

## Investigation of chemistry substance inflow/outflow actual condition of a sewer

Whole term

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## (Purpose)

Research during the previous fiscal year was carried out mainly to study risk communication methods and grasp the actual condition of the behavior of chemical substances in sewage treatment plants as a response in such plants, as part of chemical substance risk management in sewerage systems. Planning of discussions with residents and NGO and interviews with businesses engaged in advanced efforts were conducted. The balance of chemical substances according to measured/reported data and methods of estimating chemical substances from household wastewater, etc. were also studied.

In research during the present fiscal year, the behavior in sewage treatment plants of chemical substances which are expected to have high influent rates in sewer systems was investigated as supplementary research continuing from previous results, and methods of estimating releases of chemical substances using PRTR data were organized/studied for the purpose of preparing guidelines (draft), with an awareness of the fact that sewerage system managers investigate releases of chemical substances and use this information in system management.

## (Results)

## 1. Clarification of actual condition of chemical substance with large influent rate into sewerage systems

Based on the results of PRTR reports published in 2002~2004, substances with high rates of migration into sewerage systems were extracted, and among these, an investigation was conducted to clarify the actual conditions of 6 substances about which little is known concerning their behavior in sewage treatment plants. As a result, it was found that most of these substances are reduced in the sewage treatment plant, and the residual content in final effluent is slight.

## 2. Preparation of guidelines (draft)

Based on the results of previous research and this fiscal year's research, "Guidelines for Establishment of Chemical Substance Management Plans and Use of the PRTR System (Draft)" were prepared. These guidelines clarify the items which sewerage system managers must perform based on the "Handbook on Chemical Substance Risk Management for Sewerage Systems" of May 2001, and organize methods of estimating chemical substance releases in an easy-to-understand manner.

## (Future plans)

In this investigation, substances with high rates of migration into sewerage systems were extracted, and has checked that the influence which these substances have on final effluent was small. However, various chemical substances are flowing in from the factory, the place of business, the home, etc. besides the substance made applicable to investigation this time at the sewer, and the substance which cannot grasp the discharge coefficient etc. is also in it.

Also in order to perform grasp of the income and outgo of the amount of chemical substances which raised accuracy more, and management, it is necessary to advance wholeheartedly investigation about the unknown substance of an action, and information gathering future succeedingly.

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key words

Chemical substance risk management, PRTR