


Content

Title :	Water Pollution Control Measures and Test Reporting Management Regulations 
Date :	2006.10.16
Legislative :	Promulgation of stipulated provisions full 101 Articles by Order of Huan-Shu-Shui-Zi No. 0950080183, October 10, 2006, Environmental Protection Administration, Executive Yuan
Content :	<p>Article 1</p> <p>These Regulations are established in accordance with Article 18, Article 19 where Article 18 is mutatis mutandis applicable, Paragraph 3 of Article 20, Article 22, Paragraph 2 of Article 31, and Paragraph 4 of Article 32 of the Water Pollution Control Act (hereinafter referred to as the “Act”).</p> <p>Article 2</p> <p>Terms used in these Regulations are defined as follows:</p> <p>I. Jointly established wastewater or sewage treatment/pretreatment facilities: The facilities refer to wastewater or sewage treatment/pretreatment facilities that are jointly invested in, established by, and jointly used by two or more enterprises.</p> <p>II. Commissioned operator: The operator refers to the party commissioned by an enterprise or sewage system to operate and manage the wastewater or sewage treatment/pretreatment facilities.</p> <p>III. Soil treatment: It means the methods for the discharge of wastewater or sewage via pipelines or ditches for irrigation or percolation into the soil for the removal or reduction of pollutants.</p> <p>IV. Commissioning wastewater or sewage treatment: It means discharge of wastewater or sewage via pipelines or ditches to be treated by a commissioned party (hereinafter referred to as “Commissioning Treatment”).</p> <p>V. Commissioned wastewater or sewage treatment: It means the acceptance of wastewater or sewage treatment commissioned by another party at established wastewater or sewage treatment/pretreatment facilities (hereinafter referred to as “Commissioned Treatment”).</p> <p>VI. Initial dilution ratio: It means the dilution multiples from the mix of wastewater column or sewage column and the surrounding seawater after the wastewater or sewage drains from the pipeline into the sea and reaches a stable level in the seawater.</p> <p>VII. Discharging wastewater or sewage using a drainage pipe to the sea (hereinafter referred to as a “Sea Drainage Pipe”): It means the use of a pipeline to transport wastewater or sewage to the sea; with an initial dilution ratio of 100:1 or greater.</p> <p>VIII. Storing: It means delivery of wastewater or sewage to storage facilities and then implementing reuse, Commissioning Treatment, using containers, tank trucks or other non-pipelines or ditches facilities to remove or transport wastewater or sewage to the area outside the range of operations, or returning water seepage in a landfill to the surface of the landfill.</p> <p>IX. Dilution: It means mixing of wastewater or sewage needed only to be treated before meeting the standards provided in the</p>

- Act and wastewater or sewage meeting the standards provided in the Act without treatment or non-contact cooling water.
- X. Recycling wastewater or sewage: It means collection of the wastewater or sewage that has not been discharged into a water body and has not undergone soil treatment to be reused for other water resource purposes.
- XI. Non-continuous discharge: It means the effluent that is not drained from a discharge point into the receiving water body continuously for 24 hours every day, or that is not drained from a discharge point approved by the sewage management authority into a sewage system continuously for 24 hours every day.
- XII. Routed discharge: It means wastewater or sewage is not drained from the permitted discharge point or not drained into a sewage system through the discharge point approved by the sewage management authority.
- XIII. Pure hot spring wastewater: It means wastewater from hot spring baths with no other added substances.

Article 3

The types of industrial wastewater are described below:

- I. Process wastewater: It means the wastewater of an enterprise that directly contacts people or objects in the process of manufacturing, processing, repair, treatment, operation, cooling, washing, counter flow washing, medical treatment, provision of services, livestock raising, development of natural resources, or other operations.
- II. Discharged wastewater: It means the wastewater drained from the recycling water of an enterprise to reduce the concentration of the pollutant that accumulates during the recycling process.
- III. Non-contact cooling water: It means the water used exclusively for temperature exchange in heat exchange pipelines.
- IV. Runoff wastewater: It means the wastewater produced from the rain when it washes outdoor facilities, surfaces of buildings or ground surfaces in the outdoor work environment, and (raw) materials.

Materials referred to in Subparagraph I of the preceding paragraph include raw materials, intermediate products, products, by-products, waste, waste gases, animals, plants or other objects.

Article 4

Enterprises or sewage systems shall take the water pollution control measures (hereinafter referred to as the "Pollution Control Measures") approved by the special municipality, county or city competent authority or any agency commissioned by the central competent authority (hereinafter referred to as the "Issuing Authority"), and shall operate in compliance with the approved Pollution Control Measures.

Article 5

If there is a concern of leaking pollutants or wastewater from enterprises or sewage systems into a water body, protective and preventive measures shall be taken. If pollutants leak to a water body or soil, emergency measures shall be taken immediately, and local competent authorities shall be reported within three hours after the leaking is detected. The report on the record of responding to the emergency and the measures taken shall be submitted to local competent authorities for reference within 10 days after the emergency measures are taken.

The report on the record of responding to the emergency and the measures taken, as stated in the preceding paragraph, shall include the following:

- I. Reason for and time of the occurrence of the incident;
- II. Receiving parties of the report, and the reporting method

- and time
- III. The content of response and the method of the elimination and cleanup of leaking;
- IV. Personnel participating in the response and their duties;
- V. The plan for the monitoring and testing of the water body and soil affected by the leaking;
- VI. Methods for prevention and improvement;
- VII. Any others as required by the competent authorities.

Article 6

When a natural disaster or emergency occurs, enterprises or sewage systems shall treat wastewater or sewage in accordance with the order of the competent authority.

Article 7

The wastewater or sewage produced by enterprises or sewage systems shall be collected through ditches, pipes, or containers within the work environment, and shall not be mixed and collected with rainwater.

The preceding sentence is not applicable to runoff wastewater. Any existing enterprises or sewage systems that are not capable of achieving the goal specified in the preceding paragraph due to difficulties in engineering technique may submit evidence and conduct mixed collection after the competent authority gives its approval, provided that the enterprises or sewage systems have facilities available to prevent direct discharge of mixed wastewater or sewage.

Article 8

Where the runoff wastewater of an enterprise or sewage system storing or staking the following substances contains such substances or their components, the runoff wastewater shall be collected and treated:

- I. Sludge produced during treatment of wastewater or sewage;
- II. Coal cinder, coal ash, fly ash, slag, or bottom ash;
- III. Raw materials, materials, scraps, products, or by-products that, when washed out by rainwater, may dissolve into or produce substances harmful to the health as announced under this Act;
- IV. Hazardous industrial waste;
- V. Waste light sources, waste dry batteries, waste pesticide containers, waste containers for special environmental agent, waste lead acid batteries, waste lubricant, waste motorized vehicles, and recycled materials or derivative waste produced during the disposal process.

Article 9

Enterprises operating in the mining industry, earth and stone extracting industry, earth and stone processing industry, cement industry, earth and stone staking/disposing station, and at the construction site shall set up facilities that are capable of keeping off, blocking and channeling the rain on the excavation surface or stacking station. However, this shall not apply if setting up the facilities to keep off or block the rain is difficult and the competent authority gives its approval. Enterprises operating in the cement industry referred to in the preceding paragraph means the enterprises that blend the cement, concrete aggregate, admixture, and water thoroughly and transport the mixture to the construction site for grouting. The enterprises referred to in Paragraph 1 shall set up a grit chamber to collect and treat the initial rainfall and the wastewater produced from car wash platforms; the grit chamber shall meet the following requirements:

- I. The total design capacity shall be equal to or greater than the total area of the construction site or workplace

multiplied by 0.025 meters.

II. When it is not raining, the distance from the highest water surface to the top of the chamber shall be greater than one-half of its depth.

III. Water impermeable material shall be used.

The facilities for keeping off, blocking, and channeling rainwater as well as the grit chamber shall be maintained and the grit shall be cleaned away on a regular basis; the time at which the maintenance and cleaning are conducted and the method for such measures shall be recorded and the record shall be retained as a reference for three years.

Where any enterprises referred to in Paragraph 1 take the measures specified in Paragraphs 1 and 3 as approved by the Issuing Authority, their runoff wastewater may be discharged from the approved runoff wastewater discharge point after being treated in the grit chamber.

Where the rainfall is greater than the total design capacity of the grit chamber specified in Subparagraph 1 of Paragraph 3 the part of the runoff wastewater whose volume exceeds the total design capacity may be rerouted for discharge.

The domestic sewage produced from the offices and staff dormitories of the enterprises referred to in Paragraph 1 shall be collected and treated appropriately.

Article 10

Before proceeding to work at construction sites, the parties concerned shall present a plan for the reduction of pollutants from runoff wastewater (hereinafter referred to as "Reduction Plan") to the competent authority for approval, and proceed as approved.

The Reduction Plan referred to in the preceding paragraph shall contain the following requirements:

I. Basic information;

II. Measures for the mitigation of pollution as mentioned in the previous article and the engineering plan; and

III. A photocopy of the certification documents issued by the competent authority.

If there is any change in the Reduction Plan or a concern that pollution is still possible as the competent authority reviews and finds the Reduction Plan insufficient to protect the quality of the water body and requires it to be improved within a limited period, then the amended Reduction Plan shall be submitted, before the change or within the limited period, to the competent authority for approval, and be implemented as approved.

Article 11

Enterprises and sewage systems other than those specified in Articles 8 to 10 shall take measures to reduce the volume of filterable substances and eroded silt in runoff wastewater.

Around areas where goods and materials are stored or on erosion-prone ground in the working environment where there is no vegetation or pavement, the measures of installing structures such as dikes, ditches or walls shall be taken to reduce runoff wastewater pollution.

For those that take measures to reduce runoff wastewater pollution in accordance with the preceding paragraph, rerouted discharge of runoff wastewater is allowed.

Article 12

Wastewater or sewage treatment/pretreatment facilities shall be equipped with adequate functions and equipment, which are stipulated as follows:

I. Wastewater or sewage treatment under the maximum productivity or service scale shall be able to ensure that the treated wastewater or sewage meets the Act and applicable regulations.

However, Wastewater or sewage drained to sewage systems shall comply with the provisions of the Sewerage Law.

- II. The treatment/pretreatment facilities shall be able to treat the foreseeable anomaly operation of production or service facilities or sudden surge of water quantity capacity.
- III. The treatment/pretreatment facilities shall be able to treat the runoff wastewater specified in Article 8.
- IV. Parts of treatment/pretreatment facilities prone to damage and difficult to replace shall come with backup devices, and parts prone to damage shall come with spare parts on inventory.
- V. A dedicated voltmeter shall be installed.
The entities engaging in recycling, dilution, Commissioned Treatment or designated by a competent authority shall, in an upstream position of the wastewater or sewage treatment facilities, install independent and exclusive cumulative inflow water measurement facilities.

Where wastewater or sewage treatment/pretreatment facilities are set up jointly for treatment of wastewater or sewage, it shall be transported through pipes or ditches.

Article 13

The enterprises or sewage systems with backup power for their production equipment that produces wastewater or sewage shall also make sufficient backup power available for operation of their wastewater or sewage treatment/pretreatment facilities.

Article 14

Wastewater or sewage treatment/pretreatment facilities shall maintain normal operation and shall be maintained regularly and repaired in time. Records shall be made and retained as a reference for three years.

The normal operation stated in the preceding paragraph is stipulated as follows:

- I. Facilities shall be operated within the scope of the operating parameters registered in the approval document for the water pollution control measure plan (hereinafter referred to as water pollution control plan), the permit allowing wastewater or sewage to be drained into surface water bodies, the simple discharge permit document, the document permitting storage of wastewater or sewage, the document permitting dilution of wastewater or sewage and the permit allowing wastewater or sewage to be drained into soil (hereinafter referred to as the Permits (Documents)). However, this is not applied when written documents are submitted to certify that the facilities are still in the status of normal operation even though the operating parameters are beyond the approved scope.
- II. The height of the accumulated sludge at the center distance between the inflow end and the outflow end of the condensation facilities shall be lower than one-half of the water depth.
- III. For the facilities without a collection pool, there is no rotating bio-disc method, membrane method, reverse osmotic method, ion exchange method, activated carbon method or similar treatment units between the discharge point and the previous treatment facilities, or for the facilities with a collection pool, there is not any of the aforementioned methods between the collection pool and the previous treatment facilities, and the electric conductivity of effluent shall not fall below 50% of that of the previous treatment facilities.

Article 15

Where an enterprise or sewage system violates the preceding article, the normal operation of its existing facilities shall be maintained during the improvement period notified by the

competent authority and measures shall be taken for reduction or discontinuation of production or service, or improvement of the wastewater or sewage treatment/pretreatment facilities. The enterprise or sewage system shall not go beyond the operating parameters according to which the competent authority gives a notice for improvement within a specific period of time, and other operating parameters shall be within the normal operation range.

Otherwise, punishment will be imposed on each violation. Registration for change with the Issuing Authority is required if the improvement referred to in the preceding paragraph may be made only after demolition of existing facilities.

Article 16

For the independent and exclusive electricity meters and operating parameter measuring facilities that are set up by the enterprise or sewage system for the wastewater or sewage treatment/pretreatment facilities and have a continuous automatic recording function, the record shall be made based on the design specification and frequency of the metering and measuring facilities; otherwise, the cumulative electricity consumption shall be recorded and the parameters shall be operated once a day. The amount of agent used for the wastewater or sewage treatment/pretreatment facilities and the production, storage, and transport volume of sludge shall be recorded each time and statistics shall be prepared every month.

The photocopies of the records, vouchers or invoices referred to in the preceding paragraph shall be retained as a reference for three years.

Article 17

The independent and exclusive electricity meters that enterprises or sewage systems set up for the wastewater or sewage treatment/pretreatment facilities shall meet the following requirements:

- I. The specifications shall meet relevant requirements of The Weights and Measures Act, and the entire electricity consumed for the wastewater or sewage treatment/pretreatment facilities shall be measured.
- II. A transparent window shall be available.
- III. The electricity meters shall be sealed with lead sealing by a competent authority or electric power company; the seal shall be confirmed by the competent authority and shall not be destroyed.
- IV. The source and destination of incoming and outgoing circuits shall be marked explicitly.

For maintenance or replacement of the electricity meters referred to in the preceding paragraph, the seal may be torn off only after informing the competent authority. The electricity consumption shall be recorded during the maintenance or replacement; the recording method shall be subject to the consent of the competent authority.

The competent authority shall be informed within one week after the maintenance or replacement.

In case no independent and exclusive electricity meters can be set up for wastewater or sewage treatment/pretreatment facilities, the facilities that have automatic control, measurement, and recording functions may be used to measure and record the consumption of electricity after being approved by the competent authority.

Article 18

Where the wastewater or sewage treatment/pretreatment facilities of an enterprise or sewage system break down for more than 24 hours, the wastewater or sewage that cannot be treated shall be stored appropriately and no discharge is allowed. Where it takes more than 30 days for repair, production of wastewater or sewage shall be suspended. The enterprise or sewage system shall record the failure time, name of the facilities, reason for the failure,

volume of the produced wastewater or sewage and its collection status, repair method and progress; the record shall be retained as a reference for three years.

Article 19

Enterprises or sewage systems may entrust commissioned operators to operate wastewater or sewage treatment/pretreatment facilities. Enterprises or sewage systems may not entrust the commissioned operator who operated for other enterprises or sewage systems and, during the commissioned operation, caused such other enterprises or sewage systems to meet one of the following requirements in the most recent year to operate wastewater or sewage treatment/pretreatment facilities:

- I. The competent authority discovers that the discharge was rerouted.
- II. A large quantity of pollutants were discharged and the competent authority found that they seriously impacted the quality of nearby water bodies.
- III. The discharged wastewater or sewage contained substances harmful to the health as announced under this Act and the competent authority found that they might affect the public health.
- IV. The competent authority imposed a punishment by ordering suspension of work or business.

For the enterprise or sewage system that shall designate personnel responsible for treatment of wastewater, the commissioned operator that such enterprise or sewage system entrusts shall be qualified to the level same as the designated wastewater treatment personnel.

For the enterprise or sewage system that shall designate a unit responsible for treatment of wastewater or sewage, the commissioned operator that such enterprise or sewage system entrusts shall be qualified to the level same as the designated wastewater treatment personnel of Class A. Enterprises or sewage systems shall make a record available at the site showing the arrival and leaving times of the commissioned operator and the operation and maintenance status; the signature needs to be affixed to the record for confirmation purpose. The record shall be retained as a reference for three years.

Article 20

Enterprises in the sewage system area that do not discharge produced wastewater or sewage into the sewage system (hereinafter referred to as "Sewer Connection") shall not discharge it into any surface water body without the consent of the sewage management authority (agency) and acquisition of the surface water body discharge permit or a simple discharge permit document.

Article 21

The wastewater or sewage that the enterprises referred to in the preceding article produces shall not be discharged into the drainage that is exclusive for the rainwater in the sewage system area. However, this is not applicable if the discharge has been approved by the sewage management authority (agency) and competent authority.

Article 22

In case the sewage management authority (agency) finds that a sewer-connected enterprise does not observe the water quality standard for the sewage system and notifies it to make improvement within a time frame, such enterprise shall apply for Permits (Documents) to the Issuing Authority if it intends to take pollution control measures other than connection to the sewer.

Where the enterprise referred to in the preceding paragraph is not able to make the improvement within the specified time frame and the sewage management authority (agency) rejects the sewer connection or notifies it to stop using the sewerage, such enterprise shall stop producing wastewater or sewage before obtaining the permit (document) approved by the Issuing Authority.

When notifying an enterprise to make improvement within a specific time frame or rejects sewer connection, the sewage management authority (agency) shall inform the authority competent.

Article 23

Enterprises or sewage systems that take soil treatment measures shall simultaneously take other pollution control measures approved by the competent authority and use them as an alternative when the soil treatment is suspended. However, this is not applicable if the wastewater or sewage is not in compliance with the effluent standards as specified in the Waste Disposal Act and may be removed to a place outside the work environment using barrels, tank trucks or other non-pipe means or ditches.

Article 24

Wastewater or sewage from enterprises and sewage systems shall be subject to pretreatment in conformity to the standards for soil treatment before proceeding to soil treatment.

For the pretreatment mentioned in the preceding paragraph, the following facilities shall be installed.

- I. Solid-liquid separation facilities;
- II. Wastewater or sewage pretreatment facilities, or in case of livestock enterprises engaged in pig or cattle farming, biological pretreatment facilities.

The provisions of Articles 12 to 19 shall apply mutatis mutandis to the wastewater or sewage pretreatment facilities mentioned in Subparagraph II of the preceding paragraph.

Article 25

Where facilities are installed for the sewerage of industrial wastewater or sewage to isolate wastewater or sewage from contact with soil, the requirements under this chapter shall be waived.

Article 26

Enterprises or sewage systems shall set up containment facilities at the lower slope in the section of land used for soil treatment to collect and treat wastewater or sewage overflow appropriately. However, this is not applicable if no overflow occurs after treatment of the soil.

Article 27

Wastewater or sewage may be drained out from enterprises or sewage systems in the duration specified in the permit for the treatment of soil from discharge of wastewater or sewage, and shall be halted temporally if any of the following situations occurs:

- I. From the day on which the Central Weather Bureau announced heavy rain and rainstorm to three days after the warning signal is clear.
- II. The total volume of nitrogen contained in the wastewater or sewage from each hectare of land every year reaches 400 kilograms.
- III. The conductivity of soil saturation extraction fluid is at 4 mΩ/cm at 25°C.
- IV. The result of soil monitoring and testing is at the upper

limit of the standards for soil pollution levels, or the monitored value of copper or zinc reaches 70% of the upper limit of the said standards.

- V. The test result of underground water indicated pollution level of underground water is at the upper limit of standard. This standard is not applicable if the NH background value of underground water is higher than the upper limit of the monitoring standard of underground water pollution, and the test value of NH of underground water is lower than the background value.

Those that are suspended from discharging wastewater or sewage in accordance with Subparagraphs III to V of the preceding paragraph, a test report of compliance shall be submitted to the competent authority for approval, and the discharge of wastewater or sewage into soil is only allowed to continue after the approval.

Article 28

Enterprises or sewage systems that take soil treatment measures shall set up sampling points before discharging wastewater or sewage into the soil.

The sampling points referred to in the preceding paragraph shall meet the following requirements:

- I. A pathway that allows the personnel of the competent authority to access to the sampling point, or in case of difficulties in making it in place, measures to be taken as approved by the competent authority;
- II. Setup of independent and exclusive cumulative water measurement facilities for measuring the volume of the wastewater or sewage discharged into the soil;
- III. Setup of a sign.

In case the competent authority finds that an enterprises or sewage system reroutes the discharge or conducts non-continuous wastewater or sewage discharge designated by the competent authority, the sampling point shall be set up at the collection pool that follows the final treatment units of pretreatment.

Setup of the sign referred to in Subparagraph III of Paragraph 2 shall meet the following requirements:

- I. The sign shall contain the name of the enterprise or sewage system and its control number, sampling point number, and maximum daily discharge volume based on the contents of the approval.
- II. The sign shall be more than 32 cm in length and more than 15cm in width with a white background. The texts shall be black with visible fonts of 15cm or more, and no other graphics shall be added without approval. (See attached Figure 1.)
- III. The sign shall be conspicuously fixed beside the sampling point at a distance between 50 cm and 2 m from the ground.
- IV. The sign shall be made of robust material.
- V. The sign shall be mounted steadily and shall not be moved easily.

Article 29

The enterprise or sewage system that has acquired the approval documents or Permits (Documents) for their Pollution Control Measures, registered their redundant capacity, and met the following requirements must apply to the Issuing Authority for and carry out change registration of Commissioned Treatment before engaging in Commissioned Treatment of wastewater or sewage:

- I. The competent authority did not impose punishment more than twice due to violation of Article 7 of the Act within one year before the application date. However, for the sewer-connected enterprise, the connection must not be rejected by the competent authority or it did not notify such

- enterprise to stop using the sewerage within one year before the application date.
- II. The competent authority did not find that the discharged wastewater or sewage contained substances harmful to the health as announced under this Act and affected the public health within three years before the application date.
 - III. The competent authority did not impose a punishment by ordering suspension of work or business due to violation of the Act within three years before the application date.
 - IV. The competent authority did not ferret out rerouted discharge within three years before the application date.

Article 30

Enterprises or sewage systems that are commissioned to treat wastewater or sewage (hereinafter referred to as the "Commissioned Party") shall meet the following requirements:

- I. The commission is limited to treatment of the wastewater or sewage in the same industry and of the same type. This is not applicable when the Issuing Authority gives it approval.
- II. The daily volume of wastewater or sewage to be treated under commission shall not exceed the approved maximum daily redundant capacity.
- III. Wastewater or sewage must be treated within 24 hours after receiving.

Article 31

The party commissioning an enterprise or sewage system to treat wastewater or sewage (hereinafter referred to as the "Commissioning Party") shall set up wastewater or sewage treatment/pretreatment facilities or storage facilities to store wastewater or sewage.

The Commissioning Party and Commissioned Party shall set up independent and exclusive cumulative water measurement facilities at the inflow and outflow ends of the pipe or ditch.

Article 32

Where wastewater or sewage cannot be treated under commission due to failure of the wastewater or sewage treatment/pretreatment facilities, the Commissioned Party shall notify the Commissioning Party to stop transport and make improvement. The Commissioned Treatment shall be terminated if wastewater or sewage cannot be treated under commission for a period of more than 30 days and alteration of the approval documents or permits (documents) for Pollution Control Measures shall be made with the Issuing Authority.

In case the Commissioned Party does not make the alteration referred to in the preceding paragraph, the Issuing Authority may directly alter the permit registration item.

The Commissioned Party shall record the reason why it cannot accept the commission, the time at which it notifies the Commissioning Party to stop the transport, and the improvement status, and shall retain the record as a reference for three years.

Article 33

When receiving the notification on termination of the Commissioned Treatment from the Commissioned Party, the Commissioning Party shall collect and store its wastewater or sewage. Production of wastewater or sewage shall stop when the wastewater or sewage is stored for more than 30 days and approval of other pollution control measures is not acquired from the Issuing Authority. However, this is not applicable if the wastewater or sewage is not in compliance with the effluent standards as specified in the Waste Disposal Act and may be removed to a place outside the work environment using barrels,

tank trucks or other non-pipe means or ditches.
The Commissioning Party shall record the time at which the Commissioned Party notifies it to stop the transport, daily production and storage volume of wastewater or sewage, and the number and quantity of storage facilities, and shall retain the record as a reference for three years.

Article 34

Where the Commissioned Party violates relevant provisions of the Act twice or more within one year during the Commissioned Treatment, it shall not increase the volume of the wastewater or sewage to be treated under commission nor the number of counterparts within one year from the date on which the second violation occurs.

The Commissioned Treatment shall be terminated if the Commissioned Party meets one of the following requirements during the Commissioned Treatment:

- I. The competent authority imposes punishment more than twice due to violation of Article 7 of the Act. However, for the sewer-connected enterprise, the connection must be rejected by the competent authority or it notifies such enterprise to stop using the sewerage.
- II. The discharged wastewater or sewage contains substances harmful to the health as announced under this Act and the competent authority finds them affecting the public health.
- III. The competent authority imposes a punishment by ordering suspension of work or business due to violation of the Act.
- IV. The competent authority ferrets out rerouted discharge.

Article 35

Enterprises or sewage systems that discharge wastewater or sewage into the ocean through ocean outfall pipes shall meet the following requirements:

- I. Construction for setup and change of ocean outfall pipes shall be reported to the competent authority for reference within 30 days after completion of the construction.
- II. Ocean outfall pipes shall be checked regularly every year and must have a function with a confirmed initial dilution rate of more than 100 times; records shall be made and retained as a reference for three years.
- III. Ocean outfall pipes that may affect discharge or safe navigation of vessels due to failure or damage shall be repaired or removed immediately, and the competent authority shall be informed within three hours after identification of such failure or damage.

Article 36

Enterprises or sewage systems that discharge wastewater or sewage into the ocean through ocean outfall pipes shall act in accordance with the following requirements if the initial dilution rate of such ocean outfall pipes cannot reach more than 100 times due to failure or damage:

- I. Discharged wastewater or sewage shall meet the effluent standards.
- II. In case discharge into the ocean is imposable, wastewater or sewage may be discharged into surface water bodies through the discharge point approved by the competent authority. However, alteration of the Permits (Documents) shall be made with the Issuing Authority in case the discharge lasts for more than 90 days.

Enterprises or sewage systems shall record the time at which failure of or damage to the ocean outfall pipe occurs, the time of notification, the cause of the occurrence, and the repair status, and shall retain the record as a reference for three years.

Article 37

Enterprises or sewage systems that dilute wastewater or sewage shall mix such wastewater or sewage using the blending facilities in the wastewater or sewage treatment/pretreatment facilities. Neither the water that is not required to be treated nor the non-contact cooling water, before being discharged, shall be mixed with treated wastewater or sewage. However, this does not apply to the treated wastewater or sewage that is drained from the permitted discharge point to mix with the water that is not required to be treated or the non-contact cooling water.

Independent and exclusive cumulative inflow water measurement facilities shall be set up for the blending facilities referred to in the preceding paragraph.

Article 38

Enterprises or sewage systems that remove or transport wastewater or sewage to a place outside the work environment using barrels, tank trucks or other non-pipe means or ditches shall set up storage facilities in the work environment to store the wastewater or sewage that has not been removed or transported. Storage facilities for collection of landfill leachate, water pumping facilities, and intercepting ditches for runoff wastewater shall be set up in case of landfill leachate recirculation to its surface.

Article 39

For the enterprises or sewage systems taking storage measures, independent and exclusive cumulative inflow and outflow water measurement facilities or measurement facilities with automatic fluid level recording and storage volume displaying functions shall be set up for the storage facilities.

Enterprises and sewage systems shall, by day and by batch, record the wastewater or sewage storage time, transport (delivery) method, water quantity and treated water quantity, and shall retain the record as a reference for three years.

Storage facilities used for the emergency response pursuant to Paragraph 1 of Article 18 or Paragraph 1 of Article 33 shall be subject to the preceding two paragraphs.

Where stored wastewater or sewage does not meet the effluent standards and is to be removed to a place outside the work environment using barrels, tank trucks or other non-pipe means or ditches, production of wastewater or sewage shall stop when the wastewater or sewage is stored in the work environment for more than 30 days and approval of other pollution control measures is not acquired from the Issuing Authority.

Article 40

Enterprises and sewage systems shall have storage facilities with a capacity that can meet the requirements of emergency response.

Article 41

Wastewater or sewage from enterprises or systems shall be recycled only after the wastewater or sewage has been treated to meet the effluent standards. Before the recycling, sampling points shall be installed. However, this is not applied when the wastewater or sewage is used for tower rinsing or other pollution prevention equipment and production processes.

Article 42

The recycled wastewater or sewage referred to in the preceding article shall be discharged into surface water bodies only when it meets the effluent standards. However, recycled wastewater or sewage to be used for cleaning the offices, staff dormitories, and

other activity venues in the work environment shall meet the effluent standards for building sewage treatment facilities. Physical contact with the recycled wastewater or sewage referred to in the preceding paragraph shall be avoided so as not to affect the health of staff.

Article 43

For recycling of wastewater or sewage, independent and exclusive cumulative water measurement facilities shall be set up after wastewater or sewage is produced and treated, while independent and exclusive cumulative water measurement facilities shall be set up for the recycle before it takes place. Wastewater or sewage treatment/pretreatment facilities or storage facilities shall be set up for wastewater or sewage recycle to store it before the recycle takes place.

Article 44

Ground oil storage facilities set up in an oil storage plant shall meet the following requirements:

- I. The bottom shall be made by cement or paved with non-permeable materials.
- II. Spill-prevention dikes with a height of more than 50 centimeters shall be set up around the oil storage facilities, and the volume encircled shall be more than 110% of the volume of the facilities. However, in case of difficulties in setting up the dikes, alternative solutions are taken as approved by the competent authority.

The enterprises mentioned in the preceding paragraph shall prepare, based on the volume of the oil storage facilities, sufficient materials and articles for prevention of leaking of pollutants.

The facilities, materials and articles mentioned in the preceding two paragraphs shall be maintained periodically.

Oil leaked from the storage facilities stated in the preceding paragraph shall be collected and treated properly.

Article 45

Ship breakers shall set up interception facilities around the ship-breaking site and take the following measures. However, facilities capable of preventing wastewater from polluting water bodies may be used with approval from the competent authority if it is difficult to set up such facilities:

- I. Equipment for containment and removal of floating oil shall be set up on the surface of the water around the work area.
- II. Appropriate facilities for collection of waste oil, wastewater and other pollutants shall be set up in the work area.
- III. Others measures that the competent authority designates.

Article 46

Operators of combined fishing and stock raising business in the livestock industry shall operate in accordance with the following requirements:

- I. The daily volume of wastewater discharged into fishponds shall be less than 4 cubic meters per hectare.
- II. A fishpond shall have a capacity for wastewater produced by less than 200 hogs per hectare.
- III. The dissolved oxygen of a fishpond shall be 1.0 mg/l or higher.
- IV. A distance of 30cm or more shall be maintained from the highest fluid level to the top around the fishpond. However, this is not applicable during the rainy season.
- V. A record containing the time at which the barn or sty is cleaned, the quantity of water discharged into the fishpond, and the time at which the wastewater is discharged from the fishpond shall be made and retained as a reference for three years.

VI. A notice shall be voluntarily sent to the competent authority three days before the discharge.

Article 47

To maintain normal supply of water, the water supply plant may take emergency response measures and discharge wastewater directly when the Central Weather Bureau issues a warning of torrential rain or when a natural disaster occurs and the concentration of the suspended solids in the raw water exceeds 2,000 mg/l or the turbidity exceeds 2,000 NTU and, as a result, the wastewater treatment facilities cannot operate normally. The water supply plan shall incorporate the emergency response measures referred to in the preceding paragraph in the approval documents or Permits (Documents) for Pollution Control Measures, and take actions according to the following requirements:

- I. The settling basin and sludge thickener shall be cleared first.
- II. A notice shall be sent to the downstream water users and the local competent authority shall be informed.
- III. Daily inspection shall be conducted for the turbidity and suspended solid concentration of the raw water and the suspended solid concentration of the effluent, and a record shall be made for such inspection; the record shall be retained as a reference for three years.

The water supply plant is responsible for removal or repair of any accumulation of sludge or damage that occurs due to emergency response measures that the water supply plant took.

Article 48

Catering enterprises and tourist hotels that render dining service shall set up grease traps to remove grease from the catering wastewater.

For the catering enterprises and tourist hotels that render spa service, the pure hot spring wastewater produced from the public pools of the existing enterprises and the hot spring facilities of a newly established enterprise shall be collected and treated separately from other wastewater.

The pure hot spring wastewater shall be treated using hair and suspended solid filtering facilities. However, this is not applicable to mud spring.

The effluent that has undergone the treatment referred to in the preceding paragraph may be directly discharged into the surface water body to which the source of the hot spring concerned belongs if the effluent, except for the water temperature, exceeds the effluent standards, though it does not exceed the quality standard of raw water.

Article 49

The grease traps as well as the hair and suspended solid filtering facilities that catering enterprises and tourist hotels set up shall be cleaned and maintained on a regular basis, and a record of the time and method for the cleaning and maintenance shall be made; the record shall be retained as a reference for three years.

The grease traps referred to in the preceding paragraph shall meet the requirements of the Design and Technique Directions of Buildings Sewage Treatment Facilities.

Article 50

Enterprises or sewage systems that set up the following water pollution control facilities and pipelines shall clearly and correctly mark their names in addition to the name and flow direction of the fluid in the pipe.

- I. Pipelines and treatment units for collection, pretreatment, treatment, backflow, discharge, and storage of water, wastewater or sewage;

- II. Rerouted pipelines for emergency response;
- III. Pipelines and storage tank units for storage, dilution, and recycle;
- IV. Independent and exclusive cumulative water measurement facilities and independent and exclusive electricity meters for wastewater or sewage treatment/pretreatment facilities;
- V. Pipelines and treatment units for collection, treatment, and storage of sludge.

Article 51

Where enterprises or sewage systems take water from water bodies for cooling or circulations purpose and the water they take is non-contact cooling water, such water may be directly discharged into the surface water body in the original water inflow area if all the water quality items, except for the water temperature and hydrogen ion concentration indexes, exceed the effluent standards, though they do not exceed the water inflow standard.

Article 52

Enterprises or sewage systems shall discharge from the discharge points permitted by the Issuing Authority. However, this is not applied in an emergency situation when personnel or treatment equipment cannot be saved without rerouting discharge. The Issuing Authority shall be notified of the rerouted discharge referred to in the preceding paragraph within 3 hours after its occurrence, and the start and end times of the rerouted discharge, the reason for the rerouted discharge, the quantity of water, and the reporting time shall be recorded.

Article 53

The discharge point of an enterprise or sewage system shall meet the following requirements:

- I. The discharge point shall be located outside the peripheral boundaries and on the ground that the discharge flows through before entering the receiving water body.
- II. There shall be a pathway outside the peripheral boundaries for the sampling personnel to access the discharge point, and a sampling platform the size of which is at least 1 square meter shall be set up.
- III. Except for the case of a discharge point for wastewater runoff, independent and exclusive cumulative water measurement facilities shall be set up to measure the discharge. However, this is not applicable to the discharge point for runoff wastewater.
- IV. A sign shall be erected.
- V. If the discharge point is established as a well, the well water shall be adequately and equally mixed.

If the establishment of a discharge point has difficulty meeting the requirements in Subparagraphs I and II of the preceding paragraph, alternative solutions shall be taken as approved by the competent authority.

In case the competent authority finds that an enterprises or sewage system reroutes the discharge or conducts non-continuous wastewater or sewage discharge designated by the competent authority, the discharge point shall be set up at the collection pool that follows the final treatment units.

Article 54

In the event that enterprises or sewage systems jointly discharge wastewater or sewage into the ocean through a marine outfall, the discharge point shall be set up at a proper location between the joint wastewater or sewage treatment/pretreatment facilities and the marine outfall.

In the absence of any joint wastewater or sewage treatment /pretreatment facilities, the discharge point shall be established

at a proper location between the outside of the peripheral boundaries of the enterprise or sewage system and the marine outfall.

Article 55

The provisions of Paragraph 4 of Article 28 shall apply mutatis mutandis to the erection of a sign at a discharge point.

Article 56

If any of the following applies to the enterprise or sewage system, it shall complete the installation of water capacity automatic monitoring facilities, water quality automatic monitoring facilities and video surveillance facilities by the deadline required by the competent authority.

- I. The competent authority discovers that the discharge is rerouted.
- II. It violates relevant provisions of the Regulations and is ordered by the competent authority for discontinuation of operation or business, or it declares discontinuation of operation or business within the period of improvement stipulated by the competent authority and then applies for reinstatement of operation or business.
- III. After being ordered twice by the competent authority to improve its violations of the Effluent Standards within a provided period, it still continues violating the Standards within a year, with one of the following circumstances:
 - (1) Concentration of pollutants in the discharged wastewater or sewage is more than 5 times the value of the upper limit provided in the Effluent Standards. However, this does not apply to the hydrogen ion concentration index, coliform group, and water temperature.

The hydrogen ion concentration index for the hydrogen ions in the discharged wastewater or sewage is smaller than 2 or greater than 11.

- IV. It discharges huge pollutants that the competent authority deems critical in affecting the quality of the water body in the surrounding area.
- V. The discharged wastewater or sewage contains the hazardous substances to health announced under the Regulations and there is a concern of the competent authority that these substances are harmful to public health.
- VI. In the last year prior to the day on which the application for the water pollution control plan or Permits (Documents)

is submitted, the former enterprise located at the same address and on the same location or land section has violated relevant provisions of the Regulations and been ordered by the competent authority to discontinue its operation or business, or it has declared discontinuation of operation or business within the period of improvement stipulated by the competent authority, or has been found rerouting discharge.

- VII. Non-continuous discharge with the possibility of the situation provided in Subparagraph I is designated by the competent authority.

After the installation of the cumulative water measurement facilities, water quality automatic monitoring facilities and video surveillance facilities, the enterprise or sewage system shall apply for alteration of the water pollution control plan or Permits (Documents) with the competent authority. Such installation may be waived if normal operation lasts for more than 365 days accumulated from the day of alteration completion without any incident as stated in the preceding paragraph and the approval of the competent authority.

Article 57

The enterprise or sewage system mentioned in the preceding

article shall install the cumulative water measurement facilities, water quality automatic monitoring facilities and video surveillance facilities in accordance with the following requirements and shall submit, pursuant to the required format, the previous month's daily cumulative water quantity, readings and water quality automatic monitoring data records and the date and method of calibration and maintenance to the competent authority by the fifteenth day of every month.

- I. Independent and exclusive cumulative water measurement facilities shall be installed for all water sources in the working area.
- II. Automatic monitoring facilities shall be installed at inflow points, outflow points and discharge points of each water pollution control measure facility unit to monitor water temperature, hydrogen ion concentration index and conductivity.
- III. Video surveillance facilities that also record time shall be installed at each water pollution control measure facility unit and each discharge point and shall be kept photographing and videotaping for 24 hours a day, and video footage can be viewed clearly.

The automatic monitoring facilities installed in accordance with Subparagraph II of the preceding paragraph shall be installed, calibrated and maintained pursuant to the brand specifications. Those that install cumulative water measurement facilities, water quality automatic monitoring facilities and video surveillance facilities shall maintain their normal functions, and in the event of malfunction, shall immediately report to the competent authority by telephone or fax. The time of malfunction, the names and titles of the persons submitting and receiving the report shall be recorded. During the period of malfunction, calibration or maintenance, the alternative method approved by the competent authority shall be adopted to record, monitor, photograph and videotape. Monitoring data shall be retained for three years and image data shall be retained for three months as reference. If the malfunctioning facilities or systems in the preceding paragraph are unable to return to normal conditions within 24 hours, the planned repair measures and the repair completion date shall be reported to the competent authority within two days from the date of malfunction. Maintenance of facilities, report of malfunctioning and the circumstances relevant to taking response measures shall be reported together in accordance with Paragraph 1.

Article 58

Where the competent authority finds any of the situations stated in Subparagraph 1 or 3 of Paragraph 1 of Article 56 occurs in case of non-continuous discharge of wastewater or sewage from an enterprise or sewage system for which the collection pool installed in the peripheral boundaries, the enterprise or sewage system shall install the display signboard showing water temperature, hydrogen ion concentration index and conductivity automatically within the time frame specified by the competent authority and complete the modification of the discharge Permits (Documents) after the installation.

The display signboard referred to in the preceding paragraph that shows flow discharge capacity and water quality automatically shall be installed at where can be easily seen on the external wall of the front door, and maintain normal operation. It shall have the function of real-time display of monitored data. In the event of malfunction, the enterprise or sewage system shall immediately report to the competent authority by telephone or fax, and the time of malfunction, the names and titles of the persons submitting and receiving the report shall be recorded. During the period of malfunction, calibration or maintenance, the alternative method approved by the competent authority shall be adopted to monitor and record.

If the malfunctioning display signboard referred to in the

preceding paragraph is unable to return to normal conditions within 24 hours, the planned repair measures and the repair completion date shall be reported to the competent authority within two days from the date of malfunction.

Article 59

In the event that an enterprise or sewage system utilizes wastewater or sewage treatment/pretreatment facilities, a functional test shall be conducted within the time frame specified by the competent authority if at least one of the following circumstances applies:

- I. Circumstances described in Subparagraph 3 of Paragraph 1 of Article 56;
- II. Abnormal operating parameters;
- III. Abnormalities in the equilibrium of water quality or flow;
- IV. A concern that dilution may have been performed without a permit;
- V. Insufficient functions of wastewater or sewage treatment/pretreatment facilities.

Upon completion of the functional test in the preceding paragraph, functional test report shall be submitted and the documents of approval or Permits (Documents) for water pollution control measure plans shall be revised. If the result of a functional test indicates nonconformity with the control standards specified in the Act, the enterprise or sewage system shall reduce or terminate its production or service, or take other response measures.

Article 60

Any functional test conducted by an enterprise or sewage system in accordance with the preceding Article shall meet the following requirements:

- I. Tests conducted on wastewater or sewage treatment/pretreatment or sludge treatment facilities shall be based on the maximum amount of daily wastewater or sewage production approved by the issuing authorities. In the event that the operating conditions are not based on the approved maximum amount of daily wastewater or sewage production, the test shall be conducted based on the reported or actual maximum amount in a regular test.
- II. The period of a functional test shall be at least five working days. The competent authority shall be notified three days before the testing date to participate in the functional test.

The functional test conducted on the testing date as defined in Subparagraph II of the preceding paragraph shall meet the following requirements:

- I. The volume of the wastewater or sewage before and after treatment shall be respectively tested once. The water quality of the wastewater or sewage before treatment shall be tested once. The operating parameters of each facilities unit shall be tested once.
- II. Methods for the test of water quality after treatment:
 - (1) In the event that wastewater or sewage is discharged continuously for 24 hours, sampling shall be conducted once every four hours for a total of six times. The samples taken twice consecutively shall be combined into a single one. A total of three samples created through the combination will be tested, and the average of the three samples is calculated.
 - (2) In the event that wastewater or sewage is not discharged continuously for 24 hours, sampling shall be conducted 4 times in accordance with the daily discharge time. The samples taken twice consecutively shall be combined into a single one. A total of two samples created through the combination will be tested, and the average of the two samples is calculated.

- III. The test of water quality shall be conducted on the items submitted under each type of industry listed in Table 1, except in the event that the competent authority has specified the testing items.
- IV. An environmental analysis laboratory with a permit issued by the central competent authority shall be commissioned to conduct the sampling and test of water quantity and quality.
- V. Units participating in the functional test shall include the process operating unit, treatment process operating unit, sampling unit, and testing unit. In the event the functional test report requires the signature of a technician, the technician shall jointly participate in the test.
- VI. In case of an enterprise or sewage system with at least two sources of wastewater or sewage and at least two wastewater or sewage treatment/pretreatment facilities, measurements and tests shall be conducted separately on each of the sources and facilities.

Article 61

In the event that an enterprise or sewage system discharges wastewater or sewage into an irrigation channel, the enterprise or sewage system shall seek approval from the managing authority (agency) or owner of the irrigation channel before wastewater or sewage is discharged.

In the event that the managing authority (agency) or owner of the irrigation channel in the preceding paragraph does not approve the discharge of wastewater or sewage, the competent authority shall be notified.

Article

In the event of unapproved discharge, storage, dilution, discharge into groundwater, soil treatment or rerouted discharge, or that the pipelines or facilities of an enterprise or sewage system do not meet relevant requirements, the pipelines or facilities shall be sealed or removed within the improvement period specified by the order of the competent authority.

Article 63

In the event that sludge deposits clearly visible have been formed at the bottom of pipelines, the entry point of the water body, and its surrounding areas due to the discharge of wastewater or sewage by an enterprise or sewage system, the enterprise or sewage system shall remove the sludge deposits on its own initiative or within a limited period pursuant to the order of the competent authority.

Article 64

In the event that enterprises or sewage systems belong to two or more industry types, or that enterprises or sewage systems belong to a single industry type but have different processes, the combined treatment and discharge of wastewater shall conform to the effluent standards for each of the concerned industry types. If different control limits are available for the same control item, the stricter limit shall apply.

In the event that the flow of wastewater from one of the industry types in the preceding paragraph is at least 75% of the total flow of wastewater, and that independent and exclusive cumulative water measurement facilities have been installed, an application may be submitted to the competent authority for the use of the effluent standards of the concerned industry type as the basis of control for all common items.

The percentage of the flow of wastewater in the preceding paragraph shall be calculated in accordance with the records of the six months prior to the date of application.

Article 65

An enterprise or sewage systems shall install calibrate and maintain cumulative water measurement facilities pursuant to the brand specifications.

Regarding the specifications of the cumulative water measurement facility in the preceding paragraph, the margin of error within the range of measurable flow shall not exceed $\pm 10\%$. However, non-contact cooling water not used for circulation whose flow is calculated by motor rotation is not subject to this restriction. In case cumulative water measurement facilities shall be sealed with lead sealing, they shall be sealed by the competent authority and the lead sealing shall not be destroyed arbitrarily.

For calibration, maintenance or replacement of the cumulative water measurement facilities, the seal may be torn off only after the competent authority has been informed.

The water quantity during the period of calibration or maintenance shall still be recorded in the way approved by the competent authority and the records shall be kept for three years. The competent authority shall be reported within a week after the calibration or maintenance in order to seal the facilities with lead sealing.

If the calibration or maintenance mentioned in the preceding paragraph cannot be completed in time due to limitations of technology or manpower of the enterprise or sewage system, such calibration or maintenance may be waived after the approval of the competent authority.

Article 66

If an enterprise or sewage system has difficulty in installing independent and exclusive cumulative water measurement facilities in accordance with the Regulations, it may conduct measurement using any other measuring facilities or methods that are able to indicate the water quantity, subject to approval from the competent authority.

If the facilities in the preceding paragraph generate records in a continuous and automatic way, the enterprise or sewage system shall record the water quantity based on the specifications and frequencies of the facilities. If the facilities do not generate records in such a way, the cumulative water quantity reading shall be recorded daily and preserved for three years for reference.

Article 67

In case of sewage produced from offices, staff dormitories, other activity spaces and buildings within the work environment of an enterprise, the management shall meet the following requirements:

- I. In case of combined treatment of sewage and enterprise wastewater, the methods for the management of enterprise wastewater shall be used.
- II. In case of separate treatment of sewage and enterprise wastewater, the methods for the management of building sewage treatment facilities shall be used, and a discharge point shall be established.

The discharge point in Subparagraph II of the preceding paragraph shall be established in accordance with Article 53. However, in case the number of employees is less than 50, the installation of independent and exclusive cumulative water measurement facilities may be waived.

Article 68

In the event that an enterprise or sewage system suspends or ends its operation on its own initiative or pursuant to a decision of the competent authority, the person responsible for the enterprise or the owner, user or manager of the sewage system shall treat and discharge the remaining wastewater or sewage in

the work environment in accordance with the Act.

Article 69

Wastewater or sewage from an enterprise or sewage system that overflows from its collection, treatment or discharge facilities, units, pipelines or ditches into the work environment shall be collected and treated.

The enterprise or sewage system shall record the date, time, water quantity, reason, collection and treatment of the overflow mentioned in the preceding paragraph for reference.

Article 70

In the event the location of an enterprise has been designated by the competent sewage system authority as an area or site in which a sewage system for exclusive use shall be established, the enterprise shall meet the requirements provided by the Act and applicable regulations for enterprises.

Article 71

Enterprises or sewage systems shall complete the test reporting in accordance with the Regulations. However, this does not apply to the following enterprises or sewage systems.

- I. Gas stations with no attached car wash facilities;
- II. Earth and stone staking/dispersing stations staking the total volume of no less than 500 m³ of earth and stones, or covering a total area of more than 250 m² for staking earth and stones before July 1, 2007
- III. Construction sites;
- IV. Livestock enterprises raising less than 200 hogs;
- V. Oil storage plants;
- VI. Enterprises or sewage systems of which the wastewater or sewage is connected to public sewage systems.

An enterprise or sewage system of which the wastewater or sewage is connected to a sewage system other than that stated in Subparagraph VI of the preceding paragraph shall submit test reports to the sewage management agency, which shall then compile the reports and deliver them to the competent authority.

Article 72

The enterprises or sewage system that stores wastewater or sewage shall have the following contents in their reports:

- I. Process facilities and production or service scales related to production of the wastewater or sewage and sludge on a monthly basis;
- II. Quality of the original wastewater or sewage and the volume of water on the testing day; the source, production volume and storage quantity of the wastewater or sewage on a monthly basis;
- III. Location and quantity of the storage facilities;
- IV. Sequential treatment measures after storage shall be reported in compliance with individual pollution control regulations;
- V. Date and method for calibration and maintenance of the automatic fluid level measurement devices of the storage facilities or their measurement methods; however, this is not applicable if independent and exclusive cumulative water measurement facilities have been set up.

In case the enterprise referred to in the preceding paragraph is a landfill where the leachate is circulated to its surface, the volume of the wastewater circulated to the surface of the landfill shall be reported on a monthly basis.

Article 73

The enterprises or sewage system that treats wastewater or sewage using wastewater or sewage treatment/pretreatment facilities shall have the following contents in their reports:

- I. Process facilities and production or service scales related to

- production of the wastewater or sewage and sludge on a monthly basis;
- II. Water quality of the original wastewater or sewage and after the treatment/pretreatment, and the water quantity on the testing day;
 - III. Source of water, consumption of water, production volume of wastewater or sewage, and volume of water treated using the wastewater or sewage treatment/pretreatment facilities on a monthly basis; the production volume of wastewater or sewage shall be respectively reported by process or source;
 - IV. Operation methods and monthly operation and maintenance costs of the wastewater or sewage treatment/pretreatment facilities;
 - V. Names of the agents used every month and their usage amount;
 - VI. Parameters and their maximum, minimum and average values under normal operation of the major treatment units during the reporting period;
 - VII. Monthly power consumption of the independent and exclusive electricity meters for wastewater or sewage treatment/pretreatment facilities.
 - VIII. Monthly production volume of sludge as well as its water content and operating frequency;
 - IX. Date and method of calibration and maintenance of the independent and exclusive cumulative inflow and outflow water measurement facilities installed or measurement methods adopted pursuant to Paragraph 2 of Article 12, and monthly readings and measurement values.

Article 74

The enterprise or sewage system that treats wastewater or sewage using wastewater or sewage treatment/pretreatment facilities and meets one of the following requirements shall act as follows, in addition to reporting pursuant to the preceding article:

- I. The enterprise or sewage system that makes use of its redundant capacity to treat under commission wastewater or sewage not produced by it shall have the following contents in its report:
 - (1) Volume of the wastewater or sewage that it produces and the redundant capacity on a monthly basis;
 - (2) Industry from which it accepts wastewater or sewage and the cumulative volume of the wastewater or sewage that it has treated on a monthly basis.
- II. The enterprise or sewage system that dilutes wastewater or sewage shall have the following contents in its report:
 - (1) Quality of the water used for the dilution and the volume of water on the testing day;
 - (2) Source and volume of water used for the dilution on a monthly basis;
 - (3) Quantity and location of the dilution tubes and points.
- III. For the commissioned operator, the designation of such commissioned operator, the name of the person implementing the commissioned operation, and any change of such person.

Article 75

The enterprise or sewage system that uses wastewater or sewage treatment/pretreatment facilities and meets one of the following requirements shall act as follows, in addition to reporting pursuant to Article 73:

- I. Enterprises or sewage systems that store or stake materials specified in Article 8 shall report the volume of the runoff wastewater collected and treated every month.
- II. Enterprises referred to in Article 9 shall report the following:
 - (1) Volume of the wastewater produced from the car wash platform and flowing into the grit chamber on a monthly basis;
 - (2) Distance from the highest fluid level of the grit chamber to the top around it and the measuring method on a monthly basis;

- (3) The maintenance status of the facilities for keeping off, blocking, and channeling rainwater as well as the grit chamber, and the volume of the initial rainfall collected and connected to the grit chamber.
- III. Catering enterprises and tourist hotels that render spa service shall report the date on which hair and suspended solid filtering facilities are maintained and the maintenance method on a monthly basis; catering enterprises and tourist hotels that render dining service shall report the date on which grease traps are maintained and the maintenance method on a monthly basis.

Article 76

Enterprises or sewage systems that connect their wastewater or sewage to dedicated sewage systems in an industrial park shall report the following:

- I. Process facilities and production or service scales related to production of the wastewater or sewage and sludge on a monthly basis;
- II. Quality of the water discharged into the sewage system and the volume of water on the testing day as well as the source of water, consumption of water, and the volume of the wastewater or sewage discharged into the sewage system on a monthly basis;
- III. Where wastewater or sewage pretreatment facilities as set up, additional reports are required pursuant to Articles 73 to 75.

Article 77

Enterprises or sewage systems that commission others to treat their wastewater or sewage shall have the following contents in their reports:

- I. Process facilities and production or service scales related to production of the wastewater or sewage and sludge on a monthly basis;
- II. Quality of the original wastewater or sewage and the volume of water on the testing day as well as the source of water, consumption of water, and the production volume of the wastewater or sewage on a monthly basis;
- III. Frequency of the Commissioning Treatment, water quality and the volume of water on the testing day, and the volume of water treated under commission on a monthly basis;
- IV. Names of the Commissioned Party and the industry in which the Commissioned Party is engaged;
- V. Water measurement facilities set up at the outflow end, the date and method for calibration and maintenance of such measurement facilities, their measurement methods, and the monthly readings and measurement values;
- VI. Article 72 shall apply to the reporting of the storage facilities set up in the work environment before treatment of wastewater or sewage under commission.

Article 78

Enterprises or sewage systems that discharge wastewater or sewage into the ocean through ocean outfall pipes shall have the following contents in their reports:

- I. Process facilities and production or service scales related to production of the wastewater or sewage and sludge on a monthly basis;
- II. Methods for maintenance of the ocean outfall pipes and the frequency of the maintenance;
- III. Sampling points, frequencies, monitoring items, and monitoring results in marine environment;
- IV. Where wastewater or sewage pretreatment facilities as set up, additional reports are required pursuant to Articles 73 to 75.

Article 79

Enterprises or sewage systems that recycle wastewater or sewage shall have the following contents in their reports:

- I. Production process facilities related to the capacity of wastewater or sewage and sludge generated, and the scale of production or service;
- II. Quality of the original wastewater or sewage and the water capacity on the day of testing, the source of monthly water supply, water consumption volume and the generation of wastewater or sewage;
- III. Source of recycled water, the method of transmission or delivery, and the purpose of recycling;
- IV. Quality of recycled water and the water capacity on the day of the test, and the monthly capacity of recycled water;
- V. Facilities for the measurement of recycled water or the date and method of the calibration and maintenance of the measurement, the monthly reading or measurement value;
- VI. If the storage facility is approved for installation, declare in accordance with Article 72.
- VII. Those that install facilities for wastewater or sewage treatment/pretreatment shall declare in accordance with the provisions of Articles 73 to 75.

The enterprises specified in Article 9 and recycled by just sedimentation treatment shall declare in accordance with the following further to the requirement as stated in the preceding paragraph:

- I. Capacity of minerals, gravels, stone chips, or mixed concrete cement generated;
- II. Monthly water consumption volume and the capacity of sludge generated in the sedimentation pool;
- III. Water treatment capacity by the sedimentation pool and the removal rate monthly;
- IV. Frequency and means of removal of sludge from the sedimentation pool or the concentration pool.

Article 80

Operators of combined fishing and stock raising business in the livestock industry shall have the following contents in their reports:

- I. Area of the fishpond and the actual raising number of fish;
- II. Animal house washing frequency and water consumption on a monthly basis;
- III. Volume of the wastewater discharged into the fishpond every month and the measurement method;
- IV. Amount of electricity consumed for the fishpond aerator on a monthly basis;
- V. Dissolved oxygen test value of the fishpond and the test date;
- VI. Date on which wastewater or sewage was discharged and the method with which it is treated after combined operation of the fishing and stock raising business on a monthly basis.

Article 81

Enterprises or sewage systems that discharge wastewater or sewage into surface water bodies shall have the following contents in their reports:

- I. Process facilities and production or service scales related to production of the wastewater or sewage and sludge on a monthly basis;
- II. Quality of the discharged wastewater or sewage, the volume of water on the testing day, and the monthly volume of discharged wastewater or sewage;
- III. Water measurement facilities set up for the effluent, the date and method for calibration and maintenance of such measurement facilities, their measurement methods, and the monthly readings and measurement values;
- IV. Where wastewater or sewage pretreatment facilities as set up,

additional reports are required pursuant to Articles 73 to 75.

Article 82

Enterprises or sewage systems that use soil to treat wastewater or sewage shall act as follows, in addition to reporting pursuant to Articles 73 to 75:

- I. Type of the crop, number of head per hectare, and area of the soil for treatment on a monthly basis;
- II. Quality of the water discharged into the soil, volume of water on the testing day, and monthly volume of water discharged into the soil;
- III. Soil and groundwater monitoring information;
- IV. Monthly operating frequency of solid-liquid separation facilities.

Article 83

The reporting of water quality and quantity and its testing, measurement, monitoring frequency and monitoring data produced by an enterprise or sewage system shall comply with the following:

- I. Quality of wastewater or sewage is tested every six months. However, for the dedicated sewage system of a community that is exempted from designating responsible persons for treatment of wastewater or sewage, quality of its wastewater or sewage is tested once a year.
- II. For an enterprise or sewage system that shall designate dedicated units or Class-A persons responsible for treatment of wastewater or sewage in accordance with the regulations governing the designation and management of environmental protection units or personnel, the quality of effluent discharged to surface water bodies is tested every three months. For an enterprise or sewage system that designates Class-B persons responsible for treatment of wastewater or sewage, the quality of effluent is tested every six months. For the dedicated sewage system of a community that is exempted from designating responsible persons for treatment of wastewater or sewage, quality of water is tested once a year.
- III. Quality of the water discharged from a sewer-connected enterprise to a sewage system is tested every six months. However, if the authority governing sewage systems has increased the frequency of testing, the requirements provided by the authority shall be applied.
- IV. For those that adopt soil treatment, the quality of the water discharged to soil is tested every three months, the monitored soil is tested once a year, and the quality of monitored groundwater is tested every six months.
- V. For those that discharge sewage into groundwater, the quality and volume of the water discharge into groundwater is tested every two months.
- VI. For those that discharge wastewater or sewage into the ocean through ocean outfall pipes, the monitored data of the marine environment are tested every three months.
- VII. For those that adopt other water pollution control measures, water quality is tested every six months.

Article 84

Water quality testing or monitoring referred to in the information reported by an enterprise or sewage system shall be performed in accordance with the items specified in Table 1. However, the competent authority may increase the items to be reported depending on the actual need.

Where an enterprise or sewage system does not use or produce any of the items specified in Table 1 during the process and wastewater or sewage treatment procedure, and the test result of the item is lower than the detection limit, such enterprise or sewage system may submit an application along with certificating

documents to the competent authority for exemption from testing and reporting the said item.

Article 85

Enterprises or sewage systems that adopt soil treatment shall take following actions with respect to monitoring of the soil and groundwater, in addition to acting in accordance with Table 1:

- I. Where the total area for soil treatment is less than one hectare, a groundwater monitoring well shall be set up at the midpoint between the upstream and downstream of the groundwater flow and a soil sample shall be taken from the well.
- II. Where the total area for soil treatment is more than 1 hectare and less than 25 hectares, a groundwater monitoring well shall be set up in the upstream and downstream of the groundwater flow, respectively, and a soil sample shall be taken from each well.
- III. Where the total area for soil treatment is more than 25 hectares and less than 100 hectares, a groundwater monitoring well shall be set up in the upstream, midstream, and downstream of the groundwater flow, respectively, and a soil sample shall be taken from each well.
- IV. Where the total area for soil treatment is more than 100 hectares, more than five groundwater monitoring wells shall be set up and more than five soil samples shall be taken. The groundwater monitoring wells and soil samples shall be set up and taken in the upstream, midstream, and downstream of the groundwater flow and surrounding area.

The soil samples referred to in the preceding paragraph shall be mixed shallow-layer samples.

The competent authority may, with reference to the actual requirements with respect to the groundwater hydrology and water quality condition, order an enterprise or sewage system to increase the number of the groundwater monitoring wells and soil samples to be taken.

Article 86

The reporting frequency of enterprises and sewage systems is once every six months. However, the following enterprises or sewage systems shall observe the reporting items and frequencies specified below:

- I. Reporting once every year for the dedicated sewage system of a community that is exempted from designating responsible persons for treatment of wastewater or sewage;
- II. Reporting soil samples once every year in case of soil treatment;
- III. Reporting once every three months in case of discharging wastewater or sewage into the ocean through ocean outfall pipes.

The competent authority may, depending on the actual need, order enterprises or sewage system to increase the reporting frequency with respect to all or part of the items to be reported.

Article 87

The reporting scope, format, and frequency shall be subject to the regulations of the central competent authority in case that the enterprise and sewage system is located in the total quantity control zone and has an automatic monitoring system, and the central competent authority establishes regulations governing connection of the automatic monitoring items.

Article 88

Enterprises or sewage systems that adopt two or more pollution control measures simultaneously shall report separately.

Enterprises or sewage systems that jointly set up wastewater or sewage treatment/pretreatment facilities for treatment purpose

shall report jointly.

Article 89

The water quality and quantity that an enterprise or sewage system reports shall be acquired by sampling and measuring on the same day.

Reporting is deemed complete only when the sampling and measuring of water quality and measuring of water quantity mentioned in the preceding paragraph are commissioned to and completed by the environmental analysis laboratory to which the central competent authority has issued a permit, and meet the requirements provided by Article 68 of the Act. Reporting is deemed incomplete for failure to report in accordance with Articles 23 and 68 of the Act. The competent authority shall send to those that report incompletely the notice requiring them to correct within a time frame. In case of failure to correct within the time frame, their reported data will be rejected and they will be deemed to have not reported.

Where the rectification within a time frame referred to in the preceding paragraph is involved in non-retrospective data of water quality, a retest shall be conducted and the data generated from such retest shall not be used concurrently for the reporting in the current period of the test.

Article 90

When the water quality or water quantity reported by an enterprise or sewage system meets one of the following conditions, the enterprise or sewage system shall be exempt from commissioning an environmental analysis laboratory:

- I. Water quality and quantity of the original wastewater or sewage, water quantity of recycled water, runoff wastewater quality and quantity, or the water quantity of separately treated hot springs wastewater;
- II. Water quantity of established independent cumulative water measurement facility whose calibration and maintenance are performed pursuant to Paragraph 1 of Article 65;
- III. The water quality and quantity of sewer-connected enterprises shall be based on the testing and measurement data of the sewage management agency.

Article 91

Samples shall be taken in the blending facilities for the water quality of the original wastewater or sewage that an enterprise or sewage system reports.

Where wastewater or sewage contains substances harmful to the health as announced under this Act, the samples of such substance item shall be taken at appropriate locations before the wastewater or sewage of each type enters in the blending facilities.

Article 92

Records reported by enterprises or sewage systems and the following documents shall be retained for three years for reference.

- I. Photocopies of the bills or invoices for the cleanup of wastewater or sewage by the enterprise or a third party firm commissioned for such purpose;
- II. Photocopies of the bills or invoices for the cleanup of sludge by the enterprise or a third party firm commissioned for such purpose;
- III. Water quality and quantity testing report;
- IV. Photocopies of the bills or invoices on the purchase of chemical agents;
- V. In case of those that discharge wastewater or sewage into the

ocean through ocean outfall pipes, the monitored data of the marine environment;

- VI. Photocopies of the record and bills or invoices on the calibration and maintenance of the measurement facility for the measurement of water capacity on accumulative basis;
- VII. Other matters designated by the competent authority.

Article 93

Enterprises or sewage systems shall report the data for the period from July to December of the previous year before January 31 every year, and shall report the data for the period from January to June of the current year before July 31 every year. However, the following enterprises or sewage systems shall observe the reporting period and data specified below:

- I. The management authority (agency) of the sewage systems referred to in Article 71, Paragraph 2 shall report the data for the period from July to December of the previous year before the end of February every year, and shall report the data for the period from January to June of the current year before August 31 every year.
- II. The dedicated sewage system of a community that is exempted from designating responsible persons for treatment of wastewater or sewage shall report the data for the period from January to December of the previous year before January 31.

In case enterprises and sewage systems apply for Permits (Documents) for pollution control measure plans, the date on which the Issuing Authority approves the approval documents or Permits (Documents) for water pollution control measure plans shall be the start date of the reporting.

Enterprises or sewage systems that fail to report within a given time frame shall correct by the deadline indicated in the notice of correction sent by the competent authority. If an enterprise or sewage system still fails to correct or fails to report prior to the ruling issued by the competent authority, it shall be deemed to have failed to report.

Article 94

Enterprises or sewage systems shall report in hard copy, except when the competent authority announces that the reporting shall be sent via the Internet.

Article 95

Construction sites that submitted the runoff wastewater pollution reduction plan pursuant to the Necessary Measures for Reduction of Volume of Filterable Substances and Eroded Silt in Runoff Wastewater from Construction Sites and Earth and Stone Staking or Disposing Stations announced by the central competent authority on August 26, 2003 and obtained the approval from the competent authority shall apply to the competent authority for modification of the runoff wastewater pollution reduction plan in accordance with Article 9 within 3 months after the implementation of the Regulations if the construction period would last for over a year after the implementation of the Regulations. However, if the construction site has difficulty in installing, the above requirement shall not apply, subject to approval from the competent authority.

Article 96

The requirements for improvement periods provided for the enterprises or sewage systems that shall carry out engineering work and install facilities, pipelines and signs to comply with new provisions of the Regulations are stated as follows:

- I. Improvement of the independent and exclusive cumulative inflow water measurement facilities stated in Paragraph 2 of Article 12, the independent and exclusive cumulative water measurement

facilities stated in Subparagraph II and signs at sampling points in Subparagraph III of Paragraph 2 of Article 28, the independent and exclusive cumulative water measurement facilities at the inflow and outflow ends stated in Paragraph 2 of Article 31, the independent and exclusive cumulative inflow water measurement facilities stated in Paragraph 2 of Article 37, the independent and exclusive cumulative inflow and outflow water measurement facilities and measurement facilities with automatic fluid level recording and storage volume displaying functions stated in Paragraph 1 of Article 39, the independent and exclusive cumulative water measurement facilities that are recycled in Paragraph 2 of Article 37, the facilities, pipelines and signs stated in Article 50, and the signboards at discharge points stated in Article 55 shall be completed within three months after the implementation of the Regulations.

- II. For any engineering work and pipeline installation not provided for in the preceding subparagraph, enterprises or sewage systems shall submit the engineering work improvement statement to the Issuing Authority for its review within two months after the central competent authority announces that the approval documents or Permits (Documents) for the water pollution control measure plans shall be renewed. Any and all improvements shall be completed within six months after the review. However, those that fail to complete improvement within the period announced for renewal of approval documents or Permits (Documents) for the water pollution control measure plans may specify reasons and apply to the Issuing Authority for the extension of the improvement period. An improvement period shall not be longer than a year.

Article 97

An enterprise or sewage system that uses containers, tank trucks or means other than pipelines or drainage ditches to transport wastewater or sewage compliant with effluent standards into an area outside of the range of operations shall inform the competent authority by telephone or facsimile 24 hours before the scheduled transport of wastewater or sewage.

An enterprise or sewage system that uses containers, tank trucks or means other than pipelines or drainage ditches to clear the wastewater or sewage not complying with effluent standards into an area outside of the range of operations, shall perform clearance and follow-up disposal pursuant to the Waste Disposal Act.

Where the enterprises or sewage systems established already prior to the implementation of the Regulations are in any of the situations stated in the preceding paragraph, the concerned matters shall be addressed pursuant to the Waste Disposal Act from January 1, 2008.

Article 98

The recycling plans that enterprises provide for record in accordance with the Industrial Water Pollution Control Measure Management Regulations prior to the implementation of the Regulations shall become invalid from January 1, 2010. In case the procedure of renewing Permits (Documents) or approval documents for water pollution control measure plans are completed, the recycling plans shall become invalid upon completion of the procedure.

Article 99

Enterprises established already prior to the implementation of the Regulations and included from July 1, 2007 into the scope of enterprises governed by the Act pursuant to the enterprise classification and definitions in the Water Pollution Control Act announced on December 6, 2005 by the central competent authority shall apply the Regulations from July 1, 2008.

Article 100

Enterprises or sewage system that make part of the plant (site) or equipment available to others or commission others to operate water pollution control equipment shall remain responsible for management of water pollution control measures and reporting of tests.

Article 101

The Regulations shall become effective on the date of promulgation.

Data Source : Ministry of Environment Laws and Regulations Retrieving System