THE GOVERNMENT

THE SOCIALIST REPUBLIC OF VIETNAM Independence - Freedom - Happiness

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DECREE

On the management of wastes and scraps(*)

Pursuant to the December 25, 2001 Law on Organization of the Government; Pursuant to the June 23, 2014 Law on Environmental Protection; At the proposal of the Minister of Natural Resources and Environment, The Government promulgates the Decree on management of wastes and scraps.

Chapter I GENERAL PROVISIONS

Article 1. Scope of regulation

- 1. This Decree prescribes the management of wastes, including hazardous waste, household solid waste, ordinary industrial solid waste, liquid waste products, wastewater, industrial exhaust gas and other particular wastes; and environmental protection in the import of scraps.
- 2. This Decree does not prescribe the management of radioactive wastes, noise, vibration, light and radiation.
- 3. The collection and transportation of wastes from non-tariff zones, export processing zones and export processing enterprises into the inland are the same as for wastes outside non-tariff zones, export processing zones and export processing enterprises prescribed in this Decree; the provisions of Chapter VIII of this Decree do not apply to scraps from non-tariff zones, export processing zones and export processing enterprises.

Article 2. Subjects of application

This Decree applies to domestic agencies, organizations, households and individuals and foreign organizations and individuals (below referred to as organizations and individuals for short) engaged in activities related to wastes and imported scraps in the territory of the Socialist Republic of Vietnam, including the mainland, islands, seas and air space.

Article 3. Interpretation of terms

In this Decree, the terms below are construed as follows:

- 1. Solid waste means waste in solid or thick (also called sludge) form discharged from production, business, service, daily-life or other activities.
- 2. Ordinary waste means waste not on the list of hazardous wastes or waste on the list of hazardous wastes but with hazardous elements below the hazardous waste threshold.

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- 3. Household solid waste (also called household garbage) means the solid waste generated from daily-life activities of humans.
- 4. Industrial solid waste means the solid waste generated from production, business and service activities.
- 5. Wastewater means the water already changed in its characteristics and nature and discharged from production, business, service, daily-life or other activities.
- 6. Liquid waste products mean products, solutions or materials in liquid form, which have expired or are discharged from the process of use, production, business, service, daily-life or other activities. If the liquid waste products are discharged together with wastewater, they shall be referred commonly to as wastewater.
- 7. Receiving waters means places where wastewater is discharged into, including water drainage systems, rivers, streams, ditches, canals, lakes, ponds, lagoons, coastal water areas, sea and other receiving waters.
- 8. Industrial exhaust gas means waste existing in the form of gas or steam generated from industrial production and service activities.
- 9. Waste identification means the process of identifying whether a matter is waste or not, and hazardous waste or ordinary waste and determining whether such waste belongs to a type or a group of certain wastes for the purpose of classification and practical management.
- 10. Waste classification means activities of separating wastes (already identified) in reality so as to divide them into different types or groups of wastes for application of different management processes.
- 11. Waste transportation means the process of carrying wastes from the place of generation to the place of disposal, possibly accompanied by waste collection, temporary storage, transshipment and preliminary processing at the place of temporary storage or transshipment.
- 12. Reuse of waste means the direct reuse of waste or reuse after preliminary processing without altering the nature of waste.
- 13. Waste preliminary processing means the application of merely mechanical-physical technical measures to change the physical characteristics such as size, moisture and temperature to facilitate the classification, storage, transportation, reuse, recycle, co-disposal or disposal to mix or separate components of wastes to suit different management processes.
- 14. Waste recycling means the process of applying technological and technical solutions to recover valuable components from wastes.
- 15. Recovery of energy from wastes means the process of recovering energy from the transformation of wastes.
- 16. Waste disposal means the process of applying technological and technical solutions (other than preliminary processing) to reduce, remove, isolate, separate, burn, destroy or bury wastes and hazardous elements in wastes.
- 17. Co-disposal of wastes means the combination of an existing production process for recycling, disposal of, recovery of energy, from wastes whereby wastes are used as raw material or substituting fuel, or are treated.
- 18. Waste-generating establishment means a production, business or service establishment where waste is generated.
- 19. Waste source owner means an organization or individual that owns or operates a waste-generating establishment.

- 20. Industrial park is the common name for industrial park, export processing zone, hitech park and industrial complex.
- 21. Waste disposal facility means the facility that provides waste disposal services (including waste recycling, co-disposal, and recovery of energy from wastes).
- 22. Household solid waste collector or carrier means the organization or individual that provides household solid waste collection and transportation services under regulations.
- 23. Waste disposer means the organization or individual that owns or operates a waste disposal facility.
- 24. Hazardous waste disposal license means the license granted to a hazardous waste disposer to provide services of disposal, recycling, co-disposal of, or recovery of energy from, hazardous wastes (possibly covering transportation, transshipment, storage and preliminary processing).
- 25. Water environment load means the capacity to additionally receive pollutants while ensuring that the density of pollutants does not exceed the limit value specified in the environment-related technical regulations for the use purpose of receiving waters.
- 26. Wastewater discharging quota means the limit volume of each pollutant or wastewater parameter promulgated by a state management agency for every receiving water body in order to ensure that the discharged wastewater does not exceed the water environment load.
- 27. Inventory of industrial exhaust gases means the determination of the volume, nature and characteristics of industrial exhaust gas sources in a given space and at a given time.
- 28. Deposit for scrap import means the payment of an amount of money at a prescribed place by a scrap importer to secure the reduction and remediation of environment risks caused by the import of scraps.
- 29. Imported scrap lot means the quantity of imported scraps of the same HS code (import and export goods classification code) or group of HS codes registered by the importer for a single inspection for import into Vietnam.

Article 4. General principles of waste management

- 1. Every organization and individual shall promote the application of measures to save natural resources and energy; use renewable natural resources and energy and environment-friendly products, raw materials and clean energy; practice cleaner production; apply environmental audit to wastes and other measures to prevent and minimize waste generation.
- 2. Wastes shall be classified at source for the purpose of promoting the re-use, recycling, co-disposal and disposal and energy recovery.
- 3. The building of waste disposal facilities must comply with relevant provisions of the laws on construction and environmental protection.
- 4. Wastewater shall be collected, treated, re-used or handed over to units with appropriate functions for re-use or treatment up to the environment-related technical regulations before being discharged into the environment.
- 5. Exhaust gases shall be treated up to the environment-related technical regulations at generating establishments before being discharged into the environment.
- 6. The State shall encourage the socialization of the collection, transportation, re-use, recycling of, and recovery of energy, from wastes.
- 7. Waste generators shall pay for waste collection, transportation and treatment service as prescribed by law.

8. The application of environment-friendly waste treatment technologies shall be encouraged. The use of bio-products in waste treatment must comply with law.

Chapter II

MANAGEMENT OF HAZARDOUS WASTES

Article 5. Identification, assignment of codes, classification and storage of hazardous wastes

- 1. The identification of hazardous wastes shall be based on hazardous waste codes, lists and threshold.
- 2. Hazardous wastes shall be classified by codes for storage in proper packages or storage equipment. Storage packages or equipment can be used commonly for hazardous waste codes of the same nature, which are incapable of causing reaction or interaction and can be disposed of by same methods.
- 3. Wastewater treated up to the environment-related technical regulations in wastewater treatment systems at generating establishments shall be managed under the provisions on wastewater management in Chapter V of this Decree.
- 4. Hazardous wastes shall be classified right at the time they are put into storage or transported for disposal.

Article 6. Registration of hazardous waste source owners

- 1. Hazardous waste source owners shall register with provincial-level Departments of Natural Resources and Environment in one of the following forms:
- a/ Compiling a dossier of registration for grant of a hazardous waste source owner registration book (below referred to as the hazardous waste source owner registration procedures);
- b/ Integrating the registration in the hazardous waste management report without having to carry out the hazardous waste source owner registration procedures, for a number of special cases (for waste source owners that have limited generated volumes and forms and time of operation);
- c/ Making online registration via the information system with adequate information similar to the compilation of dossiers mentioned at Point a, Clause 1 of this Article.
- 2. The hazardous waste source owner registration procedures mentioned at Point a, Clause 1 of this Article shall be carried out only once (without extension and adjustment) when hazardous waste-generating activities start. The registration book shall be re-granted only in the cases in which the names and addresses of waste source owners or the addresses and number of hazardous waste-generating establishments are changed; and plans on self-reuse, recycling, co-disposal and disposal of, and recovery of energy, from hazardous wastes at the establishments are modified and added. After the waste source owner registration book is granted, information on wastes shall be updated in periodical reports on hazardous waste management.
- 3. The hazardous waste source owner registration procedures shall be integrated into the registration of plans on self-reuse or preliminary processing, recycling, disposal, co-disposal of, recovery of energy from, hazardous wastes up to the environment-related technical regulations within the premises of the generating establishments.

Article 7. Responsibilities of hazardous waste source owners

1. To register under Clause 1, Article 6 of this Decree with provincial-level Departments of Natural Resources and Environment of localities where their hazardous waste-generating establishments are located

- 2. To work out measures to reduce generated hazardous wastes; to identify, classify and determine the volume of hazardous wastes to be reported and managed.
- 3. To arrange places for temporary storage of hazardous wastes; to store hazardous wastes in packages or containing equipment that meet the prescribed technical requirements and management process.
- 4. If being incapable of self-reuse, recycling, co-disposal or disposal of, recovery of energy from, hazardous wastes at their establishments, to sign contracts for transfer of hazardous wastes to organizations or individuals with appropriate functions.
- 5. Hazardous waste source owners shall report every 6 (six) months on the storage of hazardous wastes at the generating establishments to provincial-level Departments of Natural Resources and Environment either in a separate document or in the periodical hazardous waste management report when such wastes cannot yet be handed over because:
 - a/ A feasible transportation and disposal plan has not yet been worked out;
 - b/ An appropriate hazardous waste disposer has not yet been found.
- 6. To make, use, archive and manage hazardous waste documents, (periodical and extraordinary) reports on hazardous waste management and dossiers, documents and daily records related to hazardous waste management as prescribed.
- 7. Within 6 (six) months after termination of hazardous waste-generating activities, to notify such in writing to the provincial-level Departments of Natural Resources and Environment of localities where hazardous wastes are generated.

Article 8. Hazardous waste collection and transportation

- 1. The collection and transportation of hazardous wastes may be carried out only by organizations or individuals possessing a hazardous waste disposal license.
- 2. Hazardous waste-collecting or -transporting vehicles and equipment must satisfy the prescribed technical requirements and management process. Hazardous waste-transporting vehicles shall be stated in the hazardous waste disposal licenses.
- 3. The use of special vehicles such as containers, trains, inland waterway vessels and seagoing ships or other vehicles not stated in the hazardous waste disposal licenses must satisfy the technical requirements and management process prescribed by the Ministry of Natural Resources and Environment and be approved by the latter.
- 4. The transportation of hazardous wastes must follow optimum itineraries in terms of route, distance and time, ensuring traffic safety and prevention and response to incidents and complying with traffic direction regulations of competent agencies.

Article 9. Conditions for grant of hazardous waste disposal licenses

- 1. Having the environmental impact assessment report approved by the Ministry of Natural Resources and Environment, for investment projects on hazardous waste disposal facilities, or the following substituting dossier and papers:
- a/Valid documents on environment, issued by competent state management agencies, for hazardous waste disposal facilities put into operation before July 1, 2006, including the certificate of registration of satisfaction of environmental standards; written appraisal of the declaration of production and business activities with environmental impacts; card of appraisal of environmental impact assessment; or papers equivalent to these documents;

b/ Environmental protection plan approved by a competent state management agency as prescribed for operating hazardous waste disposal facilities.

- 2. Locations of hazardous waste disposal facilities (except production establishments conducting hazardous waste co-disposal) are included in master plans with waste management and disposal contents approved under law by competent agencies of the provincial or higher level.
- 3. The systems and equipment for disposal (including preliminary processing, recycling, co-disposal, and energy recovery), packages and containing equipment, temporary storage or transshipment areas, and transporting vehicles (if any) must meet the prescribed technical requirements and management process.
- 4. Environmental protection facilities at hazardous waste disposal facilities satisfy the prescribed technical requirements and management process.
 - 5. Employees meet the following requirements:
- a/ A hazardous waste disposal facility must have at least 2 (two) employees in charge of management, administration and provision of professional and technical instructions, possessing qualifications related to environment or chemistry and a hazardous waste management certificate as prescribed;
- b/ A hazardous waste transshipment station must have at least 1 (one) person in charge of management, administration and provision of professional and technical instructions, possessing qualifications related to environment or chemistry;
- c/ The employees specified at Points a and b of this Clause must have social and health insurance as prescribed by law; and have long-term labor contracts if they are not named in the business registration certificate (or equivalent papers) or not included in the leadership or payroll of the applicant for a hazardous waste disposal license;
- d/ Having trained operators and drivers to ensure the safe operation of vehicles, systems and equipment.
- 6. Having a safe operation process for vehicles, systems and equipment for collection, transport (if any) and disposal (including preliminary processing, recycling, co-disposal, energy recovery) of hazardous wastes.
- 7. Having an environmental protection plan covering plans on pollution control and environmental protection; occupational safety and health; incident prevention and remedy; periodical training; program on environment observation, hazardous waste disposal operation supervision and efficiency assessment.
- 8. Having a plan for control environmental pollution restoration upon operation termination.
 - 9. The conditions specified in Clause 1 of this Article do not apply to the following cases:
- a/ Lawfully operating production establishments that wish to additionally conduct co-disposal based on their existing production technologies without having to make again environmental impact assessment reports;
- b/ Lawfully operating waste disposal facilities that wish to renovate and upgrade themselves with more advanced technologies to reduce or control adverse environmental impacts, to raise the disposal efficiency and save natural resources and energy, without having to make again environmental impact assessment reports. These facilities shall work out renovation and upgrading plans and submit them to the hazardous waste disposal-licensing agency for consideration and approval before conducting the renovation and upgrading.
- 10. The following cases shall not be regarded as hazardous waste disposal facilities and are not required to have hazardous waste disposal licenses:

- a/ Waste source owners reuse, recycle, co-dispose of, dispose of, or recover energy from, generated hazardous wastes within the premises of their hazardous waste-generating establishments;
- b/ Organizations or individuals conduct research and development of hazardous waste disposal technologies in the laboratory setting;
- c/ Health establishments with medical hazardous waste disposal facilities located within their premises for disposal of their medical hazardous wastes and collection and disposal of medical hazardous wastes for nearby health establishments (cluster model).
- 11. The Ministry of Natural Resources and Environment shall prescribe the technical requirements and management process for the cases specified in Clause 10 of this Article.

Article 10. Grant of hazardous waste disposal licenses

- 1. Organizations and individuals satisfying the conditions prescribed in Article 9 of this Decree shall compile dossiers of registration for grant of hazardous waste disposal licenses and submit them to a competent agency.
- 2. The Ministry of Natural Resources and Environment is the agency competent to grant hazardous waste disposal licenses nationwide.
- 3. The hazardous waste disposal license must clearly specify the geographical area of operation, volumes and types of hazardous wastes allowed for disposal, vehicles, systems and equipment for transportation and disposal of hazardous wastes (including preliminary processing, recycling, co-disposal, and energy recovery), and other requirements on the hazardous waste disposer.
 - 4. A hazardous waste disposal license is valid for 3 (three) years from the date of its grant.
- 5. The procedures for grant of hazardous waste disposal licenses shall replace the procedures for inspection and certification of completion of environmental protection facilities under the environmental impact assessment report or the environmental protection plan (or equivalent dossiers and papers); certification of satisfaction of environmental protection requirements, for household solid waste and ordinary industrial solid waste disposal facilities (if the facilities combine the disposal of hazardous wastes with the disposal of household solid wastes and ordinary industrial solid wastes); and other environment-related procedures related to the period of operation of hazardous waste disposal facilities as prescribed by law.
- 6. In the process of consideration and grant of hazardous waste disposal licenses, the Ministry of Natural Resources and Environment shall issue written approvals of the experimental disposal of hazardous wastes, which serve as a temporary basis for the signing of contracts for hazardous waste collection, transportation and disposal to serve the trial operation for no more than 6 (six) months.
- 7. The Ministry of Natural Resources and Environment shall prescribe the order and procedures for granting hazardous waste disposal licenses.

Article 11. Re-grant, modification of hazardous waste disposal licenses

- 1. The hazardous waste disposal license shall be re-granted in the following cases:
- a/ It expires;
- b/ It is changed from the hazardous waste management license granted according to regulations before this Decree takes effect;
 - c/ It is lost or damaged.
- 2. The hazardous waste disposal license shall be modified upon any change in geographical area of operation; volume and type of hazardous waste allowed for disposal; vehicles, systems and equipment for transportation and disposal of wastes (including preliminary processing,

recycling, co-disposal and energy recovery); number of transshipment stations; number of hazardous waste disposal facilities.

- 3. The provisions of Clause 2, Article 9 of this Decree do not apply to the re-grant and modification specified in Clauses 1 and 2 of this Article.
- 4. The re-granted or modified hazardous waste disposal license is valid for 3 (three) years after the re-grant or modification, except the case in which the hazardous waste disposer only requests partial modification of the granted license and retains its validity.
- 5. The Ministry of Natural Resources and Environment shall prescribe the order and procedures for re-grant and modification of hazardous waste disposal licenses.

Article 12. Responsibilities of hazardous waste disposers

- 1. To sign contracts for hazardous waste collection, transportation and disposal with hazardous waste source owners in the areas of operation stated in their hazardous waste disposal licenses; to receive, transport and dispose of volumes and types of hazardous wastes by permitted vehicles, systems and equipment in accordance with the contract contents, hazardous waste documents and hazardous waste disposal licenses.
- 2. To fulfill the responsibilities of hazardous waste source owners for hazardous wastes arising from the course of operation which are beyond their disposal capability. If they can thoroughly treat the hazardous wastes, the hazardous waste disposers are not required to fulfill the responsibilities of hazardous waste source owners.
- 3. To fully implement the contents of the dossier of registration for grant of hazardous waste disposal licenses which have been certified by the Ministry of Natural Resources and Environment. This dossier shall be used as a specific basis for environmental management and supervision of hazardous waste disposers.
- 4. To notify in writing the hazardous waste source owners and report to the Ministry of Natural Resources and Environment (in a separate document or in the periodical hazardous waste management report) if they have reasons for temporary storage of hazardous wastes untreated after 6 (six) months after the date of transfer thereof written on the hazardous waste documents.
- 5. To register with the Ministry of Natural Resources and Environment when having the demand for cooperation in transportation of hazardous wastes not stated in their licenses to other hazardous waste disposers with appropriate function for disposal.
- 6. To apply the national standards of the environment management system (TCVN ISO 14001) within 24 (twenty-four) months after being granted the hazardous waste disposal license, or after this Decree takes effect, for operating hazardous waste disposal facilities.
- 7. To compile, use, archive and manage according to regulations hazardous waste documents, (periodical and extraordinary) reports on hazardous waste management, and dossiers, documents and daily records related to the hazardous waste management. The hazardous waste disposer that is concurrently the ordinary industrial solid waste or household solid waste disposer may integrate the reports, dossiers, documents and daily records for the disposal of hazardous wastes and household solid wastes or ordinary industrial solid wastes.
- 8. To implement the plan on pollution control and environmental restoration upon operation termination, to return the hazardous waste disposal licenses to the Ministry of Natural Resources and Environment within 6 (six) months after the termination of operation.
- **Article 13.** Responsibilities of the Minister of Natural Resources and Environment in the management of hazardous wastes

- 1. To perform the unified state management of hazardous wastes nationwide and promulgate regulations on:
- a/Lists, codes and thresholds of hazardous wastes; technical requirements and management process on determination, classification, storage, transshipment, transportation, preliminary processing, re-use, recycling, co-disposal and disposal of, and recovery of energy from, hazardous wastes; technical requirements and management process related to the conditions for grant of hazardous waste disposal licenses and the fulfillment of responsibilities of waste source owners and hazardous waste disposers during the period of operation.
- b/ The order and procedures for registration of hazardous waste source owners; grant and withdrawal of hazardous waste disposal licenses; integration and replacement of procedures related to registration of source owners, grant of hazardous waste disposal licenses; and grant of hazardous waste management certificates;
- c/ Registration of transboundary transportation of hazardous wastes under the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal; the performance of functions of the competent authority and Basel Convention focal point in Vietnam;
- d/Peculiar cases: Cases in which the collection, transportation, storage and transshipment by the vehicles and equipment stated in the hazardous waste disposal licenses cannot be carried out by waste source owners with low generated waste volumes or by waste source owners located in deep-lying and remote areas or areas without sufficient conditions for the direct transportation of hazardous wastes by the vehicles stated in the hazardous waste disposal licenses, hazardous wastes cannot be disposed of at home yet or are specified in treaties to which the Socialist Republic of Vietnam is a contracting party; hazardous wastes are re-used; hazardous wastes are transported from offshore oil and gas facilities. and other cases arising in reality.
- 2. To organize the management and inspection of the conditions, operation and dossiers, contracts, reports and documents related to hazardous waste disposers.
- 3. To organize the establishment and operation of an information system and a national database on hazardous wastes; to organize and guide the online registration of waste source owners, declaration of hazardous waste documents and reporting on hazardous waste management; to promote the use of the information or email system for notification, guidance, and discussion with organizations and individuals in the course of granting hazardous waste disposal licenses.
- 4. To organize the implementation of the contents on hazardous waste management to serve the formulation and implementation of the master plan on environmental protection as prescribed in Article 94 of the Law on Environmental Protection.
- **Article 14.** Responsibilities of provincial-level Departments of Natural Resources and Environment in hazardous waste management
- 1. To manage activities as well as dossiers, reports, contracts and documents of hazardous waste source owners in their localities (including waste source owners that are exempted from making hazardous waste source owner registration).
- 2. To update the database on hazardous wastes and enable the online registration of waste source owners, declaration of hazardous waste documents and reporting on hazardous waste management in their localities; to promote the use of the information or email system in the process of registration of hazardous waste owners.

3. To report to the provincial-level People's Committees and the Ministry of Natural Resources and Environment on the management of hazardous wastes and registration of hazardous waste source owners before March 31 of the following year.

Chapter III MANAGEMENT OF HOUSEHOLD SOLID WASTES

Article 15. Classification and storage of household solid wastes

- 1. Household solid wastes shall be classified at source according to the management and disposal purposes into the following groups:
- a/ Group of disintegrable organic wastes (food leftovers, leaves, vegetables, tubers, fruits and animal carcasses);
 - b/ Group of reusable and recyclable wastes (paper, plastic, metal, rubber, nylon and glass);
 - c/ Remaining group.
- 2. Household solid wastes, after being classified, shall be put in appropriate packages or equipment.
- 3. The classification of household solid wastes shall be managed and supervised; organizations, individuals and households shall be mobilized to observe the regulations and facilitate the collection, transportation and disposal of household solid wastes.
- 4. Provincial-level People's Committees shall guide and organize the classification of household solid wastes in a manner suitable to their practical local socio-economic conditions.

Article 16. Responsibilities of household solid waste generators

- 1. To classify and store household solid wastes under Article 15 of this Decree.
- 2. Households and individuals shall pay charges for the collection and transportation of household solid wastes as prescribed.
- 3. Household solid waste source owners shall sign collection, transportation and disposal service contracts and pay all expenses under the service contracts.

Article 17. Collection and transportation of household solid wastes

- 1. Household solid wastes shall be collected according to routes for transportation to places of gathering, transshipment stations and solid waste disposal facilities according to approved master plans.
- 2. On main thoroughfares and in trade centers, parks, public squares, crowded places, traffic hubs and other public places, appropriate household waste containing equipment and gathering sites shall be arranged.
- 3. Household solid waste containing equipment must have proper sizes suitable to the storage duration. Containing equipment placed at public places must have a beautiful looking.
- 4. In the course of transporting the household solid wastes, wastes must not be let drop, causing dust and smell dispersal and water leakage.

Article 18. Responsibilities of household solid waste collectors and carriers

- 1. To fully meet the requirements on labor and specialized vehicles and equipment for collection and transportation of all household solid wastes at prescribed locations.
- 2. To widely notify the time, sites, frequency and routes of collecting household solid wastes at residential points.

- 3. To collect and transport household solid wastes to gathering places, transshipment stations or disposal facilities by vehicles and equipment which meet the prescribed technical requirements and management process.
- 4. If hazardous wastes can be separated from household solid wastes at gathering places and transshipment stations, to manage them under the provisions on hazardous waste management in Chapter II of this Decree.
- 5. To be accountable for the drop of household solid wastes, the dispersal of dust and odor or the leakage of water, adversely affecting the environment in the course of collection and transportation.
- 6. To train and provide labor safety protection equipment for household solid waste collecting and transporting workers.
- 7. To hold regular medical checks and ensure prescribed benefits for laborers involved in the household solid waste collection and transportation.
 - 8. To annually report on household solid waste collection and transportation as prescribed.

Article 19. Selection of household solid waste disposal technologies

- 1. Household waste disposal technologies include:
- a/ Organic fertilizer processing technology;
- b/ Incinerating technology;
- c/ Hygienic burial technology;
- $\mbox{d/}$ Technologies for recycling, energy recovery, manufacture of products from useful components of household solid wastes;
 - dd/ Other environment-friendly technologies.
- 2. Household solid waste disposal technologies shall be selected according to the following criteria:
 - a/ Technologically:
- Capability to dispose of different household solid wastes, flexibility, suitability in scale and expansion of capacity;
- Level of automation and localization of equipment lines; ratios of disposal, re-use, recycling, burial of household solid wastes;
- Priority given to technologies already assessed and appraised by competent agencies as up to the environment-related standards and technical regulations and suitable to Vietnam's conditions:
- The management, operation and maintenance suitable to the qualifications and capabilities of local workers.

b/ Environmentally and socially:

- Ensuring environment-related standards and technical regulations;
- Saving land areas;
- Saving energy, showing the capability for energy recovery in the course of disposal;
- Training and employing local people.
- c/ Economically:
- The disposal costs suitable to the local payment capability or not exceeding the disposal expense levels promulgated by competent agencies;

- Salability of products turned out from the disposal or recycling technologies.
- 3. Pursuant to the provisions of Clause 2 of this Article, provincial-level People's Committees or investors shall select the household solid waste disposal technologies suitable to their local conditions.

Article 20. Selection of project owners and household solid waste disposers

- 1. The selection of projects owners for household solid waste disposal facilities must comply with the laws on investment, construction and bidding.
- 2. The selection of household solid waste disposers to manage and operate state budgetfunded household solid waste disposal facilities must comply with the law on supply of publicservice products.
- 3. If household solid waste disposal facilities are invested with non-budget funds, project owners shall directly manage and operate the facilities they have invested in or hire other organizations or individuals to act as household solid waste disposers under law.
- **Article 21.** Environmental protection requirements on household solid waste disposal facilities
- 1. Having an environmental impact assessment report approved by a competent agency, for investment projects on waste disposal facilities.
- 2. Having systems and equipment for disposal (including preliminary processing, recycling, co-disposal and energy recovery) and temporary storage areas which meet the prescribed technical requirements and management process.
- 3. Having environmental protection works at the facilities which meet the prescribed technical requirements and management process.
 - 4. Having an environment management and supervision program.
- 5. Obtaining the certification by a competent agency as satisfying environmental protection requirements before official operation.
- 6. Before trial operation, household solid waste disposers shall propose competent agencies to certify satisfaction of environmental protection requirements on household solid waste disposal facilities for their plans on trial operation. The trial operation duration of disposal must not exceed 6 (six) months.
- 7. The Ministry of Natural Resources and Environment shall certify or adjust the certification of satisfaction of environmental protection requirements for:
- a/ Household solid waste disposal facilities with environmental impact assessment reports approved by the Ministry;
- b/ Household solid waste disposal facilities which receive and dispose of household solid wastes in inter-provincial regions;
- c/ Facilities that dispose of household solid wastes in combination with disposing of hazardous wastes (with the hazardous waste disposal license as the substitute).
- 8. Provincial-level People's Committees shall certify or adjust the certification of satisfaction of environmental protection requirements for household solid waste disposal facilities within their competence to approve environmental impact assessment reports and for facilities that only receive and treat household solid wastes within provinces.
- 9. The time for submission of dossiers of registration for certification of the satisfaction of environmental protection requirements for household solid waste disposal facilities is as follows:

- a/Within 6 (six) months after starting the trial operation;
- b/For household solid waste disposal projects involving different stages, the dossiers may be submitted for each stage of the project.
- 10. A household solid waste disposal facility that witnesses any changes in scale, capacity or technology shall submit a dossier of request for adjustment and certification of satisfaction of environmental protection requirements to a competent agency for consideration, adjustment and certification as prescribed.
- 11. If a facility disposes of household solid wastes and ordinary industrial solid wastes, the certification of satisfaction of environmental protection requirements on household solid waste disposal facilities and the certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities shall be integrated.
- 12. The certification of satisfaction of environmental protection requirements prescribed in this Article does not apply to the following cases:
- a/Household solid waste disposal facilities are not required to make environmental impact assessment reports as prescribed; household solid waste disposal facilities have been put into operation and certified as having completed the environmental protection works as prescribed before this Decree takes effect;
- b/ Household solid waste burial sites have been put into operation before this Decree takes effect:
- c/ The self-preliminary processing, re-use, recycling, disposal, co-disposal of, or recovery of energy from, household solid wastes are carried out within the premises of the facilities;
- d/ The research and development of household solid waste disposal technologies are carried out in the laboratory setting.
 - 13. The provisions of Clause 1 of this Article do not apply to the following cases:
- a/ Production establishments which have been lawfully put into operation wish to additionally conduct the co-disposal of household solid wastes based on their existing production technologies without having to make environmental impact assessment reports;
- b/ Household solid waste disposal facilities which have been lawfully put into operation wish to renovate and upgrade themselves with more advanced technologies in order to reduce or control adverse environmental impacts, raise the disposal efficiency and save natural resources and energy without having to make environmental impact assessment reports.
 - Article 22. Responsibilities and rights of household solid waste disposers
 - 1. The household solid waste disposer has the responsibilities:
 - a/To satisfy all environmental protection requirements specified in Article 21 of this Decree;
- b/ To fully implement the contents of certification of satisfaction of environmental protection requirements on household solid waste disposal facilities and dossiers of request for the certification of satisfaction of environmental protection requirements enclosed with the certification contents. Such dossier shall be used as a specific basis for environment management and supervision of household solid waste disposers;
- c/ For the cases specified in Clause 13 of Article 21, to prepare a plan for submission to a competent agency defined in Clause 7 or 8, Article 21 of this Decree, for consideration and approval before starting operation;
- d/To notify in writing the state management agency and concerned parties when suspending the provision of disposal services for repair, transformation or upgrading of these services. The

notification must clearly state the reasons and time for the suspension. At the same time to work out a plan for disposal;

dd/ Upon detection of environmental incidents, to apply urgent measures to ensure safety for people and property; to organize the rescue of people and property and promptly inform the project owners, local administrations or environmental protection agencies in localities where environmental pollution or incidents occur for coordinated handling;

e/ To make, use, archive and manage reports, dossiers, documents and daily records related to the management of household solid wastes as prescribed;

g/ If hazardous wastes can be separated from household solid wastes or hazardous wastes are generated at household solid waste disposal facilities, to manage them in accordance with the regulations on management of hazardous wastes and discharge the responsibilities of hazardous waste source owners as prescribed in Chapter II of this Decree.

- 2. The household solid waste disposer has the rights:
- a/ To fully receive solid waste disposal service charges according to signed contracts;
- b/ To request competent state agencies to consider amending and supplementing technical rules and regulations and economic and technical norms related to solid waste disposal activities;
 - c/ Other rights prescribed by law.
- **Article 23.** Improvement and restoration of the environment upon closure of household solid waste burial sites
- 1. The restoration and re-use of ground areas after the closure of burial sites must satisfy the following requirements:
- a/ Before the re-use of ground areas, survey and assessment of relevant environmental elements shall be carried out;
- b/ Pending the re-use of household solid waste burial sites, the treatment of leaked garbage water and exhaust gases must continue with routine operation;
- c/ Environmental changes shall be monitored at observation stations after the termination of operation of household solid waste burial sites.
 - 2. Responsibilities of household solid waste project owners and disposers:
- a/ To work out a plan for environmental improvement and restoration upon closure of a household solid waste burial site and submit it to a competent agency specified in Clause 7 or 8, Article 21 of this Decree, for approval before the closure. For environmental improvement and restoration activities financed by central budget funds, such plan shall be submitted to the Ministry of Natural Resources and Environment for consideration and summarization;
- b/ Right after the closure of a household solid waste burial site, to proceed with the improvement and restoration of the environment and surrounding areas and at the same time to apply measures to prevent environmental pollution according to the approved plan;
- c/ To organize periodical environmental supervision and monitoring of environmental development at a closed household solid waste burial site for at least 5 (five) years after its closure. To report the periodical environment supervision results to the local environment state management agency;
- d/ To draw topographical maps of the areas after the closure and termination of operation of household solid waste burial sites;
 - dd/ To propose measures for pollution control in the subsequent years;

- e/ To compile dossiers on handover of site grounds to competent state agencies for management.
- 3. The Ministry of Natural Resources and Environment shall assume the prime responsibility for, and coordinate with the Ministry of Construction in, guiding the order and procedures for, and contents of, improvement and restoration of the environment at household solid waste burial sites and the process of closing household solid waste burial sites after termination of operation.
- Article 24. Service contracts for household solid waste collection, transportation and disposal
 - 1. Types of contract:
 - a/ Contract for household solid waste collection, transportation and disposal services;
 - b/ Contract for household solid waste collection and transportation services;
 - c/ Contract for household solid waste disposal services.
- 2. The Ministry of Construction shall guide model contracts for household solid waste collection, transportation and disposal.
 - **Article 25.** Expenses for household solid waste collection, transportation and disposal
- 1. Expenses for collection, transportation and storage of household solid wastes generated from individuals, households and public places shall be offset by local budgets.
- 2. Expenses for disposal of household solid wastes shall be used as a basis for determination of service prices and as a ground for signing of contracts for household solid waste disposal services. Household solid waste disposal expenses shall be accurately and fully calculated per unit of household solid waste volume for disposal, including:
 - a/ Operation and maintenance expenses;
- b/ Expenses for depreciation of machinery, workshops and facilities invested for disposal of household solid wastes (including leaked garbage water and exhaust gas, if any) up to the prescribed standards and technical regulations;
 - c/ Other expenses, taxes and charges as prescribed by law.
- 3. Revenues for payment of household solid waste collection, transportation and disposal expenses include sanitation charges and other revenues prescribed by law.

Article 26. Household solid waste disposal service prices

- 1. Pricing principles and methods:
- a/ To associate prices with service quality and disposal technologies; to ensure that household solid wastes are disposed of strictly according to the technical process, meeting the environment-related standards and technical regulations, contributing to raising the environmental quality and protecting community health;
- b/ To price household solid waste disposal services on the basis of the infrastructure conditions, socio-economic conditions and payment capability of the local budget.
- 2. Responsibilities to set, appraise and approve household solid waste disposal service prices:
- a/For household solid waste disposal facilities invested by the state budget in a province, provincial-level People's Committees shall assign specialized departments to prepare price options to be sent to provincial-level Departments of Finance for appraisal and submission to the provincial-level People's Committees for approval;

b/For household solid waste disposal facilities invested by non-budget funds, the project owners shall prepare and submit price options to provincial-level Departments of Finance for appraisal in coordination with related agencies and submission to provincial-level People's Committees for approval;

c/For inter-regional or inter-provincial household solid waste disposal projects, the project owners shall prepare price options and send them to the Ministry of Finance for appraisal in coordination with related ministries and sectors. The appraisal results shall be used as a basis for the People's Committees of the project-covered provinces to approve the prices of household solid waste disposal services.

Article 27. Responsibilities of ministers in the management of household solid wastes

- 1. The Minister of Natural Resources and Environment:
- a/To guide the order and procedures and dossiers of request for the certification, adjustment and certification of satisfaction of environmental protection requirements on household solid waste disposal facilities;
- b/To guide techniques and the management process in the classification, storage, gathering, transshipment, transportation, preliminary processing, re-use, recycling, co-disposal and disposal of, and recovery of energy from, household solid wastes; technical requirements and management process for cases in which certification of satisfaction of environmental protection requirements specified in Clause 12, Article 21 of this Decree is not required and other cases which arise in reality;
- c/ To organize the implementation of contents on household solid waste management to serve the formulation and implementation of environmental protection master plans as prescribed in Article 98 of the Environmental Protection Law;
- d/ To organize the management and inspection of environmental protection activities regarding household solid waste management;
- dd/ To assume the prime responsibility for, and coordinate with the Minister of Construction in, organizing the establishment of a database on household solid wastes, managing, exploiting, exchanging and providing information relating to household solid waste management.
 - 2. The Minister of Construction:
- a/To guide the management of the construction of household solid waste disposal facilities according to the approved master plans; the methods of formulation and management of expenses as well as methods of pricing household solid waste disposal services;
- b/ To announce economic and technical norms on household solid waste collection, transportation and disposal; to allocate investment capital for construction of household solid waste disposal facilities;
- c/To coordinate with the Minister of Natural Resources and Environment in establishing the database on household solid wastes, managing, exploiting, exchanging and providing information relating to household solid waste management.
- 3. The Minister of Sciences and Technology shall assume the prime responsibility for, and coordinate with the Minister of Construction and the Minister of Natural Resources and Environment in, appraising new household solid waste disposal technologies researched and applied for the first time in Vietnam.
- **Article 28.** Responsibilities of provincial-level People's Committees in the management of household solid wastes

- 1. To organize the management of household solid wastes in their provinces, assign and decentralize responsibilities to specialized agencies and decentralize the household solid waste management to the People's Committees at all levels as prescribed.
- 2. To promulgate specific regulations on household solid waste management; support and incentive mechanisms and policies to encourage the household solid waste collection and transportation and the investment in household solid waste disposal facilities as suitable to their local socio-economic development conditions.
- 3. To direct the formulation, appraisal, approval and implementation of solid waste disposal master plans and environmental protection master plans according to their competence; to make annual plans for household solid waste collection, transportation and disposal and allocate funds for their implementation in conformity with their local socio-economic development programs and plans.
- 4. To establish sanitation charge rates for households, individuals, production, business and service establishments and organizations and submit them to the provincial-level People's Councils for decision.
- 5. To annually report to the Ministry of Natural Resources and Environment and the Ministry of Construction on the management of household solid wastes in their localities before March 31 of the following year.
- 6. To organize the dissemination of and education in the law on household solid waste management; to direct the inspection, examination and handling of violations of the law on solid waste management in their localities.

Chapter IV MANAGEMENT OF ORDINARY INDUSTRIAL SOLID WASTES

Article 29. Identification, classification and storage of ordinary industrial solid wastes

- 1. Ordinary industrial solid wastes shall be identified and separated from hazardous wastes; if it is impossible to separate them, they shall be managed according to regulations on hazardous wastes.
- 2. The identification, classification and storage of ordinary industrial solid wastes must satisfy the prescribed technical requirements and management process.

Article 30. Responsibilities of ordinary industrial solid waste source owners

- 1. To identify, classify and store ordinary industrial solid wastes under Article 29 of this Decree.
- 2. To carry out by themselves the re-use, preliminary processing, recycling, disposal, co-disposal and energy recovery or sign contracts for transfer to units licensed to transport and dispose of ordinary industrial solid wastes.
- 3. To periodically report on the generation and management of ordinary industrial solid wastes in the periodical environment supervision reports.

Article 31. Collection and transportation of ordinary industrial solid wastes

- 1. The collection, transportation and transshipment of ordinary industrial solid wastes must ensure that they are not dropped, causing dispersal of dust, odor or water leakage and must satisfy the prescribed technical requirements and management process.
- 2. Licensed hazardous waste disposers may collect and transport ordinary industrial solid wastes.

- 3. Ordinary industrial solid waste collectors and carriers shall hand over the wastes to lawfully licensed ordinary industrial solid waste disposal facilities.
- **Article 32.** Environmental protection requirements on ordinary industrial solid waste disposal facilities
- 1. To have an environmental impact assessment report approved by a competent agency, for investment projects on waste disposal facilities.
- 2. The systems and equipment for disposal (including preliminary processing, recycling, co-disposal and energy recovery), packages, containing equipment, temporary storage or transshipment stations, transporting vehicles (if any) must satisfy the prescribed technical requirements and management process.
- 3. To have environmental protection works within their premises, which satisfy the prescribed technical requirements and management process.
 - 4. To have an environment management and supervision program.
- 5. Ordinary industrial solid waste disposal facilities shall be certified by competent agencies as satisfying environmental protection requirements before official operation.
- 6. Before the trial operation, ordinary industrial solid waste disposers shall report to an agency competent to certify satisfaction of environmental protection requirements on their trial operation plan. The duration of trial operation of ordinary industrial solid waste disposal must not exceed 6 (six) months.
- 7. The Ministry of Natural Resources and Environment shall certify, or adjust the certification of, satisfaction of environmental protection requirements on:
- a/ Ordinary industrial solid waste disposal facilities with environmental impact assessment reports approved by the Ministry of Natural Resources and Environment;
- b/ Ordinary industrial solid waste disposal facilities receiving wastes for disposal from waste source owners in inter-provincial regions;
- c/ The facilities combining the disposal of ordinary industrial solid wastes with the disposal of hazardous wastes (having the hazardous waste disposal license as substitute).
- 8. Provincial-level People's Committees shall certify, or adjust the certification of, satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities under their competence to approve environmental impact assessment reports, and facilities that receive wastes for disposal only from waste source owners in their provinces.
- 9. The time for submission of dossiers of registration for satisfaction of environmental protection requirements on ordinary industrial solid waste disposal is as follows:
- a/ Not more than 6 (six) months after starting the trial operation, for projects with environmental impact reports approved;
- b/ For projects involving different stages, the dossiers of registration for certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities can be submitted for each stage of the project.
- 10. An ordinary industrial solid waste disposal facility that witnesses any changes in scale, capacity or technology shall compile a dossier of request for adjustment of certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities and submit it to a competent agency for consideration and adjustment of certification according to regulations.
- 11. The certification of satisfaction of environmental protection requirements prescribed in this Article does not apply to the following cases:

- a/ Ordinary industrial solid waste disposal facilities have been put into operation and certified as completing the environmental protection works as prescribed before this Decree takes effect;
 - b/ Ordinary industrial solid wastes are re-used;
- c/ The self-reuse, recycling, co-disposal, disposal of, and recovery of energy from, ordinary industrial solid wastes generated within the facilities;
- d/ The research and development of ordinary industrial solid waste disposal technologies are carried out in the laboratory environment.
 - 12. The provisions of Clause 1 of this Article do not apply to the following cases:
- a/Production establishments that have been lawfully put into operation wish to additionally conduct the ordinary industrial solid waste disposal based on their existing production technologies without having to make again environmental impact assessment reports;
- b/ Waste disposal facilities that have been lawfully put into operation wish to renovate and upgrade themselves with more advanced technologies to reduce or control adverse environmental impacts, raise the disposal efficiency and save natural resources and energy, without having to make again environment impact assessment reports.

Article 33. Responsibilities of ordinary industrial solid waste disposers

- 1. To compile dossiers for certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities.
- 2. For the cases specified in Clause 12 of Article 32, to submit a plan to a competent agency specified in Clauses 7 and 8, Article 32 of this Decree, for consideration and approval before starting their operation.
- 3. To dispose of ordinary industrial solid wastes suitable to their operation areas, capacity, waste types, and waste disposal systems and equipment already constructed, installed and certified.
- 4. To perform the responsibilities of hazardous waste source owners as prescribed, if the hazardous wastes are generated from the facilities.
- 5. To fully implement the contents of certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities and the dossiers of request for certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities enclosed with the certificate's contents. These dossiers shall be used as a specific basis for the environmental management and supervision of the ordinary industrial solid waste disposers.
- 6. To make, use, archive and manage reports, dossiers, documents and daily records related to ordinary industrial solid waste management as prescribed. If the ordinary industrial solid waste disposer is concurrently the hazardous waste or household solid waste disposer, the reports, dossiers, documents and daily records for the management of hazardous wastes or household solid wastes and ordinary industrial solid wastes may be integrated.
- 7. To apply the national standards on environmental management systems (TCVN ISO 14001) within twenty-four (24) months after obtaining the certification of satisfaction of environmental protection requirements, or after this Decree takes effect, for operating facilities.
- 8. To implement the plan on pollution control and environmental restoration, at the same time to notify them in writing to agencies competent to certify satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities within six (6) months after operation termination.

- **Article 34.** Responsibilities of the Minister of Natural Resources and Environment in the management of ordinary industrial solid wastes
- 1. To perform the unified state management of ordinary industrial solid wastes and promulgate regulations on:
- a/ Technical requirements and management process in the classification, storage, transshipment, transportation, preliminary processing, re-use, co-disposal and disposal of, and recovery of energy from, ordinary industrial solid wastes; technical requirements and management process related to the environmental protection requirements on ordinary industrial solid waste disposal facilities and the performance of responsibilities during the operation of waste source owners and ordinary industrial solid waste disposers;
- b/ The order and procedures for certification and adjustment of certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities;
- c/ Technical requirements and management process for cases in which certification of satisfaction of environmental protection requirements as specified in Clause 11, Article 32 of this Decree, is not required, and other cases which arise in reality.
- 2. To organize the management and inspection of activities as well as dossiers, contracts and reports related to ordinary industrial solid waste disposers according to his/her competence.
- 3. To organize the establishment and operation of a national database on ordinary industrial solid wastes; to promote the use of the information system and emails for notification to, guidance for, and discussion with, organizations and individuals in the course of certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities.
- 4. To organize the implementation of contents on ordinary industrial solid waste management to serve the formulation and implementation of environmental protection master plans as prescribed in Article 98 of the Environmental Protection Law.
- **Article 35.** Responsibilities of provincial-level People's Committees in the management of ordinary industrial solid wastes
- 1. To organize the management and inspection of activities as well as dossiers, contracts and reports related to ordinary industrial solid waste disposers certified by the provincial-level People's Committees as satisfying environmental protection requirements.
- 2. To organize the updating of the national database on ordinary industrial solid wastes; to promote the use of the information system or emails for notification to, guidance for, and exchange with organizations and individuals in the course of certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities.
- 3. To make annual statistics on, and update the situation of generation and management of ordinary industrial solid wastes in their localities and report them to the Ministry of Natural Resources and Environment for summarization and monitoring. The reporting deadline is March 31 of the following year.

Chapter V

MANAGEMENT OF WASTEWATER

Article 36. General principles of wastewater management

- 1. Wastewater shall be managed through reduction, re-use, collection, and treatment up to the environment-related technical regulations.
 - 2. The discharge of wastewater shall be managed by both administrative boundary and basin.

- 3. Wastewater generators shall pay wastewater treatment service charges and prices as prescribed by law.
 - 4. To encourage activities aiming to reduce and re-use wastewater.

Article 37. Wastewater collection and treatment

- 1. Industrial parks must have a separate rainwater collection system and a centralized wastewater collection and treatment system up to the environment-related technical regulations. The wastewater treatment system must have full capacity for treatment of the whole volume of generated wastewater of establishments in the industrial park and shall be built and operated before the establishments in the industrial park are put into operation. Nearby industrial parks may use the common centralized wastewater treatment system.
- 2. Urban centers, residential quarters, high-rises, and trade and service complexes must have rainwater collection and wastewater collection and treatment systems according to planning, which must comply with the technical regulations on construction of technical infrastructure.
- 3. Production, business or service establishments must have rainwater collection and wastewater collection and treatment systems in the following forms:
- a/ Self-treatment at the wastewater treatment systems of the establishments up to the environment-related technical regulations before being discharged into the environment;
- b/ Satisfaction of requirements on input wastewater before it enters the centralized wastewater treatment system of the industrial park or craft village under the regulations of the owner of the technical infrastructure system of the industrial park or craft village;
- c/Transfer thereof to the licensed treatment unit outside the wastewater-generating facilities according to regulations: For hazardous wastewater, it shall be managed under the provisions on hazardous waste management in Chapter II of this Decree; for non-hazardous wastewater, it may be carried only to a unit with proper functions for treatment.

Article 38. Discharge of wastewater into receiving waters

- 1. The discharge of wastewater of production, business and service establishments into receiving sources shall be uniformly carried out under the national environment-related technical regulations promulgated by the Ministry of Natural Resources and Environment or under the local environment-related technical regulations.
- 2. Wastewater sources discharged into receiving waters shall be regularly examined and evaluated.
- 3. The discharge of wastewater into receiving sources shall be managed in conformity with the water environment load and the prescribed wastewater discharge quotas.

Article 39. Observation of wastewater discharge

- 1. The discharge of wastewater of production, business and service establishments as well as industrial parks shall be periodically observed according to the approved environmental impact assessment reports, the certified environmental protection plans or equivalent dossiers and papers as prescribed by law.
- 2. Industrial parks shall be installed with continuous automatic wastewater observation systems that transmit data directly to provincial-level Departments of Natural Resources and Environment of the localities where such industrial parks are located.
- 3. Production, business and service establishments lying outside industrial parks, each with the discharging capacity of at least 1,000 m³/day (excluding cooling water), shall be installed

with a continuous automatic wastewater observation system that transmits data directly to provincial-level Departments of Natural Resources and Environment of the localities where such establishments are located.

4. Production, business and service establishments lying outside industrial parks, each with the discharging capacity of under 1,000 m³/day (excluding cooling water), which are likely to cause adverse environmental impacts, are encouraged to install a continuous automatic wastewater observation system.

Article 40. Management of post-treatment wastewater and mud

- 1. Post-treatment wastewater shall be collected for re-use or discharge into receiving waters.
- 2. The re-use of post-treatment wastewater must comply with specific regulations applicable to each use purpose.
 - 3. Mud from a wastewater treatment system shall be managed as follows:
- a/ Mud with hazardous elements surpassing the hazardous waste thresholds shall be managed under the provisions on hazardous waste management in Chapter II of this Decree;
- b/ Mud without hazardous elements in excess of the hazardous waste thresholds shall be managed under the provisions on management of ordinary industrial solid wastes in Chapter IV of this Decree.

Article 41. Water environment load and wastewater discharge quotas

- 1. The water environment load shall be assessed according to every polluting parameter, which shall be used as a basis for control of such polluting parameter in every wastewater discharge source in the basin, based on the highest negative impacts.
- 2. The load shall be assessed on the basis of characteristics of use purpose and self-cleaning capability of the receiving environment; scale and nature of current wastewater discharge sources and according to the socio-economic development master plan.
- 3. Wastewater discharge quotas shall be determined and allocated based on the water environment load corresponding to each stage of the socio-economic development master plan.
- 4. The water environment load and wastewater discharge quotas shall be used as a basis for formulation or adjustment of socio-economic development master plans as well as sectoral development master plans; and for consideration and approval of investment policy and investment certification for projects.

Article 42, Resources for wastewater management

- 1. The State shall encourage all forms of investment in wastewater management in accordance with the law on investment.
- 2. Revenues from household wastewater treatment service charges must incrementally make up for costs of centralized household wastewater treatment services.
- 3. Revenues from (household and industrial) wastewater shall be used for the purposes of preventing, limiting, controlling and remedying pollution caused by wastewater.

Article 43. Responsibilities of ministers in wastewater management

1. The Minister of Natural Resources and Environment:

a/ To establish the technical requirements and management process on: re-use of wastewater; management of cooling water; collection and treatment of first-run rainwater that is possibly polluted within the premises of production, business or service establishments; transfer of wastewater for treatment outside the establishments; establishments that are

required to have a wastewater treatment system; continuous automatic wastewater observation for establishments likely to cause large-scale environmental pollution; physical conditions and technical infrastructure facilities of agencies receiving continuous automatic wastewater observation data and the information and reporting regime;

- b/ To develop and promulgate instructions on assessment of the load of receiving waters, zone the use of, and determine wastewater discharge quotas for, receiving waters; to develop, promulgate and allocate wastewater discharge quotas for inter-provincial river basins; manage the exchange of wastewater discharge quotas;
- c/ To guide the management and treatment of wastewater and promulgate uniform environment-related technical regulations on wastewater discharge into receiving waters;
- d/ To observe and control water quality at receiving waters in inter-provincial or transnational river basins;
- dd/ To develop processes for investigation and assessment of, and establishment of a database on, wastewater sources in river basins; to manage the databases on wastewater sources in inter-provincial river basins and operate the mechanism of sharing information on wastewater sources in inter-provincial or transnational river basins.
- 2. Responsibilities of ministers involved in the management of wastewater of a number of peculiar discharge sources must comply with the provisions of Chapter VII of this Decree.
- **Article 44.** Responsibilities of provincial-level People's Committees in wastewater management
- 1. To direct and organize the collection and treatment of household wastewater in their provinces.
- 2. To observe and control water quality at receiving waters in their provinces; to invest in physical foundations and technical infrastructure for receipt and management of results of continuous automatic wastewater observation.
- 3. To organize the assessment of the load of, to promulgate and distribute wastewater discharge quotas for, intra-provincial river basins; to announce information on wastewater receiving sources that are no longer capable of receiving wastewater in areas under their management.
- 4. To organize the investigation, evaluation and creation of the database on wastewater sources, the management, inspection and supervision of sources of wastewater discharged into intra-provincial receiving waters; to coordinate with the Ministry of Natural Resources and Environment and related localities in organizing the management, inspection and supervision of sources of wastewater discharged into inter-provincial receiving sources as prescribed.
- 5. To annually report on the wastewater management and treatment to the Ministry of Natural Resources and Environment for summarization and monitoring.

Chapter VI

MANAGEMENT OF INDUSTRIAL EXHAUST GASES

Article 45. Registration and inventory of, establishment of a database on, industrial exhaust gases

1. Project owners and establishment owners listed as voluminous exhaust gas sources specified in the Appendix to this Decree shall register industrial exhaust gas source owners, except waste source owners conducting waste co-disposal eligible to be granted a hazardous

waste disposal license, and those certified as satisfying environmental protection requirements on household solid waste or ordinary industrial solid waste disposal facilities.

- 2. The registration of industrial exhaust gas source owners shall be carried out when production establishments officially operate or plan to change industrial exhaust gas sources (increasing the discharged volume of exhaust gases and number of exhaust gas sources).
- 3. The Ministry of Natural Resources and Environment shall receive dossiers of registration of waste source owners; inventory industrial exhaust gases and establish a database on industrial exhaust gases.

Article 46. Grant of industrial exhaust gas discharge permits

- 1. The Ministry of Natural Resources and Environment shall consider dossiers of industrial exhaust gas source owner registration and grant permits for the discharge of industrial exhaust gases to operating establishments listed as voluminous exhaust gas sources specified in the Appendix to this Decree, except exhaust gas source owners conducting co-disposal of wastes eligible to be granted a hazardous waste disposal license and those certified as satisfying environmental protection requirements on household solid waste or ordinary industrial solid waste disposal facilities.
- 2. The validity of an industrial exhaust gas discharge permit must be 5 (five) years. In case of changing exhaust gas discharge sources (increase in the volume of exhaust gases or number of exhaust gas sources), the establishments shall compile dossiers of request for re-grant of industrial exhaust gas discharge permits.
- 3. The grant of industrial exhaust gas discharge permits shall be effected from January 1, 2018.

Article 47. Continuous automatic observation of industrial exhaust gases

- 1. Industrial exhaust gas source owners on the list of voluminous exhaust gas sources specified in the Appendix to this Decree shall install continuous automatic exhaust gas observation equipment that transmit data directly to provincial-level Departments of Natural Resources and Environment of localities where these owners are located.
- 2. Provincial-level Departments of Natural Resources and Environment shall transmit continuous automatic exhaust gas observation data to the Ministry of Natural Resources and Environment.
- **Article 48.** Responsibilities of the Minister of Natural Resources and Environment in the management of industrial exhaust gases

The Minister of Natural Resources and Environment shall prescribe the order and procedures for industrial exhaust gas registration and inventory; technical requirements and connection standards for transmission of continuous automatic industrial exhaust gas observation data.

Chapter VII

MANAGEMENT OF A NUMBER OF PARTICULAR WASTES

Article 49. Management of medical wastes

- 1. Medical wastes (excluding wastewater entering wastewater treatment systems of medical establishments) shall be classified at source as follows:
- a/ Hazardous medical wastes, including contagious wastes; non-contagious hazardous wastes (classified according to the list of hazardous wastes and provisions on hazardous waste

management in Chapter II of this Decree); radioactive wastes (managed under regulations on radiation);

- b/ Ordinary medical wastes, including ordinary solid wastes (including household solid wastes); non-hazardous liquid waste products.
- 2. Contagious wastes shall be strictly managed at the highest degree in medical establishments, ensuring non-dispersal of germs affecting the environment and human health.
- 3. If contagious wastes are mislaid into household solid wastes or ordinary wastes, the mixture of such wastes shall be managed according to regulations on hazardous wastes.
- 4. Medical establishments shall base on master plans, geographical factors and economic and environmental conditions to select and apply one of the following hazardous medical waste disposal options:
- a/ Centralized hazardous medical waste disposal facility or centralized waste disposal facility with medical waste disposal items;
- b/ Disposal of hazardous medical wastes after the medical establishment cluster model (medical wastes of a cluster of medical establishments are collected and treated in the disposal system and equipment of an establishment in the cluster);
- c/ Disposal of hazardous medical wastes in the disposal system and equipment within the premises of each medical establishment.
 - 5. Disposal of hazardous medical wastes:
- a/ To give priority to the selection of environment-friendly non-incineration technologies which ensure the disposal of wastes up to the environment-related technical regulations;
- b/ Contagious wastes, after being disinfected, shall be treated like ordinary wastes by appropriate methods.
- 6. The Minister of Natural Resources and Environment shall stipulate in detail the transportation and disposal of medical wastes.
- 7. The Minister of Health shall assume the prime responsibility for, and coordinate with the Minister of Natural Resources and Environment in, stipulating in detail the classification, storage and management of medical wastes within the premises of medical establishments and wastes generated from funeral and cremation activities.

Article 50. Management of solid wastes from construction activities

- 1. Solid wastes from construction activities (including renovation and demolition, referred collectively to as construction solid wastes) shall be classified and managed as follows:
- a/ Earth and mud discharged from earth excavation, surface earth dredging, digging for building foundations shall be used for reinforcement of cultivation land or appropriate land areas;
- b/ Earth and rocks, solid wastes from building materials (brick, tile, mortar, concrete, expired gluing materials) shall be recycled for use as building materials or re-use as filling and leveling materials for construction works, or buried in construction solid waste burial sites;
- c/ Recyclable solid wastes such as glass, iron, steel, wood, paper and plastics shall be recycled and re-used.
- 2. Urban households, when renovating or demolishing buildings, shall adopt measures to collect, transport and treat construction debris according to regulations.

- 3. Households in rural, deep-lying or remote areas, where there exist no systems for waste collection upon renovation or demolition of buildings, shall manage the construction debris under the guidance of local administrations and may not dump the debris on roads, in rivers, ditches, streams, canals and groundwater sources.
- 4. The Minister of Construction shall assume the prime responsibility for, and coordinate with the Minister of Natural Resources and Environment in, stipulating in detail the classification, collection, re-use, recycling and disposal of construction wastes.

Article 51. Management of wastes from agricultural activities

- 1. Hazardous wastes being toxic chemical packages or hazardous chemical products used in agricultural or forestry production shall be collected, stored, transported and disposed of according to regulations on management of hazardous wastes.
- 2. Plant protection chemical packages, after being used and cleansed from hazardous components, shall be managed like ordinary wastes.
- 3. Husbandry wastewater shall be re-used for crop watering or used in other agricultural activities as prescribed by the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment.
- 4. The Minister of Agriculture and Rural Development shall assume the prime responsibility for, and coordinate with the Minister of Natural Resources and Environment in, guiding in detail the collection and storage of wastes generated from agricultural activities.
- 5. The Minister of Natural Resources and Environment shall specify the disposal of packages, plant protection chemicals, fertilizers and veterinary drugs generated from agricultural activities.

Article 52. Management of wastes from transport activities

- 1. Wastes generated in the Vietnamese territory from international means of transport shall be managed under the provisions of this Decree, without applying the law on import and trade.
- 2. The Minister of Transport shall assume the prime responsibility for, and coordinate with the Minister of Natural Resources and Environment in, establishing the technical requirements and management process applicable to hazardous wastes, ordinary solid waste, wastewater, and exhaust gases generated from land, air, maritime, inland waterway and railway transport activities in conformity with treaties to which the Socialist Republic of Vietnam is a contracting party.

Article 53. Management of dredged mud

- 1. Dredged mud (from the sea, rivers, canals, ditches, water drainage systems and other water areas) shall be collected, transported, dumped, re-used, recycled and disposed of according to law.
- 2. The Minister of Construction shall stipulate the management of mud from septic tanks and mud from urban water drainage systems.
- 3. The Minister of Agriculture and Rural Development shall stipulate the management of mud dredged from canals, ditches and irrigation works.
- 4. The Minister of Natural Resources and Environment shall stipulate the management of mud dredged from the sea, rivers, lakes and other water areas.
- 5. Provincial-level People's Committees shall stipulate dredged mud dump and disposal sites.

Article 54. Management of non-hazardous liquid waste products

- 1. Waste source owners shall organize the re-use, recycle, disposal, co-disposal of, recovery of energy from, non-hazardous waste products up to the environment-related technical regulations.
- 2. If non-hazardous liquid waste products can be treated at on-spot wastewater treatment systems of generating establishments or industrial parks, they shall be managed under the provisions on wastewater management in Chapter V of this Decree.
- 3. If non-hazardous liquid waste products cannot be treated at generating establishments, they shall only be carried to functional establishments for treatment which have obtained a written approval from the agency that has approved the environmental impact assessment reports, environmental protection schemes and environmental protection plans (or equivalent dossiers and papers) for such establishments.
- 4. The Minister of Natural Resources and Environment shall issue technical regulations and management process related to the identification, classification, storage, collection, transportation, reuse, recycling and treatment of non-hazardous liquid waste products.

Chapter VIII

ENVIRONMENTAL MANAGEMENT IN THE IMPORT OF SCRAPS

Article 55. Subjects entitled to import scraps from overseas into Vietnam

- 1. Organizations and individuals directly using scraps as production raw materials.
- 2. Organizations and individuals undertaking the entrusted import of scraps for organizations or individuals using imported scraps as production raw materials.

Article 56. Conditions on environmental protection in the import of scraps

- 1. Organizations and individuals directly importing scraps for use as production raw materials must satisfy the following conditions:
 - a/ For imported scrap storehouses
- Having a rainwater collection system; a system for collection and treatment of wastewater generated during the storage of scraps, which are up to the national technical regulations on environment.
- Having a foundation level preventing flooding; the floor surface in the scrap storage place designed to prevent the rainwater overflow from the outside; the floors free of cracks, made by non-absorbent material, and durable against the calculated highest weight of scraps.
- Having walls and partitions made of fire-proof material. Having roofs made of fire-proof material against sunlight and rain for the entire scrap storage place. Having measures or a design to limit the wind directly entering the storehouse.
- Having fire extinguishing equipment (at least foam fire extinguishers and sand for flame extinction), fire exit diagrams and signs as instructed by competent fire prevention and fighting agencies in accordance with the law on fire prevention and fighting.

b/ Imported scrap storing yards

- Having a system for collection and methods of treatment of first-run rainwater overflow across the storing yards and wastewater generated during the storage of scraps, which are up to the environment-related technical regulations.
- Having a foundation level preventing flooding; the floors free of cracks, made by non-absorbent material, and durable against the calculated highest weight of scraps.

- Having measures to minimize dust from the storing yards.
- Having fire prevention and fighting equipment (foam fire extinguishers, sand for flame extinction) as instructed by competent fire prevention and fighting agencies in accordance with the law on fire prevention and fighting.
- c/ Technologies and equipment for recycling and re-use of scraps must satisfy the prescribed technical requirements and management process;
- d/ Having technologies and equipment for disposal of impurities in scraps up to the environment-related technical regulations. In case of absence of these technologies and equipment, scraps shall be carried to a unit with proper functions for disposal;
 - dd/ Paying a deposit for imported scrap security as prescribed by this Decree;
- e/ Making a written commitment to re-export or dispose of imported scraps which fail to meet the environmental protection requirements.
 - 2. The entrusted importers must satisfy the following conditions:
- a/ Having entrusted import contracts signed with the organizations or individuals using imported scraps as production raw materials. These organizations and individuals must meet the requirements specified in Clause 1 of this Article;
 - b/ Paying a deposit for imported scrap security as prescribed by this Decree;
- c/ Making a written commitment to re-export or dispose of imported scraps which fail to meet the environmental protection requirements;
- d/ Being not allowed to store imported scraps if they have no storehouses and storing yards meeting the conditions specified in Clause 1 of this Article.
- 3. The Minister of Natural Resources and Environment shall stipulate the order and procedures for certification of satisfaction of environmental protection conditions in the import of scraps for use as production raw materials as prescribed in Clauses 1 and 2 of this Article; guide the technical requirements and environmental protection for technologies and equipment for disposal of impurities accompanying imported scraps as prescribed at Point d, Clause 1 of this Article.

Article 57. Purpose and method of paying deposits for imported scrap security

- 1. The payment of deposits for imported scrap security aims to ensure that scrap importers take responsibility for handling environmental risks and pollution which may arise from the imported scrap lots.
- 2. Scrap importers shall pay deposits at Vietnam Environmental Protection Fund or a commercial bank at which they open main transaction accounts.
 - 3. Deposit payment method:
 - a/ Deposit money shall be paid and refunded in Vietnam dong;
 - b/ Deposit money is entitled to non-term interest from the date of deposit payment.

Article 58. Deposit amounts for imported scrap security

- 1. Importers of iron and steel scraps shall pay a deposit amount as follows:
- $\,$ a/ If the imported volume is under 500 tons, the deposit amount must account for 10% of the total value of the imported scrap lot;
- b/ If the imported volume is between 500 tons and under 1,000 tons, the deposit amount must account for 15% of the total value of the imported scrap lot;

- c/ If the imported volume is 1,000 tons or more, the deposit amount must account for 20% of the total value of the imported scrap lot.
 - 2. Importers of paper and plastic scraps shall pay a deposit amount as follows:
- a/ If the imported volume is under 100 tons, the deposit amount must account for 15% of the total value of the imported scrap lot;
- b/ If the imported volume is between 100 tons and under 500 tons, the deposit amount must account for 18% of the total value of the imported scrap lot;
- c/ If the imported volume is 500 tons or more, the deposit amount must account for 20% of the total value of the imported scrap lot.
- 3. Scrap importers not mentioned in Clauses 1 and 2 of this Article shall pay a security deposit for the imported scraps accounting for 10% of the total value of the imported scrap lot.

Article 59. Process of paying security deposits for imported scraps

- 1. Scrap importers shall pay a deposit at least 15 working days before carrying out the import customs procedures.
- 2. Upon receiving the deposit, Vietnam Environmental Protection Fund or the commercial bank shall certify the deposit payment. A certified copy of the deposit certification paper shall be submitted together with the customs dossiers for imported scraps.

Article 60. Management and use of deposit amounts for imported scraps

- 1. Vietnam Environmental Protection Fund or commercial banks at which organizations and individual pay security deposits for imported scraps shall block the deposit amounts.
- 2. Vietnam Environmental Protection Fund or commercial banks having received deposits shall refund the deposit amounts to scrap importers within 5 (five) working days after receiving the latter's written requests enclosed with customs declarations appended with the customs clearance seal or certified copies of customs declarations appended with the mark that scraps have been re-exported.
- 3. If the imported scraps are not cleared from customs procedures or cannot be re-exported, the deposit amount shall be used for payment of expenses for handling scraps in violation. If the deposit amount is not enough for paying all expenses for handling scraps in violation, the scrap importer shall pay these expenses.
- 4. For the remaining deposit amount after payment of expenses for handling scraps in violation, within 5 (five) working days after obtaining the written opinion of the provincial-level People's Committee of the locality where violations are handled, on the completion of the handling of the scraps, Vietnam Environmental Protection Fund or commercial bank shall refund the remaining deposit amount to the scrap importer concerned.
- 5. The Minister of Natural Resources and Environment shall assume the prime responsibility for, and coordinate with the Minister of Finance in, prescribing the order and procedures for the use of the deposit amounts for handling of scraps in violation which cannot be re-exported.

Article 61. Responsibilities of the Minister of Natural Resources and Environment

- 1. To assume the prime responsibility for, and coordinate with related agencies in, guiding and inspecting the import of scraps for use as production raw materials in accordance with the Environmental Protection Law.
 - 2. To submit to the Prime Minister for consideration and decision the trial import of scraps

and the adjustment and supplementation of the list of scraps allowed for import from overseas for use as production raw materials.

Article 62. Responsibilities of provincial-level People's Committees

- 1. The provincial-level People's Committees of localities where production establishments are located shall guide the periodical inspection of environmental protection activities of scrap importers and report to the Ministry of Natural Resources and Environment on the scrap import and use and environment matters related to imported scraps before March 31 of the following year.
- 2. The provincial-level People's Committees of localities where violations are committed shall:
 - a/ Direct, guide, plan and organize the handling of imported scraps;
- b/ Assume the prime responsibility for, and coordinate with the provincial-level People's Committees of localities where production establishments are located in, handling the violations related to the imported scraps.

Article 63. Responsibilities of scrap importers and users

- 1. To comply with regulations on environmental protection in the import of scraps.
- 2. To pay all expenses for handling imported scraps if the deposit amount is not enough for handling scraps in violation of environmental protection regulations.
- 3. Annually, before January 15 of the following year, owners of production establishments using imported scraps shall send reports on the import and use of scraps in the year to the provincial-level Departments of Natural Resources and Environment.

Chapter IX IMPLEMENTATION PROVISIONS

Article 64. Transitional provisions

- 1. The hazardous waste source owner registration books lawfully granted before this Decree takes effect may continue to be used.
- 2. The hazardous waste management permits lawfully granted before this Decree takes effect may continue to be used until they cease to be valid.
- 3. Dossiers already received by competent state agencies for settlement according to the administrative procedures on management of wastes and scraps before this Decree takes effect shall be handled according to the provisions of law applicable at the time of receipt.
- 4. If household solid waste disposal facilities (except the cases specified at Point b, Clause 12, Article 21 of this Decree) have their environmental impact assessment reports approved before this Decree takes effect, but have not yet been inspected and certified as completing the environmental protection works, such shall be replaced by the certification of satisfaction of environmental protection requirements. If the facilities have been inspected and certified as completing the environmental protection works and need the certification of satisfaction of environmental protection requirements on household solid waste disposal facilities, they shall submit dossiers as prescribed.
- 5. If ordinary industrial solid waste disposal facilities have their environmental impact assessment reports approved before this Decree takes effect but have not yet been inspected and certified as completing the environmental protection works, such shall be replaced by the certification of satisfaction of environmental protection requirements. If the facilities have been inspected and certified as completing the environmental protection works and need the

certification of satisfaction of environmental protection requirements on ordinary industrial solid waste disposal facilities, they shall submit dossiers as prescribed.

6. Certificates of eligibility for import of scraps granted before this Decree takes effect may be further used for importing scraps until they cease to be valid.

Article 65. Guidance and implementation responsibility

- 1. The Ministry of Natural Resources and Environment shall, within the ambit of its functions, tasks and powers, guide and organize the implementation of this Decree.
- 2. Ministers, heads of ministerial-level agencies, heads of government-attached agencies, and chairpersons of provincial-level People's Committees shall implement this Decree; send annual reports on arising issues and waste management according to their assigned competence (the reporting period lasts from January 1 to December 31 every year) to the Ministry of Natural Resources and Environment for summarization and monitoring before March 31 of the following year.

Article 66. Effect

- 1. This Decree takes effect on June 15, 2015.
- 2. All the articles (excluding Articles 7, 8, 9, 10, 11, 13, 15, 16, 17 and 18) of the Government's Decree No. 59/2007/ND-CP of April 9, 2007, providing the management of solid wastes; Clause 4 of Article 4, Clause 6 of Article 4, and Clause 3 of Article 45, of the Government's Decree No. 80/2014/ND-CP of August 6, 2014, on water drainage and wastewater treatment; Point 1.3 of Section X, Part A of the detailed list of charges and fees, promulgated together with the Government's Decree No. 24/2006/ND-CP of March 6, 2006, amending and supplementing a number of articles of the Government's Decree No.57/2002/ND-CP of June 3, 2002, detailing the implementation of the Charge and Fee Ordinance; the Government's Decree No. 174/2007/ND-CP of November 29, 2007, on environmental protection charges applicable to solid waste cease to be effective from the date this Decree takes effect.-

On behalf of the Government
Prime Minister
NGUYEN TAN DUNG

AppendixLIST OF VOLUMINOUS EXHAUST SOURCES

(Promulgated together with the Government's Decree No. 38/2015/ND-CP of April 24, 2015)

No.	Type	Characteristics
1.	Steel cast manufacture	Output exceeding 200,000 tons/year
2	Thermal power	All, excluding thermo-power plants operated by natural gas
3	Cement	All
4	Chemicals and chemical fertilizers	Output exceeding 10,000 tons/year
5	Petroleum industry	Output exceeding 10,000 tons/year
6	Industrial steam boiler	Output exceeding 20 tons of steam/hour