

Abstracts

[Special Issue: Impact on Waste Management in Japan by COVID-19 : Forced Change, Evidenced Robustness, and Future Perspective]

1. Response of the Ministry of the Environment to the Spread of the Novel Coronavirus (COVID-19) Infection

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Abstract

Waste treatment is an essential social infrastructure that supports the people's livelihood and the economy. It should be noted that stable waste treatment is required even during the spread of the novel coronavirus infection. It is important to keep being attentive to the spread of the infection and to continue taking measures against the spread of infection for all of the related entities. The Ministry of the Environment has promoted the collection, investigation, and organization of knowledge on novel coronavirus infection. We will continue to make efforts to ensure that any waste related to the novel coronavirus infection is properly treated and that the waste treatment system is maintained through the sharing of useful knowledge in an easy-to-understand format amongst local governments, waste treatment companies, waste generators, and other relevant entities - as we simultaneously work to raise awareness.

Keywords: novel coronavirus (COVID-19) infection, waste treatment

2. Sorting, Storage, and Transport of Medical Waste from Japan's First Hospital Specializing in COVID-19

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Abstract

Novel coronavirus disease (COVID-19) was classified as a designated infectious disease under the Infectious Disease Control Law by Cabinet Order on 1 February 2020. Juso Hospital in Osaka City became the first hospital in Japan to specialize in COVID-19. All wastes from medical practices, treatment, inspection, etc., have been treated as infectious wastes, the greater part of which has been personal protective equipment (PPE). Single-use goods are essential since none of the materials can be reused. Although volume reduction was attempted to a practical degree, PPE and single-use goods have drastically increased the amount of infectious wastes generated. Plastic containers that can be wiped and disinfected have been employed in order to avoid infection due to waste transfer from infectious zones to normal zones. No in-hospital infections have occurred at Juso Hospital and the hospital has partially resumed its normal medical services from 27 July 2020.

Keywords: novel coronavirus disease (COVID-19), infectious waste, personal protective equipment (PPE), single-use

3. Collection and Transportation of Municipal Waste during the COVID-19 Crisis

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Abstract

The clean and comfortable living environment we are all accustomed to is ensured due to the systematic collection and transportation of municipal waste, which is generated and discarded each day. This is a socially implemented system, the sustained functioning of which is strongly relied upon by all. If for some reason its functioning is disrupted, wastes are left unattended to. In the event that a disruption is prolonged for any lengthy amount

of time, the public health system can deteriorate to the point of hindering our daily environmental safety, affecting the health of many. With the spread of COVID-19, which can infect anyone and is highly contagious, municipal waste collection/transport workers are required to continue working, anxiously trying to avoid the risk of contact with the virus. It is necessary for these essential workers to access accurate information and act upon it accordingly.

This paper introduces the significance of waste collection and transport, as well as the guidelines that summarize points to be taken into account for appropriate conduct. The paper discusses possible future scenarios for the municipal waste collection and transportation business in these uncertain COVID-19 times.

Keywords: COVID-19, municipal waste, collection and transportation, public health, business continuity

4. Influence of COVID-19 Pandemic on Waste Treatment at Infectious Waste Incineration Facility

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Abstract

The waste incineration plant owned and operated by Kobe Environmental Creation Co., Ltd. (KEC) has an incineration capacity of 80ton/day and burns mainly clinical and plastic wastes. Infectious wastes are delivered to the facility where they are carefully sealed, and then stored in sealed plastic containers. The waste is then sent to the incineration furnace in this fully protected state. Because waste disposal companies are considered part of medical infrastructure, KEC has not had to reduce its workforce nor its workload during the current COVID-19 crisis. Many meetings for new projects, however, did have to be suspended due to the prohibition of business visits. The amount of infectious wastes being brought into the facility has remained almost the same as usual even during the COVID-19 emergency. If properly sealed and enclosed, these wastes have a sufficiently low risk of infection during waste disposal but it is important to note there are cases where this enclosing is not without inaccuracies (i.e. blood leaks, protruding needles, overpackaging). What we wish to

highlight here is that those who are generating and unloading waste should keep in mind that there are actually humans managing the waste at the other end, struggling to stay safe.

Keywords: infectious waste, incineration, amount of waste generated, state of emergency over COVID-19, waste plastic

5. Impact of COVID-19 on Plastic Recycling at the Local Government Level

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Abstract

COVID-19 has had a strong impact on issues related to plastic waste for local governments. Segregated collection, sorting and recycling of waste plastics from package for waste reduction have improved recycle manner of citizens; however, material recycling has not been so much achieved as desired. Besides, decrease of governmental revenue will make the current system unsustainable; namely, the local governments must change their policy. The author suggests a new system: self-bringing of plastic resources to a gathering site operated by official sector. When citizens bring their plastic resources, they watch collected one. That results in learning of desired quality of the resources. It will achieve low-cost and high quality collection of plastic resources; moreover, it will raise the quality of private-based plastic collection. Official sites for self-bringing have a role of social welfare, too. At the same time, some plastics, such as sanitary use, cannot be recycled but should be incinerated with energy recovery.

Key words: local government, plastic, COVID-19, segregated collection