

Implementing Progress of e-Manifest in Japan

September, 2010

Japan Industrial Waste Information Center

1 . History of the business

- (1) Designation as the Information Processing Center for the electronic manifest (hereafter called “e-Manifest”) on November 30, 1998 and the implementation of the e-Manifest legal system on December 1, 1998.

Upon the amendment of the Waste Management Law on June, 1997, the requirement for a generator to confirm the treatment state of his industrial waste by Manifest, and with this, the legal e-Manifest system was established.

Thus, when a generator manages his industrial waste by commission, he is required to use either paper Manifest or e-Manifest.

Japan Industrial Waste Technology Center, hereafter called JW, was designated as the Information Processing Center (hereafter called “IPC”), which is the exclusive operation body of e-Manifest, based on the Paragraph 2 of the Article 13-2 of the Waste Management Law, and started the operation from December 1, 1998.

IPC consists of two divisions. One is the Business Promotion Division, which works on the client information, the service fee demand and the promotion of e-Manifest, and the other is the System Development and Operation Division, which works on the development and operation of e-Manifest system.

(2) Development history of e-Manifest information systems

Upon the start of operation on 1998, the first system used was that developed in 1997 based on the order of Ministry of Health and Welfare. In 2000, the amendment of the Waste management Law, in which a generator is required to confirm the completion of the final disposal of his waste, was made. To address to this amendment, the second system that was the full renewal of the first one was developed by our order and operated from April, 2001(see table 1).

Then, IT progress was made available to use high speed and large capacity broad wand communication methods such as ADSL. We renewed our e-Manifest system, the third system, in order to enhance the client convenience by strengthening communication and data processing capabilities during 2004 to 2006. From May 2010, we operate the forth system that was developed from 2008 to 2010 to cope with increasing demand of e-Manifest use.

(3) History of promotion activities of the increase use of e-Manifest (the project of Ministry of the Environment).

1) Project for study of the introduction of e-Manifest tracking system (FY2003)

- Demonstration test of an industrial waste tracking system.

2) Project for promoting the increase use of e-Manifest (FY2003-2007)

- Study of promotion measures for increasing e-Manifest in use.

- Improvement of e-Manifest system

- Study of the computerization of administrative reporting.

- Model project for the promotion of the increase use of e-Manifest.

- Provision of orientation sessions for e-Manifest.

- Provision of the information searching system of waste management businesses subscribing for e-Manifest
- 3) Project for developing infrastructure for a material cycled community utilizing IT (FY2008)
 - Seminars for introducers and operation experience workshops for e-Manifest
 - Development of the system providing a seminar in a remote place.
 - Strengthening the e-Manifest system

Table 1 Development history of the e-Manifest system

System	1st	2nd	3rd	4th
Development period	FY1997-1998	FY2000	FY2004-2006	FY2008-2010
Background circumstance	Legal implementation of e-Manifest	Amendment of the Waste Management Law	Advancement of communication Technology	Steep increasing demand
Operation start	1998/12/01	2000/04/01	2006/06/26	2010/05/04
Communication network (TCP/IP)	KDDI Network (telephone line)	KDDI Network & Internet Network	Internet Network	Internet Network
Access method	C/S	C/S, Web, EDI, Portable phone	PC, EDI, Portable phone,	Web, EDI

TCP/IP: Transmission Protocol/Internet Protocol

2. Outline of the e-Manifest system

The e-Manifest system is a system to manage industrial waste among a generator, a transporter and a disposer on a network via IPC by computerizing Manifest information.

(1) Access ways to the e-Manifest system.

Regarding access ways to the e-Manifest system, we have three (3) method as follows;

a) PC method

The purpose-made software from JW homepage can be downloaded and a user can install it in his or her PC.

b) EDI method

This method can be chosen when a user wants to have a customized e-manifest system capable of working together with his or her internal systems.

c) Portable phone method

This method can be used together with PC method. The registration and reference of data can be made through the Web function of a portable phone.

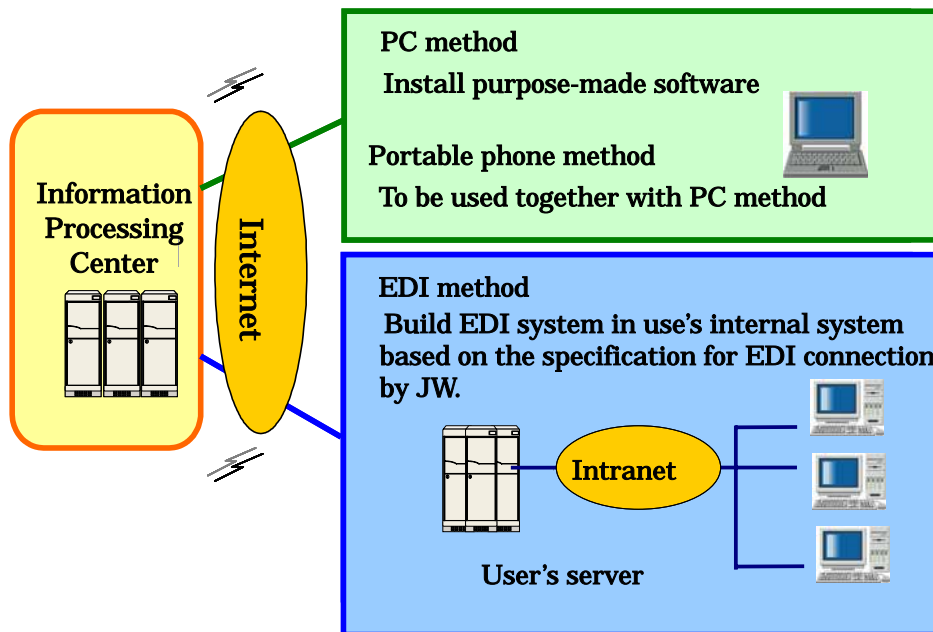


Fig. 1 Access methods to the e-manifest system

(2) Operation modes of the e-Manifest system

The Manifest flow can be basically divided into two portions of the 1st Manifest (flow from a generator to intermediate treatment businesses) and the 2nd Manifest (flow from intermediate treatment businesses to disposers). And legally users can choose either paper- or e-Manifest. Thus, the following three operational modes exist

Among the three modes, currently the Mode is prevailing (Table 2).

- Mode : e-Manifest only
- Mode : e-Manifest(the 1st portion) and paper-Manifest (the 2nd portion)
- Mode : paper-Manifest (the 1st portion) and e-Manifest (the 2nd portion)

Table. 2 Operational modes of the e-Manifest

Mode	1st Manifest			2nd Manifest		
	Generator	Transporter	Intermediate treatment business Diposer Generator	Transporter	Final disposer	
	e-Manifest					
	e-Manifest			Paper-Manifest		
	Paper-Manifest			e-Manifest		

(3) User fee

As for the user fee of the e-Manifest system, initially, the framework of user fee was developed counting frequent users, namely mass generators (category A). Then, the fee category B for smaller issuers was incorporated. Furthermore, the fee category C for groups composed of very small issuers was added (Table 3).

1) Development of the fee category A: December, 2001.

2) Incorporation of the fee category B: August, 2004.

This incorporation was made to stipulate the subscription of generators issuing rather small numbers of e-Manifests

3) Revision of the fee for intermediate treatment businesses: June, 2006.

Single subscription scheme for an intermediate treatment business was introduced, since it has the statuses of both a disposer and a generator. Based on this, the fees for intermediate treatment businesses were revised

4) Formulation of a new fee category for group subscribers: October, 2007

In order to stipulate the subscription of infrequent generators, a new fee category C was formulated.

Table 3 User fees of e-Manifest

a) Fee table for generators(tax included)

Category	A	B	C
Sign-up fee	¥5,250	¥5,250	¥5,250
Basic charge (per annum)	¥26,250	¥2,100 (40 issues)	No
Service charge (per issue)	¥10.5	¥63 (41 issues)	¥63

b) Fee table for waste management businesses(tax included)

Category	Transporter	Disposer				
			A		B	
			A	B	A	B
Sign-up fee	¥5,250	¥5,250	¥5,250	¥5,250	¥5,250	¥3,150
Basic charge (per annum)	¥13,125	¥13,125	¥26,250	¥13,125 (40 issues)	¥26,250	¥2,100 (40 issues)
Service charge (per issue)	-	-	¥10.5	¥63 (41 issues)	¥10.5	¥63 (41 issues)

Remarks: Disposer status only
Both statuses of a disposer and a generator
Generator status only

3 . Current attainment in subscribing and issuing of e-Manifest

(1) Number of subscribers

The number of e-Manifest subscribers, especially in generators, is increased significantly after FY2006 (Fig.2). At the end of March, 2009, the number of subscribers reaches 43,493 (generators: 33,718, transporters: 5,775, and disposers: 4,000). This figure is about 14 times greater than that of the previous year.

The subscribers of health care services (mainly dentists) are noted to increase extensively after the introduction of the group fee category C (Fig.3).

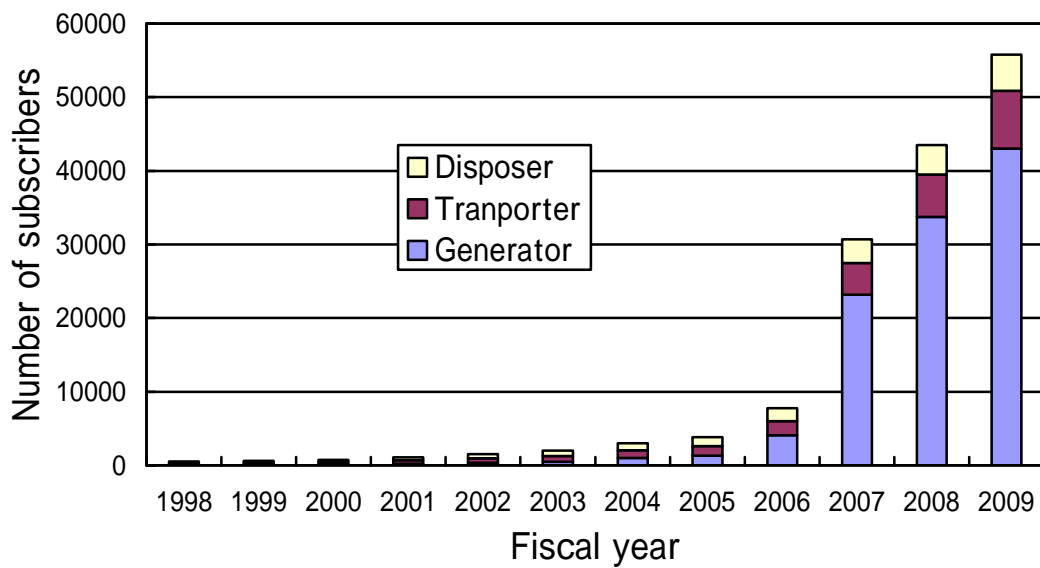


Fig. 2 Chronological changes of subscribers

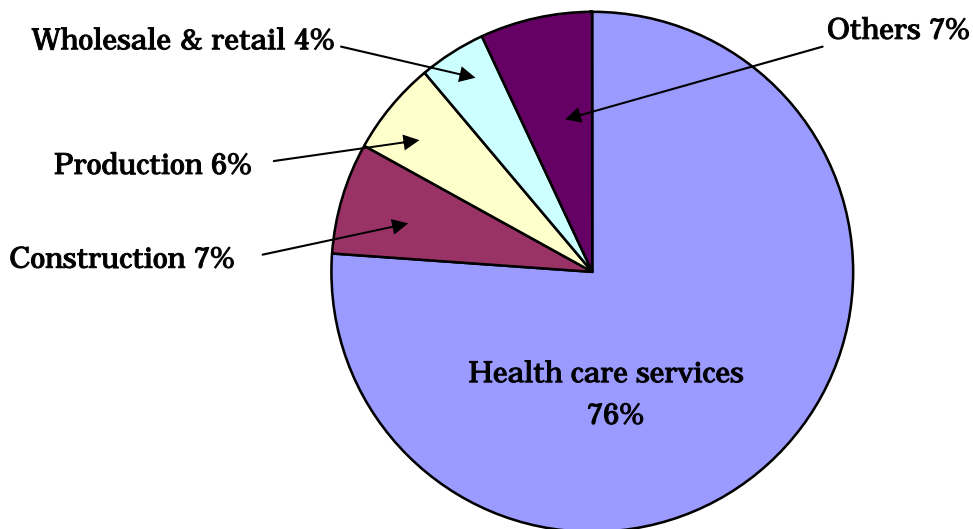


Fig.3 Shares of business categories of generators subscribed. (As of March 31, 2009)

(2) Number of e-Manifest issued

Regarding the number of e-Manifest issued, it is found to increase exponentially with year. At the end of fiscal year 2009, it reaches about 8.4 million issues which is about two times grater than that of fiscal year 2007. The yearly average share of e-Manifest in total Manifest issues (45 millions) becomes about 19 % (Fig.4).

Since Major general contractors and housing makers have already started to use e-Manifest in some of building destruction sites, and also a major hamburger chain company and like unify the management of their wastes generated from retail shops in their main office, the internal prevalence rates of e-Manifest in big corporations is recently increasing.

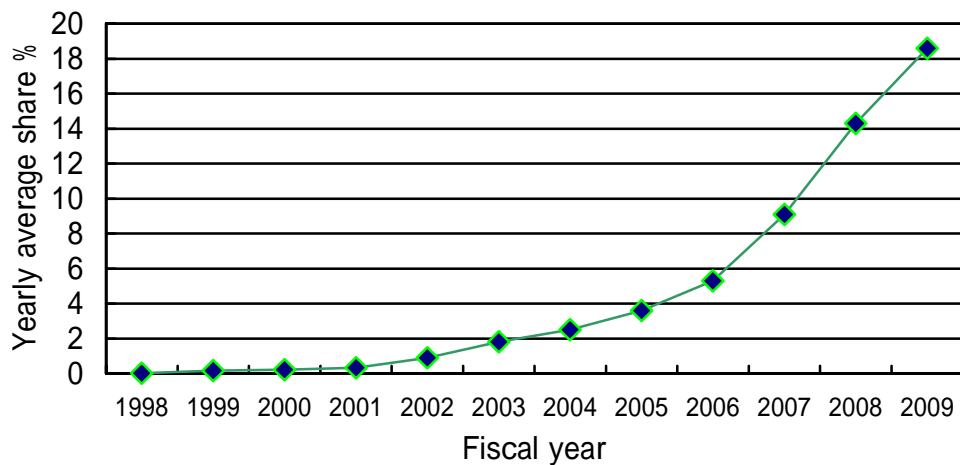


Fig.4 Yearly average share of e-Manifest in total Manifest issued (Yearly total number of Manifest issued: 45 millions)

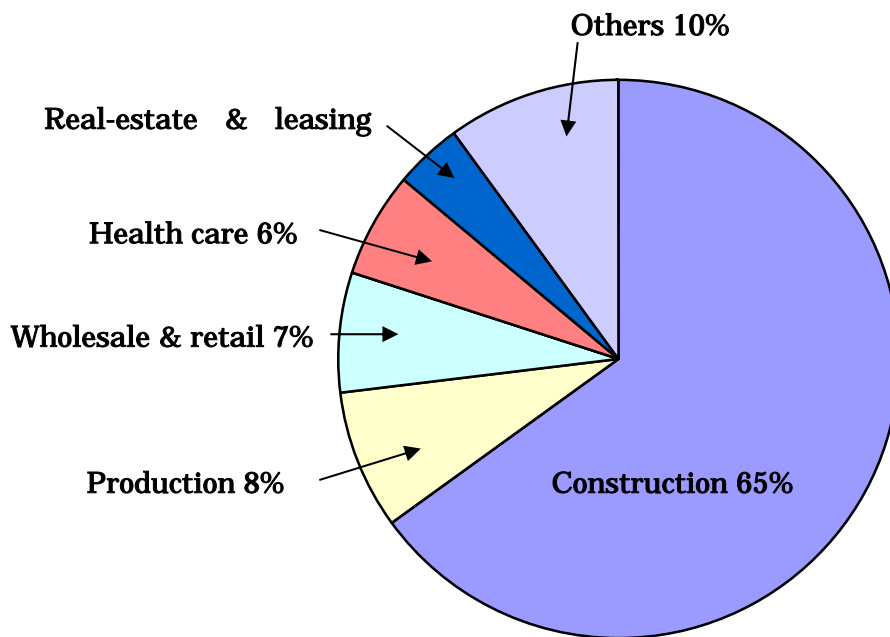


Fig. 5 Shares of business categories of e-Manifest issued (As of March 31, 2009)

As for the number of e-Manifest issued related to the business categories of generators, the use in general construction business has the highest share of 65% of all, and production business (8%), wholesale and retail (7%), health care services (6%), and real-estate and lease business (4%) follow in this order. The sum of shares of these business categories occupies 90% of all (Fig.5).

4 . Efforts for the promotion of the increase use of e-Manifest

In order to further increase e-Manifest in use, we are implementing various promotion activities including the publication of subscriber s information and the good operational examples through our Homepage, and participation in a variety of exhibitions. In addition, we implemented “Model project for promoting the increase use of e-Manifest” from FY2003 to FY2007. Many entities such as corporations, industry groups and local governments took part in this project.

Since FY2005, we have worked and still work according to the Promotion Measures for the Increase Use of e-Manifest incorporated in the project of Ministry of the Environment named “Enhancement of the Integrity of Industrial Waste Management Businesses” in March, 2005. And also we have the pursuing target of 50% share of e-Manifest in total Manifests in the end of FY2010 that was set up in “IT New Reform Strategy prepared by the IT Strategy Headquarters of which chief was the Prime Minister in January 1, 2006.

1) Provision of the explanatory sessions of e-Manifest

From FY2000, we provide the explanatory sessions nation-wide under the cooperation with local public bodies, and National Federation of Industrial Waste Management Association and its member Associations. The core contents of the sessions include the following:

- How e-Manifest works.
- Benefits expected by its use.
- How to operate it.
- Practical examples in operation.

From FY2008, in order to cope with increasing inquiries with the increase of the users, we provide workshops for experiencing the operation of e-Manifest system

2) Development of tools for promoting increase use

Usually, the study of the use of e-Manifest by a business undergoes the following steps so that we develop the suitable tool for each study step.

-) Understanding of the workings of e-Manifest and the expected benefits by its use.
 -) Study of its use.
 -) Proof test
 -) Regular use
- a) Preparation of a guidebook for the use of e-Manifest and an introductory video showing practical examples in operation.

The practical usage may differ with types of business and waste. Thus, we prepare a guidebook and a video in which applicable usages could be found through various practical examples in operation. A video showing the usages can view on our homepage

b) Development of the demonstration version

We have developed the “Demonstration version of e-Manifest” so that the experience of e-Manifest operation can be made.

c) Provision of the explanatory video of e-Manifest operation

For quick and better understanding, a video showing how to operate e-Manifest is posed on our homepage.



Photo.1 Promotion materials for e-Manifest

3) Formation of the nation-wide supporting system

In order to promote nation-wide dissemination of e-Manifest, we build up the operation supporting system under the cooperation of National Federation of Industrial Waste Association and its member Associations from FY2008. The local member associations carry out the following services:

A Services relating to the sign-up procedure

- a. Distribution of the leaflet, booklet and application form.
- b. Response to inquiries on the sign-up procedure
- c. Accept of an application and check of its description
- d. Sending the application forms accepted to the Information Processing Center.

B Services relating to the supports of users.

- a. Noticing of legal information on e-Manifest
- b. Responding to inquiries on how to operate.
- c. Providing of explanatory workshops by utilizing PC training sessions.
- d. Noticing of information on e-Manifest system modifications.
- e. Providing of guidance of the Information Processing Center

4) Release of the information of waste management businesses subscribed.

We post a webpage capable of searching the information of waste management businesses subscribed for the e-Manifest system, which is requested by many generators, from October, 2007.

5) Reporting of e-Manifest information to local governments.

By the Ordinance of Enforcement of the Waste Management Law amended on September, 2006, a generator is required on a site to site base to report the state of Manifest issuing in the last year to the local government concerned. Thus, to fulfill the requirement of the Article 8-36 of the Ordinance of Enforcement of the Waste management Law, the Information Processing Center prepares and submits the report by processing the e-Manifest information of the previous year to the governors or mayors.

For streamlining administrative reporting, the Information Processing Center provides services through its built-in sub-systems for helping the preparation of various administrative reports required by regulations from April, 2008 (Table 4).

Table 4. Administrative reports of industrial waste which can be prepared through our built-in sub-systems.

Reporter	Title of administrative report of industrial waste	User
IPC	· Annual status report on e-Manifest issuing	Generator
Business	· Annual status report on Manifest issuing · Performance report on the waste disposal plan of mass generators. · Performance report on the disposal of specially controlled wastes.	Generator
	· Performance report on the transporting of industrial waste	Transporter
	· Performance report on the disposal of industrial waste.	Disposer

IPC: The Information Processing Center

5 . Improvements of services for subscribers.

In order to improve the convenience of subscribers and reduce the operational cost, we implemented the followings:

(1) Implementation of campaigns for increasing use of e-Manifest.

In order to promote the increase use of e-Manifest, we implemented a sign-up fee free campaign twice.

1) From January, 2007 to January, 2008.

Beneficiary: generators, transporters and disposers

2) From October 2009 to November 2009.

Beneficiary: generators (confined to Fee Category A and B subscribers), transporters and disposers.

(2) Service of providing a CD-R recorded information input

In order to reduce a subscriber s burden on keeping the records of massive e-Manifest

information, and proofing the use of e-Manifest, provide a CD-R preparation service in which e-Manifest data requested by subscribers is recorded.

(3) Streamlining of paperwork

The online application and the modification of data registered make available through our Web site besides the conventional paper application.