NEWSLETTER

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THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

Dear Waste Management Experts

The lead story of this issue concerns a group of products which are difficult for municipalities to deal with when they become waste. The Health and Welfare Minister has designated these "difficult wastes", and created a new system for their disposal which began this March.

Next, a municipal ordinance to prevent littering, which is one of the keys to make the Japanese cities clean, is detailed. And in order to help you understand the biggest waste management news in Japan in '95, we have prepared a schematic chart of the Packaging Waste Recycling Law. Please use it together with the article from our last issue.

As of this issue, the JSWME NEWSLETTER will be published every three months, October, January, April and June, so that we can send you the latest waste management news from Japan in a more timely manner.

(by Hiroki Hashizume)

Difficult Waste to Manage - Another New Trial for Better Waste Management in Japan -

Difficult Waste to Manage Properly

In Japan, it is a municipality's duty to collect, transport and dispose of domestic waste in its administrative area to protect citizen's health and conserve the living environment. However, certain waste is difficult to manage properly using municipalities' present management techniques and facilities. This type of waste has been referred to as "difficult waste to be managed properly", or "difficult waste" for short.

In this connection, the Japanese Waste Management and Public Cleansing Law (Waste Management Law), first enacted in 1970 stipulated "When enterprises manufacture, process or sell products, containers, etc., they shall ensure appropriate management of the waste generated when they are discarded". There has been a lengthy debate over the definition of difficult waste, as well as, by whom and how it should be dealt with. Some kinds of waste are being handled by municipalities with great difficulty, and some waste is too difficult for municipalities to manage at all. Thus, 'difficulty' varies among municipalities. A product/waste which is very difficult to manage in municipality 'A' may be successfully treated in municipality 'B' with a specialized facility.

Non-Collectable Items

In most municipalities, there are some wastes that have not even been collected because of their extreme management difficulty. Instead, people are referred to private enterprises specialized in their management or they are asked to return the non-collectable items to the stores. The following are non-collectable items in the Tokyo Metropolitan Area; 1) Harmful objects, dangerous objects, and objects that smell, such as gas, oils, industrial chemicals, fireworks, printing ink, matches, developing fluid, gasoline additives and batteries; 2) Cars, motorcycle, tires and pianos; 3) Objects that might interfere with maintenance and operation of the management facilities, such as fire extinguisher, safes and chemicals.

Difficult Waste and Waste Management Law

After hot discussions and various trials both by municipalities and by industry, the following is the basic plan for dealing with difficult waste: Municipalities should improve their facilities and management capabilities to take care of the waste properly and enterprises should assess the handling or processing difficulty of the waste which their products, containers, etc. create when discarded.

Given this background, the Waste Management Law revised in '91 introduced the following ideas; Mayors of municipalities are entitled to require cooperation of enterprises which manufacture, process, sell or otherwise handle products, containers, etc. to facilitate proper treatment and management of wastes. Based on the law, the Ministry of Health and Welfare specified the following four items as "Difficult Waste" on March 14, 1994, and enforced it on March 1, 1995; 1) tires (for cars), 2) television sets (not less than 25 inches), 3) refrigerators (not less than 250 liters) and 4) spring mattresses.

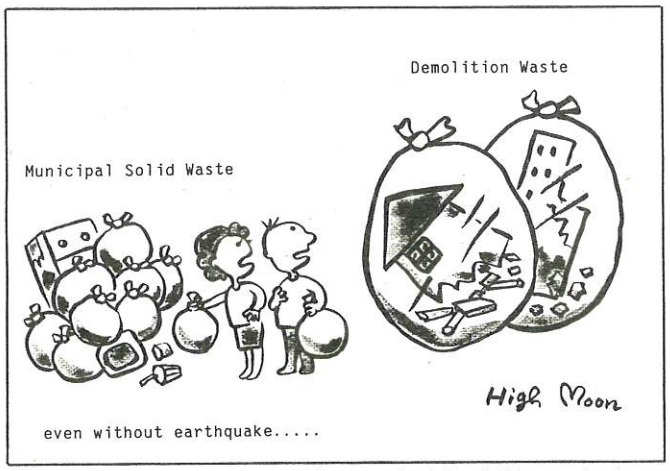
Implementation of the New System

The Ministry of Health and Welfare has asked municipalities to carry out the new system. Now, municipalities and business establishments are talking

over implementation of the system, The main problems are as follows; 1) Enterprises are required to collect the four items only when residents buy new goods. (Not applicable to waste generated with moves, illegal dumping, etc.) 2) Municipalities must dispose of the items when it is difficult for enterprises to treat them and dispose of them at landfill sites.

With the enactment of the Packaging Waste Recycling Law, responsibilities and the role of waste management among citizens, municipalities and enterprises seem to be changing. (Refer to issue No. 13 of the JSWME NEWSLETTER.) Through the introduction of a new model for role sharing and responsibility sharing among municipalities, enterprises and citizens, a further better system of difficult waste management is expected to develop.

(by Hisakazu Hirai and Hiroki Hashizume)



Even without an earthquake, the amount of demolition waste is twice that of municipal solid waste.

By Courtesy of Prof. Hiroshi Takatsuki

Kawasaki City's Ordinance for the Prevention of Littering of Cans, Bottles and Cartons

In Kawasaki City, a preventive ordinance against the littering of cans and bottles, as well as cigarette butts and chewing gum, was passed in March 1995 and took effect on July 1, 1995.

Background to the Ordinance

Kawasaki City has been conducting an Environmental Cleansing and Beautification program which covered and covers main railway station forecourt and trunk roads. It has also helped to improve public etiquette about littering through activities such as the Living Environmental Fair, a public day for beautification of the city and the Tamagawa River cleanup which involved local people.

In spite of such efforts, some people have continued littering and local people have requested a strict city ordinance to be established.

Main Features of the Ordinance

The Ordinance consists of 10 articles with two major features;

1) definition of the responsibilities of the city, citizens and businesses, and
2) penalties for violations.

Violation of the law may result in a fine of up to 20,000 yen in certain areas where littering is strictly prohibited. Of course, any littering in streets, open spaces, parks, rivers and other public places is illegal. The city anticipates that imposing fines will act as a disincentive for people to litter.

Future Steps

The mayor intends to designate certain littering prevention zones this October and the city plans to implement a number of preventive actions which are contained in its littering prevention plan. It is essential that the city works together with local people and corporations to carry out the plan.

It is desirable that nobody litters. It is also important to launch public relations program to inform the public about the Ordinance and to encourage the public and businesses not to litter.

No littering chewing gum, cigarette butts, empty cans, etc.. : Kawasaki City

(by Taro Ohsawa and Kiichiro Sakaguchi)

Introduction of Universities with Programs Related to Waste management in Japan (4) Hydraulic and Sanitary Engineering Laboratory, Department of Civil Engineering, Fukuoka University

Fukuoka University was established in 1934. Its 540,000 m^2 campus spreads out in the foothills of the Sefuri Mountains in the suburbs of Fukuoka City which is

located in Kyushu, one of the main islands of Japan. Presently Fukuoka University is comprised of 9 faculties subdivided into 25 department and offers academic programs leading to Doctorate degrees in 14 major fields. The Hydraulic and Sanitary Engineering Laboratory of Fukuoka University was established in Oct. 1966 by Dr. M. Hanashima.

For the most part, this laboratory has been doing sanitary landfill research using many kinds of large-scale lysimeters set up on a 5,000 m^2 laboratory area. We have 1 professor, 2 associate professors, 4 researchers, 2 secretaries and 40 students including those enrolled in the Master and Doctorate courses in solid waste management. The number of graduates from our laboratory is now more than 1,000. Our laboratory is constantly striving to be one of the leading institutions in sanitary landfill research for environmental preservation in Japan and developing countries.

We began the study of decomposition of domestic waste using lysimeters of aerobic and/or anaerobic conditions in 1967. As a result, we discovered a new phenomenon regarding landfill sites: solid waste is decomposed rapidly by being supplied with air to landfill layers and that aerobic bacteria play an important role in the decomposition of waste. We therefore proposed a new concept to be known as "Landfill Type", which classifies landfills into five types based on the degree of aerobic activity and the structural mechanisms of the sites. (The five landfill types are shown in Fig. 1.) We have gained a lot of useful information regarding landfills over the last 28 years using 28 different varieties of lysimeters.

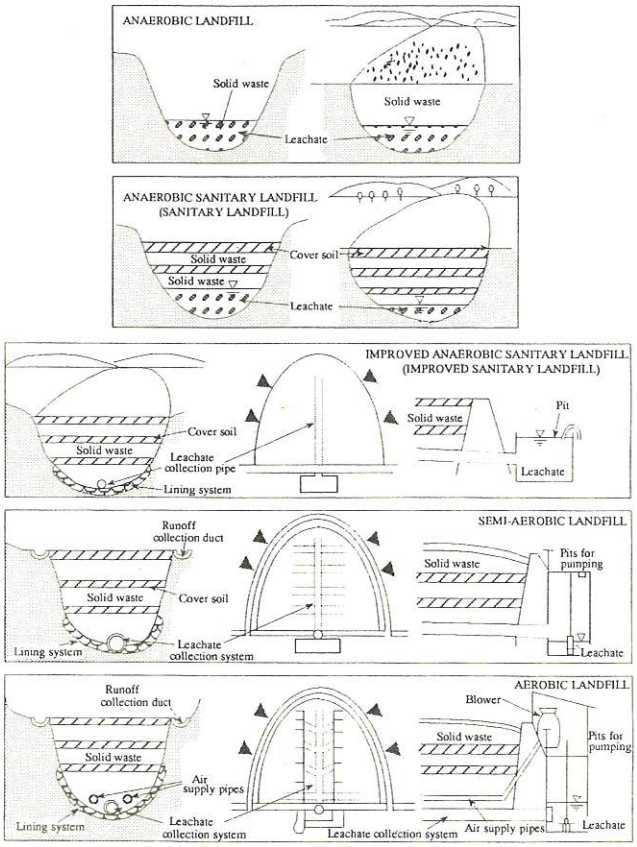


Fig. 1 Classification of landfill type

The latest study we are carrying out is of landfill sites of the closed type. This type fulfills the needs of environmental protection, resource stockpiling, and use of the sites' cover surface before decommissioning (see Fig. 2). Fig.3 shows you our laboratory.

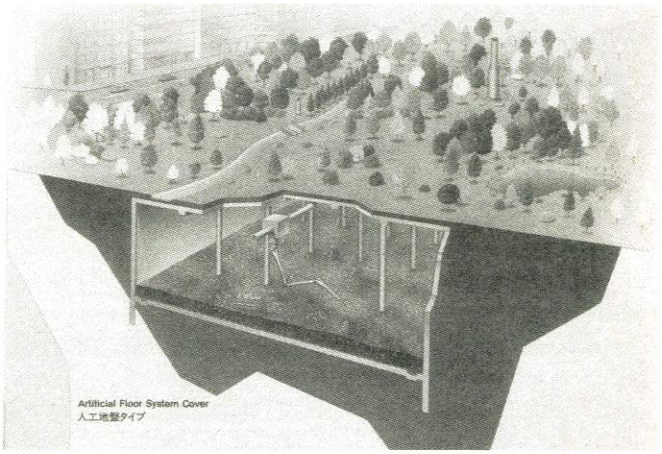


Fig.2 The Latest Study of Landfill Sites of the Closed Type

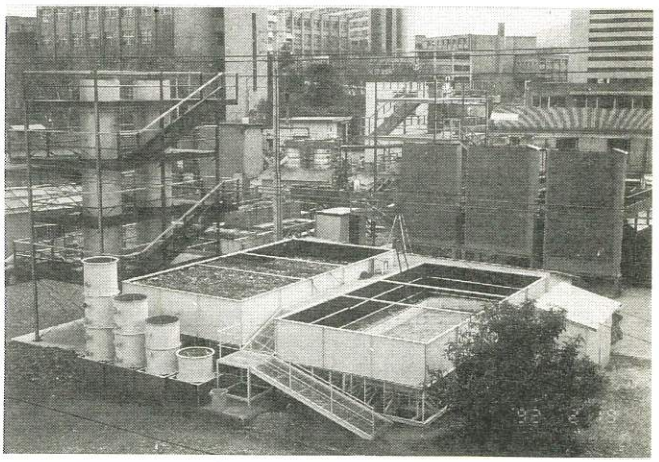


Fig.3 Hydraulic and Sanitary Engineering Laboratory

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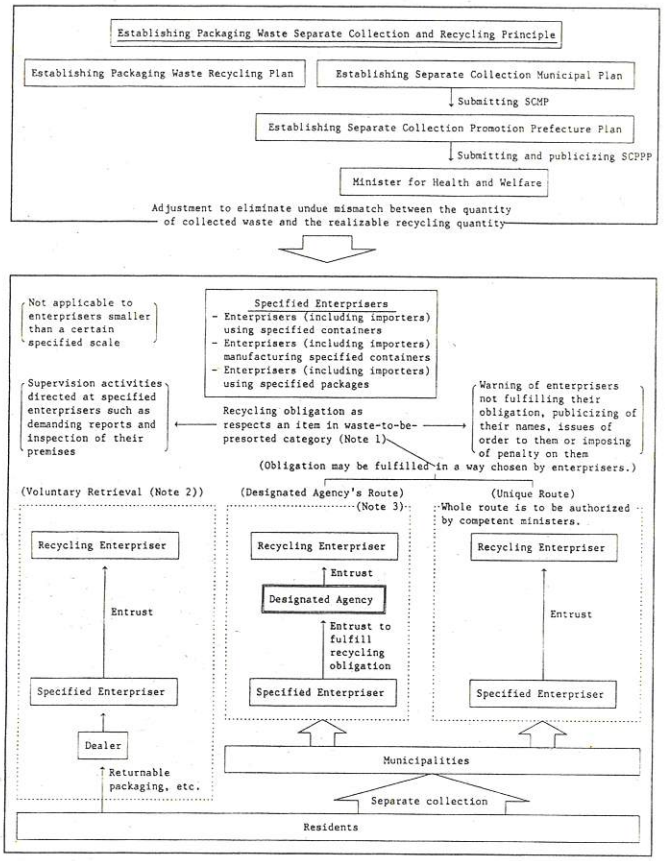
Framework of Packaging Waste Recycling Law



Note;

1) Neither PWRP nor recycling is required in respect to items which are obviously salable and are not in a waste-to-be-presorted category designated by an order of the competent ministers as a group needing no recycling.
2) Those specified enterprisers who retrieve packaging they use or manufacture or have them retrieved by someone else may apply to the competent ministers to get authorization of their conformance of the method of retrieving the said packaging using voluntary retrieval criterion.
3) Competent Ministers can designate a DSD/Eco-Emballages like non-profit organization as an agency to recycle PW a fee for recycling to it.
4) The ratio the burden on the enterprises using specified containers and those manufacturing them shall be fixed by the competent ministers on the basis of the ratio of the proceeds from the sales of merchandise in the said containers and the proceeds from the sales of the said containers.

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Vol. 6 No.4 (Jul. '95) & Vol. 6 No.5 (Sep. '95)

The volumes contain the following technical papers. (written in Japanese with English abstract)

Vol.6 No.4 (July 1995)

Air Flow Rate in Leachate Collection Pipe of Semi-Aerobic Landfills; The Case of a Single Pipe
by Youngkyu Kim, Toshihiko Matsuto, Yasumasa Tojo and Nobutoshi Tanaka

Recycling of Paper Resources and Paper Waste Treatment - Preliminary Resources, Cost and Energy Analysis of Waste Paper Recycling
by Shinsuke Morisawa, Takeshi Hasegawa and Yoriteru Inoue

A Study on Pb in Fly Ash from a General Waste Incineration Plant and the Leaching Characteristics of Pb from a Landfill
by Nobuo Hasegawa

Effects of Pretreatment on the Solubilization and Anaerobic Digestion of Waste Activated Sludge
by Qun-hui Wang, Kohji Kakimoto, Hiroaki I. Ogawa, Kazuhiro Fujisaki and Yasuhiko Kato

Vol.6 No.5 (September 1995)

Fuzzy Comprehensive Evaluation Method for Final Disposal Site Planning
by Akira Koizumi, Toyono Inakazu, Tetsuya Fujita and Tohru Furuichi

Detection System of Explosive Substances for Bulky Refuse Disposal Facilities
by Takashi Ohnishi, Yoshikazu Akaizawa, Toshimasa Shimizu and Tomimasa Yonezawa

Studies on Organic Substances in Leachate from Landfills - Organic Substances Extractable from Rubber Sheets -
by Hiroshi Fukui, Toshiro Sakurai, Nobuo Awaji, Naoyuki Hirabayashi, Tomiharu Ito and Yukio Kojima

Studies on Implementation of a Leakage Detection Techniques for Seepage Control Sheets by Measuring Skewness of Electrical Potential Distribution
by Toshiro Oshikata, Tohru Furuichi, Masaru Tanaka and Masataka Hanashima

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