



Tracking Hazardous Waste

Improving the Transboundary Tracking of Hazardous Waste in North America: A Regional Approach to a Global Effort

Benefits for common data standards for managing transboundary hazardous waste shipments

September 2007

Introduction

The Commission for Environmental Cooperation (CEC) is working on a project which will allow the governments of Canada, Mexico and the United States to replace their current paper-based system of tracking transboundary shipments of hazardous waste and hazardous recyclable materials with an electronic-based system.

As part of this project, the governments are developing common data standards for export requests and consent documents and a method for sharing this information electronically.

Importers and exporters must obtain written approvals from national governments to ship hazardous waste or hazardous recyclable material from one country to another. Currently, countries share export requests and consents documents with one another by sending paper copies through the mail, by fax or by cable. This results in the exchange of hundreds of thousands of documents between North American governments each year.

The CEC project will allow governments to exchange this export request and consent information electronically. This will reduce government administrative burdens, improve data quality, make it easier to provide data to environmental enforcement and border protection agencies, facilitate the adoption of emerging tracking technologies and help the governments provide more timely and coherent information on what crosses their national borders.

This project will also enhance compliance. The new electronic system will include information on shipment requirements. This will allow the governments to compare the requirements with the actual shipment information in order to determine possible violations.

Publication Details

Publication type: Background paper
Publication date: September 2007
Original language: English
Review and quality assurance procedures:
Party review: 16 July – 13 August 2007

The Secretariat of the Commission for Environmental Cooperation developed this paper in cooperation with the Hazardous Waste Task Force, as part of the Trade and Enforcement of Environmental Laws Project. The information contained herein is the responsibility of the authors and does not necessarily reflect the views of the CEC, or the governments of Canada, Mexico or the United States of America.

The CEC Secretariat would like to thank Tim Whitehouse (CEC), Geneviève Cournoyer-Proulx (CEC), Rick Picardi (EPA), Debbie Goodwin (EPA), Robert Heiss (EPA), Loraine Deshaies (Env. Canada), Nabila Elsaadi (Env. Canada), Kevin Tracy (Env. Canada), Jose Lorenzo (Semarnat) and Emil Dzuray (LMI).

The Charge from the CEC Council

In order to move in the direction of electronic exchange of information and away from a paper-based system, the Commission for Environmental Cooperation (CEC) Council Resolution 03-08 directs the Secretariat to work with the North American countries to: “ ... continue to examine technologies and systems currently being considered for hazardous waste and hazardous recyclable materials and wastes tracking in North America, with a view toward identifying obstacles to the interoperability of these systems, laying the framework for the exchange of information, and implementing automated systems for tracking transboundary movements in North America.”¹

As follow up to Council Resolution 03-08, the CEC’s Hazardous Waste Task Force (HWTF) has agreed to create common North American data standards for the electronic exchange of information on government-to-government export request (commonly known as a “notice”) and consent for transboundary shipments of hazardous waste or hazardous recyclable material. This work will take into consideration:

- the methodology established by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)² for developing global data standards and the work of the UN/CEFACT’s environmental group, Trade Business Group 13 (TBG-13), and
- the modernization and trade facilitation efforts, as well as the material data standards, of the World Customs Organization (WCO).

¹ http://www.cec.org/files/PDF/COUNCIL/Res-08-Haz-Waste_en.pdf

² UN/CEFACT, a United Nations body, encourages close collaboration between governments and business to improve their ability to facilitate the development of effective and efficient international, electronic information exchange through the creation and use of global data standards and protocols. The UN/CEFACT subgroup called TBG-13 is responsible for improving the exchange of environmental information among countries. For more information, see: www.uncefact.org



The Hazardous Waste Notice System

Canada, Mexico and the United States require exporters and importers to obtain approvals from designated government environmental authorities for shipments of hazardous waste and hazardous recyclable materials and to keep a record of the material’s fate from its point of origin to its final destination. Although specific requirements differ in the three countries, they are all based on the Prior Informed Consent (PIC) concept³, which states that a shipment of hazardous waste or hazardous recyclable material may only be exported to another country with the importing country’s prior consent.

PIC is achieved through a government-to-government export notice and consent process. Under this notice and consent process, an exporter must submit a notification of intent to export to the environmental authority

of the country in which the exporter is located. The exporting country’s environmental authority then forwards the “notice of intent” to the importing country which can consent or object to the shipment. The importing country then sends the approval or objection back to the exporting country’s environmental authority. The exporting country’s environmental authority then sends the approval (in the form of a consent or a permit), or objection to the exporter and records the information in a data system.

A notice contains a variety of detailed information about the proposed hazardous waste or hazardous recyclable material shipments such as, but not limited to:

- the time period covered by the notice,
- the type and anticipated amount of waste,
- an estimate of the number of waste shipments that will be exported,
- the type of container to be used,
- the name and address of the party to whom the waste will be shipped, and
- the method of transportation to be used (air, highway, rail, water).

³ The PIC concept does not apply to the hazardous waste generated by U.S. companies operating in Mexico under the Maquiladora Program. Under the United States Mexico La Paz Agreement, the United States agreed to accept hazardous waste from maquiladoras, as these companies are referred to, without requiring Mexico to obtain consent from the United States.

The consent or approval of a permit may be valid for up to a year and may cover multiple shipments.

The Benefits of Moving to an Electronic Exchange of Export Notice and Consent Information

The creation of North American data standards will allow for the electronic exchange of export notice and importing country's consent information between the governments. A major limitation of the current paper-based system is that it does not allow for the most efficient and effective sharing of data. The electronic sharing of information will improve overall data quality, enhance enforcement capabilities, support border security, facilitate the adoption of more advanced tracking technologies, allow governments to reduce administrative burdens, and reduces the environmental footprint by wasting less paper.

Under the current system of exchanging information by fax, mail or cable the North American governments must enter notice information manually into multiple data systems, which can result in delays and data entry errors. If information is exchanged electronically, the government of the exporting country would send the notice information and consent or objection to the importing country, saving the governments both the time and money of data being entered multiple times, improving the accuracy of this information.



The electronic transmission of data is likely to enhance the capability of the governments to cooperate on compliance monitoring and enforcement activities of mutual interest. The receipt of information on a more timely and accurate basis is likely to improve the documentation of shipments between countries and enable the governments to more readily identify discrepancies that may indicate violations of law.

In addition, it is anticipated that customs, border agencies, and other governmental agencies could have electronic access to notice and consent information contained in the data system of the domestic environmental authorities.

Electronic sharing of notice and consent information between governments requires the use of common data standards. Once the countries agree on these data standards and the method for electronically sharing this information, they will have a common North American framework which will facilitate improved international tracking.

The Need for Common Data Standards

Today, data standards are commonly used globally for the electronic exchange of information. They are documented agreements on formats and definitions of common data shared for a particular transaction or series

of transactions. When organizations adopt data standards, they agree on what information to send and how to send it using a common language for that particular data exchange. When a Canadian traveling in Mexico uses an ATM, for example, the bank in Mexico and the bank in Canada are able to exchange information on the user's account and conduct the transaction because both banks use common data standards and have agreed upon rules for converting pesos to dollars.

Common data standards allow information from different data systems to be easily shared without changing the source data systems (i.e., the United States would not have to upgrade its system to exchange information with an upgraded system in Mexico or Canada, or vice-versa – this is also referred to as decoupling systems from data exchanges). This is especially useful for international transactions such as exports and imports of hazardous waste or hazardous recyclable material. The relevant information from the source data systems is converted to meet the common data standards, and then the data file will be electronically sent to the importing country's environmental authority for internal processing into their respective data systems.⁴

Creating Common North American Data Standards for Notice and Consent Information

Some of the activities necessary for creating a common North American data standard for notice and consent information will require

⁴ There will be no trilateral data system or 'data warehouse' in which the data from the three countries would be stored in one place. All that is needed is an identified location for the exporting country to place the data file for the importing country to access.





identifying information, called data elements. For each data element the following needs to be agreed upon:

- Definition for the data element, i.e. what information does the data actually represent?
- Length of the data element, i.e. two characters long,
- Values that can be held in that data element, i.e. it contains a “Y” or an “N”, it must be a valid date, it must be one of the agreed upon waste codes, etc., and
- Any rules associated with the data element, i.e. shipping information must be a date which is the same or greater than the

date shipping begins, quantity can not be zero, etc.

Once these common data elements have been agreed upon, file formats for notices must be developed.

This CEC Project Ties into Other International Efforts

Just as the CEC recognized the need for common data standards for exchanging notice information, other international organizations have seen this need and begun efforts to develop common data standards such as the UN/CEFACT group, as mentioned ear-

lier. UN/CEFACT encourages collaboration between governments and business to secure the inter-operability for the exchange of information. The CEC HWTF will coordinate with the UN/CEFACT to: align with the development of global data exchange standards; reduce duplication of efforts; share ideas so that the HWTF’s work is informed by what is occurring in the global community; and ensure that UN/CEFACT takes North American data needs into account. The development of data exchange standards by UN/CEFACT, the CEC and other organizations illustrates that the HWTF project is a timely effort.

CEC Has a Critical Role to Play in the Development of International Data Standards

Through the implementation of a systematic approach to the development of data standards, the investments and planning of previous years are now coming to fruition. While giving consideration to larger global efforts, the CEC is fast tracking the development of the North American data standards for notification. The CEC has a key role to play because a significant proportion of hazardous waste and hazardous recyclable materials are shipped within North America. The CEC is better suited than the three individual countries to ensure that the ongoing UN environmental standards effort reflects the export/import requirements unique to North America. Furthermore, the timing of the CEC effort is especially opportune because the UN effort is just now gaining momentum.

