazardous Waste
- TREATMENT, STORAGE, AND DISPOSAL FACILITY (TSDF) REQUIREMENTS
 - (1) Manifest: Completion, Transmittal and Recordkeeping
 - (2) Discrepancy Reports, Rejected Loads, and Residues
 - (3) Unmanifested Waste Report: Completion and Submission
 - (4) Standards for Electronic Manifests: Signatures, Security, and Systems

3(c) GENERATOR REQUIREMENTS

(1) Manifest: Completion, Transmittal, and Recordkeeping

Existing 40 CFR 262.20 requires generators transporting, or offering for transportation, hazardous waste for offsite management or disposal to prepare a manifest (8700-22) and, if necessary, continuation sheets (8700-22A). Generators must prepare these forms in accordance with sections 262.20 and 262.23, 262.54, and 262.60, as appropriate, as well as the instructions in the appendix to Part 262. Generators must transmit and keep records of the manifest in accordance with existing sections 262.23, 262.40, 262.44, 262.54, and 262.60, as appropriate.

The proposed rule would modify the existing manifest form and amend the generator manifest requirements to enable them to complete, keep records of, and transmit either paper or electronic manifests. Generators using a paper form must continue to comply with the existing manifest requirements, as discussed above. Generators using an electronic manifest must comply with new requirements proposed at 40 CFR 262.24, 262.25, and 262.26 for manifest use, signature, and electronic systems/security, as well as existing manifest requirements, as applicable (e.g., 40 CFR 262.40).

Finally, the proposed rule would change the manifest tracking system for imports and exports of hazardous waste to make it more clear on the manifest itself that the shipment is either an import or an export. Transporters importing hazardous waste also would be required to leave a copy of the manifest at U.S. Customs, as is currently the case for exports.

(a) Manifest Completion: Domestic and International Shipments

Under 40 CFR 262.20, as amended by the proposal, generators may use a paper or electronic manifest format when manifesting their hazardous waste. Generators using a paper form must prepare their manifest on EPA Form 8700-22 and, if necessary, Form 8700-22A, according to the instructions in the appendix to Part 262. Generators using an electronic format must use either the Electronic Data Interchange (EDI) format described in proposed section 262.20(a)(3)(i), or the Internet Forms format described in proposed section 262.20(a)(3)(ii).

The proposed rule also would amend 40 CFR 262.54, which currently requires primary exporters of hazardous waste to complete the manifest according to sections 262.20 through 262.23, except as provided under section 262.54(a)-(d). The proposed rule would amend section 262.54(c) by requiring that, in the International Shipment block, the primary exporter check the export box and enter the point of exit (city and State) from the United States.

In addition, the rule would amend 40 CFR 262.60, which currently requires the importer to prepare a manifest in accordance with section 262.20, except as modified by section 262.60(b)(1)-(2). The proposed rule would add a new section 262.60(d), requiring that, in the International Shipment block, the importer check the import box and enter the point of entry (city and State) into the United States.

Finally, EPA has modified the manifest form as follows:

- Added the following as EPA-required elements on the form:
 - A unique, pre-printed tracking number on each manifest; and
 - An emergency phone number (currently required on shipping papers pursuant to Department of Transportation shipping paper regulations at 49 CFR 172).
 - Standardized the wording on the generator certification to the wording on DOT's Shipper's Certification found at 49 CFR 172.204.
 - Removed the 5-digit manifest document number from the form (the pre-printed manifest tracking number will now serve as the unique identifier on each manifest).
- (i) Data Items

This section lists the data that generators must include in completing the paper and electronic manifest formats required under 40 CFR 262.20, as amended:

- The generator's U.S. EPA ID and the manifest tracking number;
- The total number of pages used to complete the manifest;
- The generator's name and mailing address;
- The generator's phone number;
- The emergency response phone number;
- The name and U.S. EPA ID number for all transporters;
- The designated waste facility's name and site address;
- The U.S. EPA ID number of the designated facility;
- The U.S. DOT description of the waste;
- The container description;
- The total quantity of each waste described;
- The unit of measure;
- Special handling instructions and additional information; and
- The generator's statement and preparer's certification.

For primary exporters only: The primary exporter must prepare the manifest in accordance with section 262.20 through 262.23, except as provided under section 262.54(a)-(d), as amended:

- In lieu of the site name, site address and EPA ID number of the designated facility, provide the name and site address of the consignee;
- In lieu of the name, site address and EPA ID number of a permitted alternate
- In the International Shipments block, check the export box and enter the point of exit (city and State) from the United States ; and
- Add to the end of the first sentence of the certification of the manifest form: "and conforms to the terms of the attached EPA Acknowledgment of Consent."

Note for primary importers only: The primary importer must prepare the manifest in accordance with section 262.20, except as provided in section 262.60(b) and (d), as amended:

- In place of the generator's name, address, and EPA identification number, the name and address of the foreign generator and the importer's name, address, and EPA identification number must be used;
- In place of the generator's signature on the certification statement, the U.S. importer or his agent must sign and date the certification and obtain the signature of the initial transporter; and
- In the International Shipment block, a check in the import box and the point of entry (city and State) into the United States must be entered.

(ii) Respondent Activities

In order to provide the data items listed above, respondents must perform the following activities required by 40 CFR 262.20, 262.54, and 262.60, as applicable, as amended by the proposed rule:

- Complete the manifest manually or electronically for domestic, export, and import shipments; and
- Complete continuation sheet, if required.

(b) Acquiring the Manifest

The existing 40 CFR 262.21 requires the generator to obtain blank manifest forms from the state to which the shipment is manifested (consignment state), if it supplies a manifest. If it does not, the generator must obtain new forms from its own state (generator state). If neither supplies a manifest, the generator may obtain a manifest from any source.

The proposed rule would revise section 262.21 by providing that blank manifest forms may be obtained from several sources (i.e. any state agency that prints manifests, commercial form printers, and TSDFs and preparers). The source of the manifests (i.e., manifest printer) must be registered with EPA to ensure consistency with the required federal specification for a universal manifest form. The source must not print the manifest form without submitting an application to EPA and subsequently receiving approval of its prefix and (sequential) numbering system. The application must contain the information specified in section 262.21(c)(1).

(i) Data Items

- An application containing the information required by proposed section 262.21(c)(1):
 - Name of registrant's organization (i.e., name of state and department or company);
 - Name of contact person and telephone number;
 - Mailing address;

- EPA identification number, if applicable;
- Brief description of registrant's government or business activity;
- Proposed, unique three-letter prefix for generating manifest tracking numbers, including an explanation of any limitations to the use of such a prefix, if any (e.g., historic numbers to avoid);
- Proof of the manifest; and
- Signed certification that the registrant will ensure that all printing instructions and specifications established by EPA are followed and that none of its tracking numbers will be intentionally duplicated.

(ii) Respondent Activities:

- The applicant must prepare and submit an application to EPA that includes the information in proposed 40 CFR 262.21(c)(1).

(c) **Manifest Transmittal and Recordkeeping**

The proposed rule would require generators using the paper manifest to continue following the existing requirements for manifest transmittal and recordkeeping at 40 CFR 262.23, 262.40(a), and 262.44(a), as applicable. The proposed rule would establish new transmittal requirements for electronic manifests at proposed 40 CFR 262.24 and require them to comply with the existing recordkeeping requirements at 40 CFR 262.40(a) and 262.44(a). In addition, the proposed rule would add a new requirement at 40 CFR 262.60(e) for generators to provide an additional copy of the manifest to transporters for delivery to the U.S. Customs official at the point of departure. Finally, generators must continue to comply with the existing requirements for exports (e.g., provide transporter with an Acknowledgment of Consent) and reclamation agreements, if applicable.

(i) Data Items

This section lists the data items associated with the manifest transmittal and recordkeeping requirements:

Paper Manifests

- A generator must ensure that the manifest consists of at least the number of copies to provide the generator, each transporter, and the designated facility with one copy each for their records and another copy to be returned to the generator, in accordance with existing section 262.22. He/she must also sign and give copies of the manifest to the transporter along with the hazardous waste in accordance with section 262.23(b), and retain copies of the manifest in accordance with existing section 262.23(a) and section 262.40(a),
- For shipments of hazardous waste within the U.S. solely by water (bulk shipments only), the generator, as required by existing section 262.23(c), must send three copies of the manifest to the owner/operator of the designated facility or the last water transporter to handle the waste in the U.S. if exported by water.
- For rail shipments of hazardous waste within the U.S. which originate at the site of generation, the generator, as required under existing section 262.23(d), must send at least three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S. if exported by rail.

Electronic Manifests

- A person who prepares a generator's hazardous waste shipment for off-site transportation may sign an electronic manifest on behalf of the generator, as provided by proposed section 262.24(b). Such a preparer may sign the generator's certification on the manifest if the generator has authorized the preparer in writing to initiate manifests on behalf of the generator and the preparer provides a paper copy of the manifest for the generator's records, with a notation in the generator's certification block indicating that the manifest was signed electronically by the preparer on behalf of the generator.

- A generator originating an electronic manifest must electronically sign the manifest certification, transmit the manifest electronically to the initial transporter, and obtain back from this transporter a copy of the manifest bearing his or her electronic signature and the date of acceptance of the shipment, as required by proposed section 262.24(c)(1) and (2). If the transporter is not able to accept and sign an electronic manifest, the generator must instead obtain from the transporter a handwritten signature and date of acceptance on a paper copy of the manifest or other shipping paper.
- The generator must retain one electronic manifest copy, and any hard copy of a manifest or shipping paper signed by the initial transporter, in accordance with proposed section 262.24(c)(3) and existing section 262.40(a) and 262.44(a). If the initial transporter is not able to accept and sign an electronic manifest, or if the generator signs an electronic manifest using the initial transporter's electronic system but is not able to take back an electronic copy, then the generator must retain a hard copy of the manifest or shipping paper signed by the initial transporter. As required under proposed section 262.24(c)(4), the generator must provide the initial transporter with a hard copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle in accordance with existing section 263.20(c) and 49 CFR 177.817(e).
- If any transporter listed on the manifest is not able to accept, sign, and transmit electronic manifest copies, then the generator must also send an electronic manifest copy to the designated facility, as required by proposed section 262.24(d). The copy transmitted to the designated facility should bear the generator's electronically signed certification, and either the initial transporter's electronic signature and date of acceptance, or a notation indicating that the transporter signed a manifest copy by hand and the date that the shipment was delivered to the initial transporter.
- For shipments of hazardous waste within the United States solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, then the generator may send an electronic copy of the manifest, dated and signed in accordance with this section, to the owner or operator of the designated facility, as required by proposed section 262.24(e).
- For rail shipments of hazardous waste within the United States which originate at the site of generation, if the next non-rail transporter (if any) or the designated facility is able to accept, sign, and transmit electronic manifests, then the generator may send an electronic copy of the manifest, dated and signed in accordance with this section, to the next non-rail transporter, if any, or to the owner or operator of the designated facility, if transported solely by rail, as required by proposed section 262.24(f).
- For rail shipments or water shipments of hazardous waste which are exported from the United States, if the last rail transporter or last water transporter to handle the waste in the United States is able to accept, sign, and transmit electronic manifests, then the generator may send an electronic copy of the manifest, dated and signed in accordance with this section, to the last rail transporter or last water transporter to handle the waste in the United States, as required at proposed section 262.24(g).

Exports: Acknowledgment of Consent

- For exports, the primary exporter must provide the transporter with an Acknowledgment of Consent and copies of the manifest or shipping papers, as required by existing section 262.54(h) and (i).

Imports: Additional Copy of Manifest

- For imports, the primary importer must provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the

United States in accordance with proposed section 263.20(g), as required by proposed section 262.60(e).

Reclamation Agreements

- In the event a small quantity generator's waste is reclaimed under a contractual agreement pursuant to existing section 262.20(e)(1), the small quantity generator must retain the reclamation agreement for at least three years from the date of termination or expiration of the agreement, as required by existing section 262.20(e)(2).

(ii) Respondent Activities

Following are the transmittal and recordkeeping requirements for generators using paper and electronic manifests.

Paper Manifests

Generators using a paper manifest must transmit and keep records of the manifest in accordance with existing sections 262.22, 262.23, 262.40 and 262.44:

- Sign the manifest certification by hand and obtain the signature of the initial transporter and date of acceptance on the manifest in accordance with section 262.23(a);
- Keep a copy of the manifest and give the remaining copies to the initial transporter, in accordance with sections 262.23(a) and (b) and 262.40(a) or 262.44(a); and
- Keep a copy of the manifest returned from the designated facility for at least three years from the date the waste was accepted by the initial waste transporter, in accordance with section 262.40(a) or 262.44(a).
- For shipments solely by water, send three copies of the manifest, dated and signed in accordance with section 262.23(a), to the designated facility or the last water transporter to handle the waste in the U.S., as required by section 262.23(c) [Note: Copies of the manifest are not required for each transporter.].
- For shipments by rail originating at the site of generation, send at least three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S., as required by section 262.23(d).

Electronic Manifests

Generators using an electronic manifest must transmit and keep records of the manifest in accordance with proposed section 262.24 and existing sections 262.40 or 262.44:

- Electronically sign the manifest certification, transmit the manifest electronically to the initial transporter, and obtain back from the initial transporter a copy of the manifest bearing the electronic signature of the initial transporter and the date of acceptance of the shipment, as required by proposed section 262.24(c)(1) and (2).
- Note: If the transporter is not able to accept and sign an electronic manifest, the generator must obtain from the transporter a handwritten signature and date of acceptance on a paper copy of the manifest or other shipping paper, as required by proposed section 262.24(c)(2).
- Note: Persons preparing the manifest for generators must sign the generator's certification on the manifest if the generator has authorized the preparer in writing to initiate manifests on behalf of the generator and provide a paper copy of the manifest for the generator's records, as required by proposed section 262.24(b).

- Retain one electronic manifest copy, and any hard copy of a manifest or shipping paper signed by the initial transporter, in accordance with existing section 262.40(a), and provide the initial transporter with a hard copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle in accordance with section 263.20(c) and 49 CFR 177.817(e), pursuant to proposed section 262.24(c)(3) and (4).
- If any transporter listed on the manifest is not able to accept, sign, and transmit electronic manifest copies, send an electronic manifest copy to the designated facility as required by proposed section 262.24(d).
- For shipments of hazardous waste within the United States solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest, dated and signed in accordance with this section, to the owner or operator of the designated facility, as required by proposed section 262.24(e).
- For rail shipments of hazardous waste within the United States which originate at the site of generation, if the next non-rail transporter (if any) or the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest, dated and signed in accordance with this section, to the next non-rail transporter, if any, or to the owner or operator of the designated facility, if transported solely by rail, as required by proposed section 262.24(f).
- For rail shipments or water shipments of hazardous waste which are exported from the United States, if the last rail transporter or last water transporter to handle the waste in the United States is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest, dated and signed in accordance with this section, to the last rail transporter or last water transporter to handle the waste in the United States, as required by proposed section 262.24(g).

Exports: Acknowledgment of Consent

- Primary exporters must provide the transporter with an Acknowledgment of Consent and copies of the manifest or shipping papers, as required by existing section 262.54(h) and (i).

Imports: Additional Copy of Manifest

- Primary importers must provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the United States in accordance with proposed section 263.20(g), as required by proposed section 262.60(e).

Reclamation Agreements

- A small quantity generator operating under a tolling agreement must retain a copy of each reclamation agreement, if applicable, for at least three years after the termination or expiration of the agreement, as required by existing section 262.20(e)(2).

(2) Standards for Electronic Manifests: Signatures, Security, and Systems

Proposed 40 CFR 262.25 and 262.26 would establish standards for electronic signatures on the manifest, maintenance of computer systems/security, and transmission/receipt of electronic manifests.

(a) Electronic Manifest Signatures

The proposed rule would require that all electronic manifests be signed with electronic signatures which meet either the digital signature standard described at proposed section 262.25(c) through (f), or the secure

digitized signature standard described at proposed section 262.25(g).⁵ Individuals that want to use the digital signature must subscribe to a Certification Authority, operating in accordance with an applicable Certificate Policy and designated Public Key Infrastructure (PKI), in order to receive a digital certificate. The Certification Authority will issue digital certificates to individual subscribers who establish sufficiently their identity in accordance with the applicable Certificate Policy, as provided by proposed section 262.25(f).

In addition, proposed section 262.25(f)(3) provides that any person who has reason to believe that a private key has been lost or compromised must report that fact immediately to the Certification Authority, who must act on that information promptly and must update the affected certificate's status in accordance with the Certificate Policy's procedures.

(i) Data Items

- Application for Digital Certificate.
- Report of lost or compromised private key.

(ii) Respondent Activities

- Individuals that want to sign their electronic manifests using the digital signature must obtain a digital certificate by applying to a Certification Authority operating in accordance with an applicable Certificate Policy and designated Public Key Infrastructure (PKI), as required by proposed section 262.25(f).
- A person who has reason to believe that a private key has been lost or compromised must report this fact to the Certification Authority, as required by proposed section 262.25(f)(3).

(b) Electronic Manifest Systems and Security

Proposed 40 CFR 262.26(a) provides that electronic copies of manifests, which are electronically signed in accordance with section 262.25, and which are generated or maintained by electronic systems that meet the security requirements of section 262.26(c), will be considered the legal equivalent to paper copies bearing handwritten signatures, for the purposes of satisfying any requirement to initiate, use or transmit a manifest, or to retain a manifest copy or produce it for inspection.

Electronic systems used to satisfy the requirements in these regulations to initiate, use, transmit, or retain records of manifests, must employ controls and procedures to ensure the authenticity and integrity of their electronic records, and to ensure that the signer of these records cannot readily repudiate the signed records as genuine, as provided at proposed section 262.26(c). Proposed section 262.26(c)(1) requires validation of computer systems by an independent, qualified information systems security professional who has prepared a written assessment of the system and has certified that the system generates and processes data accurately and reliably, that the system performs consistently and as intended, that the system is fully interoperable with any other electronic manifest system(s) with which the system exchanges electronic manifests, that the system is designed and can be operated to meet the computer security standards of this section and good security practices common to trusted electronic commerce systems, and that appropriate precautions have been taken to ensure that these security measures cannot be avoided or defeated.

Proposed section 262.26(c)(9) requires the establishment of controls on distribution of, access to, and use of systems documentation that describes how the system operates, how the system components must be installed and configured, how system security features are implemented, or how the system is maintained. These controls extend as well to changes or revisions to system documentation or operating procedures.

⁵ A "digital signature" means an electronic signature that is based on private key/public key cryptography, and which allows both the identity of the signer and the integrity of the data to be verified. A "secure digitized signature" means an electronic signature that is created with a system which includes a digitizer device that collects signature input from an electronic stylus, and which includes software which can process signature input as specified.

Proposed section 262.26(c)(10) requires the establishment of, and adherence to, written policies that hold individuals accountable and responsible for actions initiated under their electronic signatures, in order to deter record and signature falsification.

(i) Data Items

- A written assessment of the system and a certification that the system generates and processes data accurately and reliably, that the system performs consistently and as intended, that the system is fully interoperable with any other electronic manifest system(s) with which the system exchanges electronic manifests, that the system is designed and can be operated to meet the computer security standards of this section and good security practices common to trusted electronic commerce systems, and that appropriate precautions have been taken to ensure that these security measures cannot be avoided or defeated, as required by proposed section 262.26(c)(1).
- Procedures for the distribution or change of system documentation controls, as required by proposed section 262.26(c)(9); and
- Written policies that hold individuals accountable and responsible for actions initiated under their electronic signatures, in order to deter record and signature falsification, as required by proposed section 262.26(c)(10).

(ii) Respondent Activities

- Persons must obtain a written assessment and certification of their system and establish controls and written policies, as required by proposed sections 262.26(c)(1), (9) and (10).

(c) **Special Procedures for Transmissions**

Proposed 40 CFR 262.26(f), (h), and (j) establish procedures for transmitting and receiving the electronic manifest. Proposed section 262.26(f) provides that, when an electronic manifest transmission is received, the recipient shall promptly generate and transmit to the sender an acknowledgment that confirms the receipt of translatable data. Proposed section 262.26(h) requires that, if a positive acknowledgment is not received within 12 hours of a transmission, then the person who initiated the transmission shall promptly re-transmit the electronic manifest. (If a person is unable to initiate or transmit a manifest electronically, it must use the paper manifest required under section 262.20(a)(2).) Finally, proposed section 262.26(j) provides that each person who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received. The transmission log shall be maintained without modification and retained for three years among the person's manifest records.

(i) Data Items

- Acknowledgment of receipt, as required at proposed section 262.26(f).
- Electronic manifest.
- Transmission log that includes for each manifest transmission sent or received (262.26(j)):
 - The date, time, and destination/source; and
 - Identification of who had access to the person's sending or receiving system during the creation, transmission, or receipt of data.

(ii) Respondent Activities

- When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data, as required by proposed section 262.26(f);

- If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest, as required by proposed section 262.26(h).
 - Note: If a person is unable to initiate or transmit a manifest electronically, it must use the paper manifest required under section 262.20(a)(2).
- Maintain for three years a transmission log covering all electronic manifests sent or received, as required by proposed section 262.26(j).

(3) Exception Reports: Completion, Submission, and Recordkeeping

The proposed rule would not modify the existing procedures for generators to prepare and submit exception reports under 40 CFR 262.42.

(a) Large Quantity Generators

(i) Data Items

- In the event a large quantity generator does not receive a copy of the signed manifest from the designated facility owner/operator within 35 days of the date the waste was accepted by the initial transporter, the large quantity generator must contact the transporter and/or the owner/operator of the designated facility to determine the status of the hazardous waste. The large quantity generator must submit an exception report to EPA if he/she has not received a copy of the signed manifest from the designated facility owner/operator within 45 days of the date the waste was accepted by the initial transporter and must retain a copy of the exception report for at least three years from the due date of the report, in accordance with existing sections 262.42(a) and 262.40(b). The report must contain the following data:
 - A legible copy of the manifest for which the generator does not have confirmation of delivery, as required by section 262.42(a)(2)(i); and
 - A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts, as required by section 262.42(a)(2)(ii).

(ii) Respondent Activities

In order to provide the data items listed above, large quantity generators must perform the following activities, as required by existing section 262.42(a)(i) and (ii):

- Prepare and submit a signed cover letter to EPA explaining the generator's efforts to locate the hazardous waste and the results of those efforts, along with a legible copy of the manifest, in accordance with section 262.42(a)(2)(ii); and
- Keep a copy of each exception report, as required by section 262.40(b).

(b) Small Quantity Generators

(i) Data Items

In the event a small quantity generator does not receive a copy of the signed manifest from the owner/operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter, he/she must submit to the EPA Regional Administrator a legible copy of the manifest with some indication that he has not received confirmation of delivery, in accordance with existing section 262.42(b).

(ii) Respondent Activities

- The small quantity generator must submit a legible copy of the manifest with some indication that the waste has not been delivered, as required by section 262.42(b).

3(d) TRANSPORTER REQUIREMENTS**(1) Manifest: Completion, Transmittal, and Recordkeeping**

Existing 40 CFR 263.20, 263.21, and 263.22 detail the completion, transmittal and recordkeeping requirements of manifests or shipping papers for hazardous waste transporters, including those exporting hazardous waste outside the U.S. In accordance with these requirements, transporters must complete specified parts of the manifest (or shipping paper, as provided in section 263.20(e)(2)), retain a copy of the manifest (or shipping paper), transmit copies to specified parties, and ensure that the original manifest or shipping papers accompany the waste to its destination.

The proposed rule would amend existing 40 CFR 263.20 by (i) requiring transporters that import or export hazardous waste from the United States to sign and date the manifest in the International Shipments block to indicate the date that the shipment either entered or left the United States; (ii) requiring transporters importing hazardous waste into the United States to provide a copy of the manifest to the U.S. Customs official at the point of entry into the United States (transporters exporting hazardous waste must provide a copy to U.S. Customs under existing requirements); and (iii) establishing procedures for transporters to use electronic manifests, as an alternative to the paper manifest. EPA also would modify the procedures for transporters to re-manifest shipments that cannot be delivered to the designated facility (263.21) and add a new section 262.23 to provide standards for electronic signatures, electronic systems/security, and transmission/receipt of electronic manifests.

(a) Hazardous Waste Transporters (except as exempted by 40 CFR 263.20(e) and (f))

The proposed rule would revise the requirements at existing 40 CFR 263.20 to enable the transporter to use a paper or electronic manifest. Section 263.20(b), as amended, would provide that, except for certain rail and water transporters exempted under sections 263.20(e) and (f), transporters transporting hazardous waste outside the U.S. (263.20(g)) and transporters transporting hazardous waste pursuant to a reclamation agreement (263.20(h)), the transporter must sign (by hand or electronic signature) and date the manifest acknowledging acceptance of the waste from the generator before transporting the hazardous waste. If the generator participates in an electronic manifest system, but the transporter is not able to accept or sign electronic manifests, then the transporter must acknowledge acceptance of the hazardous waste by signing by-hand and dating a paper copy of the manifest or other shipping paper. A transporter participating in an electronic manifest system must use an electronic signature in accordance with the provisions of proposed section 262.25. Before leaving the property, the transporter must return or transmit a signed paper or electronic copy of the manifest to the generator.

In addition, the transporter must ensure that a paper copy of the manifest or other shipping paper accompanies the shipment and is readily available and recognizable; and for shipments involving an electronic manifest, ensure that the manifest is transmitted to the next transporter or to the designated facility prior to or at the time of the delivery of the shipment, as required by section 263.20(c), as amended.

A transporter who delivers a hazardous waste to another transporter or to the designated facility must obtain the date of delivery and a handwritten or electronic signature of the transporter or designated facility; retain a copy in accordance with existing section 263.22; and give the remaining paper copies of the manifest, or transmit an electronic copy of the manifest, to the accepting transporter or designated facility, as required at section 263.20(d), as amended.

(i) Data Items

- Electronic manifest, paper manifest, and/or shipping paper.

(ii) Respondent Activities

Except for those water or rail transporters exempted under section 263.20(e) and (f), transporters transporting hazardous waste outside the U.S. (263.20(g)), and transporters transporting hazardous waste pursuant to a reclamation agreement (263.20(h)), hazardous waste transporters must perform the following activities, as required by section 263.20(b), (c), and (d), as amended, and existing section 263.22(a):

- Sign and date the manifest by hand or electronic signature, as required by amended section 263.20(b)(1) and (2).
 - Note: If the generator participates in an electronic manifest system, but the transporter is not able to accept or sign electronic manifests, then the transporter must acknowledge acceptance of the hazardous waste by signing by-hand and dating a paper copy of the manifest or other shipping paper (263.20(b)(1)).
- Return or transmit a signed paper or electronic copy to the generator, as required under amended section 263.20(b)(3);
- Ensure that a paper manifest (or other shipping paper) accompanies the waste to its destination and is readily available to, and recognizable by, authorities in the event of accident or inspection, as required by amended section 263.20(c)(1);
 - Note: For shipments involving an electronic manifest, the transporter must ensure that the manifest is transmitted to the next transporter or next or to the designated facility prior to or at the time of the delivery of the shipment (263.20(c)(3)).
- In delivering the hazardous waste and manifest to another transporter or to the designated facility, perform the following activities, as required by amended section 263.20(d):
 - Obtain the date and signature of that transporter or the owner/operator of the facility or alternate facility designated on the manifest, pursuant to section 263.20(d)(1);
 - Retain a copy of the manifest pursuant to existing section 263.22(a); and
 - Give remaining copies of the manifest, or transmit an electronic copy of the manifest, to the accepting transporter or facility, in accordance with section 263.20(d)(3).

(b) Water (bulk shipment) Transporters Regulated Under Existing Section 263.20(e)

The rule would not modify existing 40 CFR 263.20(e) for water transporters. Under section 263.20(e), the requirements of sections 263.20(c), (d), and (f) do not apply to water (bulk shipment) transporters if the hazardous waste is delivered by water (bulk shipment) to the designated facility; a shipping paper containing specified information required on a manifest and, for exports, and EPA Acknowledgment of Consent accompanies the hazardous waste; the person delivering the waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and a copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with section 263.22.

(i) Data Items

The data items required for the above activities include:

- Copies of the paper or electronic manifest;
- Copies of the shipping paper containing all the information on the manifest except the EPA ID numbers, the generator certification, and required signatures, as required under section 263.20(e); and
- An EPA Acknowledgment of Consent (AOC) (for exporters only), as required by section 263.20(e)(2).

(ii) Respondent Activities

In cases where the transporter delivers hazardous waste to the initial water transporter, the delivering transporter must conduct the following activities, as required by existing section 263.20(e):

- Obtain the date and signature of the water transporter on the manifest, in accordance with section 263.20(e)(4); and
- Forward the manifest to the designated facility, in accordance with section 263.20(e)(4).

Bulk water transporters identified under section 263.20(e) must perform the following:

- Ensure that the shipping paper (and Acknowledgment of Consent, for exports) accompanies the waste to its destination, as required by §263.20(e)(2);
- If the delivering (water) transporter, obtain the date of delivery and handwritten signature of the owner/operator of the designated facility on either the manifest or shipping paper, as required by section 263.20(e)(3);
- If the initial water transporter, sign and date the manifest and return it to the delivering transporter so that the manifest can be forwarded to the designated facility owner/operator, as required by section 263.20(e)(4); and
- Retain a copy of the manifest or shipping paper, as required by section 263.22(b).

(c) Rail Transporters Regulated Under Section 263.20(f)

The proposed rule would revise the existing manifest requirements for rail transporters at 40 CFR 263.20(f) to enable the use of paper or electronic manifests. Under section 263.20(f)(1), as amended, initial rail transporters must sign (by-hand or with an electronic signature) and date the manifest acknowledging acceptance of the hazardous waste; return or transmit a signed copy of the manifest to the non-rail transporter; and forward at least three paper copies or an electronic copy of the manifest to the next non-rail transporter, the designated facility, if the shipment is delivered to that facility by rail, or the last rail transporter designated to handle the waste in the United States; and retain a copy of the manifest and rail shipping paper in accordance with section 263.22.

Rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator certification, and signatures) and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste at all times, as required by existing section 263.20(f)(2).

When delivering hazardous waste to the designated facility, a rail transporter must obtain the date of delivery and handwritten or electronic signature of the owner or operator of the designated facility on the manifest, or a handwritten signature on the shipping paper (if the manifest has not been received by the facility) and retain a copy of the manifest or signed shipping paper, as required under section 263.20(f)(3), as amended. When delivering hazardous waste to a non-rail transporter, a rail transporter must obtain the date of delivery and the handwritten or electronic signature of the next non-rail transporter on the manifest and retain a copy of the manifest, as required under section 263.20(f)(4), as amended. Before accepting hazardous waste from a rail transporter, a non-rail transporter must sign (by hand or with an electronic signature) and date the manifest and provide a copy to the rail transporter, as required by section 263.20(f)(5), as amended.

(i) Data Items:

The manifest data items required of rail transporters for the above activities include:

- Paper and/or electronic manifest;
- A shipping paper containing all the information on the manifest except the EPA ID numbers, the generator certification, and required signatures; and

- An EPA Acknowledgment of Consent (AOC) (for exports only).

(ii) **Respondent Activities:**

Rail transporters must perform the following activities to comply with the requirements of section 263.20(f), as amended:

- When accepting waste from a non-rail transporter, sign (by hand or with an electronic signature) and date the manifest, as required by section 263.20(f)(1)(i) and return or transmit a signed copy of the manifest to the non-rail transporter, as required by section 263.20(f)(1)(ii);
- Forward at least three paper copies or an electronic manifest to either the next non-rail transporter, the designated facility, or the last rail transporter designated to handle the waste in the U.S., as required by section 263.20(f)(1)(iii);
- Ensure a shipping paper containing all the information required on the manifest excluding the EPA identification number, generator certification, and signatures (and for exports an Acknowledgment of Consent) accompanies the waste, as required under section 263.20(f)(2);
- When delivering hazardous waste to the designated facility or to the next non-rail transporter, obtain the handwritten or electronic signature and date of delivery of the facility or non-rail transporter on the manifest, as required under section 263.20(f)(3)(i) or (f)(4)(i);
- Retain a copy of the manifest and/or rail shipping paper, as required under sections 263.20(f)(1)(iv), 263.20(f)(3)(ii), 263.20(f)(4)(ii) and 263.22, as applicable; and
- Before accepting hazardous waste from a rail transporter, sign (by hand or with an electronic signature) and date the manifest and provide a copy to the rail transporter, as required under section 263.20(f)(5).

(d) Transporters Who Transport Hazardous Waste Into and/or Out of The U.S. (263.20(g))

The proposed rule would amend 40 CFR 263.20(g), which currently applies only to exports. Under section 263.20(g), as amended, transporters who transport hazardous waste into and/or out of the United States must sign and date the manifest (by hand or with an electronic signature) in the International Shipments block to indicate the date that the shipment either entered or left the United States; retain one copy in accordance with existing section 263.22; return a hand-signed or electronically signed copy to the generator; and provide a paper or electronic copy of the manifest to a U.S. Customs official for imports at the point of entry and for exports at the point of departure from the United States. In addition, in the case of exports, the transporter also must ensure that a copy of the EPA Acknowledgment of Consent also accompanies the waste, as required by section 263.20(c)(3).

(i) **Data Items**

The manifest data items required for transporters exporting hazardous waste out of the United States include:

- Paper and/or electronic manifest or shipping paper; and
- Acknowledgment of Consent.

(ii) **Respondent Activities:**

Transporters who transport hazardous waste into and/or out of the United States must perform the following activities to comply with section 263.20(g), as amended:

- Sign (by hand or with an electronic signature) and date the manifest in the International Shipments block to indicate the date that the shipment either entered or left the United States, as required by section 263.20(g)(1);
 - Give a copy of the manifest to the U.S. Customs official for imports at the point of entry into the United States and for exports at the point of departure from the United States, as required by section 263.20(g)(4);
 - Retain a copy of the manifest, as required by section 263.20(g)(2); and
 - Return a hand-signed or electronically signed copy to the generator, as required by section 263.20(g)(3).
 - For exports, ensure that copies of the manifest and Acknowledgment of Consent accompanies the waste, as required by section 263.20(c)(3).
- (e) **Transporters Who Transport Hazardous Waste Pursuant To A Reclamation Agreement (263.20(h))**

The rule would not revise existing 40 CFR 263.20(h). Section 263.20(h) provides that transporters can be exempt from the requirements of sections 263.20 and 263.22 when transporting a small quantity generator's waste pursuant to a reclamation agreement in accordance with existing section 262.20(e). These transporters are required to record data items on a log or shipping papers, carry the record to the reclamation facility, and retain these records, as required by existing section 263.20(h).

(i) Data Items

In accordance with section 263.20(h)(2), the log or shipping papers should include the following data items:

- The name, address, and U.S. EPA identification number of the hazardous waste generator;
- The quantity of waste accepted;
- All DOT-required shipping information; and
- The date the waste is accepted.

(ii) Respondent Activities

These transporters must perform the following activities in accordance §263.20(h):

- Record the waste information on a log or shipping paper, as required by section 263.20(h)(2);
- Carry the record when transporting waste to the reclamation facility, as required by section 263.20(h)(3); and
- Retain the records for at least three years after termination or expiration of the agreement, as required by section 263.20(h)(4).

(2) **Compliance with the Manifest**

Under existing 40 CFR 263.21(a), the transporter must deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to the designated facility listed on the manifest; the alternate designated facility, the next designated transporter; or the place outside the United States designated by the transporter. Existing section 263.21(b) requires that, if the hazardous waste cannot be delivered in accordance with section 263.21(a), the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

The proposed rule would amend section 263.21 by providing at section 263.21(b)(1) that, if the hazardous waste cannot be delivered in accordance with paragraph (a) of this section because of an emergency condition other than rejection of the waste by the designated facility, then the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

Under proposed section 263.21(b)(2), if hazardous waste is rejected by the designated facility listed on the manifest, the transporter must obtain the date of rejection and signature of the owner or operator of the designated facility on the manifest, retain one copy of the manifest in accordance with section 263.22, and give the remaining copies of the manifest to the rejecting designated facility. [The transporter burden hours and cost for the section 263.21(b)(2) activities are covered under the Subsection of this ICR entitled, "Manifest: Completion, Transmittal, and Recordkeeping."] The procedures for facilities to manifest rejected wastes under 40 CFR 264.72(d), (e), and (f), or 40 CFR 265.72(d)(e) and (f) for interim status facilities, apply to any rejected wastes.

(i) Data Items

- A manifest that has been revised according to the generator's instructions.

(ii) Respondent Activities

- If the hazardous waste cannot be delivered in accordance with section 263.21(a) because of an emergency condition other than rejection of the waste by the designated facility, then the transporter must perform the following activities in accordance with section 263.21(b)(1):
 - Contact the generator for further directions and revise the manifest according to the generator's instructions.

(3) Standards for Electronic Manifests: Signatures, Security, and Systems

As provided in proposed 40 CFR 263.23(a), if a transporter of hazardous waste participates in an electronic manifest system, the electronic system used by the transporter to originate, use, transmit, or store electronic manifests must be designed and operated in accordance with the system controls, procedures, and computer security requirements described in proposed 40 CFR 262.26, as required by proposed section 263.23(a). Except where a provision of Part 263 specifically requires a paper copy of the manifest or a handwritten signature, manifest copies which are electronically signed in accordance with proposed section 262.25 and which are originated, transmitted, or maintained by electronic systems that comply with section 263.23(a), will be considered the legal equivalent to paper manifest copies bearing handwritten signatures. Proposed section 263.23(e) provides that the definitions and procedures set forth in proposed section 262.26(e), (f), (g), (h), and (i) are incorporated by reference and apply to transporters participating in electronic manifest systems. [Note: Refer to the discussion of the proposed 40 CFR 262.25 and 262.26 information collection requirements in this ICR for the requirements that transporters must follow.]

In addition, a transporter who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 263.23(f).

(a) Electronic Manifest Signatures

The proposed rule would require that all electronic manifests be signed with electronic signatures which meet either the digital signature standard described at proposed section 262.25(c) through (f), or the secure digitized signature standard described at proposed section 262.25(g). [Note: Refer to the discussion of the proposed 40 CFR 262.25 information collection requirements in this ICR for the requirements that transporters must follow.]

(i) Data Items

- Application for Digital Certificate.
- Report of lost or compromised private key.

(ii) Respondent Activities

- Individuals that want to sign their electronic manifests using the digital signature must obtain a digital certificate by applying to a Certification Authority operating in accordance with an applicable Certificate Policy and designated Public Key Infrastructure (PKI), as required by proposed section 262.25(f).
- A person who has reason to believe that a private key has been lost or compromised must report this fact to the Certification Authority, as required by proposed section 262.25(f)(3).

(b) Electronic Manifest Systems and Security

Proposed 40 CFR 262.26(a) provides that electronic copies of manifests, which are electronically signed in accordance with section 262.25, and which are generated or maintained by electronic systems that meet the security requirements of section 262.26(c), will be considered the legal equivalent to paper copies bearing handwritten signatures, for the purposes of satisfying any requirement to initiate, use or transmit a manifest, or to retain a manifest copy or produce it for inspection.

Electronic systems used to satisfy the requirements in these regulations to initiate, use, transmit, or retain records of manifests, must employ controls and procedures to ensure the authenticity and integrity of their electronic records, and to ensure that the signer of these records cannot readily repudiate the signed records as genuine, as provided at proposed section 262.26(c). [Note: Refer to the discussion of the proposed 40 CFR 262.26(c) information collection requirements in this ICR for the requirements that transporters must follow.]

(i) Data Items

- A written assessment of the system and a certification that the system generates and processes data accurately and reliably, that the system performs consistently and as intended, that the system is fully interoperable with any other electronic manifest system(s) with which the system exchanges electronic manifests, that the system is designed and can be operated to meet the computer security standards of this section and good security practices common to trusted electronic commerce systems, and that appropriate precautions have been taken to ensure that these security measures cannot be avoided or defeated, as required by proposed section 262.26(c)(1).
- Procedures for the distribution or change of system documentation controls, as required by proposed section 262.26(c)(9); and
- Written policies that hold individuals accountable and responsible for actions initiated under their electronic signatures, in order to deter record and signature falsification, as required by section 262.26(c)(10).

(ii) Respondent Activities

- Persons must obtain a written assessment and certification of their system and establish controls and written policies, as required by proposed sections 262.26(c)(1), (9) and (10).

(c) Special Procedures for Transmissions

Proposed 40 CFR 262.26(f), and (h) establish procedures for transmitting and receiving the electronic manifest. [Note: Refer to the discussion of the proposed 40 CFR 262.26(f) and (h) information collection requirements in this ICR for the requirements that transporters must follow.]

In addition, a transporter who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 263.23(f). This log must include for each manifest transmission sent or received, the date, time, and destination/source identity. The transmission log must also identify who had access to the transporter's system during the creation, transmission,

or receipt of data. This transmission log must be maintained without modification and retained for 3 years among the transporter's manifest records.

(i) Data Items

- Acknowledgment of receipt, as required by section 262.26(f).
- Electronic manifest.
- Transmission log covering all electronic manifests sent or received (263.23(f)), including:
 - The date, time, and destination/source identity; and
 - Identification of who had access to the transporter's system during the creation, transmission, or receipt of data.

(ii) Respondent Activities

- When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data when an electronic manifest transmission is received, as required by proposed section 262.26(f).
- If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest, as required by proposed section 262.26(h).
 - Note: If a person is unable to initiate or transmit a manifest electronically, it must use the paper manifest required under section 262.20(a)(2).
- Maintain for three years a transmission log covering all electronic manifests sent or received, as required by proposed section 263.23(f).

(4) Notification of Discharge of Hazardous Waste

The proposed rule would not modify the existing requirements for transporters to notify authorities of a discharge of hazardous waste. In the event of a discharge of hazardous waste during transportation, existing 40 CFR 263.30(a) requires the transporter to take appropriate immediate action to protect human health and the environment, for example, notifying local authorities. Section 263.30(c) requires an air, rail, highway, or water transporter who has discharged hazardous waste to give notice, if required by 49 CFR 171.15, to the National Response Center and to report in writing as required by 49 CFR 171.16, to the Department of Transportation. Section 263.30(d) requires a water (bulk shipment) transporter who has discharged hazardous waste to give the same notice as required by 33 CFR 153.203 for oil and hazardous substances, if not already required under 33 CFR 153.203. Water (bulk shipment) transporters, as soon as they have knowledge of any discharge of hazardous waste, must immediately notify the National Response Center (NRC), U.S. Coast Guard, as required by 33 CFR 153.203. If the direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated on-scene coordinator (OSC) for the geographic area where the discharge occurs. If it is not possible to notify the NRC or the predesignated OSC immediately, reports may be made immediately to the nearest Coast Guard unit, provided the transporter notifies the NRC as soon as possible.

(i) Data Item

The data item required for notification of a discharge of hazardous waste includes reporting the discharge to relevant authorities as specified in 40 CFR 263.30 and 33 CFR 153.203.

(ii) Respondent Activities

- In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate action to protect human health and the environment, including notification of the discharge to local authorities, as required by 40 CFR 263.30(a).

- Water (bulk shipment) transporters must immediately notify the National Response Center (NRC) of the discharge or, if it is not practicable to notify the NRC, a predesignated OSC can be notified. If the OSC is notified, the transporter must notify the NRC of the discharge as soon as possible, as required by 40 CFR 263.30(d) and 33 CFR 153.203.

[Note: This ICR does not include burden and cost estimates for activities associated with the 49 CFR 171 notification requirements referenced in 40 CFR Part 263 since Part 263 does not add any notification requirements to those already in 49 CFR 171.]

3(e) TREATMENT, STORAGE, AND DISPOSAL FACILITY (TSDF) REQUIREMENTS

The manifest requirements discussed in this section apply to treatment, storage and disposal facilities (TSDFs) that accept hazardous waste from an off-site source. Existing 40 CFR 264.71(a) or (b) or 265.71(a) or (b) require TSDFs receiving hazardous waste accompanied by a manifest (or a shipping paper, received from a rail or water (bulk shipment) transporter, containing all of the information required in a manifest except for the EPA identification numbers, generator's certification, and signatures) to sign and date the manifest (or shipping paper); note any significant discrepancies on each copy of the manifest (or shipping paper); give copies of the manifest (or shipping paper) to the transporter and generator; and retain a copy of the manifest (and shipping paper) for three years. The TSDF also is required to attempt to reconcile manifest discrepancies (i.e., between the quantity or type of waste described on the manifest or shipping paper and the actual quantity or type of hazardous waste received) and, if necessary, submit a discrepancy report to EPA, as required under section 264.72 and 265.72. Finally, if the TSDF accepts a hazardous waste for treatment, storage or disposal from any offsite source without an accompanying manifest or shipping paper and the waste is not otherwise excluded under section 261.5, the facility must prepare and submit to EPA an unmanifested waste report on EPA Form 8700-13B, as required by sections 264.76 and 265.76.

The proposed rule would amend sections 264.71(a) and (b) and 265.71(a) and (b) to enable the designated TSDF to receive, transmit and keep records of an electronic manifest, as an alternative to the paper manifest. The rule also would add new procedures at sections 264.72 and 265.72 for TSDFs to re-manifest rejected loads and residues. In addition, the rule would revise sections 264.76 and 265.76 to remove references to EPA form 8700-13B; rather, TSDFs need only submit a note that contains the required information. Finally, the rule would establish standards at new section 264.78 and 265.78 for electronic signatures, electronic systems/security, and transmission/receipt of electronic manifests.

(1) Manifest: Completion, Transmittal and Recordkeeping

The proposed rule would amend existing sections 264.71(a) and (b) and 265.71(a) and (b) by providing that, if a facility receives or rejects hazardous waste accompanied by a manifest, the owner or operator, or his agent, must sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was fully rejected as noted in the manifest discrepancy space; note any discrepancies (as defined in section 264.72 and 265.72) on each copy of the manifest; immediately return to the transporter a signed paper or electronic copy; immediately (for electronic manifests) or within 30 days of delivery (for paper manifests) send a copy of the manifest to the generator; and retain a paper or electronic copy for at least three years from the date of delivery. Note that, as required by proposed section 264.71(a)(1) and 265.71(a)(1), a TSDF participating in an electronic system must use an electronic signature in accordance with proposed section 262.25 to sign manifest copies electronically.

If an owner or operator participates with a generator in an electronic manifest system, but receives a hazardous waste shipment from a transporter that does not participate in an electronic system, the owner or operator must conduct the following activities, as required by proposed section 264.71(a)(6) or 265.71(a)(6): hand-sign and date a paper copy of the manifest or shipping paper provided by the delivering transporter, and immediately give the transporter the copy of the hand-signed manifest or shipping paper; electronically sign and date the electronic manifest covering the shipment that was forwarded to the facility by the generator, to certify that the hazardous waste covered by the manifest was received; note any significant discrepancies in the manifest (as defined in §264.72(a)) on the electronic manifest; immediately return the electronically signed electronic

copy of the manifest to the generator; and retain at the facility an electronic copy of each manifest for at least three years from the date of delivery.

(i) Data Items

The data items required for the above completion, recordkeeping and transmittal activities include:

- Copies of the paper and/or electronic manifest or shipping paper.

(ii) Respondent Activities

Facilities receiving a manifest (or a shipping paper, if the manifest has not been received) accompanying a hazardous waste shipment must perform the following activities, in accordance with amended 40 CFR 264.71(a) and (b) and 265.71(a) and (b). [Note: Although the noting of manifest or shipping paper discrepancies is mentioned in above, it is burdened in the subsection entitled "Discrepancy Reports, Rejected Loads, and Residues."]

- Complete, transmit and retain copies of the manifest, as required by 40 CFR 264.71(a) or (b) or 265.71(a) or (b), as amended:
 - Sign (by hand or electronic signature) and date each copy of the manifest (or shipping paper, if applicable) to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was fully rejected as noted in the manifest discrepancy space;
 - If the facility participates with a generator in an electronic manifest system, but receives a paper manifest from a non-participating transporter, electronically sign and date the electronic manifest covering the shipment that was forwarded to the facility, to certify that the hazardous waste covered by the manifest was received;
 - Immediately return a copy of the manifest to the transporter;
 - Immediately (for electronic manifests) or within 30 days (for paper manifests), send a copy to the generator; and
 - Retain a copy for at least three years from delivery.

(2) Discrepancy Reports, Rejected Loads, and Residues

Existing 40 CFR 264.71 and 264.72 or 265.71 or 265.72 provide that, upon noting a significant discrepancy between the quantity or type of waste described on the manifest or shipping paper and the actual quantity or type of hazardous waste received, facility owner/operators are required to note any significant discrepancy in the manifest and attempt to reconcile the discrepancy; if it is not reconciled within 15 days after receiving the waste, the facility owner/operator must immediately submit to EPA the manifest or shipping paper in question, as well as a letter describing the discrepancy and efforts to reconcile it. [Note: Existing 40 CFR 264.72(a) and 265.72(a) describe a "manifest discrepancy" as differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Existing section 264.72(a)(1) and 265.72(a)(1) also define "significant discrepancies" (e.g., for bulk waste, variations greater than 10 percent in weight).]

In the proposed rule, EPA would define manifest discrepancies as: (1) significant differences (as defined by section 264.72(b) and 265.72(b)) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives, (2) rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF cannot accept, and (3) the presence of regulated container residues, which are residues that exceed the quantity limits for "empty" containers set forth in 40 CFR 261.7(b).

40 CFR 264.72(b) and 265.72(b), as amended, provide that significant differences in quantity are: (1) for bulk waste, variations greater than 10 percent in weight, and (2) for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant differences in type are obvious differences which can be

discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

Proposed 40 CFR 264.72(c) and 265.72(c) provide that, upon discovering a significant difference in quantity or type, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

Proposed 40 CFR 264.72(d) and 265.72(d) provide that, upon rejecting waste or discovering the presence of a regulated residue, the facility must contact the generator to obtain the generator's instructions for forwarding the waste to another facility that can manage the waste. The facility must send the waste according to the generator's instructions. If it is impossible to locate in a timely manner an alternative facility that can promptly receive the waste, the facility may, with permission of the generator, return the rejected waste or residue to the generator. While the facility is making arrangements for forwarding rejected wastes or residues to another facility under this section, it must ensure that either the delivering transporter retains custody of the waste, or, the facility must provide for secure, temporary custody of the waste pending delivery of the waste to the first transporter designated on the new manifest prepared under proposed 40 CFR 264.72(e) or (f) or 265.72(e) or (f).

Proposed 40 CFR 264.72(g) and 265.72(g) provide that, if a facility rejects a waste or discovers the presence of a regulated residue after it has already signed a manifest or shipping paper to certify to the receipt of the materials under section 264.71(a) or (b) or 265.71(a) or (b), the facility shall amend its copy of the manifest to indicate the rejected wastes or residues in the discrepancy space of the amended manifest. The facility shall also copy the manifest tracking number from Item 3 of the new manifest to the discrepancy space of the amended manifest, and shall re-sign and date the manifest to certify to the information as amended. The facility must retain the amended manifest for at least three years from the date of amendment, and must within 30 days, send a copy of the amended manifest to the delivering transporter and to the generator.

(i) Data Items

- A letter describing the significant discrepancy and the facility's efforts to reconcile it.
- Copy of the original manifest and/or shipping paper.
- Copy of a new manifest and/or shipping paper.

(ii) Respondent Activities

The activities required of the above data items, as required by section 264.72 and 265.72, as amended, include:

- For significant discrepancies identified at section 264.72(b) or 265.72(b), the facility must:
 - Note and attempt to reconcile any significant discrepancies, as required by section 264.72(a)(2) and (c) or section 265.72(a)(2) and (c); and
 - Prepare and submit a letter to EPA describing the discrepancy and attempts to reconcile it, along with a copy of the manifest or shipping paper at issue, as required by section 264.72(c) or 265.72(c).
- For rejected loads and residues that must be sent off-site to an alternate facility or back to the generator, the facility is required to prepare a new manifest, as required by proposed 40 CFR 264.72(d) and (e) or (f) or 265.72(d) and (e) or (f):
 - Contact the generator for forwarding information, as required by proposed 40 CFR 264.72(d) or 265.72(d); and
 - Prepare a new manifest for rejected loads or container residues sent to the alternate designated facility or back to the generator:

- Write the generator's or facility's name (as appropriate), address and U.S. EPA ID number in the generator's name and mailing address box (Items 1 and 4) of a new manifest, as required by proposed 40 CFR 264.72(e)(1) or (f)(1) or 265.72(e)(1) or (f)(1);
 - Write the name of the alternate designated facility or original generator and its U.S. EPA ID number in the designated facility block (Item 9) of a new manifest, as required by proposed 40 CFR 264.72(e)(2) or (f)(2) or 265.72(e)(2) or (f)(2);
 - Copy the manifest tracking number found in Block A or Item 3 of the old manifest to the Special Handling and Additional Information Block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment, as required by proposed 40 CFR 264.72(e)(3) or (f)(3) or 265.72(e)(3) or (f)(3);
 - Copy the manifest tracking number found in Item 3 of the new manifest to the manifest reference number line in the Discrepancy Block of the old manifest (Item 20), as required by proposed 40 CFR 264.72(e)(4) or (f)(4) or 265.72(e)(4) or (f)(4);
 - Write the DOT description for the rejected load or the residue in the Item 10 (U.S. DOT Description) of the new manifest reflecting the new waste and write the container types, quantity, and volume(s) of waste, as required by proposed 40 CFR 264.72(e)(5) or (f)(5) or 265.72(e)(5) or (f)(5); and
 - Sign the Generator's Certification, as required by proposed 40 CFR 264.72(e)(6) or (f)(6) or 265.72(e)(6) or (f)(6).
- For loads rejected or residues discovered after signature of the manifest, amend the manifest, retain the amended manifest for at least three years, and within 30 days, send a copy to the delivering transporter and to the generator, as required by proposed 40 CFR 264.72(g) or 265.72(g).

(3) Unmanifested Waste Report: Completion and Submission

Pursuant to existing 40 CFR 264.76 and 265.76, if the TSDF accepts a hazardous waste for treatment, storage, or disposal from any off-site source without an accompanying manifest or a shipping paper as described in section 263.20(e)(2), and the waste is not excluded from the manifest requirement under 40 CFR 261.5, the facility owner/operator must prepare and submit to EPA an unmanifested waste report within fifteen days of receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B (Unmanifested Waste Report).

The proposed rule would modify existing 40 CFR 264.76 and 265.76 by allowing TSDFs to submit a typed, handwritten, or electronic note instead of the current Report. The typed, handwritten, or electronic note must be legible and contain the information listed at proposed 40 CFR 264.76(a) or 265.76(a) (i.e., the same information as currently required in the Report).

(i) Data Items

As required under existing 40 CFR 264.76 or 265.76, the note must include:

- The EPA identification number, name, and address of facility;
- The date the facility received the waste;
- The EPA identification number, name, and address of generator and transporter, if available;
- A description and quantity of each unmanifested hazardous waste the facility received;
- The method of treatment, storage, or disposal for each hazardous waste;

- The certification signed by the owner/operator of the facility or his authorized representative; and
 - A brief explanation of why the waste was unmanifested, if known.
- (ii) Respondent Activities

In order to provide the items listed above, the facility must perform the following activities, in accordance with section 264.76 or 265.76, as modified by the rule:

- Prepare and submit to EPA a note of the unmanifested waste within 15 days after receiving the waste.

(4) Standards for Electronic Manifests: Signatures, Security, and Systems

As provided at proposed 40 CFR 264.78(a) or 265.78(a), if a an owner/operator of TSDf participates in an electronic manifest system, the electronic system used by the TSDf to originate, use, transmit, or store electronic manifests must be designed and operated in accordance with the system controls, procedures, and computer security requirements described in proposed 40 CFR 262.26. Except where a provision of Part 264 or 265 specifically requires a paper copy of the manifest or a handwritten signature, manifest copies which are electronically signed in accordance with proposed section 262.25 and which are originated, transmitted, or maintained by electronic systems that comply with section 264.78(a) or 265.78(a), will be considered the legal equivalent to paper manifest copies bearing handwritten signatures. Proposed section 264.78(e) and 265.78(e) provide that the definitions and procedures set forth in proposed section 262.26(e), (f), (g), (h), and (i) are incorporated by reference and apply to owner/operators of TSDfs participating in electronic manifest systems. [Note: Refer to the discussion of the proposed 40 CFR 262.25 and 262.26 information collection requirements in this ICR for the requirements that TSDfs must follow.]

In addition, an owner/operator who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 264.78(f) or 265.78(f).

(a) Electronic Manifest Signatures

The proposed rule would require that all electronic manifests be signed with electronic signatures which meet either the digital signature standard described at proposed section 262.25(c) through (f), or the secure digitized signature standard described at proposed section 262.25(g). [Note: Refer to the discussion of the proposed 40 CFR 262.25 information collection requirements in this ICR for the requirements that TSDfs must follow.]

(i) Data Items:

- Application for Digital Certificate.
- Report of lost or compromised private key.

(ii) Respondent Activities:

- Individuals that want to sign their electronic manifests using the digital signature must obtain a digital certificate by applying to a Certification Authority operating in accordance with an applicable Certificate Policy and designated Public Key Infrastructure (PKI), as required by proposed section 262.25(f).
- A person who has reason to believe that a private key has been lost or compromised must report this fact to the Certification Authority, as required by proposed section 262.25(f)(3).

(b) Electronic Manifest Systems and Security

Proposed 40 CFR 262.26(a) provides that electronic copies of manifests, which are electronically signed in accordance with section 262.25, and which are generated or maintained by electronic systems that meet the security requirements of section 262.26(c), will be considered the legal equivalent to paper copies bearing handwritten signatures, for the purposes of satisfying any requirement to initiate, use or transmit a manifest, or to retain a manifest copy or produce it for inspection.

Electronic systems used to satisfy the requirements in these regulations to initiate, use, transmit, or retain records of manifests, must employ controls and procedures to ensure the authenticity and integrity of their electronic records, and to ensure that the signer of these records cannot readily repudiate the signed records as genuine, as provided at proposed section 262.26(c). [Note: Refer to the discussion of the proposed 40 CFR 262.26(c) information collection requirements in this ICR for the requirements that TSDFs must follow.]

(i) Data Items

- A written assessment of the system and a certification that the system generates and processes data accurately and reliably, that the system performs consistently and as intended, that the system is fully interoperable with any other electronic manifest system(s) with which the system exchanges electronic manifests, that the system is designed and can be operated to meet the computer security standards of this section and good security practices common to trusted electronic commerce systems, and that appropriate precautions have been taken to ensure that these security measures cannot be avoided or defeated, as required by proposed section 262.26(c)(1).
- Procedures for the distribution or change of system documentation controls, as required by proposed section 262.26(c)(9); and
- Written policies that hold individuals accountable and responsible for actions initiated under their electronic signatures, in order to deter record and signature falsification, as required by section 262.26(c)(10).

(ii) Respondent Activities

- Persons must obtain a written assessment and certification of their system and establish controls and written policies, as required by proposed sections 262.26(c)(1), (9) and (10).

(c) **Special Procedures for Transmissions**

Proposed 40 CFR 262.26(f), and (h) establish procedures for transmitting and receiving the electronic manifest. [Note: Refer to the discussion of the proposed 40 CFR 262.26(f) and (h) information collection requirements in this ICR for the requirements that TSDFs must follow.]

In addition, an owner/operator who transmits or receives electronic manifests must maintain a transmission log covering all electronic manifests sent or received, as required by proposed section 264.78(f) or 265.78(f). This log must include for each manifest transmission sent or received, the date, time, and destination/source identity. The transmission log must also identify who had access to the transporter's system during the creation, transmission, or receipt of data. This transmission log must be maintained without modification and retained for 3 years among the facility's manifest records.

(i) Data Items

- Acknowledgment of receipt, as required by proposed section 262.26(f).
- Electronic manifest.
- Transmission log covering all electronic manifests sent or received, including (264.78(f) or 265.78(f)):

-- The date, time, and destination/source identity; and

- Identification of who had access to the transporter's system during the creation, transmission, or receipt of data.

(ii) Respondent Activities

- When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data when an electronic manifest transmission is received, as required by proposed section 262.26(f);
- If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest, as required by proposed section 262.26(h).
 - Note: If a person is unable to initiate or transmit a manifest electronically, it must use the paper manifest required under section 262.20(a)(2).
- Maintain for three years a transmission log covering all electronic manifests sent or received, as required by proposed section 264.78(f) or 265.78(f).

4. THE INFORMATION COLLECTED -- AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

The following subsections discuss how EPA will collect the information, what activities EPA will perform once the information has been received, and how EPA will manage the information it collects under the manifest system, as modified by the proposed rule. The subsections also include a discussion of how the information collection requirements will affect small entities.

4(a) AGENCY ACTIVITIES

The Agency activities associated with the existing manifest requirements include the review of exception reports, discrepancy reports, and unmanifested waste reports. The Agency reviews these reports to identify potentially non-compliant or otherwise unresolved activities that warrant Agency attention. For example, upon receipt of an exception report, the Agency may conduct a follow-up investigation to assist the generator in locating the shipment. The Agency keeps these reports on file.

In addition to these existing requirements, the proposed rule would now require manifest form printers to register with EPA, as provided under proposed 40 CFR 262.21(c). The Agency will need to review, process, and keep records of the data submitted. For purposes of this analysis, EPA also assumes that the Agency will act as the Certification Authority for waste handlers that desire to use a digital signature for their electronic manifests, as required under proposed 40 CFR 262.25, and as referenced elsewhere. The Agency must review and process application materials submitted, and provide qualified applicants with a digital certificate.

Note that, as provided under the existing regulations, manifests, shipping papers, contractual agreements, and reclamation agreements are not formally submitted to EPA, but must be kept on file at the generator's, transporter's or TSDF's location and made available to EPA upon request. Accordingly, this analysis does not include Agency activities associated with review of these documents.

4(b) COLLECTION METHODOLOGY AND MANAGEMENT

In collecting and analyzing the information required under manifest requirements, EPA uses electronic equipment such as personal computers and applicable data base software, when appropriate. The Agency also may increasingly use electronic methods to receive manifest-related reports (e.g., unmanifested waste reports). Note that this assumption is not reflected in the ICR.

4(c) SMALL ENTITY FLEXIBILITY

The current regulations require both large and small quantity generators of hazardous waste to use the manifest to track shipments of hazardous waste. However, the Agency has found that most small businesses do not generate hazardous waste either at all or in large enough quantities to make them subject to regulation and, therefore, are not affected by the manifest requirements. Generators of less than 100 kg/month (conditionally exempt small quantity generators) are exempted from manifest requirements. Also, EPA has exempted spent lead-acid batteries going for recycling and used oil being recycled or burned for energy recovery from the manifesting requirements.

Further, the proposed rule is specifically intended to be deregulatory and to reduce, not increase, the paperwork and related burdens of the RCRA hazardous waste manifest system. For businesses in general, including all small businesses, the form changes, although required, are designed to reduce the labor time and other costs of acquiring, completing, and submitting hazardous waste manifests. The Agency's proposals regarding the optional use of the electronic automation of form preparation and tracking are also designed to facilitate and encourage increased efficiency and reduced costs through the use of modern communications technologies. These possibilities were not available under existing manifest regulations. Although most small businesses waste generators would not be expected to initiate or acquire the automation technology directly, many or most would be expected to share in the savings due to automation undertaken by the waste transportation, treatment and disposal sectors which service the many waste generating sectors. Since these proposals are offered as options to the regulated community, they are unlikely to be employed in situations that do not involve cost savings to waste handlers and generators.

(1) Contractual Reclamation Agreements

A small quantity generator is exempt from the manifest requirements when his hazardous waste is reclaimed under a contractual agreement, and he complies with limited requirements, including recordkeeping of the contractual agreement, as required by section 262.20(e)(2).

(2) Exception Reports

The exception report requirements, under section 262.42, for small quantity generators are less stringent than those for large quantity generators. A small quantity generator is only required to submit to EPA a legible copy of the manifest with some indication he/she has not received confirmation of delivery and has 60 days to fulfill this requirement. Large quantity generators, on the other hand, are required to contact the transporter or facility owner/operator if he/she has not received a copy of the manifest within 35 days. In addition, if 45 days have passed and the large quantity generator still has not received a signed copy of the manifest, he/she must submit a copy of the manifest as well as a cover letter explaining the generator's efforts to locate the hazardous waste. Hence, the exception report requirements for small quantity generators are not as burdensome.

4(d) COLLECTION SCHEDULE

(1) Manifest and Other Document Collection: Generators, Transporters, and TSDFs

Since copies of manifests, shipping papers, contractual agreements, and reclamation agreements are kept at the generator's, transporter's or TSDF's location and not normally submitted to EPA, discussion of a collection schedule is not applicable.

(2) Exception Reports Collection: Generators

As provided under the existing requirements, large quantity generators must submit exception reports to EPA within 45 days of the date the waste was accepted by the initial transporter, if he or she has not received a copy of the manifest signed by the TSDF. Small quantity generators must submit an abbreviated version of an exception report to EPA within 60 days.

(3) **Discrepancy and Unmanifested Waste Report Collection: TSDFs**

As provided under the existing requirements, TSDF owner/operators must submit discrepancy reports and unmanifested waste reports to EPA within 15 days of delivery of the waste to the TSDF.

5. **NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA**

5(a) **NONDUPLICATION**

No document identical or similar in purpose to the manifest is required by the Federal government. Although a Department of Transportation (DOT) shipping paper contains most of the information contained on the manifest, it does not appear to be legally sufficient to track hazardous waste from the generator to the designated facility. For example, DOT's shipping paper does not require the EPA identification numbers and signatures of the transporters and destination sites shipping or handling the hazardous waste. EPA requires such signatures and identification numbers on the manifest to ensure accountability of each waste handler during shipment of the hazardous waste. Also, since EPA coordinated the development of the manifest with DOT, the manifest form can be used as a DOT shipping paper, thus eliminating the need for the transporter to carry both documents. Furthermore, the manifest form was developed as a means of standardizing the information requirements, both Federal and State, thereby eliminating the need for a generator to complete and a transporter to carry multiple manifests for interstate shipments.

5(b) **CONSULTATIONS**

In 1985, manifest officials in several State environmental agencies formed an International Hazardous Waste Manifest Coordinators Group (IHWMC) to address manifesting issues and to increase uniformity among State manifest programs. During 1988, the IHWMC served on the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) Manifest Revisions Task Force to develop regulatory recommendations to EPA to increase consistency in the use of the manifest across the country. The Task Force's recommendations for specific modifications to the Uniform Hazardous Waste Manifest were submitted to EPA as a rulemaking petition on January 8, 1990.

In 1992, EPA embarked upon a negotiated rulemaking effort in an attempt to take advantage of the near consensus already reached by States in the ASTSWMO petition. EPA hoped that solutions could be easily found which would meet the needs of all affected parties. These solutions essentially were based on the consolidation of the current state optional requirements into the federal portion of the form, and while these changes would have created a more uniform manifest system, they would not have resulted in the kind of decrease in manifest burden the Agency sought.

Starting in 1996, EPA reestablished an Agency workgroup charged with building upon the best recommendations of the negotiated rulemaking effort, along with better accommodating the Agency's burden reduction goals. This proposal reflects the Agency's proposed changes to several areas of manifest reform.

In 1998, EPA held forums with State and industry representatives and other interested parties to discuss the Agency's initiatives to reduce regulatory burdens under the manifest system. In addition, EPA consulted with waste handlers on average respondent burden hours under the manifest system (1994 and 1995). EPA asked respondents to estimate the average burden hours for completing a manifest, exception report, discrepancy report, and unmanifested waste report. Furthermore, EPA contacted state manifest programs regarding the number of manifests originating in their state and one TSDF regarding its activities in reconciling manifest discrepancies (1999).

5(c) **EFFECTS OF LESS FREQUENT COLLECTION**

Since the manifest is required to accompany all shipments of hazardous waste when shipped off-site by the generator, less frequent preparation is not possible. The frequency of off-site shipment is determined by the generator and depends on: (1) the quantities of waste to be shipped as they impact the economies of shipment; (2)

transporter scheduling; and (3) the applicable regulatory requirements. The present system gives the generator the opportunity to maximize the economies of off-site shipments by selecting a shipping frequency that is appropriate for the rate of waste generation. Further, by requiring a manifest to accompany each shipment, EPA ensures the manifest is available in the case of a discharge of hazardous waste during transportation. Information on the manifest could be useful to emergency response personnel responding to the scene. In this regard, less frequent manifesting could result in a less expedient or protective response to the release.

Under normal conditions, EPA does not collect manifests, but requires instead preparation of the manifest, use of the manifest during transportation, and recordkeeping of the manifests for a 3-year period. Manifests are only collected by EPA either to accompany an exception or discrepancy report or in the case of an export. As mentioned, manifests may also be used by emergency response personnel responding to an accident.

5(d) GENERAL GUIDELINES

Under the manifest recordkeeping requirements in 40 CFR Part 262, Subpart B, Part 263, Subpart B, and Parts 264 and 265, Subpart E, generators, transporters, and TSDFs must retain copies of manifests, shipping papers, exception reports, discrepancy reports, unmanifested waste reports, contractual agreements, and reclamation agreements for at least three years. EPA believes that hazardous waste shipments cannot and will not be properly managed unless States can track the treatment and disposal of those shipments. The provisions for manifest completion, transmittal, and recordkeeping are designed to provide a means by which EPA can, if necessary, easily track wastes from "cradle to grave." In tracking shipments, it may be necessary at times to refer to shipments made at least three years previously.

Requirements and justification for reporting information to the Agency more often than quarterly have been discussed under Section 4(d). Collection activities that must be prepared in more than 45 days are also discussed in Section 4(d).

5(e) CONFIDENTIALITY

Section 3007(b) of RCRA and 40 CFR Part 2, Subpart B, which define EPA's general policy on the public disclosure of information, contain provisions for confidentiality. If the Agency receives any confidential information, it will manage that information according to the protocols established by the Agency, as appropriate.

5(f) SENSITIVE QUESTIONS

No questions of a sensitive nature are included in any of the information collection requirements.

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

6(a) ESTIMATING RESPONDENT BURDEN

Exhibits 1 through 14 present EPA's estimated annual respondent burden hours and costs for all information collection activities covered in this ICR.⁶ Note that this ICR calculates respondent burden and cost based on an assumption that approximately 50 percent of all manifests transmitted and recordkept are paper copies and that the remaining 50 percent are electronic.⁷

⁶ To the greatest extent possible, this ICR includes respondent assumptions and data that has been obtained from the approved EPA ICR Number 801 (*Requirements for Generators, Transporters, and Waste Management Facilities under the RCRA Hazardous Waste Manifest System*, October 22, 1999) and the *Economic Analysis of the USEPA's Proposed Modifications to the Hazardous Waste Manifest System (EA)*, May 12, 2000.

⁷ The EA assumes that, under a high adoption rate, approximately 50 percent of manifests would be electronic, and under a low adoption rate, approximately 25 percent of manifests would be electronic.

6(b) ESTIMATING RESPONDENT COSTS

EPA estimates that the total annual respondent cost for all activities covered in this ICR in Exhibits 1 through 14. The exhibits include annual labor, capital, and operation and maintenance (O&M) costs to be incurred by respondents affected by the information collection requirements covered in this ICR.

Labor Costs

EPA estimates an average hourly respondent labor cost of \$102 for legal staff, \$73 for managerial staff, \$53 for technical staff, and \$27 for clerical staff. To arrive at these estimates, EPA consulted the *Handbook of U.S. Labor Statistics, Second Edition*⁸, and the EPA report *Estimating Costs for the Economic Benefits of RCRA Noncompliance*.⁹ These publications summarize the unloaded (base) hourly rate for various labor categories in U.S. firms. EPA then applied an overhead factor of 2.3 for non-legal staff and 3.0 for legal staff to derive their loaded hourly rates. These wage rates and the burden hours presented in Exhibits 1 through 13 are used to estimate the respondent labor costs associated with all of the information collection activities covered in this ICR.

Capital Costs

Capital costs usually include any produced physical good needed to provide the needed information, such as machinery, computers, and other equipment. For this ICR, EPA estimates that respondents will incur capital costs associated with the purchase of file cabinets, diskettes, and electronic signature devices.¹⁰ As shown in Exhibit 14, EPA estimates the total average annual capital cost to all hazardous waste handlers under the modified manifest system, collectively, to be approximately \$797,590.

File Cabinets and Diskettes

EPA took the following steps to derive the capital costs associated with the purchase of file cabinets and diskettes:

1. Estimate the total annual number of paper and electronic manifests required to be retained by all waste handlers. Under the manifest system, generators, transporters, and designated TSDFs must keep copies of manifests and other manifest-related documents for a period of three years. Thus, at any given time during the effective period of this ICR, the hazardous waste industry is keeping copies of three years' worth of manifest-related documents. In total, EPA estimates that waste handlers (i.e., generators, transporters, and designated TSDFs) will need to keep copies of approximately 21,025,008 manifests annually. EPA estimates that, of these 21,025,008 manifests, 10,722,754 would be paper manifests and 10,302,254 would be electronic manifests.
2. Ascertain the number of standard-size file cabinets and diskettes that would provide the needed capacity. EPA estimates that waste handlers would store their paper manifests in standard-size file cabinets and their electronic manifests in diskettes. For storing paper manifests, EPA estimates that the hazardous waste industry would need to use approximately 670 file cabinets each year.¹¹ For storing electronic

⁸ EPA obtained the data from Table 3-2 "Wage Ranges of Average (Mean) Wages by Occupation." The book was edited by Eva Jacobs, and was published in 1998 by Bernan Press.

⁹ The report was authored by U.S. EPA, RCRA Enforcement Division, Office of Regulatory Enforcement, and was published in February 1997.

¹⁰ As explained in the EA, EPA has assumed, for purposes of analysis, that participants in an electronic system would already have the requisite computer equipment needed for electronic manifesting (e.g., PC, software and modem). Therefore, neither the EA nor ICR includes capital costs for basic computer equipment.

¹¹ EPA estimates that a standard-size, five-drawer, lateral file cabinet holds approximately 16,000 documents. Thus, for storing 10,722,754 paper manifests, waste handlers would need 670 file cabinets (i.e., 10,722,754/16,000) each year.

manifests, EPA estimates that the hazardous waste industry would need to use approximately 735,875 diskettes each year.¹²

3. Estimate the aggregate cost of standard-size file cabinets and diskettes to waste handlers. Based on consultations, EPA estimates that the cost of one file cabinet is \$549 and the cost of one diskette is \$0.37. Thus, EPA estimates that the cost for all file cabinets and diskettes is \$367,924 (i.e., 670 x \$549) and \$272,274 (i.e., 735,875 x \$0.37), respectively.
4. Annualize the aggregate cost of standard-size file cabinets and diskettes using a net present value formula. EPA annualized the cost of the diskettes and file cabinets over three years at a discount rate of seven percent.¹³ EPA estimates that the hazardous waste industry will need to pay an annual cost of \$140,199 for the 670 file cabinets and an annual cost of \$103,751 for the 735,875 diskettes.

Electronic Signature Devices

EPA assumes that all waste handlers automating their manifesting would need to buy electronic signature devices, i.e., 1,800 LQGs, 50 percent of LQG brokers (44), 50 percent of SQG brokers (119), 50 percent of captive TSDFs (759), 50 percent of commercial TSDFs (253), and 40 percent of transporters (200). EPA assumes that each LQG, broker, and captive TSDF would purchase one signature device and that each commercial TSDF would purchase eight signature devices (i.e., for eight employees at the site) at \$100 per device (\$40 annualized cost over three years at seven percent interest). EPA also assumes that each transporter company would purchase a signature device for each truck at a cost of \$279 per truck (\$107 annualized). In total, EPA estimates that the hazardous waste industry will need to pay an annual cost of \$553,640 for signature devices. See Table 1 for a summary of these handlers' costs.

Table 1
Electronic Signature Devices: Cost to Waste Handlers under the Proposal

Type of Handler	Number of Handlers	Annualized Cost of Signature Devices	Number of Signature Devices	Total
LQGs	1,800	\$40	1	\$72,000
Brokers/LQGs	44	\$40	1	\$1,760
Brokers/SQGs	119	\$40	1	\$4,760
TSDFs Captive	759	\$40	1	\$30,360
TSDFs Commercial	253	\$40	8	\$80,960
Transporter	200	\$107	17	\$363,800
Total	3,175	N/A	N/A	\$553,640

N/A Not applicable

Exhibit 14, which summarizes the respondent's aggregate annual costs, includes the annualized capital costs for EDI signature devices.

Operation and Maintenance Costs

O&M costs are those costs associated with a paperwork requirement incurred continually over the life of the ICR. They are defined by the PRA as "the recurring dollar amount of cost associated with O&M or purchasing services." For this ICR, O&M costs cover postage and an envelope for manifests and reports sent to other parties (33 cents for postage, 3 cents per envelope), photocopying of reports submitted to the Agency (10 cents per report), and obtaining an independent written assessment/certification of an electronic manifest system (\$1,700).

¹² EPA estimates that a diskette holds approximately 14 documents. Thus, for storing 10,302,254 manifests, waste handlers would need 735,875 diskettes (i.e., 10,302,254/14) each year.

¹³ Based on an OMB-approved discount rate of 7.0% (OMB Circular A-94) and a required three-year record retention period for the manifest.

O&M costs also include long distance telephone call costs (\$2.00/call). These O&M costs are shown in Exhibits 1 through 14 for all applicable activities.

In addition to the O&M costs for postage, photocopying, and long distance telephone calls, EPA estimates that waste handlers transmitting and receiving electronic manifest would subscribe to a Value-Added Network (VAN) for unlimited three-year subscription to EDI access, given the volume of their manifesting. EPA estimates that the unlimited three-year subscription to EDI access would be a one-time cost of \$3,000 (\$1,143 annualized cost over three years at seven percent interest). EPA assumes SQG brokers and captive TSDFs would subscribe for a less expensive electronic system (\$295/yr in annual fees). See Table 2 for a summary of these handlers' costs.

Table 2
EDI Subscription Cost to Waste Handlers under the Proposal

Type of Handler	Number of Handlers	Subscription Cost per Handler	Total
LQGs	1,800	\$1,143	\$2,057,400
Brokers/LQGs	44	\$1,143	\$50,292
Brokers/SQGs	119	\$295	\$35,105
TSDFs Captive	759	\$295	\$223,905
TSDFs Commercial	253	\$1,143	\$289,179
Transporter	200	\$1,143	\$228,600
Total	3,175	N/A	\$2,884,481

N/A Not applicable

As shown in Exhibit 14, EPA estimates the total average annual O&M cost to all hazardous waste handlers under the manifest system, collectively, to be approximately \$5,983,523.

6(c) ESTIMATING AGENCY BURDEN AND COST

This section estimates EPA's burden hours and costs associated with the requirements covered in this ICR. Since Regional Offices generally process all the information collected under the requirements covered in this ICR, Regional labor costs are used in the calculation of Federal agency costs. Based on the General Schedule (GS) Salary Table 2000, EPA estimates an average hourly labor cost of \$59.50 for legal staff (GS-15, Step 1), \$42.80 for managerial staff (GS-13, Step 1), \$30.03 for technical staff (GS-11, Step 1), and \$18.26 for clerical staff (GS-06, Step 1). To derive these hourly estimates, EPA multiplied the basic hourly rates by the standard government overhead factor of 1.6.

As shown in Exhibit 15, EPA estimates that the annual Agency burden for all activities covered in this ICR is approximately 8,255 hours, at an annual cost of \$268,324.

6(d) ESTIMATING THE RESPONDENT UNIVERSE AND TOTAL BURDEN AND COST

Respondent Universe

The following paragraphs summarize the ICR's assumptions and data on the respondent universe and number of manifests prepared/transmitted.

Number of Respondents

Based on 1997 Biennial Reporting System (BRS) data, EPA estimates that approximately 18,290 large quantity generators (LQGs) and 2,024 treatment, storage and disposal facilities (TSDFs) ship hazardous waste

offsite each year and are subject to the manifest system.¹⁴ EPA further estimates that, of these 2,024 TSDFs acting as generators, approximately 25 percent are commercial TSDFs (506) and 75 percent are captive TSDFs (1,518). EPA defines a commercial TSDF as a facility whose waste management capacity is available to any generators or facilities for commercial hazardous waste management, or to a limited group of generators or facilities for commercial hazardous waste management. A captive TSDF is a facility that receives hazardous waste from onsite sources only, or from onsite sources and offsite sources that are part of its same company only. EPA believes there are significant differences between commercial and captive TSDFs regarding waste volumes managed and number of manifests completed, and thus, the Agency has chosen to examine their manifest preparation burdens separately in this ICR.

Finally, EPA has examined Resource Conservation and Recovery Information System (RCRIS) data and 1995 BRS data and estimates that approximately 72,580 small quantity generators (SQGs) ship hazardous waste offsite each year. Of these 72,580 SQGs shipping hazardous waste offsite each year, EPA estimates that approximately 71,536 SQGs are subject to the manifest system and that the remaining 1,044 SQGs operate under a reclamation agreement. As provided under section 262.20(e), these 1,044 SQGs need not undertake any manifesting activities for their hazardous waste shipments to the recycling facility.

Number of Manifests

To estimate the number of manifests prepared and transmitted by generators, EPA contacted nine state manifest programs to get their estimate of the number of manifests prepared for shipments originating in their state. In order to get an accurate estimate, EPA contacted nine typical states in terms of hazardous waste generation volume (per 1995 biennial reporting data). In total, the nine states contacted by EPA represented approximately 29 percent of the total U.S. hazardous waste generation volume in 1995.¹⁵ EPA then extrapolated their manifest totals to the entire U.S. That is, EPA assumed that the remaining 41 states accounted for about 2.4 times as many manifests as the nine states contacted. From these calculations, EPA estimated that about 1.8 million manifests are prepared annually (i.e., for federally regulated hazardous waste).¹⁶

Further, based on these consultations, as well as on consultations with industry, EPA estimates that the average LQG completes approximately 49 manifests each year. In total, EPA estimates that all LQGs complete approximately 896,210 manifests per year (i.e., for domestic and import shipments, as well as and export shipments to non-designated OECD countries). This is shown in Table 3.

In addition, EPA estimates that the average commercial TSDF acting as a generator completes approximately 311 manifests each year (approximately 157,366 manifests in total per year for all commercial TSDFs). EPA estimates that the average captive TSDF acting as a generator completes approximately 38 manifests per year (approximately 57,684 manifests per year for all captive TSDFs).

Finally, EPA estimates that the average SQG subject to the manifest system completes approximately nine manifests per year (about 643,824 manifests per year for all SQGs).

¹⁴ EPA acknowledges that most TSDFs qualify as LQGs, i.e., a site that generates 1,000 kilograms per month or more of hazardous waste. However, the Agency believes it is appropriate to distinguish between sites that only generate hazardous waste (LQGs) and sites that generate and treat, store or dispose of hazardous waste (TSDFs) because of differences in their manifesting practices and number of outbound shipments.

¹⁵ The total U.S. hazardous waste generation volume in 1995 was approximately 214 million tons. The nine states contacted represent approximately 63 million tons of the total U.S. hazardous waste generation volume in 1995.

¹⁶ Note that the EA estimates that approximately 2.4 million manifests are prepared each year for federal and State-only hazardous waste. Pursuant to the 1995 PRA, this ICR examines only manifests accompanying federally regulated hazardous wastes.

Table 3
Total Annual Number of Manifests Completed by Hazardous Waste Generators:
Domestic Shipments, Import Shipments, and Export Shipments^a

Type of Generator	Number of Generators That Manifest	Average Annual Number of Manifests Completed per Generator	Total Annual Number of Manifests Completed
LQGs	18,290	49	896,210 ^b
Commercial TSDFs	506	311	157,366 ^b
Captive TSDFs	1,518	38	57,684
SQGs	71,536	9	643,824
Total	91,850	19	1,755,084

^a Table only includes export shipments to non-designated OECD countries.

^b Note that this ICR assumes that a percentage of these manifests are prepared by designated TSDFs for their generator customers, while the remaining forms are prepared by generators themselves or brokers acting as agents for the generators.

In total, the Agency estimates that approximately 1.8 million manifests are completed each year for domestic shipments, import shipments, and export shipments to non-designated OECD countries, as summarized in Table 3.

In addition, Table 4 breaks down the total annual number of manifests that accompany domestic shipments, import shipments, and export shipments to non-designated OECD countries. Based on EPA consultations, as well as data compiled by EPA's Office of Enforcement and Compliance Assurance (OECA), EPA estimates that approximately 1,725,533 manifests accompany domestic shipments of hazardous waste and approximately 12,000 manifests accompany export shipments to non-designated OECD countries each year, including Mexico and Canada. Based on EPA's best professional judgment, EPA also estimates that approximately 17,551 manifests accompany import shipments of hazardous waste each year.

Table 5 presents the total number of manifests prepared by all waste handlers, as used in the Agency's spreadsheet calculations. It reflects EPA's assumption that half of all broker-prepared manifests would be electronic. It also reflects EPA's assumption that all manifests prepared by designated TSDFs for their generator customers would be prepared electronically (e.g., in the TSDFs' proprietary database system). EPA estimates that half of the designated TSDFs' manifests prepared electronically would be transmitted to generator customers via transporters electronically. The remaining 50 percent would be transmitted in hardcopy. Note that EPA does not assume captive or commercial TSDFs use brokers or designated TSDFs for manifest preparation.

Table 4
Total Annual Number of Manifests Accompanying Domestic Shipments
and Export Shipments to Non-Designated OECD Countries

Type of Generator	Total Number of Manifests/yr - Domestic Shipments	Total Number of Manifests/yr - Import Shipments	Total Number of Manifests/yr - Export Shipments ^a	Total Number of Manifests/yr - All Shipments
LQGs	881,120	8,962	6,128	896,210
Commercial TSDFs	154,716	1,574	1,076	157,366
Captive TSDFs	56,713	577	394	57,684
SQGs	632,984	6,438	4,402	643,824

	Manifests/yr - Domestic Shipments	Manifests/yr - Import Shipments	Manifests/yr - Export Shipments ^a	Manifests/yr - All Shipments 47
Total	1,725,533	17,551	12,000	1,755,084

^a Table only includes export shipments to non-designated OECD countries, including shipments to Mexico and Canada.

Table 5
Methods of Manifest Preparation by Waste Handler Type^a

	LQGs	SQGs	Captive TSDF	Commercial TSDF	Total
Manually Prepared Manifests					
Prepared by generator	194,926	12,876	28,842.00	78,683	315,327
Prepared by broker	64,975	57,944	N/A	N/A	122,919
Prepared by designated TSDF	0	0	N/A	N/A	0
Subtotal	259,901	70,821	28,842	78,683	438,247
Electronically Prepared Manifests					
Prepared by generator	194,926	0	28,842	78,683	302,451
Prepared by broker	64,975	57,944	N/A	N/A	122,919
Prepared by designated TSDF	376,408	515,059	N/A	N/A	891,467
Subtotal	636,309	573,003	28,842	78,683	1,316,837
All Manifests					
Prepared by generator	389,851	12,876	57,684	157,366	617,778
Prepared by broker	129,950	115,888	N/A	N/A	245,839
Prepared by designated TSDF	376,408	515,059	N/A	N/A	891,467
Total	896,210	643,824	57,684	157,366	1,755,084

^a Contains rounding

Respondent Burden and Costs

Based on the universe data presented in Tables 3 through 5, EPA estimates respondents' burden and costs associated with all the requirements covered in this ICR in Exhibits 1 through 14. A discussion of the burden estimates presented in these exhibits follows.

GENERATOR REQUIREMENTS

(1) Reading the Regulations

Exhibit 1 presents the total annual burden and cost to hazardous waste generators in reading the modified manifest regulations at 40 CFR Part 262. In total, EPA expects that approximately 91,850 generators will read the Part 262 regulations each year. As shown in Exhibit 1, EPA estimates that each generator will average about 1.25 hours to read these regulations.

(2) Manifest Completion: Domestic and International Shipments

As shown in Exhibit 2, this ICR assumes that a percentage of LQGs and SQGs rely on the designated TSDFs' assistance in manifest preparation, while the remaining LQGs and SQGs, as well as all TSDFs acting as generators, prepare their manifests themselves. These assumptions are discussed in the following paragraphs.

(a) Completing the Manifest Without the Assistance of Designated TSDF

Based on consultations with hazardous waste generators and the States, EPA believes that about 58 percent of LQG manifests and 20 percent of SQG manifests accompanying hazardous waste shipments are prepared without the assistance of the designated. Under the proposed rule, EPA estimates that these LQGs and SQGs would take an average of 24 and 22.8 minutes, respectively, to complete the modified paper manifest and an

average of nine minutes to complete an electronic manifest. In addition, EPA estimates that about five percent of their manifests include continuation sheets.

EPA further estimates that commercial TSDFs would take an average of 25.8 minutes to complete a modified paper manifest and an average of nine minutes to complete an electronic manifest. In addition, EPA estimates that each captive TSDF would take an average of 25.8 minutes to complete a modified paper manifest and an average of 19.2 minutes to complete an electronic manifest. Furthermore, EPA estimates that about five percent of their manifests include continuation sheets.

(b) Completing the Manifest With the Assistance of Designated TSDF

As discussed, EPA recognizes that many LQGs and SQGs rely on the assistance of the designated TSDF to complete the manifest form. Because the designated TSDF normally fills out most of the manifest form for the generator, the collaborative effort significantly reduces the burden on generators. This assumption is reflected in Exhibit 3.

Under the proposed rule, EPA estimates that each LQG and SQG would take approximately 1.8 minutes to complete specified portions of the paper or electronic manifest. [Note: Refer to Exhibit 12 for the burden and costs for designated TSDFs to assist LQGs and SQGs in completing their manifests.]

(3) Acquiring the Manifest

Under proposal 40 CFR 262.21, EPA estimates that 50 percent of commercial TSDFs and 50 percent of brokers would register with EPA to print their own forms (416 commercial TSDFs and brokers). EPA estimates that such registration is a one-time activity, and thus, it has annualized the one-time burden of 30 minutes over 3 years (i.e., approximately 10.2 minutes per year). This is reflected in Exhibit 4.

(4) Manifest Transmittal and Recordkeeping

As shown in Exhibit 5, EPA estimates that LQGs, TSDFs acting as generators, and SQGs will send three percent of their manifests with water shipments and six percent with rail shipments. Generators must comply with the requirements of sections 262.23, 262.24, and 262.40 when transmitting and keeping records of the paper or electronic manifest, as appropriate. (For purposes of analysis, this ICR assumes that all electronic manifests would be carried by the transporter from the generator to the designated TSDF, i.e., no generators would send their electronic manifests directly to the designated TSDF by electronic means.) In addition, EPA developed a conservative estimate that approximately 1,044 SQGs ship their hazardous waste off site under a reclamation agreement, pursuant to existing 40 CFR 262.20. These SQGs are required to keep a copy of the contractual agreement under which their hazardous waste is shipped to the recycling facility.

(5) Standards for Electronic Manifests: Signatures, Security and Systems

For purposes of analysis, this ICR assumes that 50 percent of generators participating in an electronic system would use a digital signature to sign their electronic manifests. These generators must apply to the Certification Authority (CA) for a digital certificate. Because this application is sent once during the three-year life of this ICR, EPA has divided the total number of applicants by three (496). EPA estimates that, each year, one percent of subscribers' private keys will be lost or compromised and thus reported to the CA. In addition, all generators participating in an electronic system will need to obtain written assessments of their electronic systems and prepare and keep specified records once over the three-year life of the ICR (992). Finally, the ICR assumes that these generators would configure their electronic systems so that they automatically transmit an acknowledgment of receipt whenever a transmission is received, and generate/maintain a transmission log of all transmissions sent and received. Thus, generators' burden for these activities would be minimal. These assumptions are reflected in Exhibit 6.

(6) Exception Reports: Completion, Submission, and Recordkeeping

EPA estimates that, on average, LQGs, TSDFs acting as generators, and SQGs will need to develop an exception report under existing section 262.42 for approximately 0.5 percent of the manifests sent off site. This assumption is reflected in Exhibit 7.

TRANSPORTER REQUIREMENTS

(1) Reading the Regulations

As shown in Exhibit 8, EPA believes that there are approximately 500 hazardous waste transporter companies subject to the manifest system.¹⁷ EPA expects that, on average, each company will take about 1.25 hours to read the modified manifest regulations once a year.

(2) Manifest Completion, Transmittal and Recordkeeping: Domestic and International Shipments

Exhibit 9 examines the manifesting burden and costs for transporters transporting domestic and international shipments of hazardous waste. EPA estimates that, of the 1,725,533 manifests completed and transmitted by generators each year for domestic shipments, approximately 91 percent will accompany highway shipments, three percent will accompany water shipments, and six percent will accompany rail shipments.

EPA further estimates that approximately 17,551 manifest forms will accompany imports and approximately 12,000 manifest forms will accompany exports to non-designated OECD countries.

Finally, EPA estimates that approximately 1,044 transporters transporting hazardous waste pursuant to a reclamation agreement will need to comply with section 263.20(h).

(3) Compliance with the Manifest

Under existing 40 CFR 263.21(b)(1), as amended, if the hazardous waste cannot be delivered in accordance with paragraph (a) of this section because of an emergency condition other than rejection of the waste by the designated facility, then the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions. EPA estimates that transporters would have to complete approximately 3,036 new manifests annually (six manifests/ transporter/year). As shown in Exhibit 9, EPA estimates that each transporter would take an average of 19.2 minutes in conducting this manifesting activity.

(4) Standards for Electronic Manifests: Signatures, Security and Systems

For purposes of analysis, this ICR assumes that 50 percent of transporters participating in an electronic system would use a digital signature to sign their electronic manifests and would have to apply to the CA for a digital certificate. Because this application is sent once during the three-year life of this ICR, EPA has divided the total number of applicants by three (33). EPA estimates that, each year, one percent of subscribers' private keys will be lost or compromised and thus reported to the CA. In addition, all transporters participating in an electronic system will need to obtain written assessments of their electronic systems and prepare and keep specified records once over the three-year life of the ICR (67). Finally, EPA assumes that these transporters would configure their electronic systems so that they automatically transmit an acknowledgment of receipt whenever a transmission is received, and generate/maintain a transmission log of all transmissions sent and received. Thus, their burden for these activities would be minimal. These assumptions are reflected in Exhibit 9.

(5) Notification of Discharge of Hazardous Waste

The U.S. Commerce's 1998 Statistical Abstract of the United States indicates that there were approximately 13,801 accidents involving transporters of hazardous substances in 1996. Of these, EPA estimates that approximately five percent (690) involved hazardous waste transporters who had a discharge of hazardous waste. In Exhibit 10, EPA used its best professional judgment to estimate that approximately 690 hazardous waste transporters will be required to notify local authorities of a hazardous waste discharge annually, as required under

¹⁷ Note that EPA did not refer to RCRIS to estimate the number of transporter companies. The validity of RCRIS data on transporters has been challenged on the basis that it overestimates the actual number of companies. The Chemical Waste Transportation Institute (CWTI), for example, has asserted that EPA does not have a process to periodically revalidate that the transporter companies in the database are still active, or to control against double-counting of companies. To address these concerns, EPA contacted CWTI for data on its surveys and studies of the transporter universe. CWTI estimates that there are approximately 500 hazardous waste transportation companies nationwide.

section 263.30. In addition, the National Response Center (NRC) indicates that it received approximately 3,880 notifications of marine source incidents in 1998 for discharges of oil or hazardous substances. NRC estimates that about two-thirds of these incidents involved oil discharges (2,561) and that one-third involved hazardous substances discharges (1,319). Of the 1,319 discharges of hazardous substances, NRC estimates that five percent (65) involved a hazardous waste. As shown in Exhibit 10, EPA expects that, on average, 65 water transporters transporting hazardous waste will notify NRC or EPA under 33 CFR Part 153. The purpose of 33 CFR Part 153 is to prescribe regulations concerning notification to the Coast Guard of the discharge of oil or hazardous substances as required by the Federal Water Pollution Control Act, as amended; the procedures for the removal of a discharge of oil; and the costs that may be imposed or reimbursed for the removal of a discharge of oil or hazardous substances.

DESIGNATED TREATMENT, STORAGE AND DISPOSAL FACILITY (TSDF) REQUIREMENTS

(1) Reading the Regulations

Based on 1997 BRS data, EPA estimates that approximately 543 TSDFs receive off site shipments of hazardous waste each year. As shown in Exhibit 11, EPA expects that each facility will take 1.25 hours to read the modified manifest regulations once a year.

(2) Manifest: Completion, Transmittal and Recordkeeping

In the following paragraphs, EPA describes its manifest assumptions for designated TSDFs that receive offsite shipments.

(a) Completing the Manifest for Generator Customers

As shown in Exhibit 12, EPA estimates that approximately 42 percent and 80 percent of manifests from LQGs and SQGs, respectively, are completed jointly with the designated TSDF. In addition, EPA estimates that five percent of these manifests will include continuation sheets.

(b) Transmitting and Recordkeeping the Manifest

EPA estimates that each manifest completed and sent offsite by a generator will be delivered to the designated TSDF, except for those manifests accompanying export shipments (12,000) or lost during transport (173 manifests, as discussed below). As shown in Exhibit 13, each of the 1,742,911 manifests delivered to the designated TSDF must be signed, dated, and returned to the generator, as required under section 264.71 or 265.71, as amended. A copy of the manifest must also be retained on site under existing requirements.

(3) Discrepancy Reports, Rejected Loads, and Residues

As shown in Exhibit 13, EPA estimates that approximately 25 percent of manifests delivered to the designated TSDF require it to reconcile a discrepancy between the manifest and shipment (e.g., by calling the generator). EPA estimates each call to the generator costs about \$2.00 in long-distance charges. EPA further estimates that about 0.4 percent of manifests delivered to the designated TSDF will require a discrepancy report under existing section 264.72 or 265.72.

In addition, under the proposal, for each fully rejected load or container residue, designated TSDFs must contact the generator for forwarding information and complete a new manifest as required by section 264.72(d) and (e) or (f) or 265.72(d) and (e) or (f). EPA estimates that designated TSDFs would have to complete approximately 3,036 new manifests each year. As shown in Exhibit 13, EPA estimates that each designated TSDF would take an average of 19.2 minutes in conducting this manifesting activity. EPA further estimates that ten percent of rejected loads or residues will be initiated by the TSDF after manifest signature and be subject to proposed section 264.72(g) or 265.72(g).

(4) Unmanifested Waste Reports: Completion and Submission

EPA estimates that designated TSDFs will need to complete approximately 173 letters notifying the Agency of unmanifested waste shipments each year, as required under amended section 264.76 or 265.76. These assumptions are shown in Exhibit 13.

(5) Standards for Electronic Manifests: Signatures, Security and Systems

This ICR assumes that 50 percent of designated TSDFs participating in an electronic system would use a digital signature to sign their electronic manifests. Note that Exhibit 6 has already estimated the annual burden for TSDFs to apply for a digital certificate and for persons to report and lost or stolen key. That is, this ICR assumes that the designated TSDFs participating in an electronic system will also participate as generators, and thus, they are addressed in Exhibit 6 of this ICR. Exhibit 6 also estimates designated TSDFs' burden for obtaining a written assessment of the electronic system and establishing procedures and written policies on system security.

Finally, the ICR assumes that TSDFs would configure their electronic systems so that they automatically transmit an acknowledgment of receipt whenever a transmission is received, and generate/maintain a transmission log of all transmissions sent and received. Thus, their burden for these activities would be minimal. These assumptions are reflected in Exhibit 13.

6(e) BOTTOM LINE BURDEN HOURS AND COSTS

Respondent and Agency bottom line burden hours and costs are summarized in this subsection. The bottom line burden hours and cost to respondents and the Agency is based on a three-year time-span over which the ICR is effective. Therefore, the bottom line burden hours and cost is the aggregate annual respondent or Agency burden hours and cost figures multiplied by three.

Respondent Tally

Exhibit 14 summarizes the total annual respondent burden and cost associated with all the requirements covered in this ICR. As shown in the exhibit, EPA estimates the annual respondent burden to be 2,326,798 hours, at an annual cost of \$106,177,798. The bottom line burden to respondents over three years is 6,980,394 hours, at a cost of \$318,533,394.

EXHIBIT 1:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
READING THE REGULATIONS

	Number of Generators	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Read the regulations										
LQGs	18,290	0.00	0.25	1.00	0.00	\$0.00	\$0.00	22,863	\$71.25	\$1,303,163
TSDFs	2,024	0.00	0.25	1.00	0.00	\$0.00	\$0.00	2,530	\$71.25	\$144,210
SQGs	71,536	0.00	0.25	1.00	0.00	\$0.00	\$0.00	89,420	\$71.25	\$5,096,940
TOTAL (LQGs, TSDFs, and SQGs)	91,850	0.00	0.25	1.00	0.00	\$0.00	\$0.00	114,813	\$71.25	\$6,544,313

EXHIBIT 2:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
COMPLETING THE MANIFEST AND CONTINUATION SHEETS (WITHOUT ASSISTANCE OF DESIGNATED TSDFs)

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator / Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopie s @ \$0.10/doc			
Manifest completion: LQGs (262.20)										
Manifests completed manually										
Complete the manifest	259,901	0.00	0.00	0.32	0.08	\$0.00	\$0.00	103,960	\$19.12	\$4,969,307
Complete the continuation sheet	12,995	0.00	0.00	0.14	0.03	\$0.00	\$0.00	2,209	\$8.23	\$106,949
Manifests completed electronically										
Complete the manifest	259,901	0.00	0.00	0.12	0.03	\$0.00	\$0.00	38,985	\$7.17	\$1,863,490
Complete the continuation sheet	12,995	0.00	0.00	0.02	0.01	\$0.00	\$0.00	390	\$1.33	\$17,283
Sub-total (for LQGs)	519,802	0.00	0.00	varies	varies	\$0.00	\$0.00	145,544	varies	\$6,957,029
Manifest completion: Commercial TSDFs who are also generators (262.20)										
Manifests completed manually										
Complete the manifest	78,683	0.00	0.00	0.35	0.08	\$0.00	\$0.00	33,834	\$20.71	\$1,629,525
Complete the continuation sheet	3,934	0.00	0.00	0.14	0.03	\$0.00	\$0.00	669	\$8.23	\$32,377
Manifests completed electronically										
Complete the manifest	78,683	0.00	0.00	0.26	0.06	\$0.00	\$0.00	25,179	\$15.40	\$1,211,718
Complete the continuation sheet	3,934	0.00	0.00	0.14	0.03	\$0.00	\$0.00	669	\$8.23	\$32,377
Sub-total (for Commercial TSDFs)	157,366	0.00	0.00	varies	varies	\$0.00	\$0.00	60,351	varies	\$2,905,997

EXHIBIT 2 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
COMPLETING THE MANIFEST AND CONTINUATION SHEETS (WITHOUT ASSISTANCE OF DESIGNATED TSDFs)

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator / Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopie s @ \$0.10/doc			
Manifest completion: Captive TSDFs who are also generators (262.20)										
Manifests completed manually										
Complete the manifest	28,842	0.00	0.00	0.35	0.08	\$0.00	\$0.00	12,402	\$20.71	\$597,318
Complete the continuation sheet	1,442	0.00	0.00	0.14	0.04	\$0.00	\$0.00	260	\$8.50	\$12,257
Manifests completed electronically										
Complete the manifest	28,842	0.00	0.00	0.12	0.03	\$0.00	\$0.00	4,326	\$7.17	\$206,797
Complete the continuation sheet	1,442	0.00	0.00	0.02	0.01	\$0.00	\$0.00	43	\$1.33	\$1,918
Sub-total (for Captive TSDFs)	57,684	0.00	0.00	varies	varies	\$0.00	\$0.00	17,031	varies	\$818,290
Manifest completion: SQGs (262.20)										
Manifests completed manually										
Complete the manifest	70,821	0.00	0.00	0.31	0.07	\$0.00	\$0.00	26,912	\$18.32	\$1,297,441
Complete the continuation sheet	3,541	0.00	0.00	0.13	0.03	\$0.00	\$0.00	567	\$7.70	\$27,266
Manifests completed electronically										
Complete the manifest	57,944	0.00	0.00	0.12	0.03	\$0.00	\$0.00	8,692	\$7.17	\$415,458
Complete the continuation sheet	2,897	0.00	0.00	0.02	0.01	\$0.00	\$0.00	87	\$1.33	\$3,853
Sub-total (for SQGs)	128,765	0.00	0.00	varies	varies	\$0.00	\$0.00	36,258	varies	\$1,744,018
TOTAL (LQGs, TSDFs, and SQGs)	863,617	0.00	0.00	varies	varies	\$0.00	\$0.00	259,184	varies	\$12,425,334

EXHIBIT 3:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
COMPLETING THE MANIFEST (WITH ASSISTANCE OF DESIGNATED TSDFs)

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator / Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest completion: LQGs (262.20)										
Complete the manifest	376,408	0.00	0.00	0.02	0.01	\$0.00	\$0.00	11,292	\$1.33	\$500,623
Manifest completion: SQGs (262.20)										
Complete the manifest	515,059	0.00	0.00	0.02	0.01	\$0.00	\$0.00	15,452	\$1.33	\$685,028
TOTAL (LQGs and SQGs)	891,467	0.00	0.00	0.02	0.01	\$0.00	\$0.00	26,744	\$1.33	\$1,185,651

EXHIBIT 4:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
ACQUIRING THE MANIFEST

	Number of Generators	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator / Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Acquiring the manifest: Registering with EPA to print manifest forms (262.21)										
Prepare and submit the application	416	0.00	0.00	0.14	0.03	\$0.36	\$0.00	71	\$8.23	\$3,574
TOTAL	416	0.00	0.00	0.14	0.03	\$0.36	\$0.00	71	\$8.23	\$3,574

EXHIBIT 5:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year	
	Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc				
Manifest transmittal and recordkeeping: LQGs										
Paper Manifest (262.23(a) and (b), and (262.40(a))										
Sign the manifest certification by hand and obtain the signature of the initial transporter and date of acceptance on the manifest	448,105	0.00	0.00	0.01	0.00	\$0.00	\$0.00	4,481	\$0.53	\$237,496
Keep a copy of the manifest and give the remaining copies to the initial transporter	448,105	0.00	0.00	0.00	0.10	\$0.00	\$0.00	44,811	\$2.70	\$1,209,884
Keep a copy of the manifest returned from the designated facility	448,105	0.00	0.00	0.00	0.10	\$0.00	\$0.00	44,811	\$2.70	\$1,209,884
For shipments solely by water, send three copies of the manifest, dated and signed, to the designated facility or the last water transporter to handle the waste in the U.S. (Domestic & Exports)	13,309	0.00	0.00	0.00	0.16	\$0.36	\$0.00	2,129	\$4.32	\$62,286
For shipments by rail originating at the site of generation, send three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S. (Domestic & Exports)	26,617	0.00	0.00	0.00	0.16	\$0.36	\$0.00	4,259	\$4.32	\$124,567
Sub-total (paper manifests)	448,105	0.00	0.00	varies	varies	varies	\$0.00	100,491	varies	\$2,844,117
Electronic Manifest (262.24(b) through (d) and 262.40(a))										
Electronically sign the manifest certification and obtain back from the initial transporter a copy of the manifest bearing the electronic signature of the initial transporter and the date of acceptance of the shipment	448,105	0.00	0.00	0.01	0.00	\$0.00	\$0.00	4,481	\$0.53	\$237,496
Retain one electronic manifest copy and any hard copy of a manifest or shipping paper signed by the initial transporter, and provide the initial transporter with a copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle	448,105	0.00	0.00	0.00	0.11	\$0.00	\$0.00	49,292	\$2.97	\$1,330,872

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Send an electronic manifest copy to the designated facility if any transported listed in the manifest is not able to accept, sign, and transmit electronic manifest copies	0	0.00	0.00	0.00	0.08	\$0.00	\$0.00	0	\$2.16	\$0
For shipments of hazardous waste within the U.S. solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the owner or operator of the designated facility (Domestic)	13,217	0.00	0.00	0.00	0.08	\$0.36	\$0.00	1,057	\$2.16	\$33,307
For rail shipments of hazardous waste within the U.S. which originate at the site of generation, if the next non-rail transporter or the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the next non-rail transporter or to the owner or operator of the designated facility, if transported solely by rail (Domestic)	26,434	0.00	0.00	0.00	0.08	\$0.36	\$0.00	2,115	\$2.16	\$66,613
For rail shipments or water shipments of hazardous waste which are exported from the U.S., if the last rail transporter or last water transporter to handle the waste in the U.S. is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the last rail transporter or last water transporter to handle the waste in the U.S. (Exports)	276	0.00	0.00	0.00	0.08	\$0.36	\$0.00	22	\$2.16	\$695
Sub-total (electronic manifests)	448,105	0.00	0.00	varies	varies	varies	\$0.00	56,967	varies	\$1,668,983

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Exports (262.54(h) and (i) and 263.24(g))										
Provide the transporter with Acknowledgment of Consent and copies of the manifest or shipping papers	6,128	0.00	0.00	0.00	0.25	\$0.00	\$0.00	1,532	\$6.75	\$41,364
Sub-total (exports)	6,128	0.00	0.00	0.00	0.25	\$0.00	\$0.00	1,532	\$6.75	\$41,364
Imports (262.20 (g) and 262.60(e))										
Provide the transporter with an additional copy of manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the U.S.	8,962	0.00	0.00	0.00	0.02	\$0.00	\$0.10	179	\$0.54	\$5,736
Sub-total (imports)	8,962	0.00	0.00	0.00	0.02	\$0.00	\$0.10	179	\$0.54	\$5,736
Sub-total (for LQGs)	varies	0.00	0.00	varies	varies	varies	varies	159,169	varies	\$4,560,200
Manifest transmittal and recordkeeping: Commercial TSDFs										
Paper Manifest (262.23(a) and (b), and (262.40(a))										
Sign the manifest certification by hand and obtain the signature of the initial transporter and date of acceptance on the manifest	78,683	0.00	0.00	0.01	0.00	\$0.00	\$0.00	787	\$0.53	\$41,702
Keep a copy of the manifest and give the remaining copies to the initial transporter	78,683	0.00	0.00	0.00	0.10	\$0.00	\$0.00	7,868	\$2.70	\$212,444
Keep a copy of the manifest returned from the designated facility	78,683	0.00	0.00	0.00	0.10	\$0.00	\$0.00	7,868	\$2.70	\$212,444
For shipments solely by water, send three copies of the manifest, dated and signed, to the designated facility or the last water transporter to handle the waste in the U.S. (Domestic and Exports)	2,337	0.00	0.00	0.00	0.16	\$0.36	\$0.00	374	\$4.32	\$10,937
For shipments by rail originating at the site of generation, send three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S. (Domestic and Exports)	4,674	0.00	0.00	0.00	0.16	\$0.36	\$0.00	748	\$4.32	\$21,875
Sub-total (paper manifests)	78,683	0.00	0.00	varies	varies	varies	\$0.00	17,645	varies	\$499,402

EXHIBIT 5 (CONTINUED):

ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Electronic Manifest (262.24(b) through (d) and 262.40(a))										
Electronically sign the manifest certification and obtain back from the initial transporter a copy of the manifest bearing the electronic signature of the initial transporter and the date of acceptance of the shipment	78,683	0.00	0.00	0.01	0.00	\$0.00	\$0.00	787	\$0.53	\$41,702
Retain one electronic manifest copy and any hard copy of a manifest or shipping paper signed by the initial transporter, and provide the initial transporter with a copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle	78,683	0.00	0.00	0.00	0.11	\$0.00	\$0.00	8,655	\$2.97	\$233,689
Send an electronic manifest copy to the designated facility if any transported listed in the manifest is not able to accept, sign, and transmit electronic manifest copies	0	0.00	0.00	0.00	0.02	\$0.00	\$0.00	0	\$0.54	\$0
For shipments of hazardous waste within the U.S. solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the owner or operator of the designated facility (Domestic)	2,321	0.00	0.00	0.00	0.02	\$0.36	\$0.00	46	\$0.54	\$2,089
For rail shipments of hazardous waste within the U.S. which originate at the site of generation, if the next non-rail transporter or the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the next non-rail transporter or to the owner or operator of the designated facility, if transported solely by rail (Domestic)	4,641	0.00	0.00	0.00	0.02	\$0.36	\$0.00	93	\$0.54	\$4,177

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
For rail shipments or water shipments of hazardous waste which are exported from the U.S., if the last rail transporter or last water transporter to handle the waste in the U.S. is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the last rail transporter or last water transporter to handle the waste in the U.S. (Exports)	48	0.00	0.00	0.00	0.02	\$0.36	\$0.00	1	\$0.54	\$43
Sub-total (electronic manifests)	78,683	0.00	0.00	varies	varies	varies	\$0.00	9,582	varies	\$281,700
Exports (262.54(h) and (i) and 263.24(g))										
Provide the transporter with Acknowledgment of Consent and copies of the manifest or shipping papers	1,076	0.00	0.00	0.00	0.25	\$0.00	\$0.00	269	\$6.75	\$7,263
Sub-total (exports)	1,076	0.00	0.00	0.00	0.25	\$0.00	\$0.00	269	\$6.75	\$7,263
Imports (262.20 (g) and 262.60(e))										
Provide the transporter with an additional copy of manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the U.S.	1,574	0.00	0.00	0.00	0.02	\$0.00	\$0.10	31	\$0.54	\$1,007
Sub-total (imports)	1,574	0.00	0.00	0.00	0.02	\$0.00	\$0.10	31	\$0.54	\$1,007
Sub-total (for Commercial TSDFs)	varies	0.00	0.00	varies	varies	varies	varies	27,527	varies	\$789,372

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest transmittal and recordkeeping: Captive TSDFs										
Paper Manifest (262.23(a) and (b), and (262.40(a))										
Sign the manifest certification by hand and obtain the signature of the initial transporter and date of acceptance on the manifest	28,842	0.00	0.00	0.01	0.00	\$0.00	\$0.00	288	\$0.53	\$15,286
Keep a copy of the manifest and give the remaining copies to the initial transporter	28,842	0.00	0.00	0.00	0.10	\$0.00	\$0.00	2,884	\$2.70	\$77,873
Keep a copy of the manifest returned from the designated facility	28,842	0.00	0.00	0.00	0.10	\$0.00	\$0.00	2,884	\$2.70	\$77,873
For shipments solely by water, send three copies of the manifest, dated and signed, to the designated facility or the last water transporter to handle the waste in the U.S. (Domestic and Exports)	857	0.00	0.00	0.00	0.16	\$0.36	\$0.00	137	\$4.32	\$4,011
For shipments by rail originating at the site of generation, send three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S. (Domestic and Exports)	1,742	0.00	0.00	0.00	0.16	\$0.36	\$0.00	279	\$4.32	\$8,152
Sub-total (paper manifests)	28,842	0.00	0.00	varies	varies	varies	\$0.00	6,472	varies	\$183,195
Electronic Manifest (262.24(b) through (d) and 262.40(a))										
Electronically sign the manifest certification and obtain back from the initial transporter a copy of the manifest bearing the electronic signature of the initial transporter and the date of acceptance of the shipment	28,842	0.00	0.00	0.01	0.00	\$0.00	\$0.00	288	\$0.53	\$15,286
Retain one electronic manifest copy and any hard copy of a manifest or shipping paper signed by the initial transporter, and provide the initial transporter with a copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle	28,842	0.00	0.00	0.00	0.11	\$0.00	\$0.00	3,173	\$2.97	\$85,661

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Send an electronic manifest copy to the designated facility if any transported listed in the manifest is not able to accept, sign, and transmit electronic manifest copies	0	0.00	0.00	0.00	0.08	\$0.00	\$0.00	0	\$2.16	\$0
For shipments of hazardous waste within the U.S. solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the owner or operator of the designated facility (Domestic)	851	0.00	0.00	0.00	0.08	\$0.36	\$0.00	68	\$2.16	\$2,144
For rail shipments of hazardous waste within the U.S. which originate at the site of generation, if the next non-rail transporter or the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the next non-rail transporter or to the owner or operator of the designated facility, if transported solely by rail (Domestic)	1,701	0.00	0.00	0.00	0.08	\$0.36	\$0.00	136	\$2.16	\$4,286
For rail shipments or water shipments of hazardous waste which are exported from the U.S., if the last rail transporter or last water transporter to handle the waste in the U.S. is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the last rail transporter or last water transporter to handle the waste in the U.S. (Exports)	18	0.00	0.00	0.00	0.08	\$0.36	\$0.00	1	\$2.16	\$45
Sub-total (electronic manifests)	28,842	0.00	0.00	varies	varies	varies	\$0.00	3,666	varies	\$107,422
Exports (262.54(h) and (i) and 263.24(g))										
Provide the transporter with Acknowledgment of Consent and copies of the manifest or shipping papers	394	0.00	0.00	0.00	0.25	\$0.00	\$0.00	99	\$6.75	\$2,660
Sub-total (exports)	394	0.00	0.00	0.00	0.25	\$0.00	\$0.00	99	\$6.75	\$2,660

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Imports (262.20 (g) and 262.60(e))										
Provide the transporter with an additional copy of manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the U.S.	577	0.00	0.00	0.00	0.02	\$0.00	\$0.10	12	\$0.54	\$369
Sub-total (imports)	577	0.00	0.00	0.00	0.02	\$0.00	\$0.10	12	\$0.54	\$369
Sub-total (for Captive TSDFs)	varies	0.00	0.00	varies	varies	varies	varies	10,249	varies	\$293,646
Manifest transmittal and recordkeeping: SQGs										
Paper Manifest (262.23(a) and (b), and (262.40(a))										
Sign the manifest certification by hand and obtain the signature of the initial transporter and date of acceptance on the manifest	328,350	0.00	0.00	0.01	0.00	\$0.00	\$0.00	3,284	\$0.53	\$174,026
Keep a copy of the manifest and give the remaining copies to the initial transporter	328,350	0.00	0.00	0.00	0.10	\$0.00	\$0.00	32,835	\$2.70	\$886,545
Keep a copy of the manifest returned from the designated facility	328,350	0.00	0.00	0.00	0.10	\$0.00	\$0.00	32,835	\$2.70	\$886,545
For shipments solely by water, send three copies of the manifest, dated and signed, to the designated facility or the last water transporter to handle the waste in the U.S. (Domestic and Exports)	9,752	0.00	0.00	0.00	0.16	\$0.36	\$0.00	1,560	\$4.32	\$45,640
For shipments by rail originating at the site of generation, send three copies of the manifest to the next non-rail transporter, the designated facility, or the last rail transporter to handle the waste in the U.S. (Domestic and Exports)	19,504	0.00	0.00	0.00	0.16	\$0.36	\$0.00	3,121	\$4.32	\$91,278
Sub-total (paper manifests)	328,350	0.00	0.00	varies	varies	varies	\$0.00	73,635	varies	\$2,084,034

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Electronic Manifest (262.24(b) through (d) and 262.40(a))										
Electronically sign the manifest certification and obtain back from the initial transporter a copy of the manifest bearing the electronic signature of the initial transporter and the date of acceptance of the shipment	315,474	0.00	0.00	0.01	0.00	\$0.00	\$0.00	3,155	\$0.53	\$167,201
Retain one electronic manifest copy and any hard copy of a manifest or shipping paper signed by the initial transporter, and provide the initial transporter with a copy of the manifest or other hazardous materials shipping paper to be carried on the vehicle	315,474	0.00	0.00	0.00	0.11	\$0.00	\$0.00	34,702	\$2.97	\$936,958
Send an electronic manifest copy to the designated facility if any transported listed in the manifest is not able to accept, sign, and transmit electronic manifest copies	0	0.00	0.00	0.00	0.08	\$0.00	\$0.00	0	\$2.16	\$0
For shipments of hazardous waste within the U.S. solely by water (bulk shipments only), if the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the owner or operator of the designated facility (Domestic)	9,305	0.00	0.00	0.00	0.08	\$0.36	\$0.00	744	\$2.16	\$23,449
For rail shipments of hazardous waste within the U.S. which originate at the site of generation, if the next non-rail transporter or the designated facility is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the next non-rail transporter or to the owner or operator of the designated facility, if transported solely by rail (Domestic)	18,610	0.00	0.00	0.00	0.08	\$0.36	\$0.00	1,489	\$2.16	\$46,898

EXHIBIT 5 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
For rail shipments or water shipments of hazardous waste which are exported from the U.S., if the last rail transporter or last water transporter to handle the waste in the U.S. is able to accept, sign, and transmit electronic manifests, send an electronic copy of the manifest to the last rail transporter or last water transporter to handle the waste in the U.S. (Exports)	194	0.00	0.00	0.00	0.08	\$0.36	\$0.00	16	\$2.16	\$489
Sub-total (electronic manifests)	315,474	0.00	0.00	varies	varies	varies	\$0.00	40,106	varies	\$1,174,995
Exports (262.54(h) and (i) and 263.24(g))										
Provide the transporter with Acknowledgment of Consent and copies of the manifest or shipping papers	4,402	0.00	0.00	0.00	0.25	\$0.00	\$0.00	1,101	\$6.75	\$29,714
Sub-total (exports)	4,402	0.00	0.00	0.00	0.25	\$0.00	\$0.00	1,101	\$6.75	\$29,714
Imports (262.20 (g) and 262.60(e))										
Provide the transporter with an additional copy of manifest for delivery to the U.S. Customs official at the point the hazardous waste enters the U.S.	6,438	0.00	0.00	0.00	0.02	\$0.00	\$0.10	129	\$0.54	\$4,121
Sub-total (imports)	6,438	0.00	0.00	0.00	0.02	\$0.00	\$0.10	129	\$0.54	\$4,121
Reclamation agreements (262.20(e)(2))										
Retain a copy of each reclamation agreement	1,044	0.00	0.00	0.00	0.10	\$0.00	\$0.00	104	\$2.70	\$2,819
Sub-total (reclamation agreements)	1,044	0.00	0.00	0.00	0.10	\$0.00	\$0.00	104	\$2.70	\$2,819
Sub-total (for SQGs)	varies	0.00	0.00	varies	varies	varies	varies	115,075	varies	\$3,295,683
TOTAL (includes LQGs, TSDFs, and SQGs)	varies	0.00	0.00	varies	varies	varies	varies	312,020	varies	\$8,938,901

EXHIBIT 6:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
ELECTRONIC MANIFESTS

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Standards for electronic manifests (262.25 and 262.26)										
Electronic manifest signatures (262.25(f))										
Apply to Certification Authority operating in accordance with an applicable Certificate Policy and designated PKI for digital certificates	496	0.00	0.00	0.25	0.00	\$0.00	\$0.00	124	\$13.25	\$6,572
Report to the Certification Authority information that a private key has been lost or compromised the affected certificate's status	5	0.00	0.00	0.08	0.00	\$0.00	\$0.00	0.4	\$4.24	\$21
Electronic manifest systems and security (262.26(c)(1), (9) and (10))										
Obtain written assessment and certification of system and establish controls and written policies	992	1.00	4.00	20.00	5.00	\$1,700.00	\$0.00	29,760	\$1,589.00	\$3,262,688
Special procedures for electronic transmissions (262.26(f), (h), and (j))										
When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data when and electronic transmission is received	845,426	0.00	0.00	0.00	0.00	\$0.00	\$0.00	0	\$0.00	\$0
If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest	845	0.00	0.00	0.00	0.08	\$0.00	\$0.00	68	\$2.16	\$1,825
Maintain a transmission log covering all electronic manifests sent or received	2,975	0.00	0.00	0.00	0.08	\$0.00	\$0.00	238	\$2.16	\$6,426
TOTAL (generators)	varies	varies	varies	varies	varies	varies	\$0.00	30,190	varies	\$3,277,532

EXHIBIT 7:
ESTIMATED ANNUAL BURDEN AND COST FOR GENERATORS
DEVELOPING EXCEPTION REPORTS

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Exception report completion, submission, and recordkeeping: LQGs (262.42(a) and 262.40(b))										
Prepare and submit a signed cover letter to EPA explaining the generator's efforts to locate the hazardous waste and the results of those efforts, along with a legible copy of the manifest	4,481	0.00	0.50	0.50	0.10	\$0.36	\$0.10	4,929	\$65.70	\$296,463
Keep a copy of each exception report	4,481	0.00	0.00	0.00	0.10	\$0.00	\$0.10	448	\$2.70	\$12,547
Sub-total (for LQGs)	4,481	0.00	0.50	0.50	0.20	\$0.36	\$0.20	5,377	\$68.40	\$309,010
Exception report completion, submission, and recordkeeping: Commercial TSDFs (262.42(a) and 262.40(b))										
Prepare and submit a signed cover letter to EPA explaining the generator's efforts to locate the hazardous waste and the results of those efforts, along with a legible copy of the manifest	787	0.00	0.50	0.50	0.10	\$0.36	\$0.10	866	\$65.70	\$52,068
Keep a copy of each exception report	787	0.00	0.00	0.00	0.10	\$0.00	\$0.10	79	\$2.70	\$2,204
Sub-total (for Commercial TSDFs)	787	0.00	0.50	0.50	0.20	\$0.36	\$0.20	945	\$68.40	\$54,272
Exception report completion, submission, and recordkeeping: Captive TSDFs (262.42(a) and 262.40(b))										
Prepare and submit a signed cover letter to EPA explaining the generator's efforts to locate the hazardous waste and the results of those efforts, along with a legible copy of the manifest	288	0.00	0.50	0.50	0.10	\$0.36	\$0.10	317	\$65.70	\$19,054
Keep a copy of each exception report	288	0.00	0.00	0.00	0.10	\$0.00	\$0.10	29	\$2.70	\$807
Sub-total (for Captive TSDFs)	288	0.00	0.50	0.50	0.20	\$0.36	\$0.20	346	\$68.40	\$19,861
Exception report completion, submission, and recordkeeping: SQGs (262.42(b))										
Submit to EPA a legible copy of manifest with some indication that the waste has not been delivered	3,219	0.00	0.25	0.25	0.00	\$0.36	\$0.10	1,610	\$31.50	\$102,880
Sub-total (for SQGs)	3,219	0.00	0.25	0.25	0.00	\$0.36	\$0.10	1,610	\$31.50	\$102,880
TOTAL (includes LQGs, TSDFs, and SQGs)	varies	0.00	varies	varies	varies	varies	varies	8,278	varies	\$486,023

EXHIBIT 8:
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
READING THE REGULATIONS

	Number of Transporter s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Read the manifest regulations										
Transporters	500	0.00	0.25	1.00	0.00	\$0.00	\$0.00	625	\$71.25	\$35,625
TOTAL	500	0.00	0.25	1.00	0.00	\$0.00	\$0.00	625	\$71.25	\$35,625

EXHIBIT 9:
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
COMPLETING AND TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest requirements (263.20)(b),(c), and (d), and 263.22(a)										
Sign and date the manifest by hand or electronic signature	1,725,533	0.00	0.00	0.01	0.00	\$0.00	\$0.00	17,255	\$0.53	\$914,532
Return a copy to the generator	1,725,533	0.00	0.00	0.01	0.00	\$0.00	\$0.00	17,255	\$0.53	\$914,532
Ensure the original manifest (or other shipping paper) accompanies the waste to its destination and its readily available to, and recognizable by, authorities in the event of accident or inspection	1,725,533	0.00	0.00	0.13	0.00	\$0.00	\$0.00	224,319	\$6.89	\$11,888,922
Obtain the date and signature that transporter or the owner/operator of the facility or alternate facility designated on the manifest	1,725,533	0.00	0.00	0.01	0.00	\$0.00	\$0.00	17,255	\$0.53	\$914,532
Retain a copy of the paper manifest	880,022	0.00	0.00	0.00	0.17	\$0.00	\$0.00	149,604	\$4.59	\$4,039,301
Retain a copy of the electronic manifest	845,511	0.00	0.00	0.00	0.01	\$0.00	\$0.00	8,455	\$0.27	\$228,288
Give remaining copies of the manifest, or transmit an electronic copy of the manifest, to accepting transporter or designated facility	1,725,533	0.00	0.00	0.01	0.00	\$0.00	\$0.00	17,255	\$0.53	\$914,532
Sub-total	1,725,533	0.00	0.00	varies	varies	\$0.00	\$0.00	451,398	varies	\$19,814,639
Manifest requirements for person delivering to initial water transporters (263.20(e))										
Obtain the date and signature of the water transporter	51,766	0.00	0.00	0.00	0.01	\$0.00	\$0.00	518	\$0.27	\$13,977
Forward the paper manifest to the designated facility	26,401	0.00	0.00	0.00	0.16	\$0.36	\$0.00	4,224	\$4.32	\$123,556
Forward the electronic manifest to the designated facility	25,365	0.00	0.00	0.00	0.08	\$0.36	\$0.00	2,029	\$2.16	\$63,919
Sub-total	51,766	0.00	0.00	0.00	varies	varies	\$0.00	6,771	varies	\$201,452

EXHIBIT 9 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
COMPLETING AND TRANSMITTING THE MANIFEST

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest requirements for water (bulk shipment) transporters (263.20(e))										
Ensure that the shipping paper (and Acknowledgment of Consent, for exports) accompanies the waste to its destination	51,766	0.00	0.00	0.13	0.00	\$0.00	\$0.00	6,730	\$6.89	\$356,668
If the delivering transporter, obtain the date and signature of the designated facility	51,766	0.00	0.00	0.01	0.00	\$0.00	\$0.00	518	\$0.53	\$27,436
If the initial transporter, sign and date the manifest and return it to the delivering transporter so that the manifest can be forwarded to the designated facility owner/operator	51,766	0.00	0.00	0.01	0.00	\$0.00	\$0.00	518	\$0.53	\$27,436
Retain a copy of the paper manifest or shipping papers	26,401	0.00	0.00	0.00	0.17	\$0.00	\$0.00	4,488	\$4.59	\$121,181
Retain a copy of the electronic manifest	25,365	0.00	0.00	0.00	0.01	\$0.00	\$0.00	254	\$0.27	\$6,849
Sub-total	51,766	0.00	0.00	varies	varies	\$0.00	\$0.00	12,508	varies	\$539,570
Manifest requirements for rail transporters (263.20(f) and (263.22(c))										
When accepting waste from non-rail transporter, sign and date the manifest and return a copy to the non-rail transporter	103,532	0.00	0.00	0.01	0.00	\$0.00	\$0.00	1,035	\$0.53	\$54,872
Forward three paper copies of the manifest to either the next non-rail transporter, the designated facility, or the last rail transporter designated to handle waste in the U.S.	52,801	0.00	0.00	0.00	0.16	\$0.36	\$0.00	8,448	\$4.32	\$247,108
Forward three electronic copies of the manifest to either the next non-rail transporter, the designated facility, or the last rail transporter designated to handle waste in the U.S.	50,731	0.00	0.00	0.00	0.08	\$0.00	\$0.00	4,058	\$2.16	\$109,579
Ensure a shipping paper containing all the information required on the manifest excluding the EPA identification number, generator certification, and signatures (and for exports an Acknowledgment of Consent) accompanies the waste	103,532	0.00	0.00	0.13	0.00	\$0.00	\$0.00	13,459	\$6.89	\$713,335

EXHIBIT 9 (CONTINUED):

ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
COMPLETING AND TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
When delivering hazardous waste, obtain the hand written or electronic signature and date from the designated facility or non-rail transporter	103,532	0.00	0.00	0.01	0.00	\$0.00	\$0.00	1,035	\$0.53	\$54,872
Retain a copy of the paper manifest and rail shipping paper	52,801	0.00	0.00	0.00	0.17	\$0.00	\$0.00	8,976	\$4.59	\$242,357
Retain a copy of the electronic manifest	50,731	0.00	0.00	0.00	0.01	\$0.00	\$0.00	507	\$0.27	\$13,697
Before accepting waste from a rail transporter, sign (by hand or electronic signature) and date the manifest and provide a copy to rail transporter	103,532	0.00	0.00	0.01	0.00	\$0.00	\$0.00	1,035	\$0.53	\$54,872
Sub-total	103,532	0.00	0.00	varies	varies	varies	\$0.00	38,553	varies	\$1,490,692
Manifest requirements for transporters who transport waste into and/or out of the U.S. (263.20(g) and 262.54(h))										
Sign (by hand or with an electronic signature) the International Shipment block, and indicate on this block of the manifest the date that the shipment either entered or left the U.S.	29,551	0.00	0.00	0.01	0.00	\$0.00	\$0.00	296	\$0.53	\$15,662
Give a copy of the manifest to the U.S. Customs official for imports at the point of entry into the U.S. and for exports at the point of departure from the U.S.	29,551	0.00	0.00	0.01	0.00	\$0.00	\$0.00	296	\$0.53	\$15,662
Sign and retain a copy of the paper manifest	15,071	0.00	0.00	0.00	0.17	\$0.00	\$0.00	2,562	\$4.59	\$69,176
Sign and retain a copy of the electronic manifest	14,480	0.00	0.00	0.00	0.01	\$0.00	\$0.00	145	\$0.27	\$3,910
Return a hand-signed or electronically signed copy of the manifest to the generator	29,551	0.00	0.00	0.00	0.01	\$0.00	\$0.00	296	\$0.27	\$7,979
For exports, ensure the Acknowledgment of Consent and manifest accompanies the waste	12,000	0.00	0.00	0.13	0.00	\$0.00	\$0.00	1,560	\$6.89	\$82,680
Sub-total	29,551	0.00	0.00	varies	varies	\$0.00	\$0.00	5,155	varies	\$195,069

EXHIBIT 9 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
COMPLETING AND TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Transporting pursuant to contractual reclamation agreement (263.20(h))										
Record the waste generator data items in a log or shipping paper	1,044	0.00	0.25	0.75	0.00	\$0.00	\$0.00	1,044	\$58.00	\$60,552
Carry the record when transporting waste to the reclamation facility	1,044	0.00	0.00	0.01	0.00	\$0.00	\$0.00	10	\$0.53	\$553
Retain these records	1,044	0.00	0.00	0.00	0.17	\$0.00	\$0.00	177	\$4.59	\$4,792
Sub-total	1,044	0.00	0.25	0.76	0.17	\$0.00	\$0.00	1,231	\$63.12	\$65,897
Compliance with the manifest (263.21(b))										
Contact the generator for further directions and revise the manifest according to the generator's instructions	3,036	0.00	0.00	0.26	0.06	\$2.00	\$0.00	972	\$15.40	\$52,826
Sub-total	3,036	0.00	0.00	0.26	0.06	\$2.00	\$0.00	972	\$15.40	\$52,826
Standards for electronic manifests (263.23(f))										
Electronic manifest signatures (262.25(f))										
Apply to Certification Authority operating in accordance with an applicable Certificate Policy and designated PKI for digital certificates	33	0.00	0.00	0.25	0.00	\$0.00	\$0.00	8	\$13.25	\$437
Report to the Certification Authority information that a private key has been lost or compromised the affected certificate's status	0	0.00	0.00	0.08	0.00	\$0.00	\$0.00	0	\$4.24	\$0
Electronic manifest systems and security (262.26(c)(1), (9) and (10))										
Obtain written assessment and certification of system and establish controls and written policies	67	1.00	4.00	20.00	5.00	\$1,700.00	\$0.00	2,010	\$1,589.00	\$220,363

EXHIBIT 9 (CONTINUED):
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
COMPLETING AND TRANSMITTING THE MANIFEST

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Special procedures for electronic transmissions (262.26(f), (h), and (j))										
When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data when and electronic transmission is received	859,991	0.00	0.00	0.00	0.00	\$0.00	\$0.00	0	\$0.00	\$0
If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest	860	0.00	0.00	0.00	0.08	\$0.00	\$0.00	69	\$2.16	\$1,858
Maintain a transmission log covering all electronic manifests sent or received	200	0.00	0.00	0.00	0.08	\$0.00	\$0.00	16	\$2.16	\$432
Sub-total	varies	varies	varies	varies	varies	\$0.00	\$0.00	2,103	varies	\$223,090
TOTAL	varies	varies	varies	varies	varies	varies	\$0.00	518,691	varies	\$22,583,235

EXHIBIT 10:
ESTIMATED ANNUAL BURDEN AND COST FOR TRANSPORTERS
NOTIFICATION OF DISCHARGE OF HAZARDOUS WASTE

	Number of Transporter Notification s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Notification of discharge of hazardous waste: Transporters (263.30(a) and (d))										
Notify local authorities of the discharge		0.00	0.25	1.00	0.00	\$0.00	\$0.00	863	71.25	\$49,163
Notification of discharge of hazardous waste: Water (bulk shipment) Transporters (33 CFR 153.203)										
Notify NRC, or a predesignated OSC, of the discharge	65	0.00	0.25	1.00	0.00	\$0.00	\$0.00	81	\$71.25	\$4,631
TOTAL	varies	varies	varies	varies	0.00	\$0.00	\$0.00	944	\$71.25	\$53,794

EXHIBIT 11:
ESTIMATED ANNUAL BURDEN AND COST FOR DESIGNATED TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs)
READING THE REGULATIONS

	Number of TSDFs	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Read the manifest regulations and instructions										
Designated TSDFs	543	0.00	0.25	1.00	0.00	\$0.00	\$0.00	679	\$71.25	\$38,689
TOTAL	543	0.00	0.25	1.00	0.00	\$0.00	\$0.00	679	\$71.25	\$38,689

EXHIBIT 12:
ESTIMATED ANNUAL BURDEN AND COST FOR DESIGNATED TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs)
COMPLETING THE MANIFEST AND CONTINUATION SHEETS (ASSISTING THE GENERATORS)

	Number of Manifests* or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest completion: Designated TSDFs (264.71(a) and (b), or 265.71(a) and (b))										
Complete the manifest	891,467	0.00	0.00	0.35	0.08	\$0.00	\$0.00	383,331	\$20.71	\$18,462,282
TOTAL	891,467	0.00	0.00	0.35	0.08	\$0.00	\$0.00	383,331	\$20.71	\$18,462,282

* The total includes the number of manifests, i.e., the number of continuation sheets is not reflected

EXHIBIT 13:

ESTIMATED ANNUAL BURDEN AND COST FOR DESIGNATED TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs)
TRANSMITTING THE MANIFEST AND REPORTING TO EPA

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Manifest transmittal and recordkeeping: Designated TSDFs (264.71(a) and (b), or 265.71(a) and (b))										
Sign and date each copy of the manifest	1,742,911	0.00	0.00	0.01	0.00	\$0.00	\$0.00	17,429	\$0.53	\$923,743
If the facility participates in an electronic system with a generator, but receives a paper manifest from non-participating transporter, sign and date electronic manifest	0	0.00	0.00	0.01	0.00	\$0.36	\$0.10	0	\$0.53	\$0
Immediately return a copy of the manifest to the transporter	1,742,911	0.00	0.00	0.17	0.00	\$0.00	\$0.00	296,295	\$9.01	\$15,703,628
Within 30 days send a copy of the paper manifest to the generator	888,885	0.00	0.00	0.00	0.16	\$0.36	\$0.00	142,222	\$4.32	\$4,159,982
Immediately send a copy of the electronic manifest to the generator	854,026	0.00	0.00	0.00	0.02	\$0.00	\$0.00	17,081	\$0.54	\$461,174
Retain a copy of the paper manifest for at least three years from delivery	888,885	0.00	0.00	0.00	0.17	\$0.00	\$0.00	151,110	\$4.59	\$4,079,982
Retain a copy of the electronic manifest for at least three years from delivery	854,026	0.00	0.00	0.00	0.01	\$0.00	\$0.00	8,540	\$0.27	\$230,587
Sub-total (manifest transmittal and recordkeeping)	1,742,911	0.00	0.00	varies	varies	varies	varies	632,677	varies	\$25,559,096
Discrepancy report completion and submission: TSDFs (264.72(b) and 265.72(b))										
Note and attempt to reconcile any significant discrepancies	431,340	0.00	0.00	0.08	0.00	\$2.00	\$0.00	34,507	\$4.24	\$2,691,562
Prepare and submit a letter to EPA describing the discrepancy and attempts to reconcile it, along with a copy of the manifest or shipping paper at issue	6,901	0.00	0.10	0.17	0.10	\$0.36	\$0.10	2,553	\$19.01	\$134,362
Sub-total (discrepancy reports)	varies	0.00	varies	varies	varies	varies	varies	37,060	varies	\$2,825,924

EXHIBIT 13 (CONTINUED):

ESTIMATED ANNUAL BURDEN AND COST FOR DESIGNATED TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs)

TRANSMITTING THE MANIFEST AND REPORTING TO EPA

	Number of Manifests or Respondents	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Managerial @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Rejected loads and residues that must be sent off site to an alternate facility or back to the generator (264.72 (d) through (g), and 265.72(d) through (g))										
Contact the generator for forwarding information and complete a new manifest	3,036	0.00	0.00	0.26	0.06	\$2.00	\$0.00	972	\$15.40	\$52,826
For loads rejected and residues discovered after signature, amend the manifest, retain a copy, and send a copy to the generator and transporter	304	0.00	0.00	0.02	0.42	\$0.72	\$0.00	134	\$12.40	\$3,984
Sub-total (rejected loads)	3,036	0.00	0.00	varies	varies	varies	\$0.00	1,106	varies	\$56,810
Unmanifested waste report completion and submission (264.76(a) and 265.76(a))										
Prepare and submit to EPA a note of the unmanifested waste within 15 days after receiving waste	173	0.00	0.50	1.00	0.50	\$0.36	\$0.10	346	\$103.00	\$17,899
Sub-total (unmanifested waste reports)	173	0.00	0.50	1.00	0.50	\$0.36	\$0.10	346	\$103.00	\$17,899
Standards for electronic manifests (264.78(f) and 265.78(f))										
Electronic manifest signatures (262.25(f))										
Apply to Certification Authority operating in accordance with an applicable Certificate Policy and designated PKI for digital certificates	0	0.00	0.00	0.25	0.00	\$0.00	\$0.00	0	\$13.25	\$0
Report to the Certification Authority information that a private key has been lost or compromised the affected certificate's status	0	0.00	0.00	0.08	0.00	\$0.00	\$0.00	0	\$4.24	\$0

EXHIBIT 13 (CONTINUED):

ESTIMATED ANNUAL BURDEN AND COST FOR DESIGNATED TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs)
TRANSMITTING THE MANIFEST AND REPORTING TO EPA

	Number of Manifests or Respondent s	Hours per Generator				O&M Costs/Respondent		Total Hours per Year	Cost per Generator/ Year	Total Cost per Year
		Legal @ \$102/hr	Manageria l @ \$73/hr	Technical @ \$53/hr	Clerical @ \$27/hr	Postage/ Shipping @ \$0.36/doc	Photocopies @ \$0.10/doc			
Electronic manifest systems and security (262.26(c)(1), (9) and (10))										
Obtain written assessment and certification of system and establish controls and written policies	0	1.00	4.00	20.00	5.00	\$1,700.00	\$0.00	0	\$1,589.00	\$0
Special procedures for electronic transmissions (262.26(f), (h), and (j))										
When an electronic manifest transmission is received, promptly generate and transmit an acknowledgment that confirms the receipt of translatable data when and electronic transmission is received	845,511	0.00	0.00	0.00	0.00	\$0.00	\$0.00	0	\$0.00	\$0
If a positive acknowledgment is not received within 12 hours of a transmission, promptly re-transmit the electronic manifest	846	0.00	0.00	0.00	0.02	\$0.00	\$0.00	17	\$0.54	\$457
Maintain a transmission log covering all electronic manifests sent or received	272	0.00	0.00	0.00	0.08	\$0.00	\$0.00	22	\$2.16	\$588
Sub-total (electronic manifests)	varies	varies	varies	varies	varies	\$0.00	\$0.00	39	varies	\$1,045
TOTAL	varies	varies	varies	varies	varies	varies	varies	671,228	varies	\$28,460,774

EXHIBIT 14:

TOTAL ANNUAL RESPONDENT BURDEN AND COST BY TYPE OF HANDLER AND MANIFESTING ACTIVITY

	Total Hourly Burden	Total Annual Capital Costs	Total Annual O&M Costs	Total Annual Labor Costs	Total Annual Costs
Generators (LQGs, SQGs, and TSDFs acting as generators)					
Read the regulations	114,813	--	\$0	\$6,544,313	\$6,544,313
Manifest completion (without assistance of designated TSDF)	259,184	--	\$0	\$12,425,334	\$12,425,334
Manifest completion (with assistance of designated TSDF)	26,744	--	\$0	\$1,185,651	\$1,185,651
Registering with EPA to print manifest forms	71	--	\$150	\$3,424	\$3,574
Manifest transmittal and recordkeeping	308,564	--	\$56,306	\$8,787,542	\$8,843,848
Special manifest requirements for exporters	3,001	--	\$0	\$81,001	\$81,001
Special manifest requirements for importers	351	--	\$1,755	\$9,478	\$11,233
Reclamation agreements	104	--	\$0	\$2,819	\$2,819
Standards for electronic manifests	30,190	--	\$1,686,400	\$1,591,132	\$3,277,532
Exception report completion, submission, and recordkeeping	8,278	--	\$4,592	\$481,431	\$486,023
Sub-total (Generators)	751,300	--	\$1,749,203	\$31,112,125	\$32,861,328
Transporters					
Read the regulations	625	--	\$0	\$35,625	\$35,625
Manifest completion, transmittal and recordkeeping	516,588	--	\$43,715	\$22,316,430	\$22,360,145
Standards for electronic manifests	2,103	--	\$113,900	\$109,190	\$223,090
Notification of discharge of hazardous waste	944	--	\$0	\$53,794	\$53,794
Sub-total (Transporters)	520,260	--	\$157,615	\$22,515,039	\$22,672,654
Designated TSDFs					
Read the regulations	679	--	\$0	\$38,689	\$38,689
Manifest completion (assisting the generators)	383,331	--	\$0	\$18,462,282	\$18,462,282
Manifest transmittal and recordkeeping	632,677	--	\$319,999	\$25,239,097	\$25,559,096
Discrepancy report completion and submission	37,060	--	\$865,854	\$1,960,070	\$2,825,924
Rejected loads	1,106	--	\$6,291	\$50,519	\$56,810
Unmanifested waste report completion and submission	346	--	\$80	\$17,819	\$17,899
Standards for electronic manifests	39	--	\$0	\$1,045	\$1,045
Sub-total (TSDFs)	1,055,238	--	\$1,192,224	\$45,769,521	\$46,961,745
Annualized capital and other O&M costs					
File cabinets	--	\$140,199	--	--	\$140,199
Electronic diskettes	--	\$103,751	--	--	\$103,751
EDI signature devices	--	\$553,640	--	--	\$553,640
EDI subscription	--	--	\$2,884,481	--	\$2,884,481
Sub-total (Capital and other O&M costs)	--	\$797,590	\$2,884,481	--	\$3,682,071
TOTAL: ALL RESPONDENTS	2,326,798	\$797,590	\$5,983,523	\$99,396,685	\$106,177,798

EXHIBIT 15:

TOTAL ANNUAL AGENCY BURDEN AND COSTS

	Number of Reports Received	Hours per Agency Respondent				O&M Costs/Respondent		Total Hours per Year	Cost per Respondent/ Report	Total Cost per Year
		Legal	Managerial	Technical	Clerical	Postage/ Shipping @ \$0.36/ manifest	Photocopies @ \$0.10/ manifest			
		@ \$59.50/hr	@ \$42.80/hr	@ \$30.03/hr	@ \$18.26/hr					
Generators										
Registering with EPA to print manifest forms (262.21)										
Receive and process application	416	0	0.00	0.25	0.00	\$0.00	\$0.00	104	\$7.51	\$3,123
Standards for electronic manifests (262.25 and 262.26)										
Receive and process information and issue a digital certificate for electronic manifests	496	0.00	0.00	0.50	0.00	\$0.00	\$0.00	248	\$15.02	\$7,448
Receive and process information that private key has been lost or compromised the affected certificate's status	5	0.00	0.00	0.25	0.00	\$0.00	\$0.00	1	\$7.51	\$38
Exception report (262.42)										
Review the exception report: LQGs	4,481	0.00	0.10	0.40	0.00	\$0.00	\$0.00	2,241	\$16.29	\$73,008
Review the exception report: Commercial TSDFs	787	0.00	0.10	0.40	0.00	\$0.00	\$0.00	394	\$16.29	\$12,822
Review the exception report: Captive TSDFs	288	0.00	0.10	0.40	0.00	\$0.00	\$0.00	144	\$16.29	\$4,692
Review the exception report: SQGs	3,219	0.00	0.10	0.40	0.00	\$0.00	\$0.00	1,610	\$16.29	\$52,447
Subtotal (Generators)	varies	0.00	varies	varies	0.00	\$0.00	\$0.00	4,637	varies	\$150,455
Transporters										
Standards for electronic manifests (263.23(f))										
Receive and process information and issue a digital certificate for electronic manifests	33	0.00	0.00	0.50	0.00	\$0.00	\$0.00	17	\$15.02	\$496
Receive and process information that private key has been lost or compromised the affected certificate's status	0	0.00	0.00	0.25	0.00	\$0.00	\$0.00	0	\$7.51	\$0
Notification of discharge (263.30 (a) and (d))										
Receive notification of discharge	65	0.00	0.20	0.80	0.00	\$0.00	\$0.00	65	\$32.59	\$2,118
Subtotal (Transporters)	varies	0.00	varies	varies	0.00	\$0.00	\$0.00	82	varies	\$2,614

EXHIBIT 15:
TOTAL ANNUAL AGENCY BURDEN AND COSTS

	Number of Reports Received	Hours per Agency Respondent				O&M Costs/Respondent		Total Hours per Year	Cost per Respondent/ Report	Total Cost per Year
		Legal	Managerial	Technical	Clerical	Postage/ Shipping @ \$0.36/ manifest	Photocopies @ \$0.10/ manifest			
		@ \$59.50/hr	@ \$42.80/hr	@ \$30.03/hr	@ \$18.26/hr					
TSDFs										
Discrepancy report (264.72(a) and (b) and 265.72(a) and (b))										
Review the discrepancy report	6,901	0.00	0.10	0.40	0.00	\$0.00	\$0.00	3,451	\$16.29	\$112,437
Unmanifested waste report (264.76 and 265.76)										
Review unmanifested waste report	173	0.00	0.10	0.40	0.00	\$0.00	\$0.00	87	\$16.29	\$2,819
Standards for electronic manifests (264.78(f) and 265.78(f))										
Receive and process information and issue a digital certificate for electronic manifests	0	0.00	0.00	0.50	0.00	\$0.00	\$0.00	0	\$15.02	\$0
Receive and process information that private key has been lost or compromised the affected certificate's status	0	0.00	0.00	0.25	0.00	\$0.00	\$0.00	0	\$7.51	\$0
Subtotal (TSDFs)	varies	0.00	varies	varies	0.00	\$0.00	\$0.00	3,537	varies	\$115,255
TOTAL: AGENCY	varies	0.00	varies	varies	0.00	\$0.00	\$0.00	8,255	varies	\$268,324

Agency Tally

Exhibit 15 summarizes the total annual Agency burden and cost associated with all the requirements covered in this ICR. As shown in the exhibit, EPA estimates the annual Agency burden to be 8,255 hours, at an annual cost of \$268,324. The bottom line burden to the Agency over three years is 24,765 hours, at a cost of \$804,972.

6(f) REASONS FOR CHANGE IN BURDEN

This ICR presents a comprehensive description of the total annual respondent burden for all activities related to the manifest system, as modified by the proposed rule. Table 6 compares the total annual respondent burden and costs under the baseline (i.e., existing) and modified manifest system, and shows that the total annual respondent burden and cost would decrease by about 558,000 hours (19%) and \$11,415,000 (10%), respectively, under the modified system.¹⁸ The burden under the modified manifest system has decreased because waste handlers would be allowed to automate their manifesting activities as an alternative to the paper form. EPA expects that computerization would greatly simplify manifest preparation (e.g., because of pulldown menus, ability to cut/paste portions of manifests and to automate the process), transmittal and recordkeeping activities (e.g., generators could configure their systems to perform certain transmittal functions automatically). The reduction in burden from automation would more than offset the expected burden increase from the new procedures for international shipments, rejected loads, and container residues.

Table 6
Comparison of Annual Respondent Burden and Costs
under the Baseline and Modified Manifest System

	Annual Burden	Annual Cost
Baseline Manifest System	2,885,221 hr	\$117,593,142
Modified Manifest System	2,326,798 hr	\$106,177,798
Savings under Proposal	558,423 hr (19%)	\$11,415,344 (10%)

6(g) BURDEN STATEMENT

Table 7 presents the range of estimated burden hours per reporting and recordkeeping activity for hazardous waste generators, transporters, and designated TSDFs under the modified manifest system. The public reporting burden for this collection includes time for manifesting a shipment (i.e., one manifest cycle). Specifically, the public reporting burden for generators includes, at a minimum, time for reviewing and signing the manifest (i.e., for generators whose manifests are prepared by the designated TSDF). It may also include time for preparing the entire paper or electronic manifest and submitting an exception report to EPA. The public reporting burden for transporters includes time to carry copies during shipment and, if needed, transmit copies to third parties by regular mail or electronic transmission. The public reporting burden for designated TSDFs includes time for reviewing the manifest at delivery of the shipment and transmitting a copy to the generator. It may also include time for preparing a generator's manifest and submitting a report to EPA (e.g., discrepancy report).

¹⁸ Note that the baseline burden and costs, as shown in Table 6, were derived from the spreadsheets used in preparing the approved Manifest ICR, except that the approved ICR's respondent universe and number of manifests were updated to reflect 1997 BRS data, as used in the EA and this ICR.

Table 7
Public Reporting and Recordkeeping Burden
(Hours per Shipment)*

Respondent Type	Reporting Burden (Hours)	Recordkeeping Burden (Hours)
Generators		
LQGs	0.03 - 1.49	1.36 - 1.46**
TSDFs acting as generators	0.36 - 1.50	1.36 - 1.46**
SQGs	0.03 - 1.49	1.36
Transporters		
Designated TSDFs	0.35 - 2.33	1.34**

* Recordkeeping burden includes time for reading the regulations once per year and keeping copies for each shipment.

** Waste handlers participating in electronic systems also will incur a one-time burden of 30 hours for establishing documentation and written policies under proposed 40 CFR 262.26(c)(1), (9) and (10).

The public recordkeeping burden for generators includes time reading the regulations once per year and keeping copies of the manifest initially sent with the shipment and received from the designated TSDF. For LQGs and TSDFs, it may also include time for keeping a copy of an exception report. For transporters and designated TSDFs, the public recordkeeping burden includes time for reading the regulations once per year and keeping a copy of the manifest accompanying the shipment.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR number and OMB control number in any correspondence.