

Chemicals in the Environment

Introduction

The number of industrially produced chemical substances is estimated to be in the tens of thousands. Chemical substances have become indispensable in our daily lives, but they may also affect human health and the ecosystem, depending on the method employed for their production, use and disposal. Indeed, dioxins, PCBs, endocrine disruptors and other substances have caused serious social problems.

The Ministry of the Environment (MOE), Government of Japan, has been conducting successive investigations on the persistence of chemical substances in the general environment since 1974 and has published the results in “Chemicals in the Environment.” The results of environmental surveys of FY2002 are compiled in “Chemicals in the Environment (FY2003).” We hope that those concerned with this issue will utilize this report and that the information provided will be helpful for the environmental preservation of this country.

Scope of investigation included in this report

As a method for selecting target substances, the following three types of surveys, each with their own purpose, were introduced so that the survey results could be effectively utilized for measures against chemical substances in the environment.

Initial Environmental Survey for grasping the status of environmental persistence of chemical substances and others, targeting the Designated Chemical Substances by the Law Concerning the Examination and Manufacture, etc. of Chemical Substances (hereinafter called the Chemical Substances Control Law), candidate substances for the PRTR System, unintentionally formed substances, and the substances required by social factors.

Environmental Survey for Exposure Study for grasping the exposure amount of chemical substances to humans and wildlife, which is necessary for the environmental risk assessment.

Monitoring Investigation for monitoring target substances included in the Stockholm Convention on Persistent Organic Pollutants (hereinafter called the POPs Treaty) and other substances that are possible candidates for target substances of the Treaty; highly persistent substances for which environmental standards are not yet established but grasping their annual environmental status is required from among Class 1 & 2 Specified Chemical Substances and Designated Chemical Substances specified in the Chemical Substances Control Law.

To avoid duplication, the results of chemical substances (dioxins, etc.) that have been monitored by other divisions of MOE are not included in this report (see below).

Environmental Investigation by Other Divisions of MOE

| Name of Investigation | Media | Target Chemical Substances |
|--|---|--|
| Monitoring Investigation of Hazardous Air Pollution Substances | Air | Benzene, Aldehydes, Mercury and its compounds, Benzo[<i>a</i>]pyrene, etc.(19 species) |
| Water Quality Monitoring | Surface water, Ground water | Cadmium, Total Cyanogen, etc. |
| Environmental Investigation on Agrochemicals | Soil, Agricultural products, Air, Surface water | Pesticides |
| Monitoring of the Precautionary Monitoring Targets | Surface water, Ground water | Chloroform, <i>trans</i> -1,2-Dichloroethylene, etc. |
| Priority Substances for the Survey on Method and Monitoring | Water environment | Zinc, etc. |
| Investigation of Dioxins | Air, Surface water, Bottom sediment, Soil, Wildlife | PCDDs, PCDFs, Coplanar PCBs, PBDDs, PBDFs |