

An investigation study about nitrogen and phosphorus removal process

Whole term 2002. 7 ~ 2005. 3

(Purpose)

The Japan Institute of Wastewater Engineering Technology study investigation mainly on an advanced wastewater treatment system such as nitrogen and phosphorus removal process using immobilized nitrifiers, and get various knowledge including “Commercialization Research on an Advanced Wastewater Treatment System Using a Five-Stage Bardenpho Process with Suspended Packing for Attached Growth” in 1995 fiscal year. However, we carried out pilot-scale and full-scale tests and got knowledge every case, but were not able to arrange it generally. Therefore we examined investigation about a method of analysis for general advanced wastewater treatment system without limiting it to process using immobilized nitrifiers to be able to go ahead through an investigation study about an advanced wastewater treatment system effectively, and carried out an investigation study for the purpose of gathering a newly technical evaluation method about nitrogen and phosphorus removal process which we adjust in the revision of a sewer law enforcement order in April, 2004.

(Schedule)

We show a schedule of this investigation for table -1.

In 2004 fiscal year, we carried out a close inspection such as a sewer law revision enforcement order and gathered a evaluation method about nitrogen and phosphorus removal process which we adjust in the revision of a sewer law enforcement order.

(Result)

In 2002 fiscal year, we arranged a past investigation study about nitrogen and phosphorus removal characteristic of an advanced wastewater treatment process using immobilized nitrifiers. In 2003 fiscal year, we examined “A method of Investigation and analysis (a plan) in an advanced wastewater treatment process.” and made a document to be useful for a plan / a design in future advanced wastewater treatment processing. “A government ordinance to revise one part of a sewer law enforcement order” was enforced on April 1, 2004, and, the notification “About use of the authorization of a business plan (March 29, 2004, Director Ministry of Land, Infrastructure and Transport / City and Regional Development Bureau)” was notified. In the notification, it was shown that a sewer manager established the plan discharge water newly, and A combination of a division of the plan discharge water and wastewater treatment process was shown. On this account

Table— 1 Schedule

Examination item	2002	2003	2004
Development of a study plan	—		
Gathering of past investigation study about process using immobilized nitrifiers		—	
Gathering of “A method of investigation and analysis (a plan) in an advanced wastewater treatment process.”		—	
A close inspection such as a sewer law revision enforcement order			—
Extraction of the matter which we should add			—
Summary / report making			—

Table— 2 Basic investigation plans examples

A basic investigation plan example	A main investigation purpose	Grounds
A type for enforcement order	Proof of findings meeting the plan discharge water	The notification by Director Ministry of Land, Infrastructure and Transport / City and Regional Development Bureau (Mach 29, 2004)
A type for most suitable institution design / driving management method	Making of the most suitable institution design / driving management method	A method of Investigation and analysis (a plan) in an advanced wastewater treatment process (2003) .
A compound type	Purposes of two above	Grounds of two above

we reviewed “A method of Investigation and analysis (a plan) in an advanced wastewater treatment process.” to adjust it with these matters and gathered a newly technical evaluation method about nitrogen and phosphorus removal process in 2004 fiscal year.

When we gathered it, We extracted “an experiment theme”, “an examination item” and “an investigation item” for an investigation about an advanced wastewater treatment process, and included a chart about “a purpose, an investigation method, a method of analysis” in every investigation item, and arranged it in a cut sheet form. And we put those investigation items together and made three kinds of basic investigation plans example to show for table-2.

(Summary)

We examined investigation about a method of analysis for general advanced wastewater treatment system to be able to go ahead through an investigation study about an advanced wastewater treatment system effectively, and gathered a newly technical evaluation method about nitrogen and phosphorus removal process Which we adjust in the revision of a sewer law enforcement order.

We can devise the investigation plan that we can answer for various demands such as “An investigation theme and item about an advanced wastewater treatment process” and “A point to keep in mind in an experiment institution design and driving” precisely by using this document.

A peculiar study

Researchers : Nobuyuki Horie, Koichi Sano, Hiroshi Uchida

key words

An advanced wastewater treatment processing,immobilized nitrifiers, An investigation method, A method of analysis, Sewer law revision enforcement order