

Cabinet Order Concerning the Control of Hazardous Materials

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CABINET ORDER CONCERNING THE CONTROL OF HAZARDOUS MATERIALS

(CABINET ORDER 306, SEP.26, 1959)

Amendments:

- | | |
|-------------------------------------|--------------------------------------|
| (1) Cabinet Order 185 Jun.30, 1960 | (23) Cabinet Order 86 Mar.31, 1987 |
| (2) Cabinet Order 132 Apr.15, 1963 | (24) Cabinet Order 358 Dec.27, 1988 |
| (3) Cabinet Order 380 Dec.19, 1963 | (25) Cabinet Order 40 Mar.15, 1989 |
| (4) Cabinet Order 380 Dec.28, 1964 | (26) Cabinet Order 101 Apr.6, 1990 |
| (5) Cabinet Order 308 Sep.21, 1965 | (27) Cabinet Order 24 Mar.13, 1991 |
| (6) Cabinet Order 158 Jun.13, 1969 | (28) Cabinet Order 366 Dec.2, 1992 |
| (7) Cabinet Order 20 Mar.24, 1970 | (29) Cabinet Order 268 Jul.30, 1993 |
| (8) Cabinet Order 168 Jun.1, 1971 | (30) Cabinet Order 37 Mar.11, 1994 |
| (9) Cabinet Order 117 Apr.28, 1972 | (31) Cabinet Order 214 Jul.1, 1994 |
| (10) Cabinet Order 378 Dec.27, 1973 | (32) Cabinet Order 15 Feb.3, 1995 |
| (11) Cabinet Order 188 Jun.1, 1974 | (33) Cabinet Order 13 Feb.7, 1997 |
| (12) Cabinet Order 215 Jul.8, 1975 | (34) Cabinet Order 20 Feb.19, 1997 |
| (13) Cabinet Order 293 Sep.30, 1975 | (35) Cabinet Order 31 Feb.25, 1998 |
| (14) Cabinet Order 153 Jun.15, 1976 | (36) Cabinet Order 3 Jan.13, 1999 |
| (15) Cabinet Order 10 Feb.1, 1977 | (37) Cabinet Order 324 Oct.14, 1999 |
| (16) Cabinet Order 211 Jul.10, 1979 | (38) Cabinet Order 211. Apr.26, 2000 |
| (17) Cabinet Order 6 Jan.23, 1981 | (39) Cabinet Order 304 Jun.7, 2000 |
| (18) Cabinet Order 2 Jan.6, 1982 | (40) Cabinet Order 333 Jun.7, 2000 |
| (19) Cabinet Order 167 Jul.22, 1983 | (41) Cabinet Order 300 Sep.14, 2001 |
| (20) Cabinet Order 180 Jun.8, 1984 | (42) Cabinet Order 12 Jan.25, 2002 |
| (21) Cabinet Order 276 Sep.21, 1984 | (43) Cabinet Order 274 Aug.2, 2002 |
| (22) Cabinet Order 274 Aug.5, 1986 | (44) Cabinet Order 517 Dec.17, 2003 |

A cabinet order has been enacted based on the provisions of Chapter 3 of the Fire Services Law (Law No. 186 of 1948) to enforce the provisions of the said Chapter of the said Law.

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Cabinet Order Concerning the Control of Hazardous Materials (Article 1~1-3)

CHAPTER 1 GENERAL PROVISIONS

(Designation of Subject Materials)

Article 1 The materials to be set forth by a cabinet order referred to in Item 10 of Group 1 of the Attached Table of the Fire Services Law (hereinafter referred to as "the Law") shall be those listed below.

- (1) periodates
 - (2) periodic acid
 - (3) oxides of chrome, lead or iodine
 - (4) nitrites
 - (5) hypochlorites
 - (6) chlorinated isocyanuric acid
 - (7) peroxodisulphates
 - (8) peroxoborates
2. The materials to be set forth by a cabinet order referred to in Item 11 of Group 3 of the Attached Table of the Law shall be chloricated silicates.
 3. The materials to be set forth by a cabinet order referred to in Item 10 of Group 5 of the Attached Table of the Law shall be the following.
 - (1) metal azides
 - (2) guanidine nitrate
 4. The materials to be set forth by a cabinet order referred to in Item 4 of Group 6 of the Attached Table of the Law shall be interhalogen compounds.

(Names of Hazardous Materials)

Article 1-2 Among the items listed in the material column of the Attached Table of the Law, each material listed under each Item of Article 1-1 Paragraph 1 above in the case of hazardous materials under Item 10 of Group 1 of the Attached Table of the Law or each material listed under each Item of Article 1-1 Paragraph 3 above in the case of hazardous materials under Item 10 of Group 5 of the said Attached Table shall be subject to the provisions of Article 11-4 Item 1 of the Law and Article 6 Paragraph 1 Item 4, Article 15 Paragraph 1 Item 17, Article 20

Paragraph 1, Article 21-2, Article 23, Article 24 Item 1, Article 26 Paragraph 1 Item 3 and Item 6-2 and Article 29 Item 2 as a hazardous material with a different name.

2. Among those materials listed in the material column of the Attached Table of the Law, those hazardous materials listed under Item 11 of Group 1 of the said Table which contains different materials listed under Item 1 through Item 9 of the said Group 1 and the materials listed in Article 1-1 Paragraph 1 above shall be subject to the provisions of Article 11-4 Item 1 of the Law and Article 6 Paragraph 1 Item 4, Article 15 Paragraph 1 Item 17, Article 20 Paragraph 1, Article 21-2, Article 23, Article 24 Item 1, Article 26 Paragraph 1 Item 3 and Item 6-2 and Article 29 Item 2 as a hazardous material with a different name as hazardous materials with different names. The same shall apply to the hazardous material listed under Item 8 of Group 2 of the said Table which contains a different material listed under Item 1 through Item 7 of Group 2, the hazardous material listed under Item 12 of Group 3 of the said Table which contains a different material listed under Item 1 through Item 11 of Group 3, the hazardous material listed under Item 11 of Group 5 of the said Table which contains a different material listed under Item 1 through Item 9 of Group 5 or a material listed under each Item of Article 1-1 Paragraph 3 above and the hazardous material listed under Item 5 of Group 6 of the said Table which contains a different material listed under Item 1 through Item 4 of Group 6.

(Testing and Property of Group 1 Hazardous Materials)

Article 1-3 The test to be set forth by a cabinet order to judge the potential hazard of the oxidation strength referred to in Note 1 of the Attached Table of the

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- Law shall be the combustion test using potassium perchlorate as the standard material [the material used as the reference material for comparison with the specimen (material to be tested; the same shall apply hereinafter); the same shall apply hereinafter] in the case of a powdery or granular material or the mass combustion test using potassium perchlorate as the standard material for any other material.
2. The combustion test referred to in Paragraph 1 above shall be the test to measure the combustion times listed below for the comparison of such combustion times.
 - (1) Combustion time (time duration from the ignition of the mixture to extinguishing of the flames; the same shall apply hereinafter) of thirty (30) grammes of a mixture of the standard material and wood powder
 - (2) Combustion time of thirty (30) grammes of a mixture of the specimen and wood powder
 3. The mass combustion test referred to in Paragraph 1 above shall be the test to measure the combustion times listed below for the comparison of such combustion times.
 - (1) Combustion time of five hundred (500) grammes of a mixture of the standard material and wood powder
 - (2) Combustion time of five hundred (500) grammes of a mixture of the specimen and wood powder
 4. The property to be set forth by a cabinet order concerning the potential hazard of the oxidation strength referred to in Note 1 of the Attached Table of the Law shall be that the combustion time under Paragraph 2 Item 2 of the combustion test stipulated in Paragraph 1 above shall be identical to or shorter than the combustion time under Paragraph 2 Item 1 in the case of a powdery or granular materials and that the combustion time under Paragraph 3 Item 2 of the mass combustion test stipulated in Paragraph 1 above shall be identical to or shorter than the combustion time under Paragraph 3 Item 1 for any other material.
 5. The test to be set forth by a cabinet order to judge the sensitivity to impact referred to in Note 1 of the Attached Table of the Law shall be the falling ball impact sensitivity test using potassium nitrate as the standard material in the case of a powdery or granular material or the steel pipe test for any other material.
 6. The falling ball impact sensitivity test referred to in Paragraph 5 above shall be the test to determine the probability of the explosion of a mixture of the specimen and red phosphorus when a steel ball is dropped on to the said mixture from a height at which the dropping of a steel ball on to the mixture of the standard material and red phosphorus causes an explosion with a probability of fifty (50) percent.
 7. The steel tube test referred to in Paragraph 5 shall be the test to explode a mixture of the specimen and powdered cellulose filled in a steel tube buried under stand in order to observe the degree of rupture caused to the steel tube.
 8. The property to be set forth by a cabinet order concerning the sensitivity to impact referred to in Note 1 of the Attached Table of the Law shall be that the probability of explosion of the mixture of the specimen and red phosphorus is fifty (50) percent or higher in the falling ball impact sensitivity test set forth in Paragraph 5 in the case of a powdery or granular material or that the steel pipe completely ruptures in the steel pipe test set forth in Paragraph 7 for any other materials.
- (Testing and Property of Group 2 Hazardous Materials)**
- Article 1-4** The test to be set forth by a cabinet order to judge the ignition hazard

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due to the flame referred to in Note 2 of the Attached Table of the Law shall be the small gas flame ignition test.

2. The small gas flame ignition test referred to in Paragraph 1 above shall be the test to measure the time from contact with the flame to ignition of the specimen and to observe the state of combustion.
3. The property to be set forth by a cabinet order referred to in Note 2 of the Attached Table of the Law shall be that the specimen undergoing the small gas flame ignition test referred to in Paragraph 2 above ignites within ten (10) seconds and continues its combustion.
4. The test to be set forth by a cabinet order to judge the inflammation hazard referred to in Note 2 of the Attached Table of the Law shall be the test to measure the flash point using a Seta closed cup flash point tester.

(Testing and Property of Group 3 Hazardous Materials)

Article 1-5 The test to be set forth by a cabinet order to judge the combustion hazard in air referred to in Note 8 of the Attached Table of the Law shall be the spontaneous combustion test.

2. The spontaneous combustion test referred to in Paragraph 1 above shall be the test to observe whether or not a material combusts itself on filter paper (including the test to observe whether or not a material combusts when a powdery specimen is dropped from a height) in the case of a solid specimen or the test to observe whether or not a material combusts in a ceramic container (including the test to observe whether or not the specimen combusts on filter paper or scorches the filter paper) in the case of a liquid specimen.
3. The property to be set forth by a cabinet order concerning the combustion hazard in air referred to in Note 8 of the Attached Table of the Law shall be that

the specimen undergoing the spontaneous combustion test referred to in Paragraph 2 above either combusts or scorches the filter paper.

4. The test to be set forth by a cabinet order to judge the combustion hazard through contact with water or the hazard of generating flammable gas referred to in Note 8 of the Attached Table of the Law shall be the water reaction test.
5. The water reaction test referred to in Paragraph 5 above shall be the test to observe whether or not the gas produced by reaction between the specimen and pure water combusts on filter paper floating on pure water or whether or not the said gas combusts when a flame is placed next to it or to measure the quantity of gas generated by the addition of pure water to the specimen and also to analyse the constituents of the said gas.
6. The property to be set forth by a cabinet order concerning the combustion hazard through contact with water or the hazard of generating a gas referred to in Note 8 of the Attached Table of the Law shall be that the gas generated in the water reaction test referred to in Paragraph 5 combusts or ignites or that gas is generated at a rate of two hundred (200) liters per hour or more per one (1) kilogramme of the specimen with generated gas having a combustible constituent(s).

(Testing of Group 4 Hazardous Materials)

Article 1-6 The test to be set forth to judge the inflammation hazard referred to in Note 10 of the Attached Table of the Law shall be the test to measure the flash point using a Tag closed cup flash point tester (or the test to measure the flash point using a Cleveland open cup flash point tester in the case where the test to measure the flash point using the Tag closed cup flash point tester fails to measure the flash point at a temperature of eighty degrees celsius (80°C) or lower

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or the test to measure the flash point using a Seta closed cup flash point tester in the case where the flash point is measured in the range between zero degrees celsius (0°C) and eighty degrees celsius (80°C) in the test to measure the flash point using a Tag closed cup flash point tester and where the dynamic viscosity of the specimen at the said flash point is ten (10) centistoke or higher).

(Testing and Property of Group 5 Hazardous Materials)

Article 1-7 The test to be set forth to judge the explosion hazard referred to in Note 18 of the Attached Table of the Law shall be the thermal analysis test using 2·4-dinitrotoluene and benzoyl peroxide as the standard materials.

2. The thermal analysis test referred to in Paragraph 1 above shall be the test to measure the temperature where exothermal reaction starts and the calorific value listed below using either a differential scanning calorimeter or a differential thermal analyser in order to compare the temperatures where exothermic reaction starts and the calorific values.

- (1) Temperature where exothermic reaction starts and the calorific value of the standard material (calorific value per unit mass; the same shall apply hereinafter)
- (2) Temperature where exothermic reaction starts and the calorific value of the specimen

3. The property to be set forth by a cabinet order concerning the explosion hazard referred to in Note 18 of the Attached Table of the Law shall be that the point indicated by the common logarithm of the calorific value of the specimen against the common logarithm of the value of the correction temperature for the said specimen is on or above the straight line linking the points indicated by the common

logarithm of the value obtained by multiplying the calorific value of 2·4-dinitrotoluene, the standard material, by 0.7 and also by the common logarithm of the value obtained by multiplying the calorific value of benzoyl peroxide, the standard material, with 0.8 against the value of the correction temperature for the respective standard material in the case where the result of the thermal analysis test stipulated in Paragraph 1 above is plotted on a plane rectangular coordinate system showing the common logarithm of the value of the temperature obtained by subtracting twenty-five degrees celsius (25°C) from the temperature where the exothermic reaction starts (referred to as the "correction temperature" hereinafter in this paragraph) along the horizontal axis and the common logarithm of the calorific value along the vertical axis. In this case, when the correction temperature of the specimen is lower than one degree celsius (1°C), the correction temperature of the said specimen is regarded as one degree celsius (1°C).

4. The test to be set forth by a cabinet order to judge the intensity of the decomposition by heating referred to in Note 18 of the Attached Table of the Law shall be the pressure vessel test using an orifice plate of one (1) millimetre in thickness.
5. The pressure vessel test referred to in Paragraph 4 above shall be the test to heat the specimen placed inside a pressure vessel mounted with a rupture plate and an orifice plate and to observe whether or not the rupture plate ruptures.
6. The property to be set forth by a cabinet order concerning the intensity of decomposition by heating referred to in Note 18 of the Attached Table of the Law shall be that the rupture plate ruptures in the pressure vessel test stipulated in Paragraph 4.

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(Testing and Property of Group 6 Hazardous Materials)

Article 1-8 The test to be set forth by a cabinet order to judge the potential hazard of the oxidation strength referred to in Note 20 of the Attached Paper of the Law shall be the test to judge the combustion times listed below to compare such combustion times.

- (1) Combustion time of a mixture of ninety (90) percent water solution of nitric acid and wood powder
 - (2) Combustion time of a mixture of the specimen and wood powder
2. The property to be set forth by a cabinet order referred to in Note 20 of the Attached Table of the Law shall be that the combustion time specified in Paragraph 1 Item 2 in the test referred to in Paragraph 1 is identical to or shorter than the combustion time specified in Paragraph 1 Item 1.

(Entrustment of Matters Concerning Tests and Properties)

Article 1-9 Apart from those set forth from Article 1-3 through Article 1-8, the details concerning the tests and properties set forth in the Notes of the Attached Table of the Law and other necessary matters shall be set forth by an ordinance of the Ministry of Public Management, Home Affairs, Posts and Telecommunications (hereinafter referred to as "an ordinance of the Ministry").

(Designation of Materials Requiring Notification)

Article 1-10 The material to be set forth by a cabinet order referred to in Article 9-2 Paragraph 1 of the Law (including the case where the said provision is applied *mutatis mutandis* in Article 9-2 Paragraph 2) shall be the material listed under each Item below with not less than the quantity stipulated in each Item.

- (1) compressed acetylene gas; forty (40)

kilogrammes

- (2) sulphuric anhydride; two hundred (200) kilogrammes
- (3) liquefied petroleum gas; three hundred (300) kilogrammes
- (4) Unslaked lime (that containing calcium oxide at eighty (80) percent or higher); five hundred (500) kilogrammes
- (5) Materials listed in the left-hand column of Attached Table 1 among the poisonous materials stipulated in Article 2 Paragraph 1 of the Poisonous and Powerful Materials Control Law (Law No. 303 of 1950); quantity stipulated in the lower row corresponding to each of the said materials
- (6) Materials listed in the left-hand column of Attached Table 2 among the powerful materials stipulated in Article 2 Paragraph 2 of the Poisonous and Powerful Materials Control Law; quantity stipulated in the lower row corresponding to each of the said materials

2. The case to be set forth by a cabinet order referred to in the proviso of Article 9-2 Paragraph 1 of the Law (including the case where the same provision shall apply *mutatis mutandis* to Article 9-2 Paragraph 2) shall be either the storage or handling of liquefied petroleum gas at facilities informed to the Commissioner of the Fire and Disaster Management Agency or the fire chief (or the municipal mayor in the case of a municipality which has no fire defence headquarters) pursuant to the provision of Article 74 Paragraph 1 of the High Pressure Gas Safety Law (Law No. 204 of 1951), Article 47-5 Paragraph 1 of the Gas Enterprises Law (Law No. 51 of 1954) or the Law Concerning Safety and Proper Trading of Liquefied Petroleum Gas (Law No. 149 of 1967) (in the case of application *mutatis mutandis* to Article 9-2 Paragraph 2 of the

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Law, the case where the storage or handling of liquefied petroleum gas at the said facilities is to be discontinued).

(Specified Quantities of Hazardous Materials)

Article 1-11 The quantity to be set forth by a cabinet order referred to in Article 9-3 of the Law (hereinafter referred to as the "specified quantity") shall be the quantity stipulated in the column for the specified quantity in Attached Table 3 in correspondence with the group indicated in the group column of the said table, the name of the material shown in the material name column of the said table and the property shown in the property column of the said table.

(Specified Flammables)

Article 1-12 The materials to be set forth by a cabinet order referred to in Article 9-3 of the Law shall be those listed in the material name column of Attached Table 4 with the quantity equivalent to or exceeding the quantity stipulated in the quantity column of the said table.

(Classification of Storage Facilities)

Article 2 The storage facilities referred to in Article 10 of the Law shall be classified in the following manner.

- (1) Storage facilities to store or handle a hazardous material indoors (hereinafter referred to as "indoor storage facilities")
- (2) Storage facilities using an outdoor tank (excluding those listed in Item 4 through Item 6 below) to store or handle a hazardous material (hereinafter referred to as "outdoor storage tank facilities")
- (3) Storage facilities using an indoor tank (excluding those listed in Item 4 through Item 6 below) to store or handle a hazardous material (hereinafter referred to as "indoor storage

tank facilities")

- (4) Storage facilities using a tank buried underground (excluding the tanks listed in Item 5) to store or handle a hazardous material (hereinafter referred to as "underground storage tank facilities")
- (5) Storage facilities using a simple tank to store or handle a hazardous materials (hereinafter referred to as "simple storage tank facilities")
- (6) Storage facilities using a tank fixed to a vehicle (in the case of a towed vehicle, limited to those with a construction which does not have a front wheel axle, placing part of the towed vehicle on the towing vehicle and with a considerable proportion of the weight of the towed vehicle as well as its live load supported by the towing vehicle) to store or handle a hazardous material (hereinafter referred to as "mobile storage tank facilities")
- (7) Storage facilities to store or handle sulphur or those only containing sulphur among Group 2 hazardous materials, flammable solids (only limited to those of which the flash point is zero degrees celsius (0°C) or higher) or Type 1 petroleums (limited to those of which the flash point is zero degrees celsius (0°C) or higher), alcohols, Type 2 petroleums, Type 3 petroleums, Type 4 petroleums or animal or vegetable oils among Group 4 hazardous materials (hereinafter referred to as "outdoor storage facilities")

(Classification of Handling Facilities)

Article 3 The handling facilities referred to in Article 10 of the Law shall be classified in the following manner.

- (1) Handling facilities to handle a hazardous material to directly supply fuel to the fuel tank of an automobile, etc. using fixed oil filling equipment (in-

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- cluding oil filling equipment installed on a vehicle in the case of supplying fuel to aircraft) ([including handling facilities to handle hazardous materials using fixed oil feeding equipment to refill kerosene or gas oil to a container or to a tank fixed to a vehicle of which the capacity is four thousand (4,000) liters or less (limited to such tanks where the inside space is compartmented with each compartment capacity being two thousand (2,000) liters or less in the case of tanks of which the capacity is two thousand (2,000) liters or more); hereinafter referred to as "filling station"])
- (2) Handling facilities of the following type to handle a hazardous material in a container in order for its sale at a store.
- 1) The multiple of the specified quantity (the multiple of the specified quantity stipulated in Article 11-4 Paragraph 1 of the Law; the same shall apply hereinafter) is fifteen (15) or lower (hereinafter referred to as a "Class 1 sales station")
 - 2) The multiple of the specified quantity exceeds fifteen (15) but is not more than forty (40) (hereinafter referred to as a "Class 2 sales station")
- (3) Handling facilities to handle the transfer of a hazardous material using a pipeline, pump and auxiliary equipment (limited to a pipeline and auxiliary equipment in the case of the transfer of a hazardous material from a ship transporting a hazardous material to the ground) [excluding those which have a construction restricting the transfer of the said hazardous material to the site of facilities (excluding pipelines) belonging to the said handling facilities and also to

land serving the workplace, forming a group of land together with the site of the facilities; hereinafter referred to as a "transfer station"]

- (4) Any handling facilities other than those listed in Item 1 through Item 3 above (hereinafter referred to as "general handling facilities")

Article 4 Deleted

(Tank Capacity Calculation Method)

Article 5 The internal volume and space volume of a tank used to store or handle a hazardous material shall be calculated in accordance with the calculation method set forth by an ordinance of the Ministry.

2. The tank capacity referred to in Paragraph 1 above shall be the volume obtained by subtracting the space volume from the internal volume.
3. Notwithstanding the provision of Paragraph 2 above, the capacity of a tank where the quantity of the hazardous material inside the said tank does not exceed the fixed volume, which does not exceed the volume obtained by subtracting the space volume from the internal volume of the said tank, using a special construction or equipment among tanks handling hazardous materials at manufacturing facilities or general handling facilities shall be the said fixed volume.

CHAPTER 2 PERMISSION, ETC. FOR MANUFACTURING FACILITIES, ETC.

(Application for Permission for Establishment)

Article 6 A person planning to obtain permission for the establishment of manufacturing facilities, storage facilities or handling facilities (hereinafter referred to

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as “manufacturing facilities, etc.”) pursuant to the provision of the first part of Article 11 Paragraph 1 of the Law shall submit a written application stating the following matters to the mayor of the municipality, prefectural governor or the Minister of Public Management, Home Affairs, Posts and Telecommunications (hereinafter referred to as the “municipal mayor, etc.”), whichever is relevant, pursuant to the type listed in each item of the said paragraph.

- (1) Name or legal name and address and name and address of the representative in the case of a corporation
 - (2) Type of facilities, such as manufacturing facilities or other, and exact type of the facilities in the case of storage facilities or handling facilities
 - (3) Site for the establishment of the manufacturing facilities, etc. (base site in the case of mobile storage tank facilities)
 - (4) Type, name and maximum quantity of the hazardous material(s) to be stored or handled
 - (5) Multiple of the specified quantity
 - (6) Location, construction and equipment of the manufacturing facilities, etc.
 - (7) Storage or handling method of the hazardous material
 - (8) Planning commencement and completion dates of the construction work of the manufacturing facilities, etc.
2. The written application referred to in Paragraph 1 above shall be accompanied by drawings and others showing the location, construction and equipment of the manufacturing facilities, etc. and the documents to be set forth by an ordinance of the Ministry).

(Application for Permission for Alteration)

Article 7 A person planning to apply for permission for alteration of the location, construction or equipment of manufacturing facilities, etc. pursuant to the

provision of the second part of Article 11 Paragraph 1 of the Law shall submit a written application stating the following matters to the municipal mayor, etc.

- (1) Name or legal name and address and name and address of the representative in the case of a corporation
 - (2) Type of facilities, such as manufacturing facilities or other, and exact type of the facilities in the case of storage facilities or handling facilities
 - (3) Site for the establishment of the manufacturing facilities, etc. (base site in the case of mobile storage tank facilities)
 - (4) Details of the intended alteration
 - (5) Reason for the intended alteration
2. The written application referred to in Paragraph 1 above shall be accompanied by drawings and others showing the details of the alteration of the location, construction or equipment of the manufacturing facilities, etc. and the documents to be set forth by an ordinance of the Ministry.

(Designation of Handling Facilities to Handle Transfer of Hazardous Materials)

Article 7-2 The handling facilities to be set forth by a cabinet order referred to in Article 11 Paragraph 1 Item 1 of the Law shall be the handling facilities listed in Article 3 Item 3.

(Designation of Manufacturing Facilities, etc. Requiring Notification of Permission, etc.)

Article 7-3 The manufacturing facilities, storage facilities or handling facilities to be set forth by a cabinet order referred to in Article 11 Paragraph 7 of the Law (including the case where the same provision shall apply *mutatis mutandis* to Article 11-4 Paragraph 3 of the Law) shall be the manufacturing facilities, etc. listed below.

- (1) Manufacturing facilities where the

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- multiple of the specified quantity is ten (10) or higher
- (2) Indoor storage facilities where the multiple of the specified quantity is one hundred and fifty (150) or higher
 - (3) Outdoor storage tank facilities where the multiple of the specified quantity is two hundred (200) or higher
 - (4) Outdoor storage facilities where the multiple of the specified quantity is one hundred (100) or higher
 - (5) Transfer stations
 - (6) General handling facilities where the multiple of the specified quantity is ten (10) or higher [excluding those stipulated in Article 31-2 Item 6-2]

(Notification of Permission, etc. by Municipal Mayor, etc. to Prefectural Public Safety Commission, etc.)

Article 7-4 Upon granting permission or the receipt of notification listed under each item below, the municipal mayor, etc. shall inform the said permission or receipt to the person stipulated in the said item pursuant to the provision of Article 11 Paragraph 7 of the Law (including the case where the same provision shall apply *mutatis mutandis* to Article 11-4 Paragraph 3 of the Law).

- (1) Permission pursuant to the provision of Article 11 Paragraph 1 of the Law or receipt of notification pursuant to the provision of Article 11-4 Paragraph 1 of the Law by a municipal mayor or prefectural governor: prefectural public safety commission with jurisdiction over the area of the municipality or prefecture in question
- (2) Permission or receipt of notification stipulated in Item 1 above by the Minister of Public Management, Home Affairs, Posts and Telecommunications (hereinafter referred to as "the Minister"): National Public Safety Commission (National Public Safety Commission and Director General

of the Maritime Safety Agency in the case where the manufacturing facilities, etc. relating to the permission or receipt in question are located in a sea area)

(Completion Inspection Procedure)

Article 8 A person planning to receive completion inspection pursuant to the provision of Article 11 Paragraph 5 of the Law (hereinafter referred to as the "completion inspection") shall apply for the said inspection to the municipal mayor, etc.

2. Upon receipt of an application pursuant to the provision of Paragraph 1 above, the municipal mayor, etc. shall conduct the completion inspection of the said manufacturing facilities, etc. without delay.
3. The municipal mayor, etc. shall issue a certificate of completion inspection clearance to a person applying for the said completion inspection when the results of the completion inspection are judged to conform to the relevant technical standards set forth in Article 9 and Article 20 through Article 22 for manufacturing facilities, Article 10 through Article 16 and Article 20 through Article 22 for storage facilities and Article 17 through Article 19 and Article 20 through Article 22 for handling facilities [those relating to the inspection referred to in Article 11-2 Paragraph 1 of the Law (hereinafter referred to as "inspection prior to the completion inspection")].
4. A person having received the certificate of completion inspection clearance referred to in Paragraph 3 above shall be entitled to apply for reissue to the issuing municipal mayor, etc. in the case of the person losing, destroying, spoiling or damaging the certificate of completion inspection clearance.
5. In the case of making an application referred to in Paragraph 4 above due to the spoiling of or damage to the certifi-

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cate of completion inspection clearance, a written application accompanied by the said certificate of completion inspection clearance must be submitted.

6. Should the person who has been re-issued the certificate of completion inspection clearance following the loss of the said certificate referred to in Paragraph 3 above discover the lost certificate, the original certificate which has been found shall be submitted to the municipal mayor, etc. who reissued the certificate of completion inspection clearance within ten (10) days of the date of it being found.

(Inspection Prior to the completion inspection)

Article 8-2 The manufacturing facilities, storage facilities or handling facilities to be set forth by a cabinet order referred to in Article 11-2 Paragraph 1 of the Law shall be manufacturing facilities, etc. in the possession of a tank(s) storing or handling hazardous liquid (hereinafter referred to as a "hazardous liquid tank") (excluding manufacturing facilities and general handling facilities in the possession of a tank of which the capacity is equal to or larger than the specified quantity to store or handle a hazardous liquid of which the capacity is equal to or larger than the specified quantity).

2. The construction work to be set forth by a cabinet order referred to in Article 11-2 Paragraph 1 of the Law shall be the work to install or alter a hazardous liquid tank (a hazardous liquid tank of which the capacity is equal to or larger than the specified quantity in the case of construction work for manufacturing facilities or general handling facilities).
3. The processes of construction work to be set forth by a cabinet order referred to in Article 11-2 Paragraph 1 of the Law shall be the processes of construction work listed under each of the items below and the matters relating to the construction

and equipment concerning manufacturing facilities, storage facilities or handling facilities referred to in the said paragraph to be set forth by a cabinet order shall be those stipulated by each item relevant to each process of the said construction work.

- (1) Processes of construction work relating to the foundations and ground for hazardous liquid tanks of outdoor storage tank facilities [excluding hazardous liquid tanks using space inside the bedrock (hereinafter referred to as "bedrock tanks")] of which the capacity is one thousand (1,000) kiloliters or larger [in the case of hazardous liquid tanks to be set forth by an ordinance of the Ministry as tanks of which the bottom section is situated below the ground surface and of which the head section is situated above the ground surface and other tanks with a special construction (hereinafter referred to as "special hazardous liquid tanks" in this Article, Article 8-4 and Article 11), the construction work to be set forth by an ordinance of the Ministry as equivalent to the construction work relating to the foundations and ground]:
Among the matters relating to the construction and equipment of the said hazardous liquid tanks, those which must conform to the standards stipulated in Article 11 Paragraph 1 Item 3-2 (standards to be set forth by an ordinance of the Ministry as equivalent to the said standards in the case of special hazardous liquid tanks) (hereinafter referred to as "matters relating to the foundations and ground of hazardous liquid tanks")
- (2) Processes of construction work relating to the tank body of the hazardous liquid tanks referred to in Item 1 above prior to the mounting of pipes and other auxiliary equipment to the

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said tanks:

Among the matters relating to the manufacture and equipment of the said hazardous liquid tanks, those which must conform to the standards stipulated in Article 11 Paragraph 1 Item 4-1 [limited to the part relating to the leak test by filling water (including the test using an appropriate liquid other than water; the same shall apply hereinafter) or the water pressure test and, in the case of special hazardous liquid tanks, the standards to be set forth by an ordinance of the Ministry as equivalent to the said standards] (hereinafter referred to as “matters relating to leakage and deformation of hazardous liquid tanks”) and, among the matters relating to the construction and equipment of the said hazardous liquid tanks, those which must conform to the standards stipulated in Article 11 Paragraph 1 Item 4-2 (excluding the part concerning the vacuum test, etc. set forth by an ordinance of the Ministry and, in the case of special hazardous liquid tanks, the standards set forth by an ordinance of the Ministry as equivalent to the said standards) (hereinafter referred to as “matters relating to the welds of hazardous liquid tanks)

- (3) Processes of construction work relating to the tank body of bedrock tanks at outdoor storage tank facilities:

Among the matters relating to the construction and equipment of the said bedrock tanks, those which must conform to the standards set forth by an ordinance of the Ministry as standards concerning the stability of the tank body (hereinafter referred to as “matters relating to the tank construction of bedrock tanks”)

- (4) Processes of construction work relating to the tank body of hazardous

liquid tanks (excluding those referred to in Item 1 and Item 3 above) prior to the mounting of pipes and auxiliary equipment to the said tanks:

Among the matters relating to the construction and equipment of the said hazardous liquid tanks, those which must conform to the standards stipulated in Article 9 Paragraph 1 Item 20, Article 11 Paragraph 1 Item 4, Article 12 Paragraph 1 Item 5, Article 13, Paragraph 1 Item 6, Article 14 Item 6, Article 15 Paragraph 1 Item 2, Article 17 Paragraph 1 Item 6 or Paragraph 2 Item 2 or Article 19 Paragraph 1 [limited to the part concerning the leak test by filling water or the water pressure test and, in the case of hazardous liquid tanks at mobile storage tank facilities to store or handle such hazardous materials as alkyl aluminium, alkyl lithium and others (hereinafter referred to as “alkyl aluminium, etc.” in this article) stipulated by an ordinance of the Ministry, the standards stipulated by an ordinance of the Ministry as equivalent to the standards stipulated in Article 15 Paragraph 1 Item 2]

4. Notwithstanding the provision of Paragraph 3 above, the provisions listed under each item below shall not apply to construction work to install or alter the hazardous liquid tanks referred to in each item.

- (1) Construction work to install or alter a hazardous liquid tank where the said hazardous liquid tank has passed the inspection of specified equipment pursuant to the provision of Article 56-3 Paragraph 1, Paragraph 2 or Paragraph 3 of the High Pressure Gas Safety Law, has been issued with the compliance mark for the standards for specified equipment pursuant to the provision of Article 56-6-14 Paragraph 2 of the said Law (including the case

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where the same provision shall apply *mutatis mutandis* to Article 56-6-22 Paragraph 2 of the said Law), has passed the inspection pursuant to the provision of Article 38 Paragraph 1, Paragraph 2 or Paragraph 3 of the Industrial Safety and Health Law (Law No. 57 of 1972) or has passed the verification pursuant to the provision of Article 44 Paragraph 1 or Paragraph 2 of the said Law:

The provision of Paragraph 3 Item 2 (limited to the part concerning matters relating to the leakage and deformation of hazardous liquid tanks) or the provision of Paragraph 3 Item 4

(2) Among the construction work to alter hazardous liquid tanks, the work relating to the bottom section of a tank (excluding work which includes the work relating to the side panel of the tank) where the matters relating to the welds of the hazardous liquid tank in question are approved to conform to the standards stipulated in Article 11 Paragraph 1 Item 4-2 by the inspection concerning safety which was conducted at the time of the said alteration work pursuant to the provision of Article 14-3 Paragraph 1 or Paragraph 2 of the Law:

The provision of Paragraph 3 Item 2 above (limited to the part concerning matters relating to the welds of hazardous liquid tanks)

- (3) Construction work to install or alter a hazardous liquid tank where the said hazardous liquid tank carries an indication set forth by an ordinance of the Ministry to certify compliance with the standards stipulated in the rules for the transportation of hazardous materials adopted by the International Maritime Organization (limited to the part concerning the water pressure test):

The provision of Paragraph 3 Item 4

above

5. The inspection prior to the completion inspection concerning the matters relating to the foundations and ground of hazardous liquid tanks shall be called the foundation and ground inspection, those inspections concerning the leak test by filling water and the water pressure test stipulated in Article 9 Paragraph 1 Item 20, Article 11 Paragraph 1 Item 4, Article 12 Paragraph 1 Item 5, Article 13 Paragraph 1 Item 6, Article 14 Item 6, Article 15 Paragraph 1 Item 2, Article 17 Paragraph 1 Item 6 or Paragraph 2 Item 2 or Article 19 Paragraph 1 among the inspections prior to the completion inspection concerning matters relating to the leakage and deformation of hazardous liquid tanks and the matters stipulated in Paragraph 3 Item 4 (the test stipulated by an ordinance of the Ministry as equivalent to the water pressure test stipulated in Article 15 Paragraph 1 Item 2 in the case of hazardous liquid tanks at mobile storage tank facilities to store or handle alkyl aluminium, etc.) shall be called leak inspection by filling water and water pressure inspection respectively, the inspection prior to the completion inspection concerning the matters relating to the welds of hazardous liquid tanks shall be called weld inspection and the inspection prior to the completion inspection concerning the tank construction of bedrock tanks shall be called bedrock tank inspection.
6. A person planning to receive an inspection prior to the completion inspection shall apply to the municipal mayor, etc. as set forth by an ordinance of the Ministry. In this case, the provision of Article 8-1 Paragraph 2 shall apply *mutatis mutandis*.
7. Should the municipal mayor, etc. approve that the matters stipulated in each item of Paragraph 3 conform to the technical standards stipulated in Article 9 regard-

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ing manufacturing facilities, Article 11 through Article 15 regarding storage facilities and Article 17 and Article 19 regarding handling facilities as a result of the inspection prior to the completion inspection (limited to those standards concerning the inspection prior to the completion inspection), he shall inform his approval to the person making the application for the said inspection prior to the completion inspection (issue of a certificate of tank inspection clearance in the case of leak inspection by filling water or water pressure inspection).

Article 8-2-2 The leak inspection by filling water or water pressure inspection can be conducted by administrative organizations other than the municipal mayor, etc. In this case, the provisions of Article 8-2-1 Paragraph 6 and Paragraph 7 shall apply *mutatis mutandis*.

(Entrustment to Association for Safety Technique of Hazardous Materials)

Article 8-2-3 The outdoor storage tank facilities to be set forth by a cabinet order referred to in Article 11-3 Item 1 of the Law shall be outdoor storage tank facilities of which the maximum quantity of the hazardous liquid to store or handle is five hundred (500) kiloliters or more (hereinafter referred to as "specified outdoor storage tank facilities").

2. The matters concerning the construction and equipment relating to the outdoor storage tank facilities referred to in Article 11-3 Item 1 of the Law, which are to be set forth by a cabinet order, shall be the matters concerning the tank body of hazardous liquid tanks and the matters concerning the foundations and ground of hazardous liquid tanks.
3. The outdoor storage tank facilities to be set forth by a cabinet order referred to in Article 11-3 Item 2 of the Law shall be outdoor storage tank facilities of which

the maximum quantity of the hazardous liquid to store or handle is one thousand (1,000) kiloliters or more (hereinafter referred to as "special outdoor storage tank facilities").

4. The matters to be specified by a cabinet order among such specified matters concerning outdoor storage tank facilities referred to in Article 11-3 Item 2 of the Law shall be the matters concerning the foundations and ground of hazardous liquid tanks, the matters concerning the welds of hazardous liquid tanks and the matters concerning the tank construction of bedrock tanks.

(Designation of Transfer Stations in Need of Consultation With Municipal Mayor)

Article 8-3 The transfer stations to be set forth by a cabinet order referred to in Article 12-5 of the Law shall be transfer stations of which the length of the pipeline to transfer a hazardous materials (maximum length of the said pipeline from an arbitrary starting point to an arbitrary ending point in the case where there are more than one starting or ending points for the said pipeline) exceeds fifteen (15) kilometers and transfer stations where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is between seven (7) kilometers and fifteen (15) kilometers.

(Safety Inspection)

Article 8-4 The outdoor storage tank facilities or transfer stations to be set forth by a cabinet order referred to in Article 14-3 Paragraph 1 of the Law shall be specified outdoor storage tank facilities of which the maximum quantity of hazardous liquid to store or handle is ten thousand (10,000) kiloliters or more or the transfer stations stipulated in Article 8-3.

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2. The period to be set forth by a cabinet order referred to in Article 14-3 Paragraph 1 of the Law shall be the period stipulated in each of the following items in accordance with the category of specified outdoor storage tank facilities or transfer stations listed in each item. However, should it be deemed inappropriate to conduct the safety inspection stipulated in Article 14-3 Paragraph 1 of the Law due to a disaster or other reasons to be set forth by an ordinance of the Ministry, it may be a period independently set by the municipal mayor, etc. based on an application made by the owner, manager or occupier of the specified outdoor storage tank facilities or transfer station in question.
 - (1) Specified outdoor storage tank facilities (excluding those listed in Items 2 and 3 below; the same shall apply hereinafter in this item):

Period between the day which is one (1) year before the last day of the eight (8) year period [in the case of specified outdoor storage tank facilities which have introduced the safety measures to be set forth by an ordinance of the Ministry, either a ten (10) or thirteen (13) year period to be set forth by the municipal mayor, etc. pursuant to an ordinance of the Ministry in line with the said measures] starting from the day when the completion inspection (limited to the completion inspection relating to permission for establishment pursuant to the provision of the first part of Article 11 Paragraph 1 of the Law) is conducted or the next day of the day when the safety inspection pursuant to the provision of Article 14-3 Paragraph 1 or Paragraph 2 of the Law is conducted close to the said day of the completion inspection and the day by which a period of one (1) year will have passed starting from the next day of the said last day
 - (2) Specified outdoor storage tank facilities concerning bedrock tanks:

Period between the day which is one (1) year before the last day of the ten (10) year period starting from the day when the completion inspection is conducted or the next day of the day when the safety inspection pursuant to the provision of Article 14-3 Paragraph 1 or Paragraph 2 of the Law is conducted close to the said day of the completion inspection and the day by which time one (1) year will have passed starting from the next day of the said last day.
 - (3) Specified outdoor storage tank facilities concerning those stipulated by an ordinance of the Ministry among specified hazardous liquid tanks:

Period between the day which is one (1) year before the last day of the thirteen (13) year period starting from the day when the completion inspection is conducted or the next day of the day when the safety inspection pursuant to the provision of Article 14-3 Paragraph 1 or Paragraph 2 of the Law is conducted close to the said day of the completion inspection and the day by which time one (1) year will have passed starting from the next day of the said last day.
 - (4) Transfer stations:

Period between the day which is one (1) month before the last day of the one (1) year period starting from the day when the completion inspection is conducted or the next day of the day when the safety inspection pursuant to the provision of Article 14-3 Paragraph 1 of the Law is conducted close to the said day of the completion inspection and the day by which time one (1) month will have passed starting from the next day of the said last day.

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3. The matters relating to the construction and equipment relating to the outdoor storage tank facilities or transfer stations referred to in Article 14-3 Paragraph 1 of the Law and to be set forth by a cabinet order shall be the matters set forth in each of the following items in accordance with the category of outdoor storage tank facilities or transfer stations listed in each item.
 - (1) Specified outdoor storage tank facilities (excluding those listed in Item 2 below)
Matters relating to the plate thickness of the bottom section of a hazardous liquid tank (the section stipulated by an ordinance of the Ministry in the case of specified hazardous liquid tanks; the same shall apply hereinafter in this paragraph, Paragraph 6 and Paragraph 7) and matters concerning the welds of hazardous liquid tanks (limited to those concerning the bottom section of hazardous liquid tanks; the same shall apply hereinafter in Paragraph 6 and Paragraph 7)
 - (2) Specified outdoor storage tank facilities concerning bedrock tanks
Matters relating the construction and equipment of bedrock tanks
 - (3) Transfer stations
Matters relating to the construction and equipment of transfer stations
 4. The outdoor storage tank facilities to be set forth by a cabinet order referred to in Article 14-3 Paragraph 2 of the Law shall be specified outdoor storage tank facilities.
 5. The uneven settlement and other conditions to be set forth by a cabinet order referred to in Article 14-3 Paragraph 2 of the Law shall be the proportion of the numerical value of the uneven settlement of a hazardous liquid tank to the diameter of the said hazardous liquid tank at one hundredth (1/100) or greater and the conditions to be set forth by an ordinance of the Ministry to be equivalent to such ratio.
 6. The matters relating to the construction and equipment concerning the outdoor storage tank facilities referred to in Article 14-3 Paragraph 2 of the Law shall be the matters to be set forth in each of the following items in accordance with the category of specified outdoor storage tank facilities listed in each of the said items.
 - (1) Specified outdoor storage tank facilities (excluding those listed in Item 2 below):
Matters relating to the plate thickness of the bottom section of hazardous liquid tanks and matters relating to the welds of hazardous liquid tanks
 - (2) Specified outdoor storage tank facilities concerning bedrock tanks:
Matters relating to the construction and equipment of bedrock tanks
 7. The matters relating the construction and equipment concerning the outdoor storage tank facilities to be set forth by a cabinet order referred to in Article 14-3 Paragraph 3 shall be the matters relating to the plate thickness of the bottom section of hazardous liquid tanks, matters relating to the welds of hazardous liquid tanks and matters relating to the construction and equipment of bedrock tanks.
- (Designation of Manufacturing Facilities, etc. Requiring Periodic Inspection)**
- Article 8-5** The manufacturing facilities, storage facilities and handling facilities to be set forth by a cabinet order referred to in Article 14-3-2 of the Law shall be the manufacturing facilities, etc. stipulated in Article 7-3 (excluding the transfer stations stipulated in Article 8-3) and those which are not set forth by an ordinance of the Ministry among the manufacturing facilities, etc. listed below.
- (1) Manufacturing facilities in possession

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of a tank below the ground handling hazardous materials (hereinafter referred to as an “underground tank” in this article)

- (2) Underground storage tank facilities
- (3) Mobile storage tank facilities
- (4) Filling stations in possession of an underground tank(s)
- (5) General handling facilities in possession of an underground tank(s)

CHAPTER 3 STANDARDS FOR LOCATION, CONSTRUCTION AND EQUIPMENT FOR MANUFACTURING FACILITIES, ETC.

Section 1 Standards for Location, Construction and Equipment for Manufacturing Facilities

(Standards for Manufacturing Facilities)

Article 9 The technical standards for the location, construction and equipment (excluding fire extinguishing equipment, alarm equipment and evacuation equipment; the same shall apply hereinafter to Section 1 through Section 3 of this chapter) of the manufacturing facilities referred to in Article 10 Paragraph 4 of the Law shall be those set forth below.

- (1) The location of manufacturing facilities shall maintain the distance set forth for each type of building, etc. listed below between the said building, etc. and the external wall of the manufacturing facilities in question or the external face of a construction equivalent to the said external wall. However, should the municipal mayor, etc. approve that the buildings, etc. listed in 1) through 3) below are safe due to the introduction of an effective fire wall or other made of a non-combustible material [those set forth by an ordinance of the Ministry among the noncombustible materials

referred to in Article 2 Item 9 of the Building Standards Law (Law No. 201 of 1950); the same shall apply hereinafter], the distance set forth by the municipal mayor, etc. may be regarded as the said distance.

- 1) Buildings or other constructions other than those listed in 2) through 4) below serving residential housing (excluding those residing on the same premises where the manufacturing facilities are located):
Ten (10) meters or wider
- 2) Schools, hospitals, theatres and other facilities to accommodate many people which are stipulated by an ordinance of the Ministry:
Thirty (30) meters or wider
- 3) Buildings which are designated as important cultural properties, important tangible ethnic cultural properties, historical remains or important cultural assets pursuant to the provisions of the Cultural Property Protection Law (Law No. 214 of 1950) or those which are acknowledged as important art objects pursuant to the provisions of the former Law Concerning Preservation of Important Art Objects etc. (Law No. 43 of 1933):
Fifty (50) meters or wider
- 4) Facilities to store or handle high pressure gas or others which could cause a disaster and which are stipulated by an ordinance of the Ministry:
Distance to be set forth by an ordinance of the Ministry
- 5) Special high voltage overhead power cables of which the working voltage exceeds seven thousand (7,000) volts but which is not higher than thirty-five thousand (35,000) volts:
Horizontal distance of three (3) meters) or wider

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- 6) Special high voltage overhead power cables of which the working voltage exceeds thirty-five thousand (35,000) volts:
Horizontal distance of five (5) meters or wider
- (2) Empty land of which the width corresponds to the relevant category shown in the table below shall be possessed around the buildings or other constructions to handle hazardous materials (excluding pipelines to transfer hazardous materials or other constructions similar to such pipelines). However, this provision shall not apply when the effective fire bulkhead as set forth by an ordinance of the Ministry is installed.

Category	Width of Empty Land
Manufacturing facility where the multiple of the specified quantity is ten (10) or less	Three (3) meters or wider
Manufacturing facility where the multiple of the specified quantity exceeds (10)	Five (5) meters or wider

- (3) Manufacturing facilities shall have a marking indicating that they are manufacturing facilities and a notice board explaining the necessary matters for fire prevention, both in easily visible places, as set forth by an ordinance of the Ministry.
- (4) Buildings where hazardous materials are handled shall not have a basement [meaning a basement stipulated in Article 1 Item 2 of the Enforcement Order for the Building Standards Law (Cabinet Order No. 338 of 1950)].
- (5) Buildings where hazardous materials are handled shall have walls, pillars, floors, beams and stairs made of a noncombustible material and the external walls through which a fire could spread shall be walls with a fire-resistant construction (meaning the fire-resistant construction referred

to in Article 2 Item 7 of the Building Standards Law; the same shall apply hereinafter) without any openings except doorways.

- (6) Buildings where hazardous materials are handled shall have a roof construction made of a noncombustible material and a roof covered with metal plates or another light weight noncombustible material. However, in the case of buildings where only Group 2 hazardous materials (excluding powdery materials and flammable solids) are handled, the roof may comprise a fire-resistant construction).
- (7) The windows and doorways of buildings where hazardous materials are handled shall be provided with fire protection equipment (among the fire protection equipment stipulated in Article 2 Item 9-2 (2) of the Building Standards Law, fire doors and others to be set forth by an ordinance of the Ministry; the same shall apply hereinafter) and the doorways to be introduced to external walls through which fire may spread shall be provided with self-closing specified fire protection equipment which can be opened at any time (among the specified fire protection equipment stipulated in Article 112 Paragraph 1 of the Enforcement Order for the Building Standards Law, fire doors or others to be set forth by an ordinance of the Ministry; the same shall apply hereinafter).
- (8) Should glass be used for the windows or doorways of buildings where hazardous materials are handled, the glass shall be wired glass.
- (9) The floors of buildings where hazardous liquid is handled shall have a construction to prevent the infiltration of hazardous liquid and shall also have a suitable inclination as well as

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- cesspools.
- (10) Buildings where hazardous materials are handled shall have natural lighting, artificial lighting and ventilation equipment which are necessary to handle hazardous materials.
 - (11) Buildings where there is concern regarding the hold up of flammable vapour or flammable impalpable powder shall have equipment to discharge such vapour or impalpable powder to a high outdoor place.
 - (12) Outdoor equipment handling hazardous liquid shall have fencing of 0.15 meters or higher in height around the ground surface immediately below the equipment or adopt a measure which is acknowledged to have the same as or better effect than the said fencing to prevent the outflow of hazardous liquid and which is to be set forth by an ordinance of the Ministry and the said ground surface shall be covered with concrete or another material which cannot be infiltrated by the hazardous liquid and which has a suitable inclination as well as cesspools. In this case, equipment handling Group 4 hazardous materials (limited to materials which are insoluble by water) shall be provided with an oil separator so that the said hazardous liquid does not directly flow into a drainage ditch.
 - (13) Machinery, apparatus and other equipment handling hazardous materials shall have a construction which is capable of preventing the leakage, overflow or scattering of the hazardous materials. However, this shall not apply when auxiliary equipment to prevent a disaster caused by the leakage, overflow or scattering of the hazardous materials is installed to the said equipment.
 - (14) Equipment to heat or cool hazardous materials or equipment of which the temperature changes with the handling of hazardous materials shall have a temperature measuring device.
 - (15) Equipment to heat or dry hazardous materials shall have a construction which does not use direct fire. However, this provision shall not apply when the said equipment is installed in a safe place from the viewpoint of fire protection or when auxiliary equipment to prevent a fire is installed to the said equipment.
 - (16) Equipment to pressurise hazardous materials or equipment where the pressure of the hazardous materials handled may rise shall have a pressure gauge and a safety device to be set forth by an ordinance of the Ministry.
 - (17) Electrical equipment shall conform to the provisions of the laws and regulations concerning electrical workpieces.
 - (18) Equipment where static electricity may be generated in the course of handling hazardous materials shall have a device to effectively remove the static electricity which is accumulated in the said equipment.
 - (19) At manufacturing facilities where the multiple of the specified quantity is ten (10) or higher, lightning equipment to be set forth by an ordinance of the Ministry shall be installed. However, this provision shall not apply in the case where the absence of such equipment does not pose a safety hazard because of the situation of the surrounding area.
 - (20) The location, construction and equipment of tanks to handle hazardous materials (excluding outdoor or indoor tanks of which the capacity is less than one-fifth of the specified quantity) shall conform to the following provisions.
 - 1) The construction and equipment of

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- outdoor tanks shall follow the cases of the construction and equipment for tanks storing or handling hazardous materials at outdoor tank storage facilities stipulated in Article 11 Paragraph 1 Item 4 (excluding those sections concerning specified outdoor storage tanks and quasi-specified outdoor storage tanks), Item 5 through Item 10 and Item 11-2 through Item 12-1 (including special cases to be set forth by an ordinance of the Ministry pursuant to the provision of Article 11 Paragraph 5) and shall have the oil retaining walls stipulated by an ordinance of the Ministry to prevent an outflow of hazardous materials at the time of leakage around the hazardous liquid tanks in accordance with the provisions to be set forth by an ordinance of the Ministry.
- 2) The construction and equipment of indoor tanks shall follow the cases of the construction and equipment for tanks storing or handling hazardous materials at indoor storage tank facilities stipulated in Article 12 Paragraph 1 Item 5 through Item 9-1 and Item 10-1 through Item 11-1.
 - 3) The location, construction and equipment of underground tanks shall follow the cases of the location, construction and equipment for tanks storing or handling hazardous materials at underground storage tank facilities referred to in Article 13 Paragraph 1 (excluding Item 5, Item 9-2 and Item 12), Article 13 Paragraph 2 (excluding Article 13 Paragraph 1 Item 5, Item 9-2 and Item 12 which are referred to as cases in Paragraph 2) or Article 13 Paragraph 3 (excluding Article 13 Paragraph 1 Item 5, Item 9-2 and Item 12 which are referred to as cases in Paragraph 3).
- (21) The location, construction and equipment of pipelines handling hazardous materials shall conform to the following provisions.
 - 1) Pipelines shall have sufficient strength in regard to their installation conditions and situation of their use and shall not suffer from any leakage or other abnormalities in the water pressure test with a pressure of 1.5 times or higher than the maximum working pressure concerning the said pipelines (including the test using a noncombustible liquid or noncombustible gas other than water).
 - 2) Pipelines shall not easily deteriorate due to the hazardous materials to be handled.
 - 3) Pipelines shall not easily deform due to heat caused by a fire, etc. However, this provision shall not apply in the case where the said pipelines are installed in places which are unlikely to be adversely affected by heat caused by a fire, etc.
 - 4) Pipelines shall adopt a measure to prevent the corrosion of their outside surface as to be set forth by an ordinance of the Ministry. However, this provision shall not apply in the case where the said pipelines are unlikely to be corroded under the conditions of their installation.
 - 5) Should pipelines be installed underground, a measure shall be adopted to enable the checking of any leakage of hazardous materials from the joints of the pipelines (excluding those joined by welding or other methods which are deemed not to cause the leakage of hazardous materials).
 - 6) Should equipment be installed to

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pipelines for heating or heat insulation, the construction shall be safe from the viewpoint of fire prevention.

- 7) Apart from conformity to 1) through 6) above, the standards to be set forth by an ordinance of the Ministry shall be conformed to.
- (22) The motor and pump, valves and couplings, etc. of equipment handling hazardous materials shall be installed in positions which are not obstructive from the viewpoint of fire prevention.
2. For manufacturing facilities, etc. which only handle Group 4 hazardous materials with a flash point of one hundred degrees celsius (100°C) or higher (hereinafter referred to as "hazardous materials with a high flash point") in accordance with the provisions of an ordinance of the Ministry, special cases for the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
3. For manufacturing facilities handling alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

Section 2 Standards for Location, Construction and Equipment for Storage Facilities

(Standards for Indoor Storage Facilities)

Article 10 The technical standards for the location, construction and equipment of indoor storage facilities (excluding those stipulated in Paragraph 2 and Paragraph 3 below) shall be those set forth below.

- (1) The location of indoor storage facilities shall follow the case for manufacturing facilities described in Article 9 Paragraph 1 Item 1.
- (2) Buildings storing or handling hazardous materials (hereinafter referred to as "storage houses" in this article) shall have empty land of the width specified in the table below in correspondence with the categories of the storage facilities around them. However, should two or more indoor storage facilities be installed next to each other, the width of such empty land may be reduced by an ordinance of the Ministry.
- (3) Indoor storage facilities shall have a marking indicating that they are indoor storage facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.

Category	Width of Empty Land	
	Case where the walls, pillars and floors of the said building have a fire-resistant construction	Cases other than that left
Indoor storage facilities of which the multiple of the specified quantity is five (5) or larger		Half (0.5) a meter or wider
Indoor storage facilities of which the multiple of the specified quantity exceeds five (5) but is not larger than ten (10)	One (1) meter or wider	One and a half (1.5) meters or wider
Indoor storage facilities of which the multiple of the specified quantity exceeds ten (10) but is not larger than twenty (20)	Two (2) meters or wider	Three (3) meters or wider
Indoor storage facilities of which the multiple of the specified quantity exceeds twenty (20) but is not larger than fifty (50)	Three (3) meters or wider	Five (5) meters or wider
Indoor storage facilities of which the multiple of the specified quantity exceeds fifty (50) but is not larger than two hundred (200)	Five (5) meters or wider	Ten (10) meters or wider
Indoor storage facilities of which the multiple of the specified quantity exceeds two hundred (200)	Ten (10) meters or wider	Fifteen (15) meters or wider

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- (3-2) Storage houses shall be independent buildings for exclusive use.
- (4) A storage house shall be a single story building of which the height from the ground surface to the eaves (hereinafter referred to as the "eaves height") is less than six (6) meters and shall have its floor above the ground surface. However, the eaves height may be less than twenty (20) meters for storage houses storing only Group 2 and Group 4 hazardous materials as set forth by an ordinance of the Ministry.
- (5) The floor area of a single storage house shall not exceed one thousand (1,000) square meters.
- (6) Storage houses shall have walls, pillars and floors with a fire-resistant construction, the beams shall be made of a noncombustible material and the external walls through which a fire may spread shall have no openings except doorways. However, in the case of storage houses for hazardous materials of not more than ten (10) times the specified quantity or storage houses for only Group 2 or Group 4 hazardous materials (excluding flammable solids and group 4 hazardous materials of which the flash point is lower than seventy (70) degrees celsius), the external walls through which a fire is unlikely to spread, pillars and floor may be made of a noncombustible material.
- (7) Storage houses shall have a roof construction made of a noncombustible material and a roof covered with metal plates or another light weight noncombustible material without a false ceiling. However, a fire-resistant construction may be employed in the case of storage houses for only Group 2 hazardous materials (excluding powdery materials and flammable solids) and a false ceiling made of a fire resistant material or noncombustible material may be installed in the case of storage houses for only Group 5 hazardous materials for the purpose of maintaining the temperature inside the said storage houses at a suitable temperature.
- (8) The windows and doorways of storage houses shall be provided with fire protection equipment and the doorways to be introduced in external walls through which a fire may spread shall be provided with self-closing specified fire protection equipment which can be opened at any time.
- (9) Should glass be used for the windows or doorways of storage houses, the glass shall be wired glass.
- (10) The floor of storage houses for peroxides of alkaline metals or those containing such peroxide among Group 1 hazardous materials, iron powder, metal powder, magnesium or those containing any one of these among Group 2 hazardous materials, those showing the property set forth in Article 1-5 Paragraph 6 in the water reaction test set forth in Article 1-5 Paragraph 5 (including potassium, sodium, alkyl aluminium and alkyl lithium; hereinafter referred to as "water-prohibitive materials") among group 3 hazardous materials or group 4 hazardous materials shall have a construction which prevents the inundation of or water infiltration to the floor surface.
- (11) The floor of storage houses for hazardous liquid shall have a construction which prevents the infiltration of hazardous liquid and shall also have a suitable inclination as well as cesspools.
- (11-2) Should frames be installed in storage houses, the construction and equipment of the frames shall conform to

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- those set forth by an ordinance of the Ministry.
- (12) Storage houses shall have natural lighting, artificial lighting and ventilation equipment which are necessary to store or handle hazardous materials and storage houses for hazardous materials of which the flash point is lower than seventy (70) degrees celsius shall have equipment to discharge hold up flammable vapour inside to the rooftop.
 - (13) Electrical equipment shall conform to the case of electrical equipment for manufacturing facilities described in Article 9 Paragraph 1 Item 17.
 - (14) At storage houses for hazardous materials where the multiple of the specified quantity is ten (10) or higher, the lighting equipment to be set forth by an ordinance of the Ministry of shall be installed. However, this provision shall not apply in the case where the absence of such equipment does not pose a safety hazard because of the situation of the surrounding area.
 - (15) Storage houses for celroid and other Group 5 hazardous materials which may decompose and ignite due to a rise of the temperature and which are set forth by an ordinance of the Ministry shall have a construction capable of maintaining the indoor temperature of the said storage houses below the ignition temperature or shall have such equipment as ventilation apparatus or air-conditioning apparatus installed.
2. The technical standards for the location, construction and equipment of indoor storage facilities storing or handling only Group 2 or Group 4 hazardous materials (excluding flammable solids and Group 4 hazardous materials of which the flash point is lower than seventy (70) degrees celsius) (limited to storage house buildings other than single story such buildings) among indoor storage facilities shall follow the cases in the provisions of Paragraph 1 Item 1 through Item 3-2 and Item 7 through Item 14 above and shall also be those set forth below.
 - (1) The floor of each story of storage houses shall be above the ground surface and shall have a height between the floor surface and the lower face of the floor above (eaves if there is no floor above) (hereinafter referred to as the "story height") of lower than six (6) meters.
 - (2) The total floor area for a single storage house shall not exceed one thousand (1,000) square meters.
 - (3) Storage houses shall have walls, pillars, floors and beams with a fire-resistant construction, stairs shall be made of a noncombustible material and the external walls through which a fire may spread shall have no openings except doorways.
 - (4) Storage houses shall have no openings for floors on the second floor and above. However, this provision shall not apply to staircases which are compartmented by fire-resistant walls or fire protection equipment.
 3. The technical standards for the location, structure and equipment of indoor storage facilities of which the multiple of the specified quantity is twenty (20) or smaller (limited to those to be introduced to buildings which have sections other than those serving for indoor storage facilities) among indoor storage facilities shall follow the cases in the provisions of Paragraph 1 Item 3 and Item 10 through Item 15 and shall also be those set forth below.
 - (1) Indoor storage facilities shall be located on either the first floor or second floor of a building of which the walls, pillars, floors and beams are of a fire-resistant construction.

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- (2) The part of a building to be used for indoor storage facilities shall have its floor above the ground surface and its story height shall be lower than six (6) meters.
 - (3) The floor area of the part of a building to be used for indoor storage facilities shall not exceed seventy-five (75) square meters.
 - (4) The part of a building to be used for indoor storage facilities shall have walls, pillars, floor, beams and roof (floor of the upper story if there is an upper story) with a fire-resistant construction and shall be compartmented from other parts with a floor or walls made of reinforced concrete of seventy (70) millimeters or more in thickness without any openings other than doorways or a construction with a strength equivalent to or higher than reinforced concrete construction.
 - (5) The doorways at the part of a building to be used for indoor storage facilities shall have self-closing specified fire protection equipment which can be opened at any time.
 - (6) The part of a building to be used for indoor storage facilities shall not have any windows.
 - (7) The ventilation and discharge equipment of the part of a building to be used for indoor storage facilities shall be provided with a damper, etc. for effective fire protection.
4. For indoor storage facilities of which the multiple of the specified quantity is fifty (50) or lower, special cases for the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
 5. For indoor storage facilities storing or handling only hazardous materials with a high flash point, special cases for the standards referred to in Paragraph 1, Paragraph 2 and Paragraph 4 may be set forth by an ordinance of the Ministry.
 6. For indoor storage facilities storing or

handling organic peroxides and those containing an organic peroxide which are set forth as hazardous materials by an ordinance of the Ministry or alkyl aluminium, alkyl lithium and other hazardous materials set forth by an ordinance of the Ministry, special cases for the standards referred to in Paragraph 1 through Paragraph 4 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

(Standards for Outdoor Storage Tank Facilities)

Article 11 The technical standards for the location, construction and equipment of outdoor storage tank facilities shall be those set forth below.

- (1) The location of outdoor tank facilities shall follow the case for manufacturing facilities described in Article 9-1 Paragraph 1 Item 1.
- (1-2) The location of outdoor storage tank facilities storing or handling hazardous liquid with a flash point shall follow the provision of Item 1-1 above and shall maintain such distance between the boundary line of the premises where the said outdoor tank facilities to the side plate of the outdoor tank storing or handling the hazardous material (hereinafter referred to as "outdoor storage tanks" in this article, Article 26 and Article 40) as that listed in the right-hand column of the table below in accordance with the flash point category of the hazardous material to be stored or handled by the said outdoor storage tank as shown in the middle column of the said table, in turn corresponding to the category of outdoor storage tank shown in the left-hand column of the said table. However, should the municipal mayor, etc. approve that safety is ensured due to

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the erection of walls made of a noncombustible material which are effective from the viewpoint of fire protection, the little likelihood of the spread of fire because of the topographical conditions even if a fire

occurs and other circumstances set forth by an ordinance of the Ministry, the distance set forth by the said municipal mayor, etc. may be the distance in question

Category of Outdoor Storage Tank	Flash Point of Hazardous Material	Distance
1. Outdoor storage tanks which are located at outdoor storage tank facilities of Class 1 workplaces stipulated in Article 2 Item 4 of the Law for Disaster Prevention at Petroleum Complex, etc. (Law No. 84 of 1975) (referred to as a "Class 1 workplace" in Paragraph 6) or a Class 2 workplaces stipulated in Article 2 Item 5 (referred to as a "Class 2 workplaces" in Paragraph 6)	Lower than 21°C	Not shorter than the distance equivalent to either the numerical value obtained by multiplying the maximum diameter of the horizontal cross-section (horizontal length in the case of a horizontal-type tank) of the tank in question (hereinafter referred to as the "numerical value of the diameter, etc.") by 1.8 (in the case where the said numerical value is smaller than the numerical value for the tank height, the numerical value of the said height) or fifty (50) meters, whichever is the greater
	21°C or higher but lower than 70°C	Not shorter than the distance equivalent to either the numerical value obtained by multiplying the numerical value of the diameter, etc. of the tank in question by 1.6 (in the case where the said numerical value is smaller than the numerical value of the tank height, the numerical value of the said height) or forty (40) meters, whichever is the greater
	70°C or higher	Not shorter than the distance equivalent to either the numerical value of the diameter, etc. of the tank in question (in the case where the said numerical value is smaller than the numerical value of the tank height, the numerical value of the said height) or thirty (30) meters, whichever is the greater.
2. Outdoor storage tanks other than the outdoor storage tanks referred to in 1. above	Lower than 21°C	Not shorter than the distance equivalent to the numerical value obtained by multiplying the numerical value of the diameter, etc. of the tank in question (in the case where the said numerical value is smaller than the numerical value of the tank height, the numerical value of the said height) by 1.8
	21°C or higher but lower than 70°C	Not shorter than the distance equivalent to the numerical value obtained by multiplying the numerical value of the diameter, etc. of the tank in question (in the case where the said numerical value is smaller than the numerical value of the tank height, the numerical value of the said height) by 1.6
	70°C or higher	Not shorter than the distance equivalent to the numerical value of the diameter, etc. of the tank in question (in the case where the said numerical value is smaller than the numerical value of the tank height, the numerical value of the said height)

Category	Width of Empty Land
Outdoor storage tank facilities of which the multiple of the specified quantity is five hundred (500) or smaller	Three (3) meters or wider
Outdoor storage tank facilities of which the multiple of the specified quantity exceeds five hundred (500) but is not larger than one thousand (1,000)	Five (5) meters or wider
Outdoor storage tank facilities of which the multiple of the specified quantity exceeds one thousand (1,000) but is not larger than two thousand (2,000)	Nine (9) meters or wider
Outdoor storage tank facilities of which the multiple of the specified quantity exceeds two thousand (2,000) but is not larger than three thousand (3,000)	Twelve (12) meters or wider
Outdoor storage tank facilities of which the multiple of the specified quantity exceeds three thousand (3,000) but is not larger than four thousand (4,000)	Fifteen (15) meters or wider
Outdoor storage tank facilities of which the multiple of the specified quantity exceeds four thousand (4,000)	Not shorter than the distance equivalent to the maximum diameter of the horizontal cross-section of the tank in question (horizontal length in the case of horizontal-type tanks) or the numerical value of the height, whichever is the greater. However, it shall not be less than fifteen (15) meters.

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- (2) Outdoor storage tanks (excluding pipelines to transfer hazardous materials and other similar workpieces) shall have empty land of the width specified in the table below in correspondence with the categories shown in the said table around them. However, should two or more outdoor storage tank facilities be installed next to each other, the width of such empty land may be reduced by an ordinance of the Ministry.
- (3) Outdoor storage tank facilities shall have a marking indicating that they are outdoor storage tank facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
- (3-2) The foundations and ground of the outdoor storage tanks of specified outdoor storage tank facilities (referred to as "specified outdoor storage tanks" in Item 4-1 and Item 4-2) shall be firm as stipulated by an ordinance of the Ministry and shall conform to the standards set forth by an ordinance of the Ministry in the plate bearing test, compressive density test and/or any other tests to be conducted pursuant to the relevant provisions of an ordinance of the Ministry.
- (3-3) The foundations and ground of the outdoor storage tanks (referred to as "quasi-specified outdoor tanks" in Item 4-1) of outdoor storage tank facilities where the maximum quantity of hazardous materials stored or handled is not less than five hundred (500) kiloliters but is less than one thousand (1,000) kiloliters (hereinafter referred to as "quasi-specified outdoor storage tank facilities") shall be firm as stipulated by an ordinance of the Ministry.
- (4) Regarding outdoor storage tanks, outdoor storage tanks other than specified outdoor storage tanks or quasi-specified outdoor storage tanks shall be made airtight using steel plate of 3.2 millimeters or more in thickness, special outdoor storage tanks and quasi-specified outdoor storage tanks shall, as set forth by an ordinance of the Ministry, be made airtight using steel plate or other materials which have both mechanical properties and weldability equivalent to or higher than steel plate or other materials conforming to the standards set forth by an ordinance of the Ministry and neither tanks other than pressure tanks in the leak test by filling water nor pressure tanks in the water pressure test lasting for ten (10) minutes at a pressure of one and a half (1.5) times the maximum working pressure [the water pressure test set forth by an ordinance of the Ministry in the case of pressure tanks which are facilities for the manufacture of high pressure gas to which the provision of Article 20 Paragraph 1 or Paragraph 3 of the High Pressure Gas Safety Law applies, the machines, etc. referred to in Article 12 Item 2 of the Enforcement Order for the Industrial Safety and Health Law (Cabinet Order No. 318 of 1972) or the machines, etc. referred to in Article 13 Item 8 or Item 24 of the said Regulations] shall experience any leakage or deformation. However, this provision shall not apply to outdoor storage tanks for solids.
- (4-2) The welds of specified outdoor storage tanks shall conform to the standards set forth by an ordinance of the Ministry in the radiographic test and vacuum test, etc. to be conducted as set forth by an ordinance of the Ministry.
- (5) Outdoor storage tanks shall have a construction which is capable of withstanding earthquakes and wind pres-

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- sure and their struts shall have a fire-resistant performance equivalent to that of a reinforced concrete construction, steel framed concrete and others as set forth by an ordinance of the Ministry.
- (6) Outdoor storage tanks shall have a construction which is capable of releasing internal gas or vapour above them in the case where the pressure inside such a tank abnormally rises due to an explosion, etc. of the hazardous material.
 - (7) The outside surface of outdoor storage tanks shall be given an anti-rust coating.
 - (7-2) Among outdoor storage tanks, those where the baseplate is installed in contact with the ground surface shall adopt a measure to prevent corrosion of the outside surface of the baseplate as set forth by an ordinance of the Ministry.
 - (8) Among outdoor storage tanks, tanks other than pressure tanks shall have a vent pipe as set forth by an ordinance of the Ministry and pressure tanks shall have a safety device as set forth by an ordinance of the Ministry.
 - (9) Outdoor storage tanks for hazardous liquid shall have a device which automatically indicates the quantity of the hazardous liquid.
 - (10) The inlet of outdoor storage tanks for hazardous liquid shall conform to the following provisions.
 - 1) The inlet must be installed in a place which is not obstructive from the viewpoint of fire protection.
 - 2) The inlet may be coupled with a filling hose or filling pipe and must not leak any hazardous liquid.
 - 3) The inlet must have a valve or lid.
 - 4) An earth electrode to effectively remove static electricity must be installed near the inlet of outdoor storage tanks for such hazardous liquid as gasoline, benzene and others with which a disaster may occur due to static electricity.
 - 5) The inlet of outdoor storage tanks for hazardous materials of which the flash point is lower than twenty-one (21) degrees celsius shall have a marking indicating that it is the inlet of an outdoor storage tank and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry. However, this provision shall not apply in the case where the municipal mayor, etc. finds the installation of the said notice board unnecessary from the viewpoint of fire prevention.
- (10-2) Pumping equipment (meaning a pump and accompanying motor, including a building or other workpiece should such a workpiece be introduced to house the said pump and motor; the same shall apply hereinafter) of outdoor storage tanks shall conform to the following provisions.
- 1) There must be empty land of with a width of three (3) meters or wider around the pumping equipment. However, this provision shall not apply when an effective fire bulkhead is installed or in other cases to be set forth by an ordinance of the Ministry.
 - 2) The distance between the pumping equipment and outdoor storage tank must be one-third (1/3) of the width of the empty land for the said outdoor storage tank or wider.
 - 3) Pumping equipment must be anchored to firm foundations.
 - 4) The walls, pillars, floor and beams of a building or other workpiece to house a pump and accompanying motor (hereinafter referred to as a "pump room") shall be made of

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- noncombustible materials.
- 5) Pump rooms shall have a roof construction made of a noncombustible material and the roof shall be covered with metal plates or another light weight noncombustible material.
 - 6) The windows and doorways of pump rooms shall be provided with fire protection equipment.
 - 7) Should glass be used for the windows or doorways of pump rooms, the glass shall be wired glass.
 - 8) The floor of a pump room shall have fencing of 0.2 meters or higher in height around it and the said floor shall have a construction which prevents the infiltration of hazardous materials and shall also have a suitable inclination as well as cesspools.
 - 9) Pump rooms shall have natural lighting, artificial lighting and ventilation equipment which are necessary to handle hazardous materials.
 - 10) Pump rooms where flammable vapour may hold up shall have equipment to discharge such vapour to a high outdoor place.
 - 11) Pumping equipment to be installed in a place other than a pump room shall have fencing of 0.15 meters or higher in height around the ground surface immediately below the equipment or shall adopt a measure which is acknowledged to have the same as or better effect than the said fencing to prevent any outflow of the hazardous materials and which is to be set forth by an ordinance of the Ministry and the said ground surface shall be covered with concrete or another material which cannot be infiltrated by the hazardous materials and which has a suitable inclination as well as cesspools. In this case, the cesspools of pumping equipment handling Group 4 hazardous materials (limited to materials which are insoluble by water) shall be provided with an oil separator so that the said hazardous materials do not directly flow into a drainage ditch.
- 12) Pumping equipment handling hazardous materials of which the flash point is lower than twenty-one (21) degrees celsius shall have a marking indicating that it is pumping equipment of an outdoor storage tank and a notice board explaining the necessary matters for fire protection, both in easily visible places, in accordance with an ordinance of the Ministry. However, this provision shall not apply in the case where the municipal mayor, etc. finds the installation of the said notice board unnecessary from the viewpoint of fire prevention.
- (11) The valves of outdoor storage tanks shall be made of cast steel or other materials of which the mechanical properties are equal to or better than those of cast steel and shall not leak any hazardous material.
- (11-2) The drain pipe of outdoor storage tanks shall be installed at the side plate of the tank. However, it may be installed to the baseplate of the tank when the relevant provision of an ordinance of the Ministry is applied.
- (11-3) The side plates of outdoor storage tanks with a floating roof or equipment to be installed to a floating roof shall be installed in a manner which does not cause any damage the floating roof or side plates respectively due to an earthquake, etc. However, this provision shall not apply to equipment which is set forth by an ordinance of the Ministry as equipment which is necessary for the safety management of hazardous materials

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- to be stored by the said outdoor storage tanks.
- (12) The location, structure and equipment of the pipelines for outdoor storage tanks shall be those set forth in Item 12-2 and Item 12-3 below and shall also follow the case of pipelines handling hazardous materials at manufacturing facilities referred to in Article 9 Paragraph 1 Item 21.
- (12-2) The pipelines of outdoor storage tanks for the transfer of hazardous liquid shall be installed in a manner not to cause any damage to the coupling parts between the said pipelines and tanks due to an earthquake, etc.
- (12-3) The pipelines of outdoor storage tanks [limited to those of which the capacity is ten thousand (10,000) kiloliters or more] for the transfer of hazardous liquid shall have valves, which can be immediately closed at the time of an emergency and which are set forth by an ordinance of the Ministry, installed near the coupling parts between the said pipelines and tanks.
- (13) Electrical equipment shall follow the case of electrical equipment at manufacturing facilities referred to in Article 9 Paragraph 1 Item 17.
- (14) At outdoor storage tank facilities of which the multiple of the specified quantity is ten (10) or higher, the lightning equipment to be set forth by an ordinance of the Ministry shall be installed. However, this provision shall not apply in the case where the absence of such equipment does not pose a safety hazard because of the situation of the surrounding area.
- (15) Oil retaining walls set forth by an ordinance of the Ministry shall be installed around outdoor storage tanks for hazardous liquid as to be set forth by an ordinance of the Ministry to prevent the outflow of hazardous liquid should any hazardous liquid be leaked.
- (16) Outdoor storage tanks for solid water-prohibitive materials shall have covering equipment made of a noncombustible, waterproof material.
- (17) Outdoor storage tanks for carbon disulphide shall be submerged in water in a non-leaking reinforced concrete water tank of which the walls and bottom have a thickness of 0.2 meters or thicker.
2. For outdoor storage tank facilities storing or handling only hazardous materials with a high flash point as set forth by an ordinance of the Ministry, special cases for the standards referred to in Paragraph 1 above may be set forth by an ordinance of the Ministry.
 3. For outdoor storage tank facilities storing or handling alkyl aluminium, alkyl lithium, acetardehyde, propylene oxide and others set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.
 4. For bedrock tanks or outdoor storage tank facilities relating to specified hazardous liquid tanks as set forth by an ordinance of the Ministry, special cases for the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
 5. Should construction work to alter the construction or equipment (limited to construction work other than the work to replace the side plate or baseplate of the tank as set forth by an ordinance of the Ministry) be conducted at outdoor storage tank facilities, special cases for the standards referred to in Paragraph 1 Item 4 (limited to the parts relating to the leak test by filling water or the water pressure test) may be set forth by an ordinance of

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the Ministry for outdoor storage tank facilities relating to the said alteration work.

6. Regarding application of the provision of Paragraph 1 Item 1-2 to outdoor storage tank facilities [limited to those of which the outdoor storage tanks have a capacity of one thousand (1,000) kiloliters or greater] which are located at a Class 1 workplace which was already a Class 1 workplace or at a site where the construction work of a new Class 1 workplace (new construction stipulated in Article 5 Paragraph 1 of the Law) for disaster prevention at a gasoline complex, etc. was in progress when the area of its location was designated a special disaster prevention area for a gasoline complex, etc stipulated in Article 2 Item 2 of the said Law (hereinafter referred to as a "special disaster prevention area") and which already had permission pursuant to the provision of Article 11 Paragraph 1 of the Law when the said area was designated a special disaster prevention area or outdoor storage tank facilities which are located at a Class 2 workplace [limited to those of which the outdoor storage tanks have a capacity of one thousand (1,000) kiloliters or greater] which already had permission pursuant to the provision of Article 11 Paragraph 1 of the Law, these outdoor storage tank facilities shall be deemed to be outdoor storage tank facilities relating to the outdoor storage tanks referred to in Item 2 of the table in Paragraph 1 Item 1-2 above for a period of one (1) year and six (6) months starting from the day on which the area in question was designated a special disaster prevention area or the day on which the workplace in question was designated a Class 2 workplace.

(Standards for Indoor Storage Tank Facilities)

Article 12 The technical standards for the location, structure and equipment of indoor storage tank facilities (excluding those set forth in Paragraph 2 below) shall be those set forth below.

- (1) Indoor tanks storing or handling hazardous materials (hereinafter referred to as "indoor storage tanks" in this article and Article 26) shall be installed in an exclusive tank room which is set up in a single story building.
- (2) There shall be a distance of half (0.5) a meter or wider between the indoor storage tank and the walls of the exclusive tank room or between the tanks when two or more indoor storage tanks are installed inside the same exclusive tank room.
- (3) Indoor storage tank facilities shall have a marking indicating that they are indoor storage tank facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
- (4) The capacity of an indoor storage tank shall not exceed forty (40) times the specified quantity [twenty thousand (20,000) liters when the said quantity exceeds twenty thousand (20,000) liters for Type 4 petroleum and group 4 hazardous materials other than animal and vegetable oils]. The same shall apply to the total capacity of tanks in the case where two or more indoor storage tanks are installed in the same exclusive tank room.
- (5) The construction of indoor storage tanks shall follow the case of construction referred to in Article 11 Paragraph 1 Item 4-1.
- (6) The outside surface of indoor storage tanks shall be given an anti-rust coat-

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- ing.
- (7) Among indoor storage tanks, tanks other than pressure tanks shall have a vent pipe as set forth by an ordinance of the Ministry and pressure tanks shall have a safety device as set forth by an ordinance of the Ministry.
 - (8) Indoor storage tanks for hazardous liquid shall have a device which automatically indicates the quantity of the hazardous liquid.
 - (9) The inlet of indoor storage tanks for hazardous liquid shall follow the case of the inlet for outdoor storage tanks set forth in Article 11 Paragraph 1 Item 10-1.
 - (9-2) Regarding pumping equipment of indoor storage tanks, pumping equipment to be installed in a place other than a building with an exclusive pump room shall follow the case of pumping equipment set forth in Article 11 Paragraph 1 Item 10-2 [excluding the provisions of 1) and 2)] and pumping equipment to be installed in a building with an exclusive pump room shall be installed as set forth by an ordinance of the Ministry.
 - (10) The valves of indoor storage tanks shall follow the case of the valves for outdoor storage tanks set forth in Article 11 Paragraph 1 Item 11-1.
 - (10-2) The drain pipe of indoor storage tanks shall follow the case of the drain pipe for outdoor storage tanks set forth in Article 11 Paragraph 1 Item 11-2.
 - (11) The location, construction and equipment of the pipelines for indoor storage tanks shall be those set forth in Item 11-2 below and shall also follow the case of the pipelines handling hazardous materials at manufacturing facilities set forth in Article 9 Paragraph 1 Item 21.
 - (11-2) The pipelines of indoor storage tanks for the transfer of hazardous liquid shall follow the case of the pipelines of outdoor storage tanks referred to in Article 11 Paragraph 1 Item 12-2.
 - (12) Exclusive tank rooms shall have walls, pillars and floors with a fire-resistant construction, the beams shall be made of a noncombustible material and the external walls through which a fire may spread shall have no openings except doorways. However, in the case of exclusive tank rooms to house indoor storage tanks for only Group 4 hazardous materials of which the flash point is lower than seventy (70) degrees celsius, the external walls through which a fire is unlikely to spread, pillars and floors may be made of a noncombustible material.
 - (13) Exclusive tank rooms shall have a roof made of a noncombustible material and shall not have a false ceiling.
 - (14) The windows and doorways of exclusive tank rooms shall be provided with fire protection equipment and the doorways to be introduced in external walls through which a fire may spread shall be provided with self-closing specified fire protection equipment which can be opened at any time.
 - (15) Should glass be used for the windows or doorways of exclusive tank rooms, the glass shall be wired glass.
 - (16) The floor of exclusive tank rooms to house indoor storage tanks for hazardous liquid shall have a construction which prevents the infiltration of hazardous liquid and shall have a suitable inclination as well as cess-pools.
 - (17) The height of the threshold of doorways to exclusive tank rooms shall be 0.2 meters or higher from the floor surface.
 - (18) The natural lighting, artificial lighting, ventilation and discharge equipment of exclusive tank rooms shall follow

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the case of the natural lighting, artificial lighting, ventilation and discharge equipment of indoor storage facilities referred to in Article 10 Paragraph 1 Item 12.

- (19) Electrical equipment shall follow the case of the electrical equipment of manufacturing facilities referred to in Article 9 Paragraph 1 Item 17.
2. The technical standards for the location, construction and equipment of indoor storage tank facilities storing or handling only Group 4 hazardous materials of which the flash point is forty (40) degrees celsius or higher (limited to the case where an exclusive tank room is installed in a multi-story building) among indoor storage tank facilities shall follow the cases in the provisions of Paragraph 1 Item 2 through Item 9-1, Item 9-2 (limited to the part related to the standards for pumping equipment to be installed in a place other than a building where an exclusive pump room is located), Item 10-1 through Item 11-2, Item 16, Item 18 and Item 19 and shall also be those set forth below.
 - (1) Indoor storage tanks shall be installed in an exclusive tank room.
 - (2) Equipment to indicate the quantity of a hazardous material inside an indoor storage tank shall be installed near the inlet of the said indoor storage tank. However, this provision shall not apply when the quantity of the said hazardous material can be easily indicated.
 - (2-2) The pumping equipment of indoor storage tanks to be installed inside buildings with exclusive tanks rooms shall be installed as set forth by an ordinance of the Ministry.
 - (3) Exclusive tank rooms shall have walls, pillars, floor and beams with a fire-resistant construction.
 - (4) Exclusive tank rooms shall have the floor of the upper story with a fire-

resistant construction if an upper story exists or shall have a roof made of a noncombustible material and no false ceiling if no upper story exists.

- (5) Exclusive tank rooms shall not have any windows.
 - (6) Self-closing specified fire protection equipment which can be opened at any time shall be installed at the doorways of exclusive tank rooms.
 - (7) The ventilation and discharge equipment of exclusive tank rooms shall be provided with a damper, etc. for effective fire protection.
 - (8) Exclusive tank rooms shall have a construction which can prevent the outflow of hazardous liquid leaking from an indoor storage tank to areas other than the exclusive tank room.
3. For indoor tank storage facilities storing or handling alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

(Standards for Underground Storage Tank Facilities)

Article 13 The technical standards for the location, construction and equipment of underground storage tank facilities (excluding those stipulated in Paragraph 2 and Paragraph 3) below shall be those set forth below.

- (1) Underground tanks storing or handling hazardous materials (hereinafter referred to as "underground storage tanks" in this article, Article 17 and Article 26) shall be installed in tank rooms set up below the ground surface. However, this provision shall not apply to underground storage tanks for Group 4 hazardous mate-

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- rials which conform to all of the provisions of 1) through 4) below.
- 1) The tank in question shall not be installed in a place within ten (10) meters of the horizontal distance of a subway or underground tunnel or any other places set forth by an ordinance of the Ministry.
 - 2) The tank in question shall be covered by a lid which is 0.6 meters larger than both the horizontally projected length and width of the tank and which has a thickness of 0.3 meters or more.
 - 3) There must be a construction to prevent the weight on the lid from being directly loaded to the tank in question.
 - 4) The tank in question must be anchored to firm foundations.
- (2) There shall be a distance of 0.1 meters between the underground storage tank and the inner walls of the tank room and dry sand shall be filled in around the tank in question.
 - (3) The head of the underground storage tank shall be 0.6 meters or more below the ground surface.
 - (4) Should two or more underground storage tanks be installed next to each other, there should be a distance of one (1) meter or more (0.5 meters when the total capacity of the said two or more underground storage tanks is one hundred (100) times or less the specified quantity) between them.
 - (5) Underground storage tank facilities shall have a marking indicating that they are underground storage tank facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
 - (6) Underground storage tanks shall be made airtight using steel plate of 3.2 millimeters or more in thickness and neither tanks other than pressure tanks subject to a pressure of seventy (70) pascals nor pressure tanks subject to a pressure of one and a half (1.5) times the maximum working pressure in the water pressure test lasting for ten (10) minutes [the water pressure test set forth by an ordinance of the Ministry in the case of pressure tanks which are facilities for the manufacture of high pressure gas to which the provision of Article 20 Paragraph 1 or Paragraph 3 of the High Pressure Gas Safety Law applies, the machines, etc. referred to in Article 12 Item 2 of the Enforcement Order for the Industrial Safety and Health Law or the machines, etc. referred to in Article 13 Item 8 or Item 24 of the said Regulations; the same applies in Article 15 Paragraph 1 Item 2] shall experience any leakage or deformation.
 - (7) The outside surface of underground storage tanks shall be protected as set forth by an ordinance of the Ministry.
 - (8) Among underground storage tanks, tanks other than pressure tanks shall have a vent pipe as set forth by an ordinance of the Ministry and pressure tanks shall have a safety device as set forth by an ordinance of the Ministry.
 - (8-2) Underground storage tanks for hazardous liquid shall have a device which automatically indicates the quantity of the hazardous liquid or a measuring port. In this case, underground storage tanks to which a measuring port is installed shall adopt a measure to prevent damage to the base plate of the tank located immediately below the measuring port.
 - (9) The inlet of underground storage tanks for hazardous liquid shall be located outdoors and shall follow the

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- case of the inlet of outdoor storage tanks referred to in Article 11 Paragraph 1 Item 10.
- (9-2) Pumping equipment of underground storage tanks shall follow the case of pumping equipment of outdoor storage tanks for pumping equipment referred to in Article 11 Paragraph 1 Item 10-2 [excluding the provisions of 1) and 2)] in the case of pumping equipment where the pump and motor are installed outside an underground storage tank or shall follow the relevant provisions to be set forth by an ordinance of the Ministry in the case of pumping equipment where the pump or motor is installed inside the underground storage tank.
- (10) The location, construction and equipment of the pipelines of underground storage tanks shall be installed in the manner set forth in Item 11 below and shall also follow the case of pipelines handling hazardous materials at manufacturing facilities referred to in Article 9 Paragraph 1 Item 21.
- (11) The pipelines of underground storage tanks shall be installed at the head of the said underground storage tanks.
- (12) Electrical equipment shall follow the case of electrical equipment at manufacturing facilities referred to in Article 9 Paragraph 1 Item 17.
- (13) Four or more pipes to inspect the leakage of hazardous liquid from underground storage tanks shall be installed in appropriate places around the said tanks.
- (14) Tank rooms shall have concrete walls and floor of 0.3 meters or more in thickness or a construction of which the strength is equivalent to or higher than the said concrete construction to which a suitable waterproofing measure is applied and the lid shall be reinforced concrete of 0.3 meters or more in thickness to which a waterproofing measure is applied.
2. The technical standards for the location, structure and equipment of underground storage tank facilities (limited to those underground storage tank facilities where the underground storage tanks are mounted with copper plates in a manner which leaves a gap between the tank and the plates or which are covered by reinforced plastic in a manner which leaves a gap between the tank and the plastic) shall follow the provisions of Paragraph 1 Item 3 through Item 5, Item 6 (limited to the part relating to the water pressure test) and Item 8 through Item 12 above in addition to the provisions of Paragraph 1 Item 1-1) through 4) in the case where the said underground storage tanks are installed in places other than tank rooms or the provisions of Paragraph 1 Item 2 and Item 14 in the case where the said underground storage tanks are installed in tank rooms located below the ground surface and shall also follow the provisions of the following items. In this case, the words "the tank in question" in Paragraph 1 Item 1-2) shall read "underground storage tanks to which a measure referred to in Paragraph 2 Item 1-1) or 2) is applied (hereinafter referred to as "double skin tanks" in this paragraph)", the words "the tank in question" in Item 1-3) and 4) shall read "the double skin tanks", the words "the underground storage tanks" and "the tank in question" in Paragraph 2 Item 2 shall read "the double skin tanks" and "the double skin tanks in question" respectively and the words "the underground storage tanks" in Paragraph 1 Item 3 and Item 4 shall read "the double skin tanks".
- (1) Underground storage tanks shall be installed below the ground surface with one of the following measures being applied.
- 1) Underground storage tanks shall be mounted with steel plate in a man-

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- ner which leaves a gap between the tank and the plates as set forth by an ordinance of the Ministry and shall also have equipment to constantly detect any leakage of the hazardous material as set forth by an ordinance of the Ministry.
- 2) Underground storage tanks shall be covered by reinforced plastic in a manner which leaves a gap between the tank and the plastic as set forth by an ordinance of the Ministry and shall have equipment set forth by an ordinance of the Ministry to detect any leakage of the hazardous material.
 - (2) Underground storage tanks shall be made airtight using one of the following materials.
 - 1) Steel plate of 3.2 millimeters or more in thickness
 - 2) Reinforced plastic set forth by an ordinance of the Ministry in correspondence with the types of hazardous materials to be stored or handled
 - 3) Underground storage tanks which are made of the material referred to in Item 2-2) above and applied with the measure referred to in Item 1-2) shall have a safe construction against the load acting on the subject of the said measure.
 - 4) The outside surface of underground storage tanks made of the material referred to in Item 2-1) [in the case of underground storage tanks to which the measure referred to in Item 1-1) is applied, the outside surface of the subject of the said measure] shall be protected as set forth by an ordinance of the Ministry.
 3. The technical standards for the location, construction and equipment of underground storage tank facilities (limited to those where underground storage tanks with the structure set forth by an ordinance of the Ministry to prevent the leakage of the hazard materials are installed below the ground surface) shall follow the provisions of Paragraph 1 Item 1-2) through 4), Item 3, Item 5, Item 6 and Item 8 through Item 13 and the outside surface of underground storage tanks shall be protected as set forth by an ordinance of the Ministry.
 4. For underground storage tank facilities storing or handling alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 3 above may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.
- (Standards for Simple Storage Tank Facilities)**
- Article 14** The technical standards for the location, construction and equipment of simple storage tank facilities shall be those set forth below.
- (1) Simple tanks storing or handling hazardous materials (hereinafter referred to as "simple storage tanks" in this article, Article 17 and Article 26) shall be installed outdoors. However, this provision shall not apply when they are installed inside exclusive rooms which meet all of the conditions set forth in 1) through 4) below.
 - 1) The construction of the said exclusive rooms shall follow the case of the construction of exclusive tank rooms for indoor storage tank facilities referred to in Article 12 Paragraph 1 Item 12 and Item 13.
 - 2) The windows and doorways of the said exclusive rooms shall follow the cases of windows and doorways of indoor storage tank facilities referred to in Article 12 Para-

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- graph 1 Item 14 and Item 15.
- 3) The floor of the said exclusive rooms shall follow the case of the construction of the floor of exclusive tank rooms for indoor storage tank facilities referred to in Article 12 Paragraph 1 Item 16.
 - 4) The natural lighting, artificial lighting, ventilation and discharge equipment of the said exclusive rooms shall follow the cases of the natural lighting, artificial lighting, ventilation and discharge equipment of indoor storage tank facilities referred to in Article 10 Paragraph 1 Item 12.
 - (2) The number of simple storage tanks to be installed at single simple storage tank facilities shall be up to three (3) and there shall not be two or more simple storage tanks for hazardous materials with the same qualities.
 - (3) Simple storage tank facilities shall have a marking indicating that they are simple storage tank facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
 - (4) Simple storage tanks shall be anchored to the ground surface, a frame or other to prevent their easy movement and there shall be empty land of which the width is one (1) meter or wider around the tanks in the case of their installation outdoors or there shall be a distance of half (0.5) a meter or wider between the tanks and the walls of the exclusive room in the case of their installation inside an exclusive room.
 - (5) The capacity of a simple storage tank shall be six hundred (600) liters or smaller.
 - (6) Simple storage tanks shall be made airtight using steel plate of 3.2 millimeters or more in thickness and shall not experience any leakage or deformation in the water pressure test lasting for ten (10) minutes with a pressure of seventy (70) pascals.
 - (7) The outside surface of simple storage tanks shall be given an anti-rust coating.
 - (8) Simple storage tanks shall have a vent pipe as set forth by an ordinance of the Ministry.
 - (9) Should equipment for the filling or feeding of oil be installed to simple storage tanks, the said equipment shall follow the cases of fixed oil filling equipment or fixed oil feeding equipment of filling stations referred to in Article 17 Paragraph 1 Item 7.

(Standards for Mobile Storage Tank Facilities)

Article 15 The technical standards for the location, construction and equipment of mobile storage tank facilities shall be those set forth below.

- (1) Mobile storage tank facilities shall be permanently placed in outdoor places which are safe from the viewpoint of fire protection or on the first floor of buildings of which the walls, floor, beams and roof are made of a fire-resistant construction or noncombustible materials.
- (2) Tanks fixed to vehicles storing or handling hazardous materials (those vehicle stipulated in Article 2 Item 6) (hereinafter referred to as "mobile storage tanks") shall be made airtight using steel plate of 3.2 millimeters or more in thickness or a material of which the mechanical properties are equivalent to or higher than those of the said steel plate and neither tanks other than pressure tanks subject to a pressure of seventy (70) pascals nor pressure tanks subject to a pressure of one and a half (1.5) times the maximum working pressure in the water

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- pressure test shall experience any leakage or deformation.
- (3) The capacity of mobile storage tanks shall be thirty thousand (30,000) liters or less and complete partitions made of steel plate of 3.2 millimeters or more in thickness or a material of which the mechanical properties are equivalent to or higher than those of the said steel plate shall be installed inside to make the capacity of each compartment four thousand (4,000) liters or less.
 - (4) Each compartment created by the partitions referred to in Item 3 above shall be provided with a manhole and a safety device to be set forth by an ordinance of the Ministry and shall also be provided with a stabiliser made of steel plate of 1.6 millimeters in thickness of a material of which the mechanical properties are equivalent to or higher than those of the said steel plate as set forth by an ordinance of the Ministry.
 - (5) The manholes and lids of the inlets of mobile storage tanks shall be made of steel plate of 3.2 millimeters in thickness or a material of which the mechanical properties are equivalent to or higher than those of the said steel plate.
 - (6) Should equipment to recover flammable vapour be installed to mobile storage tanks, the said equipment shall have a construction which prevents any leakage of the flammable vapour.
 - (7) Mobile storage tanks of which the manholes, inlets and safety devices, etc. (hereinafter referred to as "auxiliary devices") protrude above the said tanks shall be provided with arrangements to prevent any damage to the said auxiliary devices.
 - (8) The outside surface of mobile storage tanks shall be given an anti-rust coating.
 - (9) Should an outlet be installed at the lower part of a mobile storage tank, a bottom valve shall be installed to the outlet of the said tank together with a manual closing device and a self-closing device to close the said bottom valve without delay at the time of an emergency. However, a self-closing device may not be installed to an outlet to be installed at the outlet of mobile storage tanks for Group 4 hazardous materials of which the flash point is seventy (70) degrees celsius or higher or an outlet of which the diameter is forty (40) millimeters or less.
 - (10) The manual closing device referred to in Item 9 above shall have a lever as set forth by an ordinance of the Ministry and an indication nearby saying that it is the lever for the said device.
 - (11) Mobile storage tanks to which a bottom valve is installed shall have an arrangement to prevent any damage to the bottom valve due to external impact.
 - (12) The pipelines of mobile storage tanks shall have a valve, etc. at the front end.
 - (13) The electrical equipment of mobile storage tanks and auxiliary devices which is installed in a place where flammable vapour may hold up shall have a construction so as not to ignite the flammable vapour.
 - (14) A grounding conductor shall be installed to mobile storage tanks for such hazardous liquid as gasoline, benzene and others which are liable to a disaster due to static electricity.
 - (15) A filling hose equipped with a metal coupling capable of coupling with the inlet of a tank storing or handling hazardous materials shall be installed to mobile storage tanks for hazardous liquid. In this case, the said metal coupling (excluding those relating to mobile storage tanks for Group 6

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- hazardous materials) shall be made of brass or another material which is unlikely to generate sparks due to friction, etc.
- (16) Among the mobile storage tanks for such hazardous liquid as gasoline, benzene and others which are liable to a disaster due to static electricity, those where the quantity of the said hazardous liquid is measured by a dipstick shall be provided with a device to prevent a disaster due to static electricity at the time of measuring.
 - (17) Mobile storage tanks shall be provided with an installation indicating the group, name and maximum quantity of the hazardous materials to be stored or handled by the said tanks in an easily visible place and shall also carry a marking as set forth by an ordinance of the Ministry.
 2. For those with a construction to reload mobile storage tanks to vehicles, etc. (referred to as "loading-type mobile storage tank facilities" in Article 26, Article 27 and Article 40) among mobile storage tank facilities, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
 3. For mobile storage tank facilities equipped with oil filling equipment for the direct filling of oil to the fuel tanks of aircraft, special cases for the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
 4. For mobile storage tank facilities storing or handling alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 1 and Paragraph 2 may be set forth by an ordinance of the Ministry

in correspondence with the properties of the said hazardous materials.

5. For mobile tank storage facilities which conform to the standards set forth by the provision concerning the transportation of hazardous materials as adopted by the International Maritime Organization, special cases for the standards stipulated in Paragraph 1, Paragraph 2 and Paragraph 4 above may be set forth by an ordinance of the Ministry.

(Standards for Outdoor Storage Facilities)

Article 16 The technical standards for the location, construction and equipment of those outdoor storage facilities storing or handling hazardous materials in containers among outdoor storage facilities shall be those set forth below.

- (1) The location of outdoor storage facilities shall follow the case of the location of manufacturing facilities referred to in Article 9 Paragraph 1 Item 1.
- (2) Outdoor storage facilities shall be located in places which are not wet and which have good drainage.
- (3) Places storing or handling hazardous materials shall be clearly demarcated by fencing, etc. around them.
- (4) There shall be empty land of the width specified in the table below in correspondence with the categories shown in the said table around the fencing, etc. referred to in Item 3 above. However, should sulphur or those only containing sulphur (hereinafter referred to as "sulphur, etc." in this article, Article 26 and Article 29) among Group 2 hazardous materials to be stored or handled, the width of the said empty land may be reduced as set forth by an ordinance of the Ministry.

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Category	Width of Empty Land
Outdoor storage facilities of which the multiple of the specified quantity is ten (10) or smaller	Three (3) meters or wider
Outdoor storage facilities of which the multiple of the specified quantity exceeds ten (10) but is not larger than twenty (20)	Six (6) meters or wider
Outdoor storage facilities of which the multiple of the specified quantity exceeds twenty (20) but is not larger than fifty (50)	Ten (10) meters or wider
Outdoor storage facilities of which the multiple exceeds fifty (50) but is not larger than two hundred (200)	Twenty (20) meters or wider
Outdoor storage facilities of which the multiple of the specified quantity exceeds two hundred (200)	Thirty (30) meters or wider

- (5) Outdoor storage facilities shall have a marketing indicating that they are outdoor storage facilities and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
 - (6) Should frames be installed for outdoor storage facilities, the construction and equipment of the frames shall be those set forth by an ordinance of the Ministry.
2. The technical standards for the location, construction and equipment of outdoor storage facilities which store or handle only blocked sulphur, etc. inside an enclosure set up on the ground (excluding those set forth in Paragraph 1 above) shall follow the provisions of each item of Paragraph 1 and shall also be those set forth below.
- (1) The area inside a single enclosure shall be one hundred (100) square meters or less.
 - (2) Should two or more enclosures be set up, the total area of the area inside each enclosure shall be one thousand (1,000) square meters or less and the distance between neighbouring enclosures shall be not less than one-third of the width of the empty land which the outdoor storage facilities in question must have pursuant to the provision of Paragraph 1 Item 4.
 - (3) Enclosures shall be made of a non-combustible material and shall have a construction to prevent any leakage of sulphur, etc.
 - (4) The height of enclosures shall be one and a half (1.5) meters or lower.
 - (5) Devices to fix sheets to prevent the outflow or scattering of sulphur, etc. shall be installed to enclosures as set forth by an ordinance of the Ministry.
 - (6) Drainage ditches and separation tanks shall be installed around places storing or handling sulphur, etc.
3. For outdoor storage facilities storing or handling only hazardous materials with a high flash point, special cases for the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry.
 4. For outdoor storage facilities storing or handling flammable solids [limited to those of which the flash point is less than twenty-one (21) degrees celsius] among Group 2 hazardous materials or Type 1 petroleum or alcohols among Group 4 hazardous materials, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

Section 3 Standards for Location, Construction and Equipment for Handling Facilities

(Standards for Filling Stations)

Article 17 The technical standards for the location, construction and equipment of filling stations (excluding those stipu-

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lated in Paragraph 2 below) shall be those set forth below.

- (1) Oil filling equipment which is fixed for the direct supply of fuel to vehicles, etc. (that consisting of pumping equipment and hose equipment; hereinafter referred to as "fixed oil filling equipment" in this article and Article 27) of filling stations shall have an open space with a width of ten (10) meters or more and a depth of six (6) meters or more to directly supply fuel to vehicles, etc. and to allow the entry and exit of vehicles, etc. to receive fuel supply (hereinafter referred to as "oil filling open space" in this article and Article 27) around the hose equipment (or below the hose equipment in the case of suspension-type fixed oil filling equipment).
- (1-2) Should oil feeding equipment which is fixed (that consisting of pumping equipment and hose equipment; hereinafter referred to as "fixed oil feeding equipment" in this article and Article 27) be installed to refill kerosene or gas oil to a container or to a tank fixed to a vehicle of which the capacity is four thousand (4,000) litres or less [limited to such tanks where the inside space is compartmented with each compartment capacity being two thousand (2,000) liters or less in the case of tanks of which the capacity exceeds two thousand (2,000) liters] at filling stations, the necessary open space shall be provided around the hoses equipment of the fixed oil feeding equipment (or below the hose equipment in the case of suspension-type fixed oil feeding equipment) apart from the oil filling open space.
- (2) The ground surface of the oil filling open space and the open space referred to in Item 1-2 above shall be higher than the surrounding ground surface, shall have an adequate inclination and shall be paved with concrete, etc.
- (3) The oil filling open space and the open space referred to in Item 1-2 above shall have drainage ditches to prevent the outflow of leaked hazardous or other liquid outside the open spaces in question as well as an oil separator.
- (4) Filling stations shall have a marking indicating that they are filling stations and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
- (5) Filling stations shall not have tanks handling hazardous materials except in the case where tanks exclusively connected to the fixed oil filling equipment or fixed oil feeding equipment or waste oil tanks or other tanks set forth by an ordinance of the Ministry of which the capacity is ten thousand (10,000) liters or less (hereinafter referred to as "waste oil tanks, etc." in this article and Article 27) are buried below the ground surface. However, in areas other than the fire resistance zones or quasi-fire resistance zones referred to in Article 8 Paragraph 1 Item 5 of the Urban Planning Law (Law No. 100 of 1968), up to three (3) simple tanks connected to fixed oil filling equipment, the capacity of which is six hundred (600) liters or less each and each of which handles a specific hazardous material of the same quality may be installed on the ground surface.
- (6) Should the exclusive tanks, waste oil tanks, etc. or simple tanks referred to in Item 5 above be installed, the location, construction and equipment of the said exclusive tanks, waste oil tanks, etc. or simple tanks shall conform to the provisions set forth below.
 - 1) The location, construction and equipment of exclusive tanks or

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- waste oil tanks, etc. shall conform to the cases of the location, construction and equipment of underground storage tanks of underground storage tank facilities referred to in Article 13 Paragraph 1 [excluding Item 5, Item 9-1 (limited to the part relating to a notice board), Item 9-2, Item 12 and the proviso of Item 1 in the case of exclusive tanks of which the capacity exceeds ten thousand (10,000) liters], Paragraph 2 of the said article [excluding Article 13 Paragraph 1 Item 5, Item 9-1 (limited to the part relating to a notice board), Item 9-2 and Item 12 which are followed in the said Paragraph 2] or Paragraph 3 of the said article [excluding Article 13 Paragraph 1 Item 5 Item 9-1 (limited to the part relating to a notice board), Item 9-2 and Item 12 which are followed in the said Paragraph 3].
- 2) The construction and equipment of simple tanks shall follow the cases of the construction and equipment of the simple storage tanks of simple storage tank facilities referred to in Article 14 Item 4 and Item 6 through Item 8.
 - (6-2) Pipelines to feed hazardous materials to fixed oil filling equipment or fixed oil feeding equipment shall only be those from the exclusive tanks or simple tanks referred to in Item 5 above which are connected to the fixed oil filling equipment or fixed oil feeding equipment in question.
 - (7) Fixed oil filling equipment and fixed oil feeding equipment shall have a structure which is safe from the view point of fire protection, including leakage prevention and other features, as set forth by an ordinance of the Ministry and shall have a device which is capable of effectively removing static electricity accumulated on the oil filling or oil feeding hoses which are equipped with a valve at the tip and of which the total length is five (5) meters or shorter (or the length set forth by an ordinance of the Ministry in the case of suspension-type fixed oil filling equipment or fixed oil feeding equipment) and at the tip of these hoses.
 - (7-2) Fixed oil filling equipment and fixed oil feeding equipment shall indicate the necessary matters for fire protection in an easily visible place as set forth by an ordinance of the Ministry.
 - (8) Fixed oil filling equipment shall maintain the set distances from the road boundary line, etc. listed below for the said road boundary line, etc. However, this shall not apply to pumping equipment which is installed in separation from hose equipment as set forth by an ordinance of the Ministry.
 - 1) Road boundary line: distance set forth in the table below for the type of fixed oil filling equipment listed in the said table
 - 2) Site boundary line: two (2) meters or more

Type of Fixed Oil Filling Equipment		Distance
Suspension-Type Fixed Oil Filling Equipment		Four (4) meters or more
Other Types of Fixed Oil Filling Equipment	The total length of the longest hose among oil filling hoses connected to fixed oil filling equipment [hereinafter referred to as "longest filling hose length" in 1) and 2)] is three (3) meters or less	Four (4) meters or more
	The longest oil filling hose length exceeds three (3) meters but is not more than four (4) meters	Five (5) meters or more
	The longest oil filling hose length exceeds four (4) meters but is not more than five (5) meters	Six (6) meters or more

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- 3) Building wall: two (2) meters [or one (1) meter in the case where the building walls of a filling station do not have openings] or less
- (8-2) Fixed oil feeding equipment shall maintain the set distances from fixed oil filling equipment, etc. listed below for the said oil filling equipment, etc. However, this shall not apply to pumping equipment which is installed in separation from hose equipment as set forth by an ordinance of the Ministry
- 1) Fixed oil filling equipment (excluding pumping equipment which is installed in separation from hose equipment as set forth by an ordinance of the Ministry): the set distance for each type of fixed oil filling equipment listed in the table below.
 - 2) Road boundary line: distance set forth in the table below for the type of fixed oil feeding equipment listed in the said table
 - 3) Site boundary line: one (1) meter or more
 - 4) Building wall: two (2) meters [or one (1) meter in the case where the where people other than those building walls of an oil handling station do not have openings] or more
- (8-3) In the case of suspension-type fixed oil filling equipment and fixed oil feeding equipment, the height of the outlet of the hose equipment shall be four and a half (4.5) meters or less from the ground surface.
- (8-4) Filling stations with suspension-type fixed oil filling equipment or fixed oil feeding equipment shall have a device which is capable of conducting the emergency stoppage of the transfer of hazardous materials from exclusive tanks by means of stopping the pumping equipment for the said fixed oil filling equipment or fixed oil feeding equipment.
- (9) Filling stations shall not have a building or any other structures which are not buildings serving the purposes set forth by an ordinance of the Ministry for the filling of fuel or any auxiliary work. In this case, the total floor area of the parts of a building set forth by an ordinance of the Ministry working for the filling station enter shall not exceed the area which is recognised not to hinder escape or fire protection as set forth by an ordinance of the Ministry.

Type of Fixed Oil Filling Equipment		Distance
Suspension-Type Fixed Oil Filling Equipment		Four (4) meters or more
Other Types of Fixed Oil Filling Equipment	The longest oil filling hose length is three (3) meters or less	Four (4) meters or more
	The longest oil filling hose length exceeds three (3) meters but is not more than four (4) meters	Five (5) meters or more
	The longest oil filling hose length exceeds four (4) meters but is not more than five (5) meters	Six (6) meters or more

Type of Fixed Oil Feeding Equipment		Distance
Suspension-Type Fixed Oil Feeding Equipment		Four (4) meters or more
Other Types of Fixed Oil Feeding Equipment	The total length of the longest hose among oil feeding hoses connected to fixed oil feeding equipment [hereinafter referred to as "longest filling hose length" in 1) and 2)] is three (3) meters or less	Four (4) meters or more
	The longest oil feeding hose length exceeds three (3) meters but is not more than four (4) meters	Five (5) meters or more
	The longest oil feeding hose length exceeds four (4) meters but is not more than five (5) meters	Six (6) meters or more

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- (10) The buildings referred to in Item 9 above and to be introduced at filling stations shall have walls, pillars, floors, beams and a roof with a fire-resistant construction or made of a noncombustible material and fire protection equipment shall be installed to the windows and entrances (excluding the entrances for vehicles, etc. as set forth by an ordinance of the Ministry). In this case, parts of the said building to be set forth by an ordinance of the Ministry shall be compartmented by floors and walls with a fire-resistant construction without openings and shall have the necessary fire protection construction set forth by an ordinance of the Ministry.
 - (11) Among the buildings referred to in Item 10 above, offices and others using fire (excluding the parts stipulated by an ordinance of the Ministry) shall have a construction which is capable of preventing the inflow of leaked flammable vapour as set forth by an ordinance of the Ministry.
 - (12) Filling stations shall have fencing or walls with a fire-resistant construction or made of a noncombustible material with a height of two (2) meters or more around them except at the side where vehicles, etc. enter or leave. In this case, should any building to which a fire may spread exist close to a filling station, the fencing or walls shall have a safe height from the viewpoint of fire protection.
 - (13) Should a pump room or other rooms handling hazardous materials (hereinafter referred to as the "pump room, etc." in this item) be introduced, the pump room, etc. shall conform to the provisions below.
 - 1) The floor of the pump room, etc. shall have a construction which prevents the infiltration of hazardous materials and shall also have a suitable inclination as well as cesspools.
 - 2) The pump room, etc. shall have natural lighting, artificial lighting and ventilation equipment which are necessary to handle hazardous materials.
 - 3) The pump room, etc. where flammable vapour may hold up shall have equipment to discharge such vapour outside.
 - (14) Electrical equipment shall follow the case of electrical equipment at manufacturing facilities referred to in Article 9-1 Paragraph 1 Item 17.
 - (15) Equipment to wash vehicles, etc. and other equipment required to perform the work of filling stations shall be installed as set forth by an ordinance of the Ministry.
 - (16) Filling stations shall not have any equipment which is deemed to hinder the filling of fuel.
2. The technical standards for the location, construction and equipment of those filling stations located inside buildings among filling stations or similar facilities set forth by an ordinance of the Ministry (hereinafter referred to as "indoor filling stations") shall conform to the provisions of Paragraph 1 Item 1 Through Item 4, the main text of Item 5, Item 6-2 through item 9 and Item 12 through Item 16 and shall also be those set forth below.
 - (1) Indoor filling stations shall be set up in buildings (limited to those having equipment set forth by an ordinance of the Ministry) of which the walls, pillars, floors and beams have a fire-resistant construction and which do not have parts serving the purposes listed in Attached Table 1 (6) of the Enforcement Order for the Fire Service Law (Cabinet Order No. 37 of 1961).
 - (2) Should exclusive tanks or waste oil tanks, etc. be installed at indoor filling

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- stations, the location, construction and equipment of the said exclusive tanks or waste oil tanks, etc. shall follow the provisions of Item 3-1 through Item 4 below and shall also follow the cases of the location, construction and equipment of underground storage tanks at underground storage tank facilities referred to in Article 13 Paragraph 1 [excluding Item 5, Item 8-1, Item 8-2, Item 9-1 (limited to the part stipulating that the position of the inlet is outdoors and the part relating to a notice board), Item 9-2, Item 12 and the proviso of Item 1 in the case of an exclusive tank(s) of which the capacity exceeds ten thousand (10,000) liters], Article 13 Paragraph 2 [excluding Article 13 Paragraph 1 Item 5, Item 8-1, Item 8-2, Item 9-1 (limited to the part stipulating the position of the inlet to be outdoors and the part relating to a notice board), Item 9-2 and Item 12 which are followed in the said Paragraph 2] or Article 13 Paragraph 3 [excluding Article 13 Paragraph 1 Item 5, Item 8-1, Item 8-2, Item 9-1 (limited to the part stipulating the position of the inlet to be outdoors and the part relating to a notice board), Item 9-2 and Item 12 which are followed in the said Paragraph 3].
- (3) Exclusive tanks and waste oil tanks, etc. shall have a vent pipe as set forth by an ordinance of the Ministry.
- (3-2) Exclusive tanks shall have a device which automatically indicates the quantity of the hazardous material.
- (3-3) Waste oil tanks, etc. shall conform to the provision of Article 13 Paragraph 1 Item 8-2.
- (4) Exclusive tanks shall have a device which automatically prevents the excessive filling of hazardous materials.
- (5) The part of a building to be used for an indoor filling station shall have walls, pillars, floor, beams and roof with a fire-resistant construction and shall be compartmented from other parts of the said building with a fire-resistant floor or walls without openings. However, should the part of a building to be used for an indoor filling station have no upper story above it, the roof may be made of a noncombustible material.
- (6) In the part of a building to be used for an indoor filling station, those sections set forth by an ordinance of the Ministry shall be compartmented with a fire-resistant floor or walls without openings from other sections of the said part of the building to be used for an indoor filling station and shall also have the necessary construction for fire protection as set forth by an ordinance of the Ministry.
- (7) The windows and entrances (excluding the entrances/exits for vehicles, etc. as set forth by an ordinance of the Ministry) shall be provided with fire protection equipment.
- (7-2) Should glass be used for the windows or entrances of the offices, etc., the glass shall be wired glass.
- (8) In the part of a building serving for an indoor filling station, offices and other parts using fire (excluding the sections set forth by an ordinance of the Ministry) shall have a construction which is capable of preventing the inflow of leaked flammable vapour as set forth by an ordinance of the Ministry.
- (9) Two sides of the first floor of the part of a building to be used for an indoor filling station shall face the sides for vehicles, etc. to enter and leave or an open space for ventilation and escape as set forth by an ordinance of the Ministry and shall not have a wall.

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However, in the case of an indoor filling station for which measures set forth by an ordinance of the Ministry are applied, it shall be sufficient for one side of the said part of the building to be used for an indoor filling station to face the side for vehicles, etc. to enter and leave and to have no wall.

- (10) The part of a building to be used for an indoor filling station shall not have any holes or depressions, etc. where flammable vapour may hold up.
 - (11) The part of a building to be used for an indoor filling station shall adopt measures set forth by an ordinance of the Ministry to prevent the spread of leakage of hazardous materials and the spread of fire to the upper story should the said part have an upper story above it.
3. For the filling stations listed below, special cases for the standards referred to in Paragraph 2 may be set forth by an ordinance of the Ministry.
- (1) Filling stations to fill fuel to aircraft at airports
 - (2) Filling stations to fill fuel to ships
 - (3) Filling stations to fill fuel to vehicles operating on railway tracks or other tracks
 - (4) Filling stations with equipment to fill compressed natural gas or other gas set forth by an ordinance of the Ministry to vehicles, etc. which use the said gas as fuel for an internal combustion engine (excluding those listed in Item 5) below
 - (5) Filling stations for private use as set forth by an ordinance of the Ministry
4. For filling stations handling methanol or those containing methanol among Group 4 hazardous materials, special cases for the standards referred to in Paragraph 3 above may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous mate-

rials.

5. For filling stations where customers themselves fill fuel or refill kerosene or gas oil to a container as set forth by an ordinance of the Ministry (referred to as "self-service filling stations" in Article 27 Paragraph 6 Item 1-1 and Item 1-3), special cases exceeding the standards referred to in the preceding paragraphs of this article may be set forth by an ordinance of the Ministry.

(Standards for Sales Stations)

Article 18 The technical standards for the location, construction and equipment of Class 1 sales stations shall be those set forth below.

- (1) Class 1 sales stations shall be located on the first floor of a building.
- (2) Class 1 sales stations shall have a marking indicating that they are Class 1 sales stations and a notice board explaining the necessary matters for fire prevention, both in easily visible places, as set forth by an ordinance of the Ministry.
- (3) The part of a building to be used for a Class 1 sales station shall have walls with a quasi-fire resistant construction (meaning the quasi-fire resistant construction referred to in Article 2 Item 7-2 of the Building Standards Law and limited to those made of a noncombustible material in the case of those which do not have a fire-resistant construction). However, the bulkhead between the part to be used for a Class 1 sales station and other parts shall have a fire-resistant construction.
- (4) The part of a building to be used for a Class 1 sales station shall have beams made of a noncombustible material and shall also have a ceiling made of a noncombustible material should a ceiling be introduced.
- (5) The floor of the upper story of the

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- part of a building to be used for a Class 1 sales station shall have a fire-resistant construction should such an upper story exist or shall have a roof with a fire-resistant construction or made of a noncombustible material should no upper story exist.
- (6) The windows and entrances of the part of a building to be used for a Class 1 sales station shall have fire protection equipment.
 - (7) Should glass be used for the windows and entrances of the part of a building to be used for a Class 1 sales station, the glass shall be wired glass.
 - (8) Electrical equipment at the part of a building to be used for a Class 1 sales station shall follow the case of electrical equipment of manufacturing facilities referred to in Article 9 Paragraph 1 Item 17.
 - (9) A room to mix hazardous materials shall follow the provisions set forth below.
 - 1) The floor area shall be six (6) square meters or more but not more than ten (10) square meters.
 - 2) The room shall be compartmented by walls.
 - 3) The floor shall have a construction which prevents the infiltration of hazardous materials and shall also have a suitable inclination as well as cesspools.
 - 4) The entrances shall have the self-closing specified fire protection equipment which can be opened at any time.
 - 5) The height of the threshold of entrances shall be 0.1 meters or more from the floor surface.
 - 6) There should be equipment to discharge flammable vapour or flammable impalpable powder held up inside to above the roof.
2. The technical standards for the location, construction and equipment of Class 2 sales stations shall follow the provisions of Paragraph 1 Item 1, Item 2 and Item 7 through Item 9 above and shall also be those set forth below.
- (1) The part of a building to be used for a Class 2 sales station shall have walls, pillars, floor and beams with a fire-resistant construction and shall have a ceiling made of a noncombustible material should a ceiling be introduced.
 - (2) The floor of the upper story of the part of a building to be used for a Class 2 sales station shall have a fire-resistant construction should such an upper story exist or shall have a roof with a fire-resistant construction should no upper story exist.
 - (3) The part of a building to be used for a Class 2 sales station shall be allowed to have windows for those parts of the said part where there is no risk of the spread of fire and the said windows shall have fire protection equipment.
 - (4) The entrances of the part of a building to be used for a Class 2 sales station shall have fire protection equipment. However, the walls of the said part through which a fire may spread or entrances of the said walls must have the self-closing specified fire protection equipment which can be opened at any time.

(Standards for Transfer Stations)

Article 18-2 The technical standards for the location, construction and equipment of transfer stations shall be set forth by an ordinance of the Ministry conforming to the technical standards pursuant to Article 15 Paragraph 3 Item 2 of the Law Concerning Petroleum Pipeline Business (Law No. 105 of 1972) which relates to the business facilities stipulated in Article 5 Paragraph 2 Item 2 of the said Law.

2. For transfer stations set forth by an ordi-

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nance of the Ministry as unsuitable for the application of the standards set forth in Paragraph 1 above because of the handling of hydrogen peroxide or those containing it among Group 6 hazardous materials or other special circumstances, special cases for the standards set forth in Paragraph 1 may be set forth by an ordinance of the Ministry.

(Standards for General Handling Facilities)

Article 19 The provisions of Article 9 Paragraph 1 shall apply *mutatis mutandis* to the technical standards for the location, construction and equipment of general handling facilities.

2. For those set forth by an ordinance of the Ministry among the general handling facilities listed below, special cases for the standards referred to in Paragraph 1 above may be set forth by an ordinance of the Ministry.

- (1) General handling facilities where spray painting work is conducted and other similar general handling facilities
- (1-2) General handling facilities where washing work is conducted and other similar general handling facilities
- (2) General handling facilities where hardening work is conducted and other similar general handling facilities
- (3) General handling facilities where hazardous materials are consumed using a boiler or burner and other similar general handling facilities
- (4) General handling facilities where hazardous materials are filled to tanks fixed to vehicles and other similar general handling facilities
- (5) General handling facilities where hazardous materials are refilled to containers
- (6) General handling facilities where hydraulic apparatus or lubricant oil circulating apparatus using hazard-

ous materials is installed and other similar general handling facilities

(7) General handling facilities where cutting apparatus or grinding apparatus using a hazardous material as the cutting oil, is installed and other general handling facilities

(8) General handling facilities where heating medium oil circulating apparatus using a hazardous material to heat up materials other than hazardous materials is installed and other similar general handling facilities

3. For general handling facilities which only handle hazardous materials with a high flash point as set forth by an ordinance of the Ministry, special cases for the standards referred to in Paragraph 2 above may be set forth by an ordinance of the Ministry.

4. For general handling facilities which handle alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry, special cases exceeding the standards referred to in Paragraph 1 may be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

Section 4 Standards for Fire Extinguishing Systems, Alarm Systems and Escape Equipment

(Standards for Fire Extinguishing Systems)

Article 20 The technical standards for fire extinguishing systems shall be those set forth below.

- (1) Among manufacturing facilities, indoor storage facilities, outdoor storage tank facilities, indoor storage tank facilities, outdoor storage facilities, filling stations and general handling facilities, those set forth by an ordinance of the Ministry as facilities

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where fire suppression is deemed to be difficult due to their scale, the types and maximum quantities of the hazardous materials to be stored or handled or other reasons should a fire break out and transfer stations shall have a Class 1, Class 2 or Class 3 fire extinguishing system as well as a Class 4 fire extinguishing system and Class 5 fire extinguishing system among the fire extinguishing systems which are considered suitable in Attached Table 5 for fire suppression at fire protection properties listed in the said table as set forth by an ordinance of the Ministry.

- (2) Among manufacturing facilities, indoor storage facilities, outdoor storage tank facilities, indoor storage tank facilities, outdoor storage facilities, filling stations, Class 2 sales stations and general handling facilities, those set forth by an ordinance of the Ministry as facilities where fire suppression is deemed to be difficult due to their scale, the types and maximum quantities of the hazardous materials to be stored or handled should a fire break out shall have a Class 4 fire extinguishing system and a Class 5 fire extinguishing system among the fire extinguishing systems which are considered suitable in Attached Table 5 for fire suppression at fire protection properties listed in the said table as set forth by an ordinance of the Ministry.
- (3) Manufacturing facilities, etc. other than the manufacturing facilities, etc. referred to in the previous two items as set forth by an ordinance(s) of the Ministry shall have a Class 5 fire extinguishing system among the fire extinguishing systems which are considered suitable in Attached Table 5 for fire suppression at fire protection properties listed in the said table as

set forth by an ordinance of the Ministry.

2. Apart from those referred to in Paragraph 1, the technical standards for fire extinguishing systems shall be set forth by an ordinance of the Ministry.

(Standards for Alarm Systems)

Article 21 Manufacturing facilities, etc. of which the multiple of the specified quantity is ten (10) or higher and which are stipulated by an ordinance of the Ministry shall have a fire alarm system which is automatically triggered at the time of the break out of a fire and other alarm systems as set forth by an ordinance of the Ministry.

(Standards for Escape Equipment)

Article 21-2 Among manufacturing facilities, etc., those set forth by an ordinance of the Ministry as facilities from which escape is deemed to be difficult due to their scale, type and maximum quantities of hazardous materials to be stored or handled and other reasons should a fire break out must have escape equipment as set forth by an ordinance of the Ministry.

(Standards for Fire Extinguishing Systems and Alarm Systems)

Article 22 Fire extinguishing systems, alarm systems or mechanical appliances which are parts of such systems (hereinafter referred to as "fire extinguishing systems, etc." in this article) which correspond to those listed in Article 37 Item 1 through Item 4, Item 6 through Item 7-3 or Item 9 through Item 11 of the Enforcement Order for the Fire Service Law or each item of Article 41-1 of the said Regulations shall conform to the technical standards referred to in Article 21-2 Paragraph 2 of the Law or Article 21-16-3 Paragraph 1 of the Law which are set forth for the said fire extinguishing systems, etc.

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2. Notwithstanding the provision of Paragraph 1 above, regarding the technical standards for fire extinguishing systems, etc. at already existing manufacturing facilities, etc. when the provisions of an ordinance of the Ministry concerning the technical standards based on the provision of Article 21-2 Paragraph 2 of the Law or Article 21-16-3 Paragraph 1 of the Law is enforced or applied or among fire extinguishing systems, etc. concerning manufacturing facilities, etc. which are currently undergoing construction or alteration work pursuant to permission granted under the provision of Article 11 Paragraph 1 of the Law, those which correspond to the provisions of Article 37 Item 1 through Item 4, Item 6 through Item 7-3 or Item 9 through Item 11 of the Enforcement Order for the Fire Service Law or each item of Article 41-2 of the said Regulations and which do not conform to the provisions of an ordinance of the Ministry concerning the said technical standards, special cases for Paragraph 1 above may be set forth by an ordinance of the Ministry for a limited period of time. The same shall apply to, among fire extinguishing systems at manufacturing facilities, etc. of which construction or alteration work pursuant to permission granted under the provision of Article 11 Paragraph 1 of the Law during the period between the day of enforcement or application of the provisions of an ordinance of the Ministry concerning the said technical standards and the previous day of the day set forth by the Minister as the day when fire extinguishing systems, etc. conforming to the technical standards set forth by the said provisions are allowed to operate, those which correspond to the provisions of Article 37 Item 1 through Item 4, Item 6 through Item 7-3 or Item 9 through Item 11 of the ment Order for the Fire Service Law or each item of Article 41-2 of the

said Regulations and which do not conform to the provisions of an ordinance of the Ministry concerning the said technical standards.

Section 5 Miscellaneous Provision

(Special Cases for the Standards)

Article 23 The provisions of Chapter 3 shall not apply when the municipal mayor, etc. approves that the risk of the break out or spread of a fire is extremely low and the damage due to a disaster, such as a fire, etc., can be contained to a minimum without relying on the standards for the location, construction and equipment of manufacturing facilities, etc. stipulated in the provisions of Chapter 3 based on a judgement on the types and maximum quantities of the hazardous materials, the multiple of the specified quantity, the storing or handling methods of the hazardous materials and the topography, other conditions around the manufacturing facilities, etc. and others or approve that effects equivalent to or higher than the case relying on the standards for the location, construction and equipment of manufacturing facilities, etc. pursuant to the provisions of Chapter 3 are achieved by the use of an unexpected special construction or equipment.

CHAPTER 4 STANDARDS FOR STORAGE AND HANDLING

(Common Provisions)

Article 24 The technical standards which are common for the storage and handling of hazardous materials at manufacturing facilities, etc. referred to in Article 10 Paragraph 3 of the Law shall be those set forth below.

- (1) Manufacturing facilities, etc. shall not store or handle hazardous materials

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- other than those items relating to the permission pursuant to the provision of Article 11-1 Paragraph 1 of the Law or to the notification pursuant to the provision of Article 11-4 Paragraph 1 of the Law or hazardous materials of which the quantities exceed the quantities relating to the said permission or notification or the multiple of the specified quantity.
- (2) Fire shall not be indiscriminately used at manufacturing facilities, etc.
 - (3) Manufacturing facilities, etc. shall not allow the indiscriminate entry of those other than working there.
 - (4) Manufacturing facilities, etc. shall be always be tidy and clean and empty boxes and other unnecessary items shall not be indiscriminately placed.
 - (4-2) Hazardous materials accumulated in cesspools or oil separators shall be scooped out as required to prevent any outflow.
 - (5) Refuse and dregs, etc. of hazardous materials shall be disposed of or shall undergo suitable treatment in a safe place at least once a day in correspondence with the properties of the said hazardous materials.
 - (6) Buildings and other structures storing or handling hazardous materials shall shield the light or ventilate in correspondence with the properties of the said hazardous materials.
 - (7) Hazardous materials shall be stored or handled at an appropriate temperature, humidity or pressure in correspondence with the properties of the said hazardous materials by monitoring the temperature gauge, hygrometer, pressure gauge and other instruments.
 - (8) When storing or handling hazardous materials, the necessary measures shall be adopted to prevent any leakage, overflow or scattering of the said hazardous materials.
 - (9) When storing or handling hazardous materials, the necessary measures shall be adopted to prevent an increased hazard posed by the said hazardous materials due to the decomposition of the hazardous materials or the inclusion of foreign matters.
 - (10) When repairing equipment, mechanical apparatus and containers, etc. where hazardous materials remain or where there is a risk of residual hazardous materials, the repair work shall be performed in a safe place only after the complete removal of the hazardous materials.
 - (11) When storing or handling hazardous materials by filling them to containers, such containers shall be suitable for the properties of the said hazardous materials and shall not have any damage, corrosion or cracks, etc.
 - (12) When storing or handling containers containing hazardous materials, rough actions, such as indiscriminate overturning, dropping, shocking or dragging, etc. shall not be conducted.
 - (13) In places posing a possible hazard of the leakage or hold up of flammable liquid, flammable vapour or flammable gas or places posing a possible hazard of the suspension of a significant amount of impalpable powder, electrical wires shall be completely connected to electrical appliances and mechanical apparatus, tools and footwear, etc. which could cause a spark shall not be used.
 - (14) In the case where hazardous materials are preserved in protective liquid, the said hazardous materials shall not be exposed outside the protective liquid.
- Article 25** The technical standards which are common for each group of hazardous materials for the purpose of storing or handling at manufacturing facilities, etc.

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referred to in Article 10 Paragraph 3 of the Law shall be those set forth below.

- (1) Group 1 hazardous materials shall avoid contact or mixing with flammable materials, proximity to items which facilitate decomposition, overheating, shock or friction and shall also avoid contact with water in the case of peroxides of alkaline metals or products containing such peroxides.
- (2) Group 2 hazardous materials shall avoid contact or mixing with oxidants, proximity to flames, sparks or high temperature objects or overheating, shall avoid contact with water or acid in the case of iron powder, metal powder and magnesium or items containing one of these and shall not generate steam indiscriminately in the case of flammable solids.
- (3) Spontaneously combustible materials (those showing the property referred to in Article 1-5 Paragraph 3 in the spontaneous combustion test referred to in Article 1-5 Paragraph 2 among Group 3 hazardous materials and alkyl aluminium, alkyl lithium and yellow phosphorus) shall avoid proximity to flames, sparks or high temperature objects, overheating or contact with air while water prohibitive materials shall avoid contact with water.
- (4) Group 4 hazardous materials shall avoid proximity to flames, sparks or high temperature objects or overheating and shall not generate vapour indiscriminately.
- (5) Group 5 hazardous materials shall avoid proximity to flames, sparks or high temperature objects, overheating, shock or friction.
- (6) Group 6 hazardous materials shall avoid contact or mixture with flammables, proximity to products which facilitate decomposition or overheating.

2. The standards referred to in Paragraph 1 shall not apply to the case where it is normal practice not to use the standards referred to in Paragraph 1 above to store or handle hazardous materials. In this case, sufficient measures shall be adopted to prevent the occurrence of a disaster in connection with the said storage or handling.

(Standards for Storage)

Article 26 The technical standards for the storage of hazardous materials referred to in Article 10 Paragraph 3 of the Law shall be those set forth below in addition to those stipulated in the previous two articles.

- (1) Items other than hazardous materials shall not be stored at storage facilities. However, this provision shall not apply when an ordinance of the Ministry stipulates otherwise.
- (1-2) The hazardous materials listed in the Attached Table of the Law under different groups shall not be stored in the same storage facilities (the same rooms at storage facilities with two or more storage rooms which are completely separated by bulkheads with a fire-resistant construction; the same applies in Item 1-3 below). However, this provision shall not apply when an ordinance of the Ministry stipulates otherwise.
- (1-3) Among Group 3 hazardous materials, yellow phosphorus and other products to be stored in water and water-prohibitive materials shall not be stored at the same storage facilities.
- (2) At indoor storage facilities, hazardous materials shall be stored in containers as set forth by an ordinance of the Ministry. However, this provision shall not apply to hazardous materials set forth by an ordinance of the Ministry.
- (3) When a large quantity of a single

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- hazardous material which carries a risk of spontaneous combustion or a single hazardous material which carries a risk of considerably aggravating a disaster is stored at an indoor storage facility, the said material shall be divided up to a multiple of ten (10) of the specified quantity with a distance of three (3) meters or more between the piles for its storage. However, this provision shall not apply to hazardous materials set forth by an ordinance of the Ministry.
- (3-2) In the case of hazardous materials being stored at indoor storage facilities, containers shall not be stacked above the height set forth by an ordinance of the Ministry.
- (3-3) At indoor storage facilities, the necessary measures shall be adopted to prevent the temperature of hazardous materials stored in containers from exceeding fifty-five degrees celsius (55°C).
- (4) The measuring port of an outdoor storage tank, indoor storage tank or underground storage tank shall be closed except when measuring operation is conducted.
- (5) The main valve (the nearest valve to the tank among the valves installed to pipelines for the transfer of hazardous liquid) and the valve or lid of the inlet of an outdoor storage tank, indoor storage tank or underground storage tank shall be closed except when a hazardous material is filled or discharged.
- (6) In the case of the installation of an oil retaining wall around an outdoor storage tank, its drain hole shall normally be closed and any oil or water which holds up inside the said oil retaining walls must be drained without delay.
- (6-2) A mobile storage tank shall indicate the group, name and maximum quantity of the hazardous material to be stored or handled by the said tank.
- (7) Mobile storage tanks, their safety devices and other auxiliary pipelines shall not experience any cracks, defective coupling, extreme deformation or leakage due to cutting of the filling hose and the bottom valves of the said tanks shall be completely closed except when they are in use.
- (8) Should hazardous materials be stored in mobile storage tanks fixed to towed vehicles, the towing vehicles shall be connected to the said towed vehicles. However, this provision shall not apply when an ordinance of the Ministry stipulates otherwise.
- (8-2) In the case of mobile storage tank facilities other than loading-type mobile storage tank facilities, mobile storage tanks shall not be transhipped with hazardous materials being stored.
- (9) Mobile storage tank facilities shall be provided with a certificate of completion inspection clearance referred to in Article 8-1 Paragraph 3, inspection records pursuant to the provision of Article 14-3-2 of the Law and other documents set forth by an ordinance of the Ministry.
- (10) Mobile storage tank facilities storing or handling alkyl aluminium, alkyl lithium and other hazardous materials set forth by an ordinance of the Ministry shall be provided with documents giving an emergency contact address and other information which is necessary in relation to emergency measures and apparatus set forth by an ordinance of the Ministry.
- (11) At outdoor storage facilities, hazardous materials shall be stored in containers as set forth by an ordinance of the Ministry except in the cases set forth in Item 12 below.
- (11-2) In the case of hazardous materials

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- being stored at outdoor storage facilities, the containers shall not be stacked above the height set forth by an ordinance of the Ministry.
- (11-3) In the case of containers containing hazardous materials being stored on frames at outdoor storage facilities, the containers shall not be stored above the height set forth by an ordinance of the Ministry.
- (12) At the outdoor storage facilities stipulated in Article 16 Paragraph 2, sulphur, etc. shall be stored below the height of enclosures, the entire enclosures shall be covered with fire retardant or inflammable sheets to prevent any overflow or scattering of the sulphur, etc. and the said sheets shall be anchored to the enclosures.
2. The technical standards for the storage of alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and others set forth by an ordinance of the Ministry shall be those set forth in Paragraph 1 above and shall also be set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.
- (Standards for Handling)**
- Article 27** The technical standards for the handling of hazardous materials referred to in Article 10 Paragraph 3 of the Law shall be those set forth in Article 24 and Article 25 and shall also be those set forth in this article.
2. The technical standards for manufacture as part of the handling of hazardous materials shall be those set forth below.
- (1) In the distillation process, liquid, vapour or gas shall be prevented from leaking due to fluctuation of the internal pressure, etc. of the equipment handling the hazardous materials.
- (2) In the extraction process, the internal pressure of the extraction canister can shall be prevented from an extraordinary increase.
- (3) In the drying process, a method by which the temperature of the hazardous material does not locally increase shall be used for heating or drying.
- (4) In the grinding process, mechanical apparatus shall not be handled in a situation where the powder of a hazardous material conspicuously suspends or the powder of a hazardous material conspicuously adheres to the said mechanical apparatus.
3. The technical standards for refilling as part of the handling of hazardous materials shall be those set forth below.
- (1) In the case of a hazardous material being refilled to a container, refilling shall be conducted as set forth by an ordinance of the Ministry.
- (2) In the case of the refilling of a hazardous material, it shall be conducted in a safe place from the viewpoint of fire protection.
4. The technical standards for consumption as part of the handling of hazardous materials shall be those set forth below.
- (1) Spray painting work shall be conducted in a safe place which is compartmented by bulkheads, etc. which are effective for fire protection.
- (2) Hardening work shall be conducted while preventing the hazardous materials from reaching a dangerous temperature.
- (3) Dyeing or cleaning work shall be conducted with good ventilation for flammable vapour and effluent shall be safely disposed of without being left alone without a good reason.
- (4) In the case of a burner being used, arrangements shall be made to prevent the blowing back of the burner and the overflow of the hazardous material.
5. The technical standards for disposal as

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part of the handling of hazardous materials shall be those set forth below.

- (1) In the case of incineration, it shall be conducted in a safe place by either combustion or explosion using a method which does not harm or damage others and a watchman shall be deployed.
 - (2) In the case of burial, it shall be conducted in a safe place in correspondence with the properties of the hazardous material.
 - (3) Hazardous materials shall not be discharged or dropped into the sea or water. However, this provision shall not apply when such action has no risk of harming or damaging others or suitable measures are introduced to prevent the occurrence of a disaster.
6. The technical standards for the handling of hazardous materials shall be those set forth below in addition to those set forth in Paragraph 2 through Paragraph 5 above.
- (1) Handling standards for filling stations (excluding those referred to in Article 17 Paragraph 3 Item 1 through Item 3 and self-service filling stations)
 - 1) When fuel is filled to a vehicle, etc., fixed oil filling equipment shall be used for direct filling.
 - 2) When fuel is filled to a vehicle, etc., the motor of the vehicles, etc. shall be stopped.
 - 3) No filling of fuel shall take place when part or the whole of a vehicle, etc. is placed outside the oil filling open space.
 - 4) When refilling kerosene or gas oil to a container or to a tank fixed to a vehicle from fixed oil feeding equipment, the refilling of kerosene to a container or filling to a tank fixed to a vehicle shall not take place when the container or part or the whole of the vehicle, etc. is outside the open space referred to in Article 17 Paragraph 1 Item 1.
 - 5) When filling a hazardous material from a mobile storage tank to an exclusive tank or waste oil tank, the mobile storage tank facility shall be parked near the inlet of the exclusive tank or waste oil tank.
 - 6) In the case of a filling station with an exclusive tank or simple tank, the filling of hazardous liquid to the said tank shall be conducted while the use of the fixed oil filling equipment or fixed oil feeding equipment connected to the said tank is suspended and vehicles, etc. are deterred from approaching the inlet of the said tank.
 - 7) Fixed oil filling equipment or fixed oil feeding equipment shall not be filled with hazardous liquid by anything other than the pipeline of an exclusive tank or simple tank connected to the said fixed oil filling equipment or fixed oil feeding equipment.
 - 8) When filling fuel to vehicles, etc. or on other occasions set forth by an ordinance of the Ministry, the parking of other vehicles, etc. shall be prohibited and the inspection, maintenance or washing of vehicles, etc. shall not be conducted near the inlet of the fixed oil filling equipment or in places around the vent pipe as set forth by an ordinance of the Ministry.
 - 9) At the open space to be set forth by an ordinance of the Ministry referred to in Article 17 Paragraph 2 Item 9, the parking or stopping of vehicles, etc. shall be prohibited and any object which may obstruct escape shall not be placed.
 - 10) When filling hazardous liquid to the exclusive tank of an indoor filling station referred to in the proviso of Article 17 Paragraph 2

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- Item 9, such filling shall be conducted as set forth by an ordinance of the Ministry to prevent the release of flammable vapour.
- 11) When washing vehicles, etc., liquid detergent with a flash point shall not be used.
 - 12) The sale of products and other businesses set forth by an ordinance of the Ministry shall only be conducted on the first floor (excluding parts set forth by an ordinance of the Ministry) of a building (part used as an indoor filling station of a building in the case of an indoor filling station) referred to in Article 17 Paragraph 1 Item 10 except in cases set forth by an ordinance of the Ministry.
 - 13) When the filling business is not taking place, necessary measures to prevent the entry of people other than employees shall be introduced.
 - 14) Customers shall not be allowed to fill fuel to vehicles, etc., refill kerosene or gas oil to containers or fill tanks fixed to vehicles by themselves.
- (1-2) The handling standards for filling stations referred to in Article 17 Paragraph 3 Item 1 through Item 3 shall follow the provisions of Item 1-1 above [excluding 1), 3) and 7)] and shall also be those set forth by an ordinance of the Ministry.
- (1-3) The handling standards for self-service filling stations shall follow the provisions of Item 1-1 above [excluding 14)] and shall also be set forth by an ordinance of the Ministry.
- (2) Handling standards for Class 1 sales stations and Class 2 sales stations
 - 1) Hazardous materials shall be contained in the containers stipulated in Article 28 and shall be sold in containers.
 - 2) At Class 1 sales stations and Class 2 sales stations, hazardous materials shall not be mixed or refilled except when paints and other hazardous materials set forth by an ordinance of the Ministry are mixed in a room stipulated in Article 18-1 Paragraph 1 Item 9.
 - (3) Handling standards for transfer stations
 - 1) The transfer of hazardous materials shall only commence after confirmation of the safety of the pipelines, pumps and auxiliary equipment [in the case of transfer stations handling the transfer of hazardous materials from ships transporting hazardous materials to the ground, pipelines and auxiliary equipment designed to transport hazardous materials; the same shall apply in 2) below] designed to transfer hazardous materials.
 - 2) During the transfer of a hazardous material, the pressure and flow rate of the hazardous material to be transported shall be constantly monitored and patrolling to confirm the safety of the pipeline, pump and auxiliary equipment for the transfer of the hazardous material shall be conducted once or more a day.
 - 3) Should an earthquake be detected or information on an earthquake be obtained in an area in which a transfer station is located, the necessary measures to prevent the occurrence or spread of a disaster shall be immediately introduced as set forth by an ordinance of the Ministry.
 - (4) Handling standards for mobile storage tank facilities (excluding loading-type mobile storage tank facilities)
 - 1) When filling hazardous liquid from a mobile storage tank to a tank which stores or handles a hazard-

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- ous material, the filling hose of the mobile storage tank shall be firmly connected to the inlet of the said tank. However, this provision shall not apply when a Group 4 hazardous material of which the flash point is forty degrees celsius (40°C) or higher is filled to a tank stipulated by an ordinance of the Ministry as set forth by an ordinance of the Ministry.
- 2) Hazardous liquid shall not be refilled from a mobile storage tank to a container. However, this provision shall not apply when a hazardous material of which the flash point is forty degrees celsius (40°C) or higher is refilled to a container stipulated by an ordinance of the Ministry as set forth by an ordinance of the Ministry.
 - 3) When gasoline, benzene or any other hazardous liquid with which a disaster caused by static electricity could occur is filled to a mobile storage tank or is discharged from a mobile storage tank, the said mobile storage tank shall be grounded as set forth by an ordinance of the Ministry.
 - 4) When filling a hazardous material of which the flash point is less than forty degrees celsius (40°C) from a mobile storage tank to a tank which stores or handles a hazardous material, the motor of the mobile storage tank facility shall be stopped.
 - 5) When gasoline, benzene or any other hazardous liquid with which a disaster caused by static electricity could occur is filled to a mobile storage tank from the upper part of the tank, a filling pipe shall be used and the tip of the said pipe shall touch the bottom of the mobile storage tank.
 - 6) When kerosene or gas oil is filled to a mobile storage tank which is used to store gasoline or when gasoline is filled to a mobile storage tank which is used to store kerosene or gas oil, measures to prevent a disaster caused by static electricity, etc. shall be introduced as set forth by an ordinance of the Ministry.
 - (5) The handling standards for loading-type mobile storage tank facilities shall follow the provisions of Item 4-2) through 6) above and shall also be those set forth by an ordinance of the Ministry.
 7. The technical standards for the handling of alkyl aluminium, alkyl lithium, acetaldehyde, propylene oxide and other hazardous materials set forth by an ordinance of the Ministry and methanol and those containing methanol among Group 4 hazardous materials shall follow the provisions of Paragraph 1 through Paragraph 6 above and shall also be those set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials.

CHAPTER 5 STANDARDS FOR TRANSPORTATION AND TRANSFER

(Transporting Containers)

Article 28 The technical standards for containers to transport hazardous materials pursuant to the provision of Article 16 of the Law (hereinafter referred to as “transporting containers”) shall be those set forth below.

- (1) The material of transporting containers shall be steel plate, aluminium plate, tin plate, glass or another material set forth by an ordinance of the Ministry.
- (2) The structure and the maximum capacity of transporting containers shall

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be set forth by an ordinance of the Ministry.

(Loading Method)

Article 29 The technical standards for the loading method pursuant to the provision of Article 16 of the Law shall be those set forth below.

- (1) Hazardous materials shall be contained in the transporting containers referred to in Article 28 as set forth by an ordinance of the Ministry for loading. However, this provision shall not apply to the case where blocked sulphur, etc. is to be loaded for transportation or to the case where hazardous materials are to be loaded for transportation from one manufacturing facility, etc. to another manufacturing facility, etc. located on the same premises where the former is located.
- (2) Hazardous materials shall be loaded with their names and quantities, etc. indicated outside the transporting containers as set forth by an ordinance of the Ministry.
- (3) Hazardous materials shall be loaded in a manner to prevent the fall of the said hazardous materials or the dropping or turning over of or damage to the transporting containers containing hazardous materials.
- (4) Transporting containers shall be loaded with their inlet facing upwards.
- (5) Hazardous materials stipulated by an ordinance of the Ministry shall be loaded with the measures set forth by an ordinance of the Ministry in correspondence with the properties of the said hazardous materials, including the adoption of effective cover to block direct solar radiation or the infiltration of rainwater.
- (6) Hazardous materials shall not be loaded together with other hazardous

materials of different groups or goods which have a risk of causing a disaster as set forth by an ordinance of the Ministry.

- (7) In the case of the stacking of transporting containers containing hazardous materials, they shall be loaded below the height to be set forth by an ordinance of the Ministry in a manner to be set forth by an ordinance of the Ministry.

(Transportation Method)

Article 30 The technical standards for the transportation method pursuant to the provision of Article 16 of the Law shall be those set forth below.

- (1) Hazardous materials or transporting containers containing hazardous materials shall be transported in a manner which avoids excessive friction or wobbling.
- (2) Should a hazardous material of which the quantity is above the specified quantity be transported by vehicle, the said vehicle shall carry a marking as set forth by an ordinance of the Ministry.
- (3) In the case of transporting a hazardous material of which the quantity is above the specified quantity by vehicle, when the vehicle temporarily stops for reloading, resting or breakdown, etc., a safe place shall be selected with careful attention paid to the security of the hazardous materials being transported.
- (4) Should a hazardous material of which the quantity is above the specified quantity be transported by vehicle, a fire extinguishing system suitable for the said hazardous material among the fire extinguishing systems stipulated in Article 20 shall be provided.
- (5) Should there be a risk of a disaster, such as a substantial leakage of the hazardous material during the trans-

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portation of a hazardous material, emergency measures to prevent a disaster be provided together with notification of the risk to the nearby fire department(s) and other relevant organizations.

2. In the case of transporting two or more hazardous materials which are different from each other or of which the specified quantities are different, when the sum of the quotients of dividing the quantity of each of the said hazardous materials to be transported by the relevant specified quantity is one (1) or higher, the hazardous material above the specified quantity is deemed to be transported.

(Transfer Standards)

Article 30-2 The standards to be set forth by a cabinet order regarding the transfer of hazardous materials by mobile storage tank facilities stipulated in Article 16-2 Paragraph 2 of the Law shall be those set forth below.

- (1) A person transferring a hazardous material(s) shall fully inspect the bottom valve and other valves of the mobile storage tank, lid of manhole and inlet and fire extinguishers, etc. prior to the commencement of transfer.
- (2) A person conducting the transfer of a hazardous material where the said transfer may fall under the category of long-time transfer stipulated by an ordinance of the Ministry shall secure two or more drivers. However, this provision shall not apply to the transfer of animal fats, vegetable oils and other hazardous materials set forth by an ordinance of the Ministry.
- (3) A person transferring a hazardous material(s) shall select a safe place when temporarily stopping a mobile storage tank facility for a rest or because of a break down, etc.
- (4) In the case of a risk of disaster, such as

the substantial leakage of a hazardous material from a mobile storage tank, a person transferring a hazardous material shall apply emergency measures to prevent a disaster and inform the nearby fire department(s) and other relevant organizations.

- (5) In the case of transferring alkyl aluminium, alkyl lithium and other hazardous materials set forth by an ordinance of the Ministry, a person transferring a hazardous material(s) shall submit a document describing the transfer route and other necessary matters to the relevant fire department(s), shall carry a copy of the said document and shall follow the written contents of the said document. However, he shall be permitted not to follow the said written contents in the case of a disaster or another incident beyond his control.

CHAPTER 5-2 HAZARDOUS MATERIALS MAN- AGER

(Workplaces, etc. for Which Hazardous Materials Manager Must be Appointed)

Article 30-3 Manufacturing facilities, storage facilities or handling facilities to be set forth by a cabinet order pursuant to the provision of Article 12-7 Paragraph 1 of the Law shall be manufacturing facilities, transfer stations or general handling facilities handling Group 4 materials other than those set forth by an ordinance of the Ministry (hereinafter referred to as "designated facilities").

2. The quantities to be set forth by a cabinet order pursuant to the provision of Article 12-7 Paragraph 1 of the Law shall be the quantity equivalent to three thousand (3,000) times the specified quantity for Group 4 hazardous materials to be handled at designated facilities (the quan-

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tities to be set forth by an ordinance of the Ministry for transfer stations).

3. A hazardous materials manager referred to in Article 12-7 Paragraph 1 shall be the person who manages and administers the implementation of businesses at the said workplace.

CHAPTER 6 HAZARDOUS MATERIALS SUPERVISOR, HAZARDOUS MATERIALS ENGINEER AND LICENSE FOR HAZARDOUS MATERIALS ENGINEER

(Obligations of Hazardous Materials Supervisor and Hazardous Materials Engineer)

Article 31 A hazardous materials supervisor shall perform his duties faithfully when supervising the safety of the work to handle hazardous materials.

2. When engaged in the work to handle a hazardous material, a hazardous materials engineer shall abide by the technical standards for storage or handling referred to in Article 10 Paragraph 3 of the Law and shall pay the utmost attention to securing the safety of the said hazardous material.
3. When witnessing the work to handle a hazardous material, a Class A hazardous materials engineer or a Class B hazardous materials engineer shall supervise that those engaged in the handling work abide by the technical standards for storage or handling referred to in Article 10 Paragraph 3 of the Law and shall provide instructions when such instructions are deemed to be necessary.

(Manufacturing Facilities, etc. for Which Hazardous Materials Supervisor Must be Appointed)

Article 31-2 Manufacturing facilities, storage facilities or handling facilities to be set forth by a cabinet order pursuant to

the provision of Article 13 Paragraph 1 of the Law shall be manufacturing facilities, etc. other than those listed below.

- (1) Indoor storage tank facilities or underground storage tank facilities of which the multiple of the specified quantity is thirty (30) or less [limited to those storing or handling Group 4 hazardous materials of which the flash point is forty degrees celsius (40°C) or higher]
- (2) Indoor storage tank facilities or simple storage tank facilities storing or handling only Group 4 hazardous materials of which the flash point is forty degrees celsius (40°C) or higher
- (3) Mobile storage tank facilities
- (4) Outdoor storage facilities of which the multiple of the specified quantity is thirty (30) or less
- (5) Class 1 sales stations or Class 2 sales stations handling only Group 4 hazardous materials of which the flash point is forty degrees celsius (40°C) or higher
- (6) Among general handling stations of which the multiple of the specified quantity is thirty (30) or less [limited to those handling only Group 4 hazardous materials of which the flash point is forty degrees celsius (40°C) or higher], those listed below
 - 1) Those consuming a hazardous material by a boiler, burner or similar apparatus
 - 2) Those refilling a hazardous material to containers

(Application for Issue of License)

Article 32 A person applying for the issue of a hazardous materials engineer's license stipulated in Article 13-2 Paragraph 3 of the Law (hereinafter referred to as the "license" in this chapter) shall submit an application form accompanied by the document(s) set forth by an ordinance of the Ministry to the prefectural governor who conducted the

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hazardous materials engineer's examination regarding the said license (in the case of a person having taken the hazardous materials engineer's examination conducted by a designated examination body stipulated in Article 13-7 Paragraph 2 of the Law, the prefectural governor who delegated the work regarding the implementation of the said hazardous materials engineer's examination to the said designated examination body).

(Entry Items on License)

Article 33 The license shall describe the following items.

- (1) Date of issue and serial number of the license
- (2) Name and date of birth
- (3) Prefecture in which legal domicile is located
- (4) Type of license, hazardous materials permitted to handle and types of hazardous materials of which the handling work may be witnessed by a Class A hazardous materials engineer or a Class B hazardous materials engineer
- (5) Other items set forth by an ordinance of the Ministry

(Renewal of License)

Article 34 A person who has been issued a license shall apply for renewal of the license by submitting the said license accompanied by the document(s) set forth by an ordinance of the Ministry to the prefectural governor who issued the said license or the prefectural governor who manages the place of residence or place of work without delay in the case of a change of any of the entry items of the license.

(Re-issue of License)

Article 35 A person having received a license shall be entitled to apply for re-issue to the prefectural governor who issued or renewed the said license in the case of the person losing, destroying, spoiling or damaging the license.

2. In the case of making the application referred to in Paragraph 1 above due to the spoiling of or damage to the license, a written application accompanied by the said license must be submitted.
3. Should a person who has been re-issued a license following the loss of the said license discover the said license, the original license shall be submitted to the prefectural governor who re-issued the license within ten (10) days of the day of discovery.

(Entrustment to an Ordinance of the Ministry)

Article 35-2 Other than those set forth in Article 32 through Article 25-1 above, the necessary matters relating to the issue, return, renewal and re-issue of the license shall be set forth by an ordinance of the Ministry.

CHAPTER 7 HAZARDOUS MATERIALS SECURITY PERSONNEL

(Designation of Manufacturing Facilities, etc. for Which Hazardous Materials Security Personnel Must be Appointed)

Article 36 Manufacturing facilities, storage facilities or handling facilities to be stipulated by a cabinet order referred to in Article 14-1 of the Law shall be manufacturing facilities or general handling facilities of which the multiple of the specified quantity is one hundred (100) or more, excluding those set forth by an ordinance of the Ministry.

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CHAPTER 8 PREVENTIVE RULES

(Designation of Manufacturing Facilities, etc. for Which Preventive Rules Must be Established)

Article 37 Manufacturing facilities, storage facilities or handling facilities to be stipulated by a cabinet order referred to in Article 14-2 Paragraph 1 of the Law shall be the manufacturing facilities listed in each item of Article 7-3 or filling stations, excluding those set forth by an ordinance of the Ministry.

CHAPTER 9 PRIVATE FIRE BRIGADES

(Workplaces Where Private Fire Brigade Must be Established)

Article 38 Manufacturing facilities, storage facilities or handling facilities to be stipulated by a cabinet order referred to in Article 14-4 of the Law shall be the designated facilities.

2. The quantity to be stipulated by a cabinet order referred to in Article 14-4 shall be the quantity stipulated in Article 30-3 Paragraph 2.

(Composition of Private Fire Brigade)

Article 38-2 A private fire brigade to be established pursuant to the provision of Article 14-4 of the Law (hereinafter referred to as a "private fire brigade") shall be composed of the number of personnel and chemical trucks shown in the middle column and the right-hand column respectively of the table below (not less than the number of personnel and chemical trucks to be set forth by an ordinance of the Ministry in the case of a workplace possessing a transfer station which is a designated facility) in accordance with the workplace category shown in the left-hand column of the said table. How-

ever, the composition set forth by an ordinance of the Ministry shall be sufficient for workplaces which have concluded a mutual aid agreement to deal with fires or other disasters.

2. The chemical trucks referred to in Paragraph 1 above shall have a fire extinguishing capacity and equipment set forth by an ordinance of the Ministry.
3. The chemical trucks referred to in Paragraph 1 shall be equipped with extinguishing agents and appliances which are necessary to conduct fire extinguishing activities.

CHAPTER 10 STANDARDS FOR CONSTRUCTION AND EQUIPMENT OF PROJECTION ROOMS

(Standards for Projection Rooms)

Article 39 The technical standards for the construction and equipment of projection rooms stipulated in Article 15 of the Law shall be those set forth below.

- (1) Projection rooms shall have a marking indicating that they are projection rooms and a notice board explaining the necessary matters for fire protection, both in easily visible places, as set forth by an ordinance of the Ministry.
- (2) The walls, pillars, floor and ceiling of projection rooms shall have a fire-resistant construction.
- (3) Projection rooms shall have a width of one (1) meter plus one (1) extra meter for each projector or more, a depth of three (3) meters or more and a ceiling height of 2.1 meters or more.
- (4) The doorway of projection rooms shall have a width of 0.6 meters or more and a height of 1.7 meters or more and shall have self-opening specified fire protection equipment which opens outwards.

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Category of Workplace	Number of Personnel	Number of Chemical Trucks
Workplace where the maximum quantity of Group 4 hazardous materials to be handled at the designated facility is less than one hundred and twenty thousand (120,000) times the specified quantity	5	1
Workplace where the maximum quantity of Group 4 hazardous materials to be handled at the designated facility is one hundred and twenty thousand (120,000) times the specified quantity or more but less than two hundred and forty thousand (240,000) times	10	2
Workplace where the maximum quantity of Group 4 hazardous materials to be handled at the designated facility is two hundred and forty thousand (240,000) times the specified quantity or more but less than four hundred and eighty (480,000) times	15	3
Workplace where the maximum quantity of Group 4 hazardous materials to be handled at the designated facility is four hundred and eighty thousand (480,000) times the specified quantity or more	20	4

- (5) Projection room windows and other openings shall have a fire protection board which has a device capable of immediately closing the said openings when an accident or fire occurs.
- (6) Projection rooms shall have an exhaust pipe for the projector and an indoor ventilation pipe, both of which are made of a noncombustible material and which lead outdoors.
- (7) Projection rooms shall have a storage cabinet(s) made of a noncombustible material for the storage of films.
- (8) A rectifier for a projector shall not be installed in a projection room.
- (9) Projection rooms shall have a fire extinguishing system as set forth by an ordinance of the Ministry.

the provision of Article 16-8-2 of the Law, he shall inform the municipal mayor, etc. who has given permission regarding a mobile storage tank facility concerning the said instruction pursuant to the provision of Article 11 Paragraph 1 of the Law of the fact that the instruction has been issued.

(Work Subject to Instruction at the Time of Emergency)

Article 39-3 The work to be set forth by a cabinet order referred to in Article 16-8-2 of the Law shall be the work to be conducted by either the prefectural governor or municipal mayor pursuant to the provisions of Article 11-5 Paragraph 1 and Paragraph 2, Article 12-1 Paragraph 2, Article 12-3 Paragraph 1, Article 16-3 Paragraph 3 and Paragraph 4 and Article 16-6 Paragraph 1 of the Law.

CHAPTER 11 INSTRUCTIONS AT THE TIME OF EMERGENCY

(Instruction Procedure at the Time of Emergency)

Article 39-2 When the Minister issues an instruction of the execution of work stipulated in Article 11-5 Paragraph 2 or Article 16-3 Paragraph 4 of the Law pursuant to

CHAPTER 12 MISCELLANEOUS PROVISIONS

(Fee)

Article 40 The amount of the fees to be paid pursuant to the provision of Article 16-4 Paragraph 1 shall be those set forth below.

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Person Required to Pay the Fee	Category	Amount of Fee
(1) Person applying for permission for installation of a transfer station pursuant to the provision of the first half of Article 11-1 Paragraph 1 of the Law	Transfer station of which the total length of the pipeline to transfer hazardous materials (maximum length of the said pipeline from an arbitrary starting point to an arbitrary ending point in the case where there are more than one starting or ending points for the said pipeline; the same shall apply hereinafter) is fifteen (15) kilometers or less (excluding those where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more)	¥79,100
	Transfer station where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more but is fifteen (15) kilometers or less	¥186,800
	Transfer station where the total length of the pipeline to transfer a hazardous material exceeds fifteen (15) kilometers)	¥186,800 plus ¥30,500 for every fifteen (15) kilometers or the fraction below fifteen (15) kilometers of the total length of the pipeline to transfer a hazardous material
(2) Person applying for permission for alteration of a transfer station pursuant to the provision of the second part of Article 11-1 Paragraph 1 of the Law	Transfer station where the total length of the pipeline to transfer a hazardous material is fifteen (15) kilometers or less (excluding those where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more)	¥64,700
	Transfer station where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more but is fifteen (15) kilometers or less	¥112,500
	Transfer station where the total length of the pipeline to transfer a hazardous material exceeds fifteen (15) kilometers)	¥112,500 plus ¥15,200 for every fifteen (15) kilometers or the fraction below fifteen (15) kilometers of the total length of the pipeline to transfer a hazardous material
(3) Person applying for completion inspection of the installation of a transfer station	Transfer station where the total length of the pipeline to transfer a hazardous material is fifteen (15) kilometers or less (excluding those where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more)	¥64,600
	Transfer station where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more but is fifteen (15) kilometers or less	¥123,800
	Transfer station where the total length of the pipeline to transfer a hazardous material exceeds fifteen (15) kilometers)	¥123,800 plus ¥15,000 for every fifteen (15) kilometers or the fraction below fifteen (15) kilometers of the total length of the pipeline to transfer a hazardous material
(4) Person applying for completion inspection of the alteration of a transfer station	Transfer station where the total length of the pipeline to transfer a hazardous material is fifteen (15) kilometers or less (excluding those where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more)	¥57,600
	Transfer station where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more but is fifteen (15) kilometers or less	¥81,200

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Person Required to Pay the Fee		Category	Amount of Fee
		Transfer station where the total length of the pipeline to transfer a hazardous material exceeds fifteen (15) kilometers)	¥81,200 plus ¥7,300 for every fifteen (15) kilometers or the fraction below fifteen (15) kilometers of the total length of the pipeline to transfer a hazardous material
(5)	Person applying for approval for temporary use of a transfer station pursuant to the proviso of Article 11-1 Paragraph 5 of the Law		¥7,500
(6)	Person applying for safety inspection of a transfer station pursuant to the provision of Article 14-3 Paragraph 1 of the Law	Transfer station where the maximum working pressure relating to the pipeline to transfer a hazardous material is 0.95 mega pascals or higher and the total length of the pipeline to transfer a hazardous material is seven (7) kilometers or more but is fifteen (15) kilometers or less	¥161,100
		Transfer station where the total length of the pipeline to transfer a hazardous material exceeds fifteen (15) kilometers)	¥161,000 plus ¥23,900 for every fifteen (15) kilometers or the fraction below fifteen (15) kilometers of the total length of the pipeline to transfer a hazardous material

2. The amount of the fee to be paid pursuant to the provision of Article 16-4 Paragraph 2 of the Law shall be four thousand and seven hundred yen (¥4,700).

(Special Cases for Group 1 Hazardous Materials, etc.)

Article 41 For those set forth by an ordinance of the Ministry among Group 1 hazardous materials, Group 2 hazardous materials and Group 5 hazardous materials, special cases for the standards stipulated in Article 9 Paragraph 1 Item 2, Item 4 through Item 7, Item 9, Item 20 and Item 21 (including the case where these provisions are applied *mutatis mutandis* in Article 19 Paragraph 1), Article 10 Paragraph 1 Item 1, Item 4 through Item 7 and Item 12, Article 20 Paragraph 1 Item 3 and Article 27 Paragraph 5 Item 3 may be set forth by an ordinance of the Ministry.

(Special Cases Following Change of Government Agency)

Article 41-2 Should the government agency stipulated in Article 16-7 of the Law change, applications for permission, notification and other procedures lodged

with the government agency relating to the said change prior to the change (hereinafter referred to as the “pre-change government agency” in this article) pursuant to the provisions of Chapter 3 of the Law or permission and other dispositions effected by the pre-change government agency pursuant to the provisions of the said Chapter shall be deemed to be applications for permission, notification and other procedures lodged to the government agency concerning the said change after the change (hereinafter referred to as the “post-change government agency” in this article) pursuant to the provisions of the said Chapter or permission and other dispositions effected by the post-change government agency pursuant to the provisions of the said Chapter.

(Qualification of Inspector of Hazardous Materials Safety Technique Association)

Article 41-3 An inspector with the qualification set forth by a cabinet order referred to in Article 16-38 Paragraph 1 of the Law shall be a person who falls under one of the items below.

- (1) A person graduating from a university stipulated in the School Education Law

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(Law No. 26 of 1947) after completing the subjects or course of mechanical engineering, shipbuilding engineering, civil engineering or architectural engineering and with three (3) or more years of practical experience of research, design, work supervision or inspection concerning construction, remodelling or repair of such steel structures as petroleum tanks and high pressure gas tanks, etc. (hereinafter referred to as "research, etc. on petroleum tanks, etc." in this article)

- (2) A person graduating from a college or technical college stipulated by the School Education Law after completing the subjects of mechanical engineering, shipbuilding engineering, civil engineering or architectural engi

neering and with five (5) or more years experience of research, etc. on petroleum tanks, etc.

- (3) A person with seven (7) or more years experience of research, etc. on petroleum tanks, etc.
- (4) A person approved by the Minister as having equivalent academic knowledge and experience to that of a person falling under one of the three items above

(Entrustment to an Ordinance of the Ministry)

Article 42 Other than those set forth by this Cabinet Order, the application and other forms and the number of copies required shall be set forth by an ordinance of the Ministry.

Cabinet Order Concerning the Control of Hazardous Materials (Attached Tables 1~2)

ATTACHED TABLES

Attached Table 1 (Relating to Article 1-10)

(1) Hydrogen cyanide	Thirty (30) kg
(2) Sodium cyanide	Thirty (30) kg
(3) Mercury	Thirty (30) kg
(4) Selenium	Thirty (30) kg
(5) Arsenic	Thirty (30) kg
(6) Hydrogen fluoride	Thirty (30) kg
(7) Monofluoroacetic acid	Thirty (30) kg
(8) Apart from the material listed under each of the above items, materials which may cause a serious impediment to fire extinguishing activities by generating a gas causing serious damage to the human body or other means with the addition of water or heat and which are set forth by an ordinance of the Ministry	Quantities set forth by an ordinance of the Ministry

Attached Table 2 (Relating to Article 1-10)

(1) Ammonia	Two hundred (200) kg
(2) Hydrogen chloride	Two hundred (200) kg
(3) Chlorosulphuric acid	Two hundred (200) kg
(4) Chloropicrin	Two hundred (200) kg
(5) Chloromethyl	Two hundred (200) kg
(6) Chloroform	Two hundred (200) kg
(7) Hydrosilicofluoric acid	Two hundred (200) kg
(8) Carbon tetrachloride	Two hundred (200) kg
(9) Bromine	Two hundred (200) kg
(10) Fuming sulphuric acid	Two hundred (200) kg
(11) Hydrogen bromide	Two hundred (200) kg
(12) Bromomethyl	Two hundred (200) kg
(13) Formaldehyde	Two hundred (200) kg
(14) Monochloroacetic acid	Two hundred (200) kg
(15) Iodine	Two hundred (200) kg
(16) Sulphuric acid	Two hundred (200) kg
(17) Zinc phosphide	Two hundred (200) kg
(18) Apart from the material listed under each of the above items, materials which may cause a serious impediment to fire extinguishing activities by generating a gas causing serious damage to the human body or other means with the addition of water or heat and which are set forth by an ordinance of the Ministry	Quantities set forth by an ordinance of the Ministry

Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 3)

Attached Table 3 (Relating to Article 1-11)

Group	Item	Property	Specified Quantity
1 st Group		Class 1 oxidizing solids	Fifty (50) kg
		Class 2 oxidizing solids	Three hundred (300) kg
		Class 3 oxidizing solids	One thousand (1,000) kg
2 nd Group	Phosphorus sulphide		One hundred (100) kg
	Red phosphorus		One hundred (100) kg
	Sulphur		One hundred (100) kg
		Class 1 combustible solids	One hundred (100) kg
	Iron powders		Five hundred (500) kg
		Class 2 combustible solids	Five hundred (500) kg
3 rd Group		Flammable solids	One thousand (1,000) kg
	Potassium		Ten (10) kg
	Sodium		Ten (10) kg
	Alkyl aluminium		Ten (10) kg
	Alkyl lithium		Ten (10) kg
		Class 1 spontaneously combustible materials and water prohibitive materials	Ten (10) kg
	Yellow phosphorus		Twenty (20) kg
4 th Group		Class 2 spontaneously combustible materials and water prohibitive materials	Fifty (50) kg
		Class 3 spontaneously combustible materials and water prohibitive materials	Three hundred (300) kg
	Special flammable materials		Fifty (50) l
	Class 1 petroleums	Non-water soluble liquid	Two hundred (200) l
		Water soluble liquid	Four hundred (400) l
	Alcohols		Four hundred (400) l
	Class 2 petroleums	Non-water soluble liquid	One thousand (1,000) l
		Water soluble liquid	Two thousand (2,000) l
Class 3 petroleums	Non-water soluble liquid	Two thousand (2,000) l	
	Water soluble liquid	Four thousand (4,000) l	
Class 4 petroleums		Six thousand (6,000) l	
Animal fats and vegetable oils		Ten thousand (10,000) l	
5 th Group		Class 1 self-reactive materials	Ten (10) kg
		Class 2 self-reactive materials	One hundred (100) kg
6 th Group			Three hundred (300) kg

Notes

1. Class 1 oxidizing solids mean solids showing the property referred to in (1) below for powdery or granular products or the property referred to in (1) and (2) below for other products.
 - (1) The combustion time referred to in Article 1-3 Paragraph 2 Item 2 in the combustion test referred to in the said paragraph where potassium perchlorate is used as the standard material is equivalent to or shorter than the combustion time referred to in Paragraph 2 Item 1 or the probability of the explosion of a mixture of the specimen and red phosphorus in the falling ball impact sensitivity test referred to in Article 1-3 Paragraph 6 where potassium chloride is used as the standard material is fifty (50) percent or higher
 - (2) The combustion time referred to in Article 1-3 Paragraph 3 Item 2 in the mass combustion test stipulated in Article 1-3 Paragraph 1 is equivalent to or shorter than the combustion time referred to in Paragraph 3 Item 1 or the steel tube is completely ruptured in the steel tube test referred to in Article 1-3 Paragraph 7
2. Class 2 oxidizing solids mean solids showing the property referred to in (1) below for powdery or granular items or solids which show the properties referred to in (1) and (2) below and which are not Type 1 oxidizing solids for other items.
 - (1) The combustion time referred to in Article 1-3 Paragraph 2 Item 2 in the combustion test stipulated in Article 1-3 Paragraph 1 is equivalent to or shorter than the combustion time referred to in Paragraph 2 Item 1 or the probability of an explosion of a mixture of the specimen and red phosphorus in the falling ball impact sensitivity test stipulated in Article 1-3 Paragraph 5 is fifty (50) percent or higher

Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 3)

- (2) Properties referred to in Note 1-(2) above
- 3. Class 3 oxidizing solids mean solids other than Class 1 oxidizing solids or Class 2 oxidizing solids.
- 4. Class 1 combustible solids mean solids of which the specimens ignite within three (3) seconds in the small gas flame ignition test referred to in Article 1-4 Paragraph 2 and continue their combustion.
- 5. Class 2 combustible solids mean solids other than Class 1 combustible solids.
- 6. Class 1 spontaneously combustible materials and water prohibitive materials shall be those of which the specimens combust in the spontaneous combustion test referred to in Article 1-5 Paragraph 2 or from which gas is produced from a material in the water reaction test referred to in Article 1-5 Paragraph 5 and combusts.
- 7. Class 2 spontaneously combustible materials and water prohibitive materials mean those of which the specimens scorch the filter paper in the spontaneous combustion test referred to in Article 1-5 Paragraph 2 or from which gas is produced in the water reaction test referred to in Article 1-5 Paragraph 5 and combusts but which are not Class 1 spontaneously combustible materials and water prohibitive materials.
- 8. Class 3 spontaneously combustible materials mean those other than Class 1 spontaneously combustible materials or Class 2 spontaneously combustible materials.
- 9. Non-water soluble liquids mean those other than water soluble liquids.
- 10. Water soluble liquids mean liquids which maintain a uniform appearance of the mixture after the calming down of circulation in the case of being gently mixed with pure water of the same quantity at a temperature of twenty degrees celsius (20°C) under one (1) atmosphere.
- 11. Class 1 self-reactive materials mean those which cause a rupture of the rupture plate in the pressure vessel test referred to in Article 1-7 Paragraph 5 using the orifice plate with a hole diameter of nine (9) millimeters.
- 12. Class 2 self-reactive materials mean those other than Class 1 self-reactive materials.

Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 4)

Attached Table 4 (Relating to Article 1-12)

Item	Quantity	
Cottons	Two hundred (200) kg	
Wood filaments and shavings	Four hundred (400) kg	
Rags and waste papers	One thousand (1,000) kg	
Yarns	One thousand (1,000) kg	
Straws	One thousand (1,000) kg	
Combustible solids	Three thousand (3,000) kg	
Coals and charcoals	Ten thousand (10,000) kg	
Combustible liquids	Two (2) m ³	
Processed woods and wood chips	Ten (10) m ³	
Synthetic resins	Foamed	Twenty (20) m ³
	Others	Three thousand (3,000) kg

Notes

1. Cottons mean raw or topped cotton fibers or raw materials for hemp yarns which are neither noncombustible nor fire-resistant.
2. Rags and waste papers mean those which are neither noncombustible nor fire-resistant (including cloths or papers soaked with an animal fat or vegetable oil and products made of them).
3. Yarns mean threads (including waste threads) and cocoons which are neither noncombustible nor fire-resistant.
4. Straws mean dried straws, dried cocoons, products made of them and dried grass.
5. Combustible solids mean solids which fall in the category of (1), (3) or (4) below [including those which liquidify in the temperature range above twenty degrees celsius (20°C) but not higher than forty degrees celsius (40°C) under one (1) atmosphere and which fall in the category of (2), (3) or (4) below].
 - (1) Solids of which the flash point is forty degrees celsius (40°C) or higher but less than one hundred degrees celsius (100°C)
 - (2) Solids of which the flash point is seventy degrees celsius (70°C) or higher but less than one hundred degrees celsius (100°C)
 - (3) Solids of which the flash point is one hundred degrees celsius (100°C) or higher but less than two hundred degrees celsius (200°C) and of which the calorific power of combustion is thirty-four (34) kilojoules per gramme or more
 - (4) Solids of which the flash point is two hundred degrees celsius (200°C) or higher, of which the calorific power of combustion is thirty-four (34) kilojoules per gramme or higher and of which the melting point is less than one hundred degrees celsius (100°C)
6. Coals and charcoals include powdery coals suspended in water, oval briquettes, briquettes, petroleum cokes, activated charcoals and those similar to these.
7. Combustible liquids mean products which are set forth by an ordinance of the Ministry referred to in Note 14 of the Attached Table of the Law and which are liquid, products which are set forth by an ordinance of the Ministry referred to in Note 15 and Note 16 of the said Table and which are liquid at a temperature of twenty degrees celsius (20°C) under one (1) atmosphere, animal fats and vegetable oils stored in custody pursuant to the provisions of an ordinance of the Ministry referred to in Note 17 of the said Table and which are liquid at a temperature of twenty degrees celsius (20°C) under one (1) atmosphere and products which possess the properties of flammable liquid [limited to those which are liquid at a temperature of twenty degrees celsius (20°C) under one (1) atmosphere] and those of which the flash point under one (1) atmosphere is two hundred and fifty degrees celsius (250°C) or higher.
8. Synthetic resins mean solid synthetic resin products, partially made synthetic resin products, raw synthetic resins and waste synthetic resins (with are neither noncombustible nor fire-resistant) (including rubber products, partially made rubber products, raw rubber and waste rubber which are neither noncombustible nor fire-resistant) and exclude synthetic resin fibres, cloths, papers, threads and rags as well as the waste of these.

Attached Table 5 (Relating to Article 20)

Classification of Fire Extinguishing Systems		Classification of Fire Prevention Properties											
		Buildings and Other Structures	Electrical Equipment	Group 1 Hazardous Materials		Group 2 Hazardous Materials			Group 3 Hazardous Materials		Group 4 Hazardous Materials	Group 5 Hazardous Materials	Group 6 Hazardous Materials
				Peroxides of Alkaline Metal or Those Containing Such Peroxides	Other Group 1 Hazardous Materials	Iron Powder, Metal Powder or Magnesium or Those Containing One of them	Flammable Solids	Other Group 2 Hazardous Materials	Water Resistive Materials	Other Group 3 Hazardous Materials			
Class 1	Indoor Fire Plug System or Outdoor Fire Plug System	○			○		○	○		○		○	○
Class 2	Sprinkler System	○			○		○	○		○		○	○
Class 3	Steam Extinguishing System or Water Spray Extinguishing System	○	○		○		○	○		○	○	○	○
	Foam Extinguishing System	○			○		○	○		○	○	○	○
	Carbon Dioxide Extinguishing System		○				○			○			
	Halon Extinguishing System		○				○			○			
	Dry Chemical Extinguishing System	○	○		○		○	○			○		○
	System Using Phosphates, etc.		○				○			○			
	System Using Carbonates, etc.		○		○		○		○		○		
	Others				○		○		○				
Class 4 or Class 5	Fire Extinguisher Discharging Jet Water	○			○		○	○		○		○	○
	Fire Extinguisher Spraying Water	○	○		○		○	○		○		○	○
	Fire Extinguisher Discharging Jet Loaded Liquid	○			○		○	○		○		○	○
	Fire Extinguisher Spraying Loaded Liquid	○	○		○		○	○		○	○	○	○
	Fire Extinguisher Discharging Foam	○			○		○	○		○	○	○	○
	Fire Extinguisher Discharging Carbon Dioxide		○				○			○			
	Fire Extinguisher Discharging Halogenide		○				○			○			
	Fire Extinguisher Discharging Dry Extinguishing agents	○	○		○		○	○		○	○		○
	Fire Extinguisher Using Phosphates, etc.		○		○		○		○		○		○
	Fire Extinguisher Using Hydrogen Carbonates, etc.		○		○		○		○		○		○
	Others				○		○		○				
Class 5	Water Bucket or Water Tank	○			○		○	○		○		○	○
	Dry Sand				○	○	○	○	○	○	○	○	○
	Dilatable Vermiculite or Dilatable Perlite				○	○	○	○	○	○	○	○	○

Notes

1. The mark O indicates the suitability of fire extinguishing systems of Class 1 through Class 5 for buildings and other structures and electrical equipment and Group 1 through Group 6 hazardous materials listed under the classification columns for fire protection properties.
2. Fire extinguishers are of the large type for Class 4 fire extinguishing systems and of the small type for Class 5 fire extinguishing systems.
3. Phosphates, etc. mean phosphates, sulphates and other chemical agents with a flame retarding performance.
4. Hydrogen carbonates, etc. mean hydrogen carbonates and products of the reaction between hydrogen carbonates and urea.

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IFSIC also translates Japanese laws and ordinances concerning fire service and introduces them to fire service personnel from foreign countries.

CABINET ORDER CONCERNING THE CONTROL OF HAZARDOUS MATERIALS

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