

Regulation on Prevention of Ionizing Radiation Hazards

(Ministry of Labour Order No. 41 of September 30, 1972)

Pursuant to the provisions of the Industrial Safety and Health Act (Act No. 57 of 1972) and the Order for Enforcement of the Industrial Safety and Health Act (Cabinet Order No. 318 of 1972) and in order to implement the Act, the Regulation on Prevention of Ionizing Radiation Hazards is provided as follows:

Chapter I General Provisions (Articles 1 and 2)

Chapter II Controlled Areas; Exposure Dose Limits and Measurements
(Articles 3 to 9)

Chapter III Protection against External Radiation (Articles 10 to 21)

Chapter IV Prevention of Contamination

Section 2 Prevention of Contamination Caused by Radioactive Materials
Discharged by the Accident (Articles 41-3 to 41-10)

Chapter IV-2 Control of Special Work (Articles 41-11 to 41-14)

Chapter V Emergency Measures (Articles 42 to 45)

Chapter VI Operations Chief of Work with X-rays and Operations Chief of
Gamma-ray Radiography (Articles 46 to 52-4-5)

Chapter VI-2 Special Education (Articles 52-5 to 52-9)

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Chapter X Miscellaneous Provisions (Articles 60 to 62)

Supplementary Provisions

Chapter I General Provisions

(Basic Principles of Prevention of Ionizing Radiation Hazards)

Article 1 An employer must endeavor to minimize the exposure of workers to Ionizing Radiation.

(Definitions)

Article 2 (1) "Ionizing Radiation" (hereinafter referred to as "Radiation") used in this Regulation means any of the following particulate rays or electro magnetic waves:

(i) alpha rays, deuteron rays and proton rays;

- (ii) beta rays and electron rays;
 - (iii) neutron rays; and
 - (iv) gamma rays and X-rays.
- (2) "Radioactive Materials" used in this Regulation means radioactive isotopes (hereinafter referred to as "Radioisotopes"), their compounds, and materials containing Radioisotopes, which fall under any one of the following:
- (i) in case of those consisting of a single type of Radioisotope and classified into any one of the categories listed in column 1 of Appended Table 1, the ones exceeding the quantity prescribed in column 2 and the concentration prescribed in column 3 of the same table, respectively, depending on the types of Radioisotopes listed in the same column;
 - (ii) in case of those consisting of a single type of Radioisotope and classified into any one of the categories listed in column 1 of Appended Table 2, the ones exceeding the quantity prescribed in column 2 of the same table depending on the types of Radioisotopes listed in the same column; provided, however, that solid materials with a concentration of 74 Bq per gram or less and sealed materials with a quantity of 3.7 MBq or less are excluded;
 - (iii) in case of those consisting of two or more types of Radioisotopes, each of which is listed in column 1 of Appended Table 1, the ones falling under both of the following:
 - (a) the sum of the ratios of the quantities of the respective Radioisotopes listed in column 1 of Appended Table 1 to the quantities listed in column 2 of the same table exceeds one; and
 - (b) the sum of the ratios of the concentrations of the respective Radioisotopes listed in column 1 of Appended Table 1 to the concentrations listed in column 3 of the same table exceeds one;
 - (iv) in case of those consisting of two or more types of Radioisotopes and which are other than those listed in the preceding item, the ones whose sum of the ratios of the quantities of the respective Radioisotopes listed in column 1 of Appended Table 1 or in column 1 of Appended Table 2 to the quantities listed in column 2 of Appended Table 1 or in column 2 of Appended Table 2 exceeds one; provided, however, that solid materials with a concentration of 74 Bq per gram or less and sealed materials with a quantity of 3.7 MBq or less are excluded.
- (3) "Radiation Work" in this Regulation means any work listed in Appended Table 2 of the Order for Enforcement of the Industrial Safety and Health Act (hereinafter referred to as "Cabinet Order") (excluding, with respect to those other than the Radiation Work provided for in Article 59-2, the Works of Decontamination, etc. of Soil and Waste provided for in Article 2, paragraph (7), item (i) of the Regulation on Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Waste Contaminated by Radioactive

Materials Resulting from the Great East Japan Earthquake and Related Works (Order of the Ministry of Health, Labour and Welfare No. 152 of 2011; hereinafter referred to as the "Regulation on Decontamination"), the Work for Collecting Wastes, etc. provided for in item (ii) of the same paragraph, and the Works for Handling Designated Contaminated Soil and Waste provided for in item (iii) of the same paragraph).

- (4) The Radioactive Materials provided for in Order of the Ministry of Health, Labour and Welfare, as set forth in item (iv) of Appended Table 2 of the Cabinet Order, are to the Radioactive Materials provided for in paragraph (2).

Chapter II Controlled Areas; Exposure Dose Limits and Measurements

(Indications of Controlled Areas)

- Article 3 (1) An employer engaging in a business undertaking Radiation Work (hereinafter referred to as the "employer" except in Article 62) must demarcate the areas which fall under either of the following (hereinafter referred to as "Controlled Areas") by posting signs:
- (i) areas where the total of the effective dose due to external radiation and the effective dose due to Radioactive Materials in the air is likely to exceed 1.3 mSv per every three months; or
 - (ii) areas where the surface density of Radioactive Materials is likely to exceed one-tenth of the limits listed in Appended Table 3.
- (2) The effective dose due to external radiation as provided for in item (i) of the preceding paragraph is to be calculated in the unit of 1cm dose equivalent.
- (3) The effective dose due to Radioactive Materials in the air as provided for in paragraph (1), item (i) is to be calculated by multiplying 1.3 mSv by the ratio of the average concentration of Radioactive Materials in the air during the working hours in a week (when the working hours in a week exceed or are less than 40 hours, the average concentration is the value calculated by multiplying the average concentration of Radioactive Materials in the air during the working hours in a week by the value obtained by dividing the working hours by 40 hours; hereinafter referred to as the "Weekly Average Concentration") during a three-month period to one-tenth of the limit designated by the Minister of Health, Labour and Welfare.
- (4) An employer must not permit any person to enter the Controlled Areas, excluding persons who need to do so.
- (5) An employer must post, in easy-to-see positions in the Controlled Areas, precautions for the wearing of the radiation measuring instruments specified in Article 8, paragraph (3), precautions for the handling of Radioactive Materials, emergency measures to be taken in case of an accident, and other instructions required to prevent radiation-derived health hazards to workers.

(Limit of Radiation Exposure Dose in Facilities)

Article 3-2 (1) With respect to any Radiation Equipment Rooms described in Article 15, paragraph (1), work rooms for handling Radioactive Materials described in Article 22, paragraph (2), storage facilities provided for in Article 33, paragraph (1) (including as applied mutatis mutandis pursuant to Article 41-9), disposal-by-storage facilities provided for in Article 36, paragraph (1), Accident-derived Waste Handling Facilities provided for in Article 41-4, paragraph (2) or landfill facilities provided for in Article 41-8, paragraph (1), an employer must keep the total of the effective dose due to external radiation and the effective dose due to Radioactive Materials contained in the air at 1 mSv or below per week at sites constantly accessed by workers by means of installing shielding walls, protective screens or other shielding devices or by means of installing local exhaust ventilation systems or equipment which seals emission sources of gas, vapor or dust of Radioactive Materials.

(2) The provisions of paragraph (2) of the preceding Article apply mutatis mutandis to the calculation of the effective dose due to external radiation as provided for in the preceding paragraph.

(3) The effective dose due to Radioactive Materials contained in the air as provided for in paragraph (1) of this article is calculated by multiplying 1 mSv by the ratio of the Weekly Average Concentration to the limit designated by the Minister of Health, Labour and Welfare in paragraph (3) of the preceding Article.

(Exposure Dose Limit to Radiation Workers)

Article 4 (1) An employer must prevent the effective dose to which workers engaging in Radiation Work in the Controlled Areas (hereinafter referred to as "Radiation Workers") are exposed from exceeding 100 mSv per five years and 50 mSv per year.

(2) Notwithstanding the provisions of the preceding paragraph, an employer must prevent the effective dose to which female Radiation Workers (excluding female workers diagnosed as being unable to conceive and those provided for in Article 6) are exposed from exceeding 5 mSv per three months.

Article 5 An employer must prevent the equivalent dose to which Radiation Workers are exposed from exceeding 150 mSv per year to their eye lens and 500 mSv per year to the skin.

Article 6 An employer must prevent the dose to which female Radiation Workers diagnosed as being pregnant are exposed for the period starting from the time they are diagnosed as being pregnant until delivery (hereinafter referred to as

"During Pregnancy") from exceeding the value provided for each of the following dose categories:

- (i) 1 mSv for effective dose due to internal exposure; and
- (ii) 2 mSv for equivalent dose to the surface of the abdomen.

(Dose Limit in Emergency Work)

Article 7 (1) In the event of an accident that falls under any of the items of Article 42, paragraph (1), and an employer carries out any emergency work for preventing radiation-derived health hazards to Radiation Workers that is to be carried out if an area described in the same paragraph emerges (hereinafter referred to as "Emergency Work"), the employer may allow male workers engaging in the Emergency Work and female Radiation Workers diagnosed as being unable to conceive to be exposed to Radiation exceeding the limits provided for in Article 4, paragraph (1), and in Article 5, notwithstanding the provisions contained therein.

(2) In the case described in the preceding paragraph, the dose to which workers will be exposed during the Emergency Work must not exceed the value provided for each of the following dose categories:

- (i) 100 mSv in the case of the effective dose;
- (ii) 300 mSv in the case of the equivalent dose to which the eye lens will be exposed; and
- (iii) 1 Sv in the case of the equivalent dose to which the skin will be exposed.

(3) The provisions of the preceding paragraph apply mutatis mutandis to male workers and female workers diagnosed as being unable to conceive, who are engaging in Emergency Work, other than Radiation Workers.

(Exceptional Emergency Dose Limit)

Article 7-2 (1) In the case referred to in paragraph (1) of the preceding Article, if the Minister of Health, Labour and Welfare considers it difficult to observe the effective dose limit prescribed in paragraph (2) of the preceding Article taking into account the situation of the accident for which the Emergency Work is carried out and other circumstances, the Minister may separately set an effective dose limit value to which workers will be allowed to be exposed during the Emergency Work (within the range not exceeding 250 mSv; hereinafter referred to as the "Exceptional Emergency Dose Limit"), notwithstanding the provisions of the same paragraph.

(2) In the case referred to in the preceding paragraph, if any of the following items may apply, the Minister of Health, Labour and Welfare immediately sets the Exceptional Emergency Dose Limit at 250 mSv:

- (i) if any event specified by the Minister of Health, Labour and Welfare among the events provided for in the Cabinet Order referred to in Article 10 of the

- Act on Special Measures Concerning Nuclear Emergency Preparedness (Act No. 156 of 1999, referred to as the "Nuclear Emergency Act" in the following item and in paragraph (1) of the following Article); or
- (ii) the cases listed in the items of Article 15, paragraph (1) of the Nuclear Emergency Act.
- (3) If the Minister of Health, Labour and Welfare has separately set an Exceptional Emergency Dose Limit pursuant to the provisions of the preceding two paragraphs, the Minister is to take into account the dose to which workers engaging in Emergency Work covered by the Exceptional Emergency Dose Limit (hereinafter referred to as the "Exceptional Emergency Work") (the workers are referred to as "workers engaging in exceptional emergency work" in the following Article) were exposed, the contents of the work required to resolve the accident for which the Exceptional Emergency Work is carried out and other circumstances, is to modify the Exceptional Emergency Dose Limit accordingly , and is to abolish the Exceptional Emergency Dose Limit as promptly as possible.
- (4) If the Minister of Health, Labour and Welfare has separately set an Exceptional Emergency Dose Limit pursuant to the provisions of paragraph (1) or paragraph (2), the Minister must issue official notice of the Exceptional Emergency Work and the Exceptional Emergency Dose Limit which will apply to the Exceptional Emergency Work. The same applies when the Exceptional Emergency Dose Limit is modified or abolished.

Article 7-3 (1) An employer must not assign Exceptional Emergency Work to personnel other than the nuclear disaster prevention worker provided for in Article 8, paragraph (3) of the Nuclear Emergency Act, the nuclear emergency preparedness managers provided for in Article 9, paragraph (1) of the Nuclear Emergency Act or the vice-nuclear emergency preparedness managers provided for in paragraph (3) of the same Article (referred to as "nuclear disaster prevention workers" in Article 52-9).

- (2) If an Exceptional Emergency Dose Limit is set pursuant to the provisions of paragraph (1) or paragraph (2) of the preceding Article, an employer may assign Exceptional Emergency Work with Radiation exceeding the dose limit provided for in Article 7, paragraph (2), item (i) to workers engaging in exceptional emergency work, notwithstanding the provisions of the same paragraph (limited to the portion covered by the same item). In this case, the employer must prevent the effective dose to which the workers will be exposed during the Emergency Work from exceeding the Exceptional Emergency Dose Limit.
- (3) An employer must endeavor to minimize the exposure of workers engaging in exceptional emergency work to Radiation in accordance with the situation of

the accident entailing the Exceptional Emergency Work.

(Dose Measurements)

Article 8 (1) An employer must measure the doses to which Radiation Workers, workers engaging in Emergency Work and workers who temporarily enter the Controlled Areas are exposed in the Controlled Areas due to external and internal exposures.

(2) The measurement of the dose due to external exposure under the preceding paragraph is to be performed for 1-cm dose equivalent and 70 μ m dose equivalent (1cm dose equivalent in the case of neutron rays); provided, however, that dose measurement performed pursuant to the following paragraph with a radiation measuring instrument attached to the parts of the body referred to in item (iii) of the same paragraph is to be performed for 70 μ m dose equivalent.

(3) The measurement of the dose due to external exposure under paragraph (1) must be performed with a radiation measuring instrument attached to the parts of the body referred to in each of the following items; provided, however, that if it is extremely difficult to measure the dose by means of a radiation measuring instrument, the dose may be calculated using the dose equivalent rate measured by a radiation measuring instrument, and if this method is extremely difficult, the dose may be obtained by calculation:

(i) the chest area in case of male workers or female workers diagnosed as being unable to conceive, or the abdominal area in case of other female workers;

(ii) the area most likely to be exposed to Radiation among the head and neck area, the chest and upper arm area and the abdominal and thigh area (excluding cases where the area most likely to be exposed to Radiation is the chest and upper arm area in case of male workers or female workers diagnosed as being unable to conceive, or the abdominal and thigh area in case of other female workers); and

(iii) the area most likely to be exposed to Radiation when it is not the head and neck area, the chest and upper arm area nor the abdominal and thigh area (excluding cases where the area is exposed to neutron rays).

(4) The measurement of the dose due to internal exposure under the provisions of paragraph (1) is performed once every period within three months in the case of workers who enter sections of Controlled Areas where there is a possibility that they are likely to inhale or ingest Radioactive Materials (or once every period within one month in the case of male workers and female workers diagnosed as being unable to conceive engaging in Emergency Work, female workers who are likely to be exposed to an effective dose exceeding 1.7 mSv in any one-month period (excluding female workers diagnosed as being unable to conceive) and female workers During Pregnancy); provide, however, that if these workers have inhaled or ingested Radioactive Materials by mistake, the

- measurement is to be performed immediately after this inhalation or ingestion.
- (5) In the measurement of the dose due to internal exposure under the provisions of paragraph (1), the value of the dose is to be determined by using the method provided by the Minister of Health, Labour and Welfare.
- (6) Radiation Workers, workers engaging in Emergency Work, and workers who temporarily enter the Controlled Areas must wear radiation measuring instruments in the Controlled Areas, with the exception of the cases under the proviso of paragraph (3).

(Confirmation and Recording of Dose Measurement Results)

- Article 9 (1) An employer must confirm the measurement results of the dose due to external exposure under paragraph (1) of the preceding Article in respect of workers who is likely to be exposed to Radiation exceeding 1 mSv per day per in the unit of 1cm dose equivalent.
- (2) An employer must calculate the dose to which Radiation Workers listed in each of the following items are exposed without delay and by using the method provided by the Minister of Health, Labour and Welfare, on the basis of the measurement or calculation results under paragraph (3) or (5) of the preceding Article, record this calculation, and store the records for 30 years; provided, however, that these provisions does not apply in the case where the employer hands over the records to the organization designated by the Minister of Health, Labour and Welfare after these records are stored for five years:
- (i) a total effective dose for three-month, one-year and five-year periods for male workers or female workers diagnosed as being unable to conceive (excluding the workers listed in the following item or item (iii) below);
 - (ii) a total effective dose for three-year and one-year periods for male workers or female workers diagnosed as being unable to conceive (limited to workers who have not been exposed to an effective dose exceeding 20 mSv per year in the last five years, and excluding the workers listed in the following item);
 - (iii) a total effective dose for one-month, one-year and five-year periods for male workers or female workers diagnosed as being unable to conceive (limited to workers engaging in Emergency Work);
 - (iv) a total effective dose for three-month and one-year periods for female workers (excluding female workers diagnosed as being unable to conceive) (or a total effective dose for three-month and one-year periods for workers whose effective dose is not likely to exceed 1.7 mSv per month);
 - (v) a total equivalent dose for three-month and one-year periods by human tissue; and
 - (vi) for pregnant female workers, a total effective dose for one-month periods and During Pregnancy due to internal exposure, and the equivalent dose to which the abdomen surfaces of pregnant female workers were exposed.

- (3) An employer must inform Radiation Workers of the dose of each of the items of the preceding paragraph without delay on the basis of the records made under the provisions of the preceding paragraph.

Chapter III Protection against External Radiation

(Irradiation Cylinders)

Article 10 (1) When an employer uses any X-ray device (meaning any device that generates X-rays and other than those listed in item (ii) of Appended Table 2 of the Cabinet Order; the same applies hereinafter) that is listed in Article 13, paragraph (3), item (xxii) of the Cabinet Order (hereinafter referred to as a "Specified X-ray Device"), the employer must use an irradiation cylinder or collimator that is designed to prevent the radiation angle of usable beams from exceeding the angle required to achieve the purpose of the use; provided, however, that these provisions do not apply in the case where the use of an irradiation cylinder or collimator interferes with the purpose of use of the Specified X-ray Device.

- (2) An employer must ensure that the irradiation cylinder or collimator as provided for in the preceding paragraph conform to the standards provided by the Minister of Health, Labour and Welfare.

(Filters)

Article 11 An employer must use a filter whenever a Specified X-ray Device is used; provided, however, that this does not apply if soft X-rays must be used because of the nature of the work or when there is no possibility that workers will be exposed to soft X-rays.

(Measures for Fluorography)

Article 12 (1) An employer must take the following measures when performing fluorography by using a Specified X-ray Device; provided, however, that this does not apply when using a Specified X-ray Device of shielding structure that does not allow the whole or part of the bodies of workers engaging in fluorography to enter the irradiation field during X-ray irradiation:

- (i) to ensure that the X-ray irradiation field will not exceed the image reception area over the distance between the X-ray tube and the focal image receptor used;
- (ii) with regard to fluorography X-ray devices for chest mass surveys and Specified X-ray Devices for uses other than medical use (hereinafter referred to as "Industrial Use, etc."), to keep the air kerma in free air (referred to as the "air kerma" in the following item) in the primary protection shielding of the image receptor at a distance of 10 cm from the accessible surface of the

- device at or below 1.0 microgray per irradiation; and
- (iii) with regard to fluorography X-ray devices for chest mass surveys and the Specified X-ray Devices for Industrial Use, etc., to install box-shaped shielding around the irradiated object and keep the air kerma at a distance of 10 cm from the shielding at or below 1.0 microgray per irradiation.
- (2) Notwithstanding the provisions of the preceding paragraph, an employer is not required to take the measure listed in each of the following items in each of the cases of the items:
- (i) if the image reception area is circular and the X-ray irradiation field is rectangular, and the X-ray irradiation field does not exceed the size at the time of circumscribing the image reception area at the distance between the X-ray tube and the focal image receptor used: measures referred to in item (i) of the preceding paragraph;
- (ii) with regard to Specified X-ray Devices for medical use, where two straight lines intersecting at right angles on an image reception area perpendicular to the irradiation direction are assumed, if each sum of the distance between the point of intersection of each straight line and the edge of the X-ray irradiation field and the distance between the point of intersection of each straight line and the edge of the image reception area (hereinafter referred to as the "distances between the points of intersection" in this item and in the following Article, paragraph (2), item (iii)) does not exceed 3% of the distance between each X-ray tube and the focal image receptor used, and the total sum of the distances between these points of intersection does not exceed 4% of the distance between the X-ray tube and the focal image receptor used: measures referred to in item (i) of the preceding paragraph;
- (iii) if a Specified X-ray Device is used in a place other than a Radiation Equipment Room pursuant to the proviso of Article 15, paragraph (1): measures referred to in items (ii) and (iii) of the preceding paragraph; and
- (iv) if workers engaging in fluorography work can easily evacuate to the place provided for in Article 3-2, paragraph (1) at the time of irradiation: measures referred to in item (iii) of the preceding paragraph.

(Measures for fluoroscopy)

- Article 13 (1) When an employer performs fluoroscopy by using a Specified X-ray Device, the employer must take the following measures; provided, however, that this does not apply when using a Specified X-ray Device of shielding structure that does not allow the whole or part of the bodies of workers engaging in fluoroscopy to enter the irradiation field during X-ray irradiation:
- (i) to install equipment with which workers engaging in fluoroscopy work can prevent the generation of, or shield, X-rays in the work position;
- (ii) to immediately install an automatic device that is designed to open the X-

- ray tube circuit if a current twice the rated current of the X-ray tube passes through the X-ray tube;
- (iii) with regard to the distance between the X-ray tube and the focal image receptor used, to prevent the X-ray irradiation field from exceeding the image reception area;
 - (iv) to keep the air kerma rate in the air of X-rays that pass through the image receptor in usable beams (hereinafter referred to as the "Air Kerma Rate") at or below 150 microgray per hour at a distance of 10 cm from the accessible surface of the image receptor in usable beams in the case of Specified X-ray Devices for medical use, or at or below 17.4 microgray per hour at a distance of 1 m from the focal point of the X-ray tube in the case of Specified X-ray Devices for Industrial Use, etc.;
 - (v) to keep the Air Kerma Rate of X-rays that pass through any section exceeding 3.0 cm from the maximum image reception area during fluoroscopy at or below 150 microgray per hour at a distance of 10 cm from the accessible surface of the section in the case of Specified X-ray Devices for medical use, or at or below 17.4 microgray per hour at a distance of 1 m from the focal point of the X-ray tube in the case of Specified X-ray Devices for Industrial Use, etc.; and
 - (vi) to install, around the irradiated object, appropriate equipment for effective shielding of X-rays other than usable beams.
- (2) Notwithstanding the provisions of the preceding paragraph, the employer is not required to take the measure listed in each of the following items in each of the cases of the items:
- (i) if the fluoroscopy time of a Specified X-ray Device for medical use can be integrated, and a timer capable of issuing a warning sound, etc. after an elapse of given time is installed: measures referred to in item (ii) of the preceding paragraph;
 - (ii) if the image reception area is circular and the X-ray irradiation field is rectangular, and the X-ray irradiation field does not exceed the size at the time of circumscribing the image reception area at the distance between the X-ray tube and the focal image receptor used: measures referred to in item (iii) of the preceding paragraph;
 - (iii) with regard to Specified X-ray Devices for medical use, where two straight lines intersecting at right angles on an image reception area perpendicular to the irradiation direction are assumed, if the sum of the distances between the points of intersection of each straight line does not exceed 3% of the distance between each X-ray tube and the focal image receptor used, and the total sum of these distances between the points of intersection does not exceed 4% of the distance between the X-ray tube and the focal image receptor used: measures referred to in item (iii) of the preceding paragraph;

and

- (iv) if a Specified X-ray Device is used in a place other than a Radiation Equipment Room pursuant to the proviso of Article 15, paragraph (1): measures referred to in items (iv) through (vi) of the preceding paragraph.

(Posting of Signs)

Article 14 With regard to each of the devices or apparatuses listed in the left-hand column of the table below, an employer must post a sign indicating the information described in the appropriate right-hand column, depending on the category of device or apparatus, on each corresponding device or apparatus or in an easy-to-see position close to it.

Device or apparatus	Information to be indicated
Cyclotrons, betatrons and other devices for accelerating charged particles (hereinafter referred to as "Charged Particle Accelerators")	Types of device, types of radiation rays, and maximum energy
Apparatuses loaded with Radioactive Materials (excluding the apparatuses listed in the following paragraph)	Types of apparatuses, types and quantities (unit: Becquerel) of Radioisotopes contained in Radioactive Materials loaded, dates when said Radioactive Materials were loaded, and names of owners of apparatuses
Apparatuses loaded with Radioactive Materials which are certified apparatuses with indication provided for in Article 12-5, paragraph (2) of the Act on Prevention of Radiation Health Hazards Due to Radioisotopes[Act No. 167 of 1957] or specified certified apparatuses with indication provided for in paragraph (3) of the same Article (excluding those whose radioactive sources are replaced or cleaned)	Types of apparatuses, and types and quantities (unit: Becquerel) of Radioisotopes contained in Radioactive Materials loaded in apparatuses

(Radiation Equipment Room)

Article 15 (1) An employer intending to install the devices or appliances listed below (hereinafter referred to as "Radiation Equipment") must prepare a dedicated room (hereinafter referred to as a "Radiation Equipment Room") and install Radiation Equipment in that room; provided, however, that this does not apply in the case where a Radiation Equipment of shielding structure is to be installed so as not to allow the 1-cm dose equivalent rate due to external radiation outside of the room to exceed 20 Sv per hour, where a Radiation Equipment must be moved from one place to another for use, or otherwise

where installing a Radiation Equipment in a Radiation Equipment Room seriously hinders the purpose of the use of the Radiation Equipment or is extremely difficult because of the nature of work:

- (i) X-ray devices;
 - (ii) Charged Particle Accelerators;
 - (iii) devices for degassing X-ray tubes or kenotrons or for conducting inspection of these appliances that generate X-rays; or
 - (iv) appliances loaded with Radioactive Materials.
- (2) An employer must post a sign indicating that the room is a Radiation Equipment Room at the entrance of the room.
- (3) The provisions of Article 3, paragraph (4) apply mutatis mutandis to a Radiation Equipment Room.

Article 16 Deleted

(Warning Devices)

Article 17 (1) In cases of the following events, an employer must take a measure to notify persons concerned of the events. In this case, the notification must be performed by means of an automatic warning device except where the Radiation Equipment is to be used in any place other than the Radiation Equipment Room, or where an X-ray device with a tube voltage of 150 kV or less or an appliance loaded with Radioactive Materials of less than 400 GBq in quantity is to be used:

- (i) when the electric power is supplied to an X-ray device or Charged Particle Accelerator;
 - (ii) when the electric power is supplied to a device for degassing X-ray tubes or kenotrons or for conducting inspection of these appliances that generate X-rays; or
 - (iii) when an appliance loaded with Radioactive Materials is used for irradiation.
- (2) An employer must install an interlock at the entrance through which personnel constantly enter and leave a Radiation Equipment Room where a Charged Particle Accelerator or an appliance loaded with Radioactive Materials of 100 TBq or more is used.

(Prohibition of Entry)

Article 18 (1) When an X-ray device for Industrial Use or an appliance loaded with Radioactive Materials is to be used in a place other than a Radiation Equipment Room pursuant to the provisions of the proviso of Article 15, paragraph (1), an employer must prohibit workers from entering a place within 5 m from the focal point of the X-ray tube or from the radiation source and the

irradiated object (excluding places where the effective dose due to external radiation is 1 mSv or less per week); provided, however, that this does not apply in the case where workers enter the place for preparation to take the radiation source out of the radiation source container or for inspection of the radiation source container or for other necessary work when the radiation source is securely housed in the radiation source container of the appliance loaded with Radioactive Materials and, in the case of a radiation source container provided with a shutter, when the shutter is closed.

- (2) The provisions of the preceding paragraph apply mutatis mutandis in the case where an employer uses an X-ray device for medical use for the purpose of X-ray photography in a place other than a Radiation Equipment Room. In this case, the term "5 m" in the same paragraph is deemed to be replaced with "2 m."
- (3) The provisions of Article 3, paragraph (2) apply mutatis mutandis to the calculation of the effective dose due to external radiation provided for in paragraph (1) (including cases in which the provisions of the preceding paragraph apply mutatis mutandis; the same applies in the following paragraph).
- (4) An employer must post a sign to clearly indicate places where workers are prohibited from entering pursuant to the provisions of paragraph (1).

(Measures during Radiophotography)

Article 18-2 When an employer uses a Specified X-ray Device or gamma-ray irradiation device for radiophotography (meaning a gamma-ray irradiation device used for radiophotography; the same applies hereinafter) in a place other than a Radiation Equipment Room (excluding cases where there is no likely that workers will be exposed to Radiation) pursuant to the provisions of the proviso of Article 15, paragraph (1), the employer must apply Radiation in a direction workers do not enter, or take a measure to shield Radiation.

(Take-out of Radiation Sources)

Article 18-3 (1) Unless a radiation source carry-out device (meaning a device consisting of an operation unit (meaning a device that feeds out and winds up a wire release), an operation tube (meaning a tube that guides the wire release) and a transmission tube (meaning a tube that guides the radiation source and the wire release; the same applies hereinafter) and is designed to feed out and house the radiation source from/in the radiation source container; the same applies hereinafter) is used when using a gamma-ray irradiation device for radiophotography, an employer must not take the radiation source out of the radiation source container.

- (2) Notwithstanding the provisions of the preceding paragraph, when using a

gamma-ray irradiation device for radiophotography in a Radiation Equipment Room, the employer may take the radiation source out of the radiation source container by using a remote controller other than a radiation source carry-out device.

Article 18-4 When an employer uses a gamma-ray irradiation device for radiophotography provided with a radiation source carry-out device, the employer must comply with the following provisions:

- (i) to transfer the transmission tube only after the radiation source is securely housed in the radiation source container and, if the radiation source container is provided with a shutter, the shutter is closed; and
- (ii) to prevent the radiation angle of usable beams from exceeding the angle required to achieve the purpose of use of the device, and to use a collimator, etc. to minimize the Air Kerma Rate of gamma rays other than usable beams; provided, however, that this does not apply when the use of a collimator, etc. interferes with the purpose of use of the device.

(Periodical Voluntary Inspections)

Article 18-5 (1) An employer must perform voluntary inspections of gamma-ray irradiation devices for radiophotography for the matters listed below periodically once every period within one month; provided, however, that this does not apply during periods of longer than a month in which the devices are not used:

- (i) whether there is any abnormality with the shutters of radiation source containers and devices to open and close these shutters;
 - (ii) whether there is any abnormality with devices for fastening radiation source holders;
 - (iii) whether there is any abnormality with the connection between a radiation source carry-out device, if provided, and the radiation source container; and
 - (iv) whether there is any abnormality with a radiation source carry-out device or remote controller for adjusting the position of the radiation source, if provided.
- (2) An employer must perform voluntary inspections of the devices provided for in the proviso of the preceding paragraph for the items listed in the same paragraph before resuming the use of these devices.

Article 18-6 (1) An employer must perform voluntary inspections of gamma-ray irradiation devices for radiophotography for abnormalities with the shielding performance of the radiation source container periodically once every period within six months; provided, however, that this does not apply during periods of longer than six months in which the devices are not used.

(2) An employer must perform voluntary inspections of the devices provided for in the proviso of the preceding paragraph for abnormalities with the shielding performance of the radiation source container before resuming the use of these devices.

(Records)

Article 18-7 Whenever an employer has performed voluntary inspections as provided for in the two preceding Articles, the employer must record the items listed below and store the records thereof for three years:

- (i) date of inspection;
- (ii) inspection method;
- (iii) point of inspection;
- (iv) inspection results;
- (v) name of the person who performed the inspection; and
- (vi) details of measures, such as repairs, when taken based on the inspection results.

(Checkups)

Article 18-8 Whenever an employer uses a gamma-ray irradiation device for radiophotography for the first time, has disassembled and modified or repaired the device, or has replaced the radiation source used for the device, the employer must check the matters listed in the items of Article 18-5, paragraph (1) and whether there is any abnormality with the shielding performance of the radiation source container.

(Repairs)

Article 18-9 If an employer has found any abnormality in the periodical voluntary inspections provided for in Article 18-5 or Article 18-6, the employer must immediately make repairs or take other measures.

(Housing of Radiation Sources)

Article 18-10 When an employer directs workers to engage in the work of housing a radiation source in a radiation source container or other container in case of any of the accidents referred to in Article 42, paragraph (1), item (iv), the employer must take a measure, such as the installation of shielding, and direct the workers to use forceps, etc. to secure an appropriate distance between the workers engaging in the work and the radiation source.

(Checkups of Radiation Sources)

Article 19 (1) When an employer has relocated and used an appliance loaded with Radioactive Materials, the employer must check, by using a radiation

measuring instrument, whether the radiation source is not lost or is leaking or spilling, whether, if the appliance is provided with a radiation source container, the radiation source is securely housed in the container, and whether, if the radiation source container is provided with a shutter, the shutter is securely closed at the time of storage of the appliance just after use and after the end of daily work.

- (2) If it is found in a checkup under the preceding paragraph that the radiation source is lost or is leaking or spilling, the radiation source is not securely housed in the radiation source container, or the shutter of the radiation source container is not securely closed, a search for the radiation source, repairs of the radiation source container, or other necessary measures to prevent health hazards to workers due to Radiation must be taken.

Article 20 Deleted

Article 21 Deleted

Chapter IV Prevention of Contamination

Section 1 Prevention of Contamination Caused by Radioactive Materials (Excluding Radioactive Materials Discharged by the Accident)

(Work Rooms for Handling Radioactive Materials)

Article 22 (1) When an employer (excluding the employer engaged in waste management provided for in Article 41-3; the same applies hereinafter in this Section) performs any work that handles Radioactive Materials which are not hermetically sealed, the employer must prepare a dedicated work room and perform handling work in the dedicated work room; provided, however, that this does not apply to cases where Radioactive Materials are dispersed and moved in a wide area for use for investigations into water leakages, epidemiological investigations with insects, investigations into the moving status of raw materials in production processes, etc. and the use of Radioactive Materials is temporary, and cases where the mining of nuclear source materials (meaning the nuclear source materials provided for in Article 3, item (iii) of the Atomic Energy Basic Act (Act No. 186 of 1955); the same applies hereinafter) is performed.

- (2) The provisions of Article 3, paragraph (4) and Article 15, paragraph (2) apply mutatis mutandis to work rooms for handling Radioactive Materials (meaning the work rooms provided for in the preceding paragraph and dedicated passages for workers engaging in the work referred to in the main clause of the same paragraph; the same applies hereinafter).

(Structures of Work Rooms for Handling Radioactive Materials)

Article 23 With regard to the internal walls, floors, and other portions of work rooms for handling Radioactive Materials which are likely to be contaminated, an employer must comply with the following provisions:

- (i) the walls, the floors and other portions are made of materials that are impermeable to gases and liquids and less susceptible to corrosion;
- (ii) the walls, the floors and other portions have smoothly finished surfaces; and
- (iii) the walls, the floors and other portions are of structures with minimum projections, dents and gaps.

(Concentrations of Radioactive Materials in the Air)

Article 24 When an employer performs mining work of nuclear source materials inside a mine, the employer must keep the Weekly Average Concentration of the nuclear source materials inside the mine for a three-month period at or below the limit specified by the Minister of Health, Labour and Welfare under Article 3, paragraph (3).

Article 25 An employer must keep the Weekly Average Concentration of the nuclear resource materials in workplaces other than work rooms for handling Radioactive Materials and mines of nuclear source materials for a three-month period at or below one-tenth of the limit specified by the Minister of Health, Labour and Welfare under Article 3, paragraph (3).

(Equipment to Prevent Scattering of Radioactive Materials)

Article 26 If there is likely that liquid droplets or dust of Radioactive Materials will scatter as a result of the handling of Radioactive Materials, an employer must install equipment, such as boards and curtains, between workers and the Radioactive Materials to prevent the droplets or dust from adhering to the bodies of workers or things workers wear, such as clothing, footwear, work clothes, and personal protective equipment (hereinafter referred to as "Outfits"); provided, however, that this does not apply when it is extremely difficult to install the equipment because of the nature of the work and the employer directs workers engaging in the work to use the protective equipment provided for in Article 39, paragraph (1).

(Tools to Handle Radioactive Materials)

Article 27 (1) On tools to be used to handle Radioactive Materials, such as forceps and tweezers, an employer must indicate their application, and they must not be used for other applications.
(2) While the tools provided for in the preceding paragraph are not used, the

employer must use tool hangers, stands, etc. of structure and material allowing easy removal of contamination to store the tools.

(Measures to be Taken When Radioactive Materials Are Spilled)

Article 28 In the event that contamination occurs due to spills, etc. of powdery or liquid-form Radioactive Materials, an employer must immediately take a measure to prevent the spread of the contamination and indicate areas with a likelihood of contamination with a sign and, at the same time, reduce the contamination to or below the limit listed in Appended Table 3 (or one-tenth of the limit listed in Appended Table 3 in case of the occurrence of contamination in a place other than work rooms for handling Radioactive Materials).

(Contamination Inspections in Work Rooms for Handling Radioactive Materials)

Article 29 (1) An employer must inspect the ceilings, floors, walls, equipment, etc. inside work rooms for handling Radioactive Materials once in a period not exceeding one month, and if these objects are found contaminated in excess of the limit listed in Appended Table 3, the employer must decontaminate them to or below the limit.

(2) An employer must clean the objects referred to in the preceding paragraph in such a manner that dust will not scatter.

(Contamination Inspections of Tools for Removing Contamination)

Article 30 (1) Each time decontamination pursuant to the provisions of Article 28 or of paragraph (1) of the preceding Article or cleaning of the objects referred to in the same paragraph is performed, an employer must inspect the tools used for the decontamination or cleaning, and if any one of the tools is found contaminated in excess of the limit listed in Appended Table 3, the employer must not permit workers to use the tool until the contamination is reduced to or below the limit.

(2) In or at a place where the tools referred to in the preceding paragraph are stored, an employer must post a sign indicating it.

(3) The provisions of Article 27, paragraph (2) apply mutatis mutandis to the tools referred to in paragraph (1).

(Contamination Inspections of Workers Leaving Controlled Areas)

Article 31 (1) An employer must establish a contamination inspection site at the exits of Controlled Areas (limited to Controlled Areas where the bodies or Outfits of workers or objects may be contaminated in excess of one-tenth of the limit listed in Appended Table 3; the same applies hereinafter in this Article and the following Article) to inspect the state of contamination of the bodies

and Outfits of workers engaging in work in Controlled Areas when they leave the Controlled Areas.

- (2) If the bodies or Outfits of workers are found contaminated in excess of one-tenth of the limit listed in Appended Table 3 in the inspection provided for in the preceding paragraph, an employer must not permit the workers to leave the Controlled Area unless the following measures are taken in the contamination inspection site provided for in the preceding paragraph:
 - (i) to direct the workers to wash their whole bodies until the contamination is reduced to or below one-tenth of the limit listed in Appended Table 3, if the bodies of workers are contaminated; and
 - (ii) to direct the workers to take the Outfits off or remove them, if the Outfits are contaminated.
- (3) Workers must wash their bodies, etc. or take off or remove the Outfits in accordance with instructions from the employer under the provisions of the preceding paragraph.

(Contamination Inspections of Objects to be Carried Out from Controlled Areas)

- Article 32 (1) An employer must inspect the state of contamination of objects to be carried out from Controlled Areas in the contamination inspection site provided for in paragraph (1) of the preceding Article when carrying them out.
- (2) An employer and workers must not carry out objects if, in the inspection provided for in the preceding paragraph, the objects are found contaminated in excess of one-tenth of the limit listed in Appended Table 3; provided, however, that this does not apply when transporting contaminated objects to a facility for decontamination, work room for handling Radioactive Materials, storage facility, discarding facility, or another Controlled Area by using containers referred to in the main clause of Article 37, paragraph (1) or by taking the measures under the proviso of the same paragraph.

(Storage Facilities)

- Article 33 (1) When an employer stores Radioactive Materials, the Radioactive Materials must be stored in storage facilities that are separated from the outside and provided with locks or other equipment or devices for closing at areas connected to the outside, such as doors and covers.
- (2) An employer must post a sign indicating that the facility is a storage facility in an easy-to-see position outside the facility.
 - (3) The provisions of Article 3, paragraph (4) apply mutatis mutandis to the storage facilities provided for in paragraph (1) of this Article.

(Facilities for Exhaust Air and Drainage)

- Article 34 (1) When an employer guides, keeps or purifies exhaust air or drainage from work rooms for handling Radioactive Materials, the exhaust air or drainage must be guided, kept or purified in a facility of structure thoroughly preventing exhaust air or drainage leakages and made of materials that are corrosion-resistant and impermeable to the drainage.
- (2) The provisions of paragraph (2) of the preceding Article apply mutatis mutandis to the facilities provided for in the preceding paragraph.

(Incinerators)

- Article 35 (1) When an employer incinerates Radioactive Materials or objects found contaminated in excess of one-tenth of the limit listed in Appended Table 3 (hereinafter referred to as "Contaminated Objects"), the Contaminated Objects must be incinerated in incinerators of structure thoroughly preventing gas leakages and the scattering of ash.
- (2) The provisions of Article 33, paragraph (2) apply mutatis mutandis to the incinerators provided for in the preceding paragraph.

(Disposal-by-Storage Facilities)

- Article 36 (1) When an employer disposes of Radioactive Materials or Contaminated Objects by storage, the Radioactive Materials or Contaminated Objects must be disposed of by storage in disposal-by-storage facilities that are separated from the outside and provided with locks or other equipment or devices for closing at areas connected to the outside, such as doors and covers.
- (2) The provisions of Article 3, paragraph (4) and Article 33, paragraph (2) apply mutatis mutandis to the disposal-by-storage facilities provided for in the preceding paragraph.

(Containers)

- Article 37 (1) Containers must be used when an employer stores or keeps Radioactive Materials, or transports, disposes of by storage or temporarily keeps for discarding the Radioactive Materials or Contaminated Objects; provided, however, that this does not apply when an effective measure is taken against Radioactive Materials or Contaminated Objects that are extremely difficult to put in containers to shield external radiation or prevent the spread of contamination or when Radioactive Materials or Contaminated Objects are transported in work rooms for handling Radioactive Materials.
- (2) When an employer uses the containers provided for in the main clause of the preceding paragraph for the applications listed in the left-hand column of the table below, the employer must use containers having the structure described in the right-hand column of the same table.

Application	Structure
When containing Radioactive Materials or Contaminated Objects that are likely to contaminate the air:	Containers are made of corrosion-resistant materials and airtight.
When containing liquid-form Radioactive Materials or Contaminated Objects dampened with them:	Containers are made of materials that are corrosion-resistant and impermeable to liquids, and less likely to cause liquid leakages and overflows.
When containing Radioactive Materials or Contaminated Objects and placing them outside of Controlled Areas for transportation:	<p>(i) The 1-cm dose equivalent rate on the surface of the container (or on the surface of the packaging when the container is packed; the same applies hereinafter in this paragraph) does not exceed 2 mSv per hour (or 10 mSv per hour when the container is transported by dedicated freight provided for in Article 1, item (vi) of the Regulation on Transport of Containers Outside of Factories or Facilities for Nuclear Fuels and Materials (Prime Minister's Office Order No. 57 of 1979) (hereinafter referred to as "Dedicated Freight" in this paragraph) and this transport complies with the technical standards of transportation provided for in Article 4, paragraph (2) and each item of Article 19, paragraph (3) of the Regulation on Vehicular Transport of Nuclear Fuels and Materials (Ministry of Transport Order No. 72 of 1978) or in Article 4, paragraph (2) and each item of Article 18, paragraph (3) of the Regulation on Vehicular Transport of Radioactive Isotopes (Ministry of Transport Order No. 33 of 1977), and this transport is recognized by the Minister of Health, Labour and Welfare to be free of obstacles to the prevention of health hazards to workers).</p> <p>(ii) The 1-cm dose equivalent rate at a distance of 1 m from the surface of the container does not exceed 0.1 mSv per hour; provided, however, that this does not apply when the container is transported by Dedicated Freight and recognized by the Minister of Health, Labour and Welfare to be free of obstacles to the prevention of health hazards to workers.</p>

- (3) An employer must indicate on the containers provided for in the main clause of paragraph (1) that the containers are to contain Radioactive Materials or Contaminated Objects.
- (4) An employer must indicate the following information on containers for the storage, preservation, transportation, or temporary retention for discarding of

Radioactive Materials:

- (i) types of the Radioactive Materials and their classification as gas, liquid or solid; and
- (ii) types and quantities of Radioisotopes contained in the Radioactive Materials.

(Protective Equipment)

- Article 38 (1) When an employer directs workers to engage in work in an area clearly indicated under the provisions of Article 28, Emergency Work or other work in which the workers may inhale air contaminated in excess of the limit specified by the Minister of Health, Labour and Welfare in Article 3, paragraph (3), the employer must prepare effective personal respiratory protective equipment, such as dust masks, gas masks, hose masks and oxygen breathing apparatuses depending on the degree of the contamination, and direct the workers engaging in the work to use the protective equipment.
- (2) Workers must use the protective equipment provided for in the preceding paragraph while they are engaged in the work set forth in the same paragraph.

- Article 39 (1) When an employer directs workers to engage in work in which they may be contaminated in excess of one-tenth of the limit listed in Appended Table 3, the employer must prepare effective protective clothes, gloves or footwear and direct the workers engaging in the work to use them.
- (2) Workers must use the protective equipment provided for in the preceding paragraph while they are engaged in the work set forth in the same paragraph.

(Work Clothes)

- Article 40 When an employer directs workers to engage in work in work rooms for handling Radioactive Materials, the employer must prepare dedicated work clothes and direct the workers to use the work clothes throughout the work.

(Decontamination of Protective Equipment)

- Article 41 If the protective equipment or work clothes to be used under the provisions of the three preceding Articles are found contaminated in excess of the limit listed in Appended Table 3 (or one-tenth of the limit in the case of portions of protective equipment or work clothes that come into contact with workers; the same applies hereinafter in this Article), an employer must not permit workers to use the protective equipment or work clothes unless they are decontaminated to or below the limit listed in Appended Table 3 by cleaning, etc. in advance.

(Prohibition of Smoking)

Article 41-2 (1) An employer must prohibit workers from smoking, eating or drinking in work rooms for handling Radioactive Materials and workplaces where they may inhale or ingest Radioactive Materials, and indicate the prohibition of smoking, eating or drinking in an easy-to-see place in the workplaces.

(2) Workers must not smoke, eat or drink in the workplaces provided for in the preceding paragraph.

Section 2 Prevention of Contamination by Radioactive Materials Discharged by the Accident

(Indication of Borders of Disposal Sites for Accident-derived Waste)

Article 41-3 An employer that undertakes the operations for disposal of accident-derived waste, etc. (meaning the objects listed in Article 2, paragraph (7), item (ii), (a) or (b) of the Ordinance on Decontamination and other objects contaminated by Radioactive Materials Discharged by the Accident (meaning Radioactive Materials discharged by the nuclear power plant due to the accident associated with the Tohoku-Pacific Ocean Earthquake that occurred on 11 March 2011; the same applies hereinafter) and provided for in Article 2, paragraph (2); the same applies hereinafter) (hereinafter referred to as " employer engaged in waste management " in this Section) must indicate the borders of the business site where the work is performed.

(Handling Accident-derived Waste Handling Facilities)

Article 41-4 (1) When an Employer engaged in waste management performs any work that handles unsealed accident-derived waste, etc., the employer engaged in waste management must prepare a dedicated work facility and handle it in the work facility.

(2) The provisions of Article 3, paragraph (4) and Article 33, paragraph (2) apply mutatis mutandis to the work facilities provided for in the preceding paragraph (hereinafter referred to as " Accident-derived Waste Handling Facilities ").

(Structures of Facilities for Handling Accident-derived Waste)

Article 41-5 (1) An employer engaged in waste management must comply with the following requirements in connection with the internal walls, floors and other portions of Accident-derived Waste Handling Facilities which are likely to be contaminated:

- (i) those portions are made of materials impermeable to gases or liquids and less susceptible to corrosion;
- (ii) those portions have smoothly finished surfaces;

- (iii) those portions are of structures with minimum projections, dents and gaps;
and
 - (iv) if there is a possibility of contamination by liquids, those portions are of a liquid-leakproof structure.
- (2) If there is a likelihood of contamination by dust in Accident-derived Waste Handling Facilities an employer engaged in waste management must take a measure to control the scattering of dust.
- (3) An employer engaged in waste management must take a measure for Accident-derived Waste Handling Facilities to prevent the spread of contamination, such as the use of a double door for their entrances.

(Crushing Equipment)

- Article 41-6 (1) When an employer engaged in waste management performs crushing, sorting, compression, condensation, etc. of accident-derived waste, etc. or Contaminated Objects outside of Accident-derived Waste Handling Facilities, the employer engaged in waste management must use equipment complying with the requirement of each of the following items depending on the situation described in the item:
- (i) when there is a possibility of contamination by gases: equipment of gas-leakproof structure and made of materials that are corrosion-resistant and impermeable to gases;
 - (ii) when there is a possibility of contamination by liquids: equipment of liquid-leakproof structure and made of materials that are corrosion-resistant and impermeable to liquids; and
 - (iii) when there is a possibility of contamination by dust: equipment without a possibility of the scattering of dust.
- (2) The provisions of Article 33, paragraph (2) apply mutatis mutandis to crushing equipment, etc. (meaning the equipment provided for in the preceding paragraph and its accessory equipment; the same applies in Article 34, paragraph (1) as applied mutatis mutandis pursuant to Article 41-9).

(Transportation Equipment, such as Belt Conveyors)

- Article 41-7 (1) When an employer engaged in waste management transports accident-derived waste, etc. or Contaminated Objects outside of Accident-derived Waste the employer engaged in waste management must use equipment complying with the requirement of each of the following items depending on the situation described in this item, except when the containers provided for in the main clause of Article 33, paragraph (1) as applied mutatis mutandis pursuant to Article 41-9 are used, or when the measures provided for in the proviso of the same paragraph are taken:
- (i) when there is a possibility of contamination by gases: equipment of gas-

- leakproof structure and made of materials that are corrosion-resistant and impermeable to gases;
 - (ii) when there is a possibility of contamination by liquids: equipment of liquid-leakproof structure and made of materials that are corrosion-resistant and impermeable to liquids; and
 - (iii) when there is a possibility of contamination by dust: equipment without a possibility of the scattering of dust.
- (2) The provisions of Article 33, paragraph (2) apply mutatis mutandis to transportation equipment, such as conveyor belts (meaning the equipment provided for in the preceding paragraph and its accessory equipment; the same applies in Article 34, paragraph (1) as applied mutatis mutandis pursuant to Article 41-9).

(Landfill Facilities)

- Article 41-8 (1) When an employer engaged in waste management landfills accident-derived waste, etc. or Contaminated Objects, the accident-derived waste, etc. or Contaminated Objects must be landfilled in landfill facilities that are separated from the outside and provided with locks or other equipment or devices for closing at areas connected to the outside, such as doors and covers.
- (2) The provisions of Article 3, paragraph (4) and Article 33, paragraph (2) apply mutatis mutandis to the landfill facilities provided for in the preceding paragraph.

(Application Mutatis Mutandis)

Article 41-9 The provisions of Article 3, paragraph (4) (limited to the cases where they are applied mutatis mutandis pursuant to Article 33, paragraph (3)), Article 25, the main clause of Article 26, Article 27, paragraphs (1) and (2) (including cases where the provisions thereof are applied mutatis mutandis pursuant to Article 30, paragraph (3)), Article 28, Article 29, Article 30, paragraphs (1) and (2), Article 31, Article 32, Article 33, paragraph (1) and paragraph (2) (including cases where the provisions thereof are applied mutatis mutandis pursuant to Article 34, paragraph (2) and Article 35, paragraph (2)), Article 34, paragraph (1), Article 35, paragraph (1), Article 37 (excluding paragraph (4)), and Article 38 through Article 41-2 apply mutatis mutandis to employers engaged in waste management. In this case, each of the terms listed in the middle columns of the table below in the provisions described in the left-hand columns is deemed to be replaced with the term listed in the corresponding right-hand column.

Article 25	work rooms for handling Radioactive Materials and mines where nuclear source materials are mined	Facilities for Handling Accident-derived Waste, etc.
Main clause of Article 26	Radioactive Materials	accident-derived waste, etc.
	of Radioactive Materials	of accident-derived waste, etc.
	an employer must install equipment, such as boards and curtains, between workers and the Radioactive Materials to prevent the droplets or powder from adhering to the bodies of workers or things workers wear, such as clothing, footwear, work clothes, and personal protective equipment (hereinafter referred to as "Outfits"):	the employer must direct the workers engaging in said work to use the protective equipment provided for in Article 39, paragraph (1) as applied mutatis mutandis pursuant to Article 41-9:
Article 27, paragraph (1)	Radioactive Materials	accident-derived waste, etc.
	such as forceps and tweezers	such as shovels
Article 28	Radioactive Materials	accident-derived waste, etc.
	work rooms for handling Radioactive Materials	Facilities for Handling Accident-derived Waste, etc.
Article 29, paragraph (1)	inside work rooms for handling Radioactive Materials	inside Facilities for Handling Accident-derived Waste, etc.
	equipment, etc.	equipment, etc. (limited to portions that may come into contact with workers)
Article 32, paragraph (1)	must inspect the state of contamination of objects to be carried out from Controlled Areas in the contamination inspection site provided for in paragraph (1) of the preceding Article when carrying them out.	must inspect the state of contamination of objects to be carried out from Controlled Areas in the contamination inspection site provided for in paragraph (1) of the preceding Article when carrying them out; provided, however, that this does not apply when objects are transported pursuant to the provision of Article 41-7, paragraph (1).

Article 32, paragraph (2)	by using containers referred to in the main clause of Article 37, paragraph (1) or	when transporting objects under the provision of Article 41-7, paragraph (1), or by using containers referred to in the main clause of Article 37, paragraph (1) as applied mutatis mutandis pursuant to Article 41-9 or
	work room for handling Radioactive Materials, storage facility, discarding facility, or another Controlled Area	Facilities for disposing of or discarding accident-derived waste, etc.
Article 33, paragraph (1)	Radioactive Materials	accident-derived waste, etc.
Article 34, paragraph (1)	work rooms for handling Radioactive Materials	Facilities for Handling Accident-derived Waste, etc., crushing equipment or transportation equipment, such as belt conveyors
Article 35, paragraph (1)	Radioactive Materials	accident-derived waste, etc.
Article 37, paragraph (1)	Radioactive Materials	accident-derived waste, etc.
	Radioactive Materials or	accident-derived waste, etc. or
	disposes of by storage or temporarily keeps for discarding	temporarily keeps for discarding or landfills
	when Radioactive Materials or Contaminated Objects are transported in work rooms for handling Radioactive Materials	when Radioactive Materials or Contaminated Objects are handled in Facilities for Handling Accident-derived Waste, etc. or transported in the facilities pursuant to the provision of Article 41-7, paragraph (1)
Article 37, paragraphs (2) and (3)	Radioactive Materials	accident-derived waste, etc.

Article 40	in work rooms for handling Radioactive Materials	in Facilities for Handling Accident-derived Waste, etc.
Article 41-2, paragraph (1)	work rooms for handling Radioactive Materials	Facilities for Handling Accident-derived Waste, etc.
	Radioactive Materials	accident-derived waste, etc.

(Exceptions in Special Decontamination Areas)

Article 41-10 (1) In landfilling of accident-derived waste, etc. (limited to removed soil referred to in Article 2, paragraph (7), item (ii) (a) of the regulation on Decontamination; the same applies hereinafter in this paragraph) in the special decontamination areas provided for in Article 25, paragraph (1) of the Act on Special Measures Concerning the Handling of Environmental Pollution by Radioactive Materials Discharged by the Nuclear Power Station Accident Associated with the Tohoku District Off the Pacific Ocean Earthquake That Occurred on 11 March 2011 (Act No. 110 of 2011) or the intensive contamination survey areas provided for in Article 32, paragraph (1) of the same Act (referred to as "special decontamination areas, etc." in the following paragraph), the provisions of Article 37 (excluding paragraph (4)) as applied mutatis mutandis pursuant to the preceding Article and the provisions of Article 41-5 not apply when the measure listed in each of the following items is taken:

- (i) measures to prevent the contamination of the bodies of workers due to accident-derived waste, etc. by performing work by remote operation, etc.;
 - (ii) measures to control the scattering of dust by dampening accident-derived waste, etc.;
 - (iii) measures to control the scattering of dust by performing work in a place as far away from the border of a landfill facility as possible, etc.; and
 - (iv) measurement of the surface density of Radioactive Materials Discharged by the Accident at the border of the landfill facility once in a period not exceeding one month and measures to keep the surface density at or below the limit listed in Appended Table 3 or the surface density of Radioactive Materials Discharged by the Accident around the landfill facility, whichever is higher.
- (2) In the application of the provisions of Article 28, Article 31, Article 32, Article 33, paragraph (2) (limited to the cases where they are applied mutatis mutandis pursuant to Article 35, paragraph (2)), Article 35, paragraph (1) and Article 37 (excluding paragraph (4)) as applied mutatis mutandis pursuant to the preceding Article to the cases where the work involved in accident-derived waste management are performed in special decontamination areas, etc., each

of the terms listed in the middle columns of the table below in the provisions described in the left-hand columns is deemed to be replaced with the term listed in the corresponding right-hand column.

Article 28	to or below the limit listed in Appended Table 3 (or one-tenth of the limit listed in Appended Table 3 in case of the occurrence of contamination in a place other than work rooms for handling Radioactive Materials)	to or below the limit listed in Appended Table 3 when measured indoors, or the limit listed in Appended Table 3 or the surface density of Radioactive Materials Discharged by the Accident around that area, whichever is higher, when measured outdoors
Article 31, paragraph (1)	the exits of Controlled Areas (limited to Controlled Areas where the bodies or Outfits of workers or objects may be contaminated in excess of one-tenth of the limit listed in Appended Table 3; the same applies hereinafter in this Article and the following Article)	the exits of Controlled Areas (limited to Controlled Areas where the bodies or Outfits of workers or objects may be contaminated in excess of one-tenth of the limit listed in Appended Table 3; the same applies hereinafter in this Article and the following Article) or the operating sites
	one-tenth of the limit listed in Appended Table 3	the limit listed in Appended Table 3
Article 31, paragraph (2), Article 32, paragraph (2) and Article 35, paragraph (1)	one-tenth of the limit listed in Appended Table 3	the limit listed in Appended Table 3

Chapter IV-2 Control of Special Work

(Work Rules at Processing Facilities)

Article 41-11 (1) When an employer performs any work that handles nuclear fuel materials (meaning the nuclear fuel materials provided for in Article 3, item (ii) of the Atomic Energy Basic Act; the same applies hereinafter), spent fuels (referring to the spent fuels provided for in Article 2, paragraph (10) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Act No. 166 of 1957); the same applies hereinafter) or objects

contaminated by the materials (including atomic fission products; the same applies hereinafter) in the Controlled Area of a fabricating and enrichment facility (meaning the fabricating and enrichment facility provided for in Article 13, paragraph (2), item (ii) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Resources; the same applies hereinafter in Article 52-6, paragraph (1)), reprocessing facility (meaning the reprocessing facility provided for in Article 44, paragraph (2), item (ii) of the same Act; the same applies in Article 52-6, paragraph (1)) or usage facility, etc. (referring to the usage facility, etc. provided for in Article 53, paragraph (2) of the same Act) limited to the usage facility, etc. of nuclear fuel materials provided for in Article 41 of the Order for Enforcement of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Cabinet Order No. 324 of 1957), the employer must establish necessary rules concerning the work to prevent hazards to workers caused by Radiation in connection with the following matters and perform the work in accordance with the rules:

- (i) operation of equipment for fabricating and enrichment facilities, reprocessing facilities or usage facilities, etc.;
 - (ii) adjustment of safety devices and automatic warning devices;
 - (iii) measures to prevent accidental criticality due to nuclear fuel materials;
 - (iv) method and sequence of work;
 - (v) measures concerning the monitoring of dose equivalent rates due to external radiation and the concentration of Radioactive Materials in the air;
 - (vi) measures concerning inspections of the state of contamination of the surfaces of ceilings, floors, walls, equipment, etc. and decontamination;
 - (vii) emergency measures in case of abnormality; and
 - (viii) beyond what is set forth in each of the above items, necessary measures to prevent hazards to workers caused by Radiation.
- (2) When rules as provided for in the preceding paragraph are established, an employer must take measures to make the matters set forth in each item of this paragraph widely known to workers concerned.

(Work Rules at Nuclear Reactor Facilities)

Article 41-12 (1) When an employer performs any work that handles nuclear fuel materials, spent fuels or objects contaminated by the materials in the Controlled Area of a nuclear reactor facility (meaning the nuclear reactor facility for research and testing provided for in Article 23, paragraph (2), item (v) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors and the nuclear reactor facilities for power generation provided for in Article 43-3-5, paragraph (2), item (v) of the same Act; the same applies in Article 52-7, paragraph (1)), the employer must establish necessary rules concerning the work to prevent hazards to workers caused by Radiation

in connection with the following matters and perform the work in accordance with the rules:

- (i) method and sequence of work;
 - (ii) measures concerning the monitoring of dose equivalent rates due to external radiation and the concentration of Radioactive Materials in the air;
 - (iii) measures concerning inspections of the state of contamination of the surfaces of ceilings, floors, walls, equipment, etc. and decontamination;
 - (iv) emergency measures in case of abnormality; and
 - (v) beyond what is set forth in each of the above items, necessary measures to prevent hazards to workers caused by Radiation.
- (2) When rules as provided for in the preceding paragraph are established, an employer must take measures to make the matters set forth in each item of the paragraph widely known to workers concerned.

(Work Rules for Duty Related to Work Involved In Accident-derived Waste Management.)

Article 41-13 (1) When an employer performs work related to the work involved in accident-derived waste management operations for disposal of accident-derived waste, etc., the employer must establish necessary rules concerning the work to prevent hazards to workers caused by Radiation in connection with the following matters and perform the work in accordance with the rules:

- (i) operation of each piece of equipment relating to accident-derived waste management;
 - (ii) adjustment of safety devices and automatic warning devices;
 - (iii) method and sequence of work;
 - (iv) measures concerning the monitoring of dose equivalent rates due to external radiation and the concentration of Radioactive Materials in the air;
 - (v) measures concerning inspections of the state of contamination of the surfaces of ceilings, floors, walls, equipment, etc. and decontamination;
 - (vi) emergency measures in case of abnormality; and
 - (vii) beyond what is set forth in each of the above items, necessary measures to prevent hazards to workers caused by Radiation.
- (2) When rules as provided for in the preceding paragraph are established, an employer must take measures to make the matters set forth in each item of the paragraph widely known to workers concerned.

(Notification of Duty Related to Work Involved In Accident-derived Waste Management)

Article 41-14 (1) When an employer (limited to persons falling under the principal employer provided for in Article 15, paragraph (1) of the Industrial Safety and Health Act (hereinafter referred to as the "Act") (referred to as the

"principal employer" in Article 59-3), if there is any) performs the work listed below, the employer must submit a written notification thereof in Form 1 to the Head of the Labour Standards Inspection Office with jurisdiction over the area where the relevant operation site is located (hereinafter referred to as the "Head of the Competent Labour Standards Inspection Office") in advance:

- (i) work of dismantling or entering equipment contaminated by accident-derived waste, etc. when take-down, modification, repair, cleaning, inspection, etc. of the equipment is performed; or
 - (ii) work in which the total of the effective dose due to external radiation and the effective dose due to Radioactive Materials in the air is likely to exceed 1 mSv per week.
- (2) The provisions of Article 3, paragraph (2) and Article 3-2, paragraph (3) apply mutatis mutandis to the calculation of the effective dose due to external radiation and the effective dose due to Radioactive Materials in the air provided for in item (ii) of the preceding paragraph.

Chapter V Emergency Measures

(Evacuation)

Article 42 (1) In case of the occurrence of any accident that falls under any of the following items, an employer must direct workers to immediately evacuate from areas where the effective dose they may be exposed to as a result of the accident may exceed 15 mSv:

- (i) if the shielding installed pursuant to the provisions of Article 3-2, paragraph (1) is damaged in the middle of the handling of Radioactive Materials or in the middle of irradiation and it is difficult to immediately discontinue the irradiation;
 - (ii) if the local exhaust ventilation system or the emission source enclosure system installed pursuant to the provisions of Article 3-2, paragraph (1) has lost its function due to a failure, damage, etc.;
 - (iii) if a large quantity of Radioactive Materials has leaked, spilled or scattered;
 - (iv) if the radiation source of an appliance loaded with Radioactive Materials has fallen from the radiation source container, or if the radiation source carried out of the radiation source container cannot be housed in the radiation source container due to a failure of the radiation source carry-out device or the remote controller for adjusting the position of the radiation source; or
 - (v) beyond what is set forth in each of the above items, if an unexpected situation other than the events of the items listed above has occurred.
- (2) An employer must indicate the areas referred to in the preceding paragraph

with signs.

- (3) An employer must not allow workers to enter the areas referred to in paragraph (1); provided, however, that this does not apply to workers engaging in Emergency Work.

(Reports on Accidents)

Article 43 In case of the occurrence of any accident that falls under any of the items of paragraph (1) of the preceding Article, an employer must immediately report the accident to the Head of the Competent Labour Standards Inspection Office.

(Medical Examinations)

Article 44 (1) An employer must direct workers who fall under any of the following situations to immediately consult a doctor or receive medical treatment of a doctor:

- (i) workers who were in the area set forth in Article 42, paragraph (1) upon occurrence of any of the accidents falling under any of the items of the same paragraph;
 - (ii) workers who were exposed to an effective dose or equivalent dose exceeding the limit provided in Article 4, paragraph (1) or Article 5;
 - (iii) workers who accidentally inhaled or ingested Radioactive Materials;
 - (iv) workers whose contamination cannot be reduced to or below one-tenth of the limit listed in Appended Table 3 (or the limit listed in Appended Table 3 in cases provided for in Article 41-10, paragraph (2)) by body washing, etc.;
- or
- (v) workers who suffered contaminated wounds.
- (2) If any worker falling under any of the items of the preceding paragraph is found, the employer must immediately report the fact to the Head of the Competent Labour Standards Inspection Office.

(Measurement and Recording of Accidents)

Article 45 (1) If any accident falling under any of the items of Article 42, paragraph (1) has occurred and any area provided for in the same paragraph has consequently come to exist, an employer must record the effective dose all workers in the area or engaging in Emergency Work were exposed to, the equivalent dose of their eye lenses and skin and the following matters, and store the records for five years:

- (i) time, date and place of the accident;
- (ii) cause and situation of the accident;
- (iii) occurrence of hazards caused by Radiation; and
- (iv) emergency measures taken by the employer.

- (2) When the effective dose or equivalent dose referred to in the preceding paragraph is unknown in connection with the workers provided for in the same paragraph, the employer must measure the dose equivalent rate due to external radiation, the concentration of Radioactive Materials in the air or the surface density of Radioactive Materials in each necessary location in the area provided for in Article 42, paragraph (1) by using a radiation measuring instrument, and determine the effective dose or equivalent dose provided for in the preceding paragraph by calculation based on the measurement result.
- (3) If the dose equivalent rate referred to in the preceding paragraph is extremely difficult to measure by using a radiation measuring instrument, it may be determined by calculation, notwithstanding the provisions of the same paragraph.

Chapter VI Operations Chief of Work with X-rays and Operations Chief of Gamma-ray Radiography

(Appointment of an Operations Chief of Work with X-rays)

Article 46 With regard to the operations listed in Article 6, item (v) of Cabinet Order, an employer must appoint an operations chief of work with X-rays for each Controlled Area from among those who have a license for operations chief of work with X-rays.

(Duties of Operations Chief of Work with X-rays)

Article 47 An employer must direct each operations chief of work with X-rays to perform the following duties:

- (i) to take measures to ensure that the signs provided for in Article 3, paragraph (1) or in Article 18, paragraph (4) are installed in conformity with the provisions;
- (ii) to take measures to ensure that the irradiation cylinder or collimator provided for in Article 10, paragraph (1) or the filters provided for in Article 11 is properly used;
- (iii) to take the measures listed in each item of Article 12 or in each item of Article 13 or the measures provided for in Article 18-2;
- (iv) beyond what is set forth in the preceding two items, to adjust the irradiation conditions, etc. so as to minimize the dose to which Radiation Workers will be exposed;
- (v) to inspect whether the measures provided for in Article 17, paragraph (1) are taken in conformity with the provisions of the same paragraph;
- (vi) to make sure before and during irradiation that workers are not in the place provided for in Article 18, paragraph (1); and
- (vii) to inspect whether the radiation measuring instrument provided for in

Article 8, paragraph (3) is attached in conformity with the provisions of the same paragraph.

(License for Operations Chief of Work with X-rays)

Article 48 The Director General of the Prefectural Labour Bureau is to grant a license for operations chief of work with X-rays to the following persons, beyond those who passed the license examination for operations chief of work with X-rays and to those listed below:

- (i) a person who has the license provided for in Article 3, paragraph (1) of the Radiology Technicians Act (Act No. 226 of 1951);
- (ii) a person who has been granted the certificate for chief engineer of reactors provided for in Article 41, paragraph (1) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors; and
- (iii) a person who has been granted the certificate for Type-I radiation protection supervisor provided for in Article 35, paragraph (1) of the Act on Prevention of Radiation Hazards due to Radioisotopes.

(Reason for Disqualification of Operations Chief of Work with X-rays)

Article 49 The persons prescribed by the Regulation of the Ministry of Health, Labour and Welfare set forth in Article 72, paragraph (2), item (ii) of the Act pertaining to the license for operations chief of work with X-rays are those who are under 18 years of age.

(Examination Subjects in License Examination for Operations Chief of Work with X-rays)

Article 50 The license examination for operations chief of work with X-rays is conducted on the following examination subjects in the form of written tests:

- (i) knowledge about the control of X-rays;
- (ii) knowledge about the measurement of X-rays;
- (iii) knowledge about the effects of X-rays on organisms; and
- (iv) relevant laws and regulations.

(Exemption of Examination Subjects in License Examination for Operations Chief of Work with X-rays)

Article 51 The Director General of the Prefectural Labour Bureau may exempt those who fall under any of the following items from the examination subjects in the license examination for operations chief of work with X-rays which are provided for in the items:

- (i) those who are granted the certificate for type-II radiation protection supervisor provided for in Article 35, paragraph (1) of the Act on Prevention of Radiation Hazards due to Radioisotopes, etc.: examination subjects listed

in items (ii) and (iii) of the preceding Article; and
(ii) those who passed the license examination for operations chief of gamma-ray radiography: examination subjects listed in item (iii) of the preceding Article.

(Details on License Examination for Operations Chief of Work with X-rays)
Article 52 Beyond what is provided for in Article 71 of the Regulation on Industrial Safety and Health (Ministry of Labour Order No. 32 of 1972; hereinafter referred to as the "Safety and Health Regulation") and the preceding two Articles, necessary matters for implementing the license examination for operations chief of work with X-rays are provided by the Minister of Health, Labour and Welfare.

(Appointment of Operations Chief of Gamma-ray Radiography)
Article 52-2 With regard to the operations listed in Article 6, item (v)-2 of Cabinet Order, an employer must appoint an operations chief of gamma-ray radiography for each Controlled Area from among those who have a license for operations chief of gamma-ray radiography.

(Duties of Operations Chief of Gamma-ray Radiography)
Article 52-3 An employer must direct each operations chief of gamma-ray radiography to perform the following duties:
(i) to take measures to ensure that the signs provided for in Article 3, paragraph (1) or in Article 18, paragraph (4) are installed in conformity with the provisions of the same article;
(ii) to inspect the functions of radiation source carrier devices or remote-controlled devices for adjusting the position of the radiation source before starting operations;
(iii) to check whether transmission tubes are transferred in conformity with the provisions of Article 18-4, item (i) and whether the radiation source is taken out in conformity with the provisions of Article 18-3;
(iv) to make sure before and during irradiation that workers are not in the place provided for in Article 18, paragraph (1);
(v) to inspect whether the measures provided for in Article 17, paragraph (1) are taken in conformity with the provisions of the same paragraph and whether the radiation measuring instrument provided for in Article 8, paragraph (3) is attached in conformity with the same paragraph;
(vi) to take the measures provided for in Article 18-2;
(vii) to take the measures provided for in Article 18-4, item (ii);
(viii) beyond what is set forth in the preceding two items, to adjust the irradiation conditions, etc. so as to minimize the dose to which Radiation Workers will be exposed;

- (ix) to inspect during operations the position of the radiation source, the condition of the shielding, etc. by using a radiation measuring instrument;
- (x) to perform the inspection provided for in Article 19, paragraph (1);
- (xi) in case of the accident listed in Article 42, paragraph (1), item (iv), to take the measures provided for in the same Article and report the occurrence of the accident to the employer; and
- (xii) when housing the radiation source in a radiation source container or another container in case of the accident listed Article 42, paragraph (1), item (iv), to take the measures provided for in Article 18-10 and maintain an appropriate distance between the workers engaging in the work and the radiation source by directing the workers to use forceps, etc.

(License for Operations Chief of Gamma-ray Radiography)

Article 52-4 The Director General of the Prefectural Labour Bureau is to grant a license for operations chief of work with gamma-ray radiography to the following persons beyond those who passed the license examination for operations chief of gamma-ray radiography:

- (i) a person who has the license provided for in Article 3, paragraph (1) of the Radiology Technicians Act;
- (ii) a person who has been granted the certificate for chief engineer of reactors provided for in Article 41, paragraph (1) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors; and
- (iii) a person who has been granted the certificate for Type-I radiation protection supervisor or Type-II radiation protection supervisor provided for in Article 35, paragraph (1) of the Act on Prevention of Radiation Hazards due to Radioisotopes .

(Reason for Disqualification of Operations Chief of Gamma-ray Radiography)

Article 52-4-2 The persons prescribed by the Regulation of the Ministry of Health, Labour and Welfare set forth in Article 72, paragraph (2), item (ii) of the Act pertaining to the license for operations chief of gamma-ray radiography are those who are under 18 years of age.

(Examination Subjects in License Examination for Operations Chief of Gamma-ray Radiography)

Article 52-4-3 The license examination for operations chief of gamma-ray radiography is conducted on the following examination subjects in the form of written tests:

- (i) knowledge about gamma-ray radiography work;
- (ii) knowledge about gamma-ray irradiation devices;
- (iii) knowledge about the effects of gamma-rays on organisms; and

(iv) relevant laws and regulations.

(Exemption of Examination Subjects in License Examination for Operations Chief of Gamma-ray Radiography)

Article 52-4-4 The Director General of the Prefectural Labour Bureau may exempt those who passed the license examination for operations chief of work with X-rays from the examination subjects in the license examination for operations chief of gamma-ray radiography which are listed in item (iii) of the preceding Article.

(Details on License Examination for Operations Chief of Gamma-ray Radiography)

Article 52-4-5 Beyond what is provided for in Article 71 of the Safety and Health Regulation and in the preceding two Articles, necessary matters for implementing the license examination for operations chief of gamma-ray radiography are provided by the Minister of Health, Labour and Welfare.

Chapter VI-2 Special Education

(Special Education Concerning Radiography Operations)

Article 52-5 (1) When an employer directs workers to engage in radiography operations using an X-ray device or gamma-ray irradiation device, the employer must conduct special education for said workers in the following subjects:

- (i) method for performing radiography work;
- (ii) structures of X-ray devices or gamma-ray irradiation devices and method for handling them;
- (iii) effects of Ionizing Radiation on organisms; and
- (iv) relevant laws and regulations.

(2) Beyond what is provided for in Article 37 and Article 38 of the Safety and Health regulation and in the preceding paragraph, necessary matters for conducting the special education provided for in the same paragraph are provided by the Minister of Health, Labour and Welfare.

(Special Education Concerning Operations Involving Handling of Nuclear Fuel Materials at Processing Facilities)

Article 52-6 (1) When an employer directs workers to engage in operations handling nuclear fuel materials or spent fuels or objects contaminated by these materials in the Controlled Area of a processing facility, reprocessing facility or usage facility, etc., the employer must conduct special education for the workers in the following subjects:

- (i) knowledge about nuclear fuel materials or spent fuels or objects contaminated by these materials;
 - (ii) knowledge about the method for performing work at processing facilities, reprocessing facilities or usage facilities;
 - (iii) knowledge about the structure of equipment for processing facilities, reprocessing facilities or usage facilities and the method for handling it;
 - (iv) effects of Ionizing Radiation on organisms;
 - (v) relevant laws and regulations; and
 - (vi) method for performing work at processing facilities, reprocessing facilities or usage facilities, etc. and the handling of equipment for the same facilities.
- (2) Beyond what is provided for in Article 37 and Article 38 of the Safety and Health Regulation and in the preceding paragraph, necessary matters for conducting the special education provided for in the same paragraph are provided by the Minister of Health, Labour and Welfare.

(Special Education Concerning Operations Involving Handling of Nuclear Fuel Materials at Nuclear Reactor Facilities)

Article 52-7 (1) When an employer directs workers to engage in operations handling nuclear fuel materials or spent fuels or objects contaminated by these materials in the Controlled Area of a nuclear reactor facility, the employer must conduct special education for the workers in the following subjects:

- (i) knowledge about nuclear fuel materials or spent fuels or objects contaminated by these materials;
 - (ii) knowledge about the method of performing work at nuclear reactor facilities;
 - (iii) knowledge about the structure of equipment for nuclear reactor facilities and the method for handling it;
 - (iv) effects of Ionizing Radiation on organisms;
 - (v) relevant laws and regulations; and
 - (vi) method for performing work at nuclear reactor facilities and the handling of equipment for the same facilities.
- (2) Beyond what is provided for in Article 37 and Article 38 of the Safety and Health Regulation and in the preceding paragraph, necessary matters for conducting the special education provided for in the same paragraph are provided by the Minister of Health, Labour and Welfare.

(Special Education Concerning Work involved in Accident-derived Waste Management)

Article 52-8 (1) When an employer directs workers to engage in the work involved in accident-derived waste management , the employer must conduct special education for the workers in the following subjects:

- (i) knowledge about accident-derived waste, etc.;
 - (ii) knowledge on the method for performing duty related to the work involved in accident-derived waste management;
 - (iii) knowledge on the structure of equipment to be used for the work involved in accident-derived waste management and the method for handling it;
 - (iv) knowledge about the effects of Ionizing Radiation on organisms and the method for controlling exposure dose;
 - (v) relevant laws and regulations; and
 - (vi) method of work related to operations for work involved in accident-derived waste management and the handling of equipment to be used.
- (2) Beyond what is provided for in Article 37 and Article 38 of the Safety and Health Regulation and in the preceding paragraph, necessary matters for conducting the special education provided for in the same paragraph are provided by the Minister of Health, Labour and Welfare.

(Special Education Concerning Exceptional Emergency Work)

Article 52-9 (1) When an employer directs nuclear disaster prevention workers to engage in operations for Exceptional Emergency Work, the employer must conduct special education for the staffs in the following subjects:

- (i) knowledge about the method for performing Exceptional Emergency Work;
 - (ii) knowledge about the structures of facilities and equipment to be used for Exceptional Emergency Work and the method for handling them;
 - (iii) knowledge about the effects of Ionizing Radiation on organisms, the method for health management, and the method for controlling exposure dose;
 - (iv) relevant laws and regulations;
 - (v) method for performing Exceptional Emergency Work; and
 - (vi) handling of facilities and equipment to be used for Exceptional Emergency Work.
- (2) Beyond what is provided for in Article 37 and Article 38 of the Safety and Health Regulation and in the preceding paragraph, necessary matters for conducting the special education provided for in the same paragraph are provided by the Minister of Health, Labour and Welfare.

Chapter VII Working Environment Measurements

(Workplaces Where Working Environment Measurements Are Required)

Article 53 The workplaces provided for in Regulation of the Ministry of Health, Labour and Welfare as set forth in Article 21, item (vi) of Cabinet Order are as follows:

- (i) any portion of workplaces where Radiation Work is performed that falls

- under the Controlled Areas;
- (ii) work rooms for handling Radioactive Materials;
 - (ii)-2 Facilities for Handling Accident-derived Waste, etc.; and
 - (iii) workplaces where the operations listed in item (vii) of Appended Table 2 of Cabinet Order are performed.

(Measurements of Dose Equivalent Rates)

Article 54 (1) An employer must periodically measure the dose equivalent rate or dose equivalent due to external radiation in the Controlled Areas provided for in item (iv) of the preceding Article once every period within one month (or within six months if the stationary Radiation Equipment is used in a fixed position and the method of the use and the position of shielding are fixed, or if an appliance loaded with Radioactive Materials of 3.7 GBq or less is used) by using a radiation measuring instrument, record the following matters in each measurement, and store the records for five years:

- (i) date and time of measurement;
 - (ii) measurement method;
 - (iii) type, model and performance of radiation measuring instrument;
 - (iv) point of measurement;
 - (v) measurement conditions;
 - (vi) measurement results;
 - (vii) name of the person who performed the measurement; and
 - (viii) general description of the measures taken based on the measurement results.
- (2) If the dose equivalent rate or dose equivalent referred to in the preceding paragraph is extremely difficult to measure by using a radiation measuring instrument, it may be determined by calculation, notwithstanding the provisions of the same paragraph.
- (3) The measurement provided for in paragraph (1) or the calculation provided for in the preceding paragraph is to be performed for a 1-cm dose equivalent rate or 1-cm dose equivalent; provided, however, that in places of the Controlled Areas provided for in item (i) of the preceding Article, where the 70 μ m dose equivalent rate is likely to exceed ten times the 1-cm dose equivalent rate or where the 70 μ m dose equivalent may exceed ten times the 1-cm dose equivalent, the measurement or calculation is to be performed for the 70 μ m dose equivalent rate or 70 μ m dose equivalent.
- (4) An employer must make the result of the measurement provided for in paragraph (1) or of the calculation provided for in paragraph (2) known to workers who enter the Controlled Area by displaying the result in an easy-to-see place or by another method.

(Measurements of Concentrations of Radioactive Materials)

Article 55 An employer must measure the concentrations of Radioactive Materials in the air in the workplaces listed in Article 53, items (ii) and (iii) periodically once every period within one month by using a radiation measuring instrument, record the matter of each of the items of paragraph (1) of the preceding Article in each measurement, and store the records for five years.

Chapter VIII Medical Examinations

(Medical Examinations)

Article 56 (1) An employer must conduct medical examinations of the following items by a physician for workers constantly engaging in Radiation Work who enter Controlled Areas, at the time of employment or transfer to the work and periodically once every period within six months thereafter:

- (i) investigation and evaluation of radiation exposure history (or, for workers having a radiation exposure history, the location of work, details and period of work, whether there is any Radiation hazard, whether there are any subjective symptoms and other matters concerning Radiation exposure);
- (ii) examination of white blood cell count and percentage;
- (iii) examination of red blood cell count and examination of hemoglobin or hematocrit value;
- (iv) examination of eyes for cataract; and
- (v) examination of skin.

(2) Among the medical examinations provided for in the preceding paragraph, the medical examination of item (iv) of the same paragraph, which must be conducted at the time of employment or transfer to the work, may be omitted depending on the type of the radiation source to be used.

(3) Among the medical examinations provided for in paragraph (1), all or some of those listed in items (ii) through (v) of the same paragraph, which must be periodically conducted, may be omitted if the physician considers them unnecessary.

(4) Notwithstanding the provisions of paragraph (1), the medical examinations listed in item (ii) to item (v) of the same paragraph are not required for workers whose exposed effective dose for the one-year period preceding the year to which the day of the medical examinations of the same paragraph (limited to those required to be conducted periodically; the same applies hereinafter in this paragraph) belongs did not exceed 5 mSv and exposed effective dose for the one-year period to which the day of the medical examinations belongs is not expected to exceed 5 mSv if the physician considers them unnecessary.

(5) At the time of the medical examinations provided for in paragraph (1), an employer must present to the physician the exposed doses of the workers after the last medical examinations (or if the doses cannot be determined by calculation, necessary data to estimate them (or if the data are not available, necessary data to ascertain the situations in which the workers were exposed to the Radiation)).

Article 56-2 (1) An employer must conduct medical examinations of the following items by a physician for Radiation Workers engaging in operations for Emergency Work periodically once every period within one month after transfer to the work and upon transfer from the work to another work or separation from service:

- (i) examination of whether there are any subjective symptoms and other objective symptoms;
 - (ii) examination of white blood cell count and percentage;
 - (iii) examination of red blood cell count and examination of hemoglobin or hematocrit value;
 - (iv) examination of thyroid stimulating hormone, free triiodothyronine and free thyroxine;
 - (v) examination of eyes for cataract; and
 - (vi) examination of skin.
- (2) Among the medical examinations provided for in the preceding paragraph, all or some of those listed in items (ii) through (vi) of the same paragraph, which must be periodically conducted, may be omitted if the physician considers them unnecessary.
- (3) At the time of the medical examinations provided for in paragraph (1), an employer must present to the physician the exposed doses of the workers after the last medical examinations (or if the doses cannot be determined by calculation, necessary data to estimate them (or if the data are not available, necessary data to ascertain the situations in which the workers were exposed to the Radiation)).

Article 56-3 With regard to Radiation Workers engaging in operations for Emergency Work, the medical examination listed in each of the following items among the medical examinations provided for in paragraph (1) of the preceding Article, which the workers last received, is deemed as the medical examination falling under the corresponding item:

- (i) medical examination conducted within one month before the day of transfer to operations for Emergency Work: medical examination at the time of transfer provided for in Article 56, paragraph (1)
- (ii) medical examination conducted within one month before the day on which

the periodical examination provided for in Article 56, paragraph (1) is to be conducted: periodical medical examination of the same paragraph

(Recording of Results of Medical Examinations)

Article 57 An employer must prepare Ionizing Radiation Medical Examination Individual Cards (Form 1-2) for the medical examinations provided for in Article 56, paragraph (1) (hereinafter referred to as "ionizing radiation medical examination(s)" in the following Article and in Article 59) or Emergency Ionizing Radiation Medical Examination Cards (Form 1-3) for the medical examinations provided for in Article 56-2, paragraph (1) (hereinafter referred to as "emergency ionizing radiation medical examinations" in the following Article and in Article 59) based on the results of the medical examinations provided for in Article 56, paragraph (1) or in Article 56-2, paragraph (1) (including the medical examinations the workers took under the proviso of Article 66, paragraph (5); the same applies hereinafter in this Article), and store the cards for 30 years; provided, however, that this does not apply in the case where the employer hands over these records to the organization designated by the Minister of Health, Labour and Welfare after these records are stored for five years.

(Hearing of Opinions of a Physician Concerning Results of Medical Examinations)

Article 57-2 (1) A hearing of opinions of a physician under the provisions of Article 66-4 of the Act based on the results of an ionizing radiation medical examination must be held in compliance with the following provisions:

- (i) a hearing of opinions is held within three months from the day when the ionizing radiation medical examination was conducted (or the day when the workers submitted a document proving the results of the medical examination to the employer in case of the proviso of Article 66, paragraph (5) of the Act); and
- (ii) the opinions heard from the physician are recorded on the Ionizing Radiation Medical Examination Cards.

(2) A hearing of views of the physician under the provisions of Article 66-4 of the Act based on the results of an emergency ionizing radiation medical examination (excluding medical examinations that must be conducted upon separation from service) must be held in compliance with the following provisions:

- (i) a hearing of opinions is held promptly after the emergency ionizing radiation medical examination was conducted (or after the workers submitted a document proving the results of the medical examination to the employer when the proviso of Article 66, paragraph (5) of the Act applies).

(ii) the opinions heard from the physician are recorded on the Emergency Ionizing Radiation Medical Examination Cards.

(Notification of Results of Medical Examinations)

Article 57-3 (1) An employer must notify workers who received the medical examinations provided for in Article 56, paragraph (1) or in Article 56-2, paragraph (1) of the results of the medical examinations without delay.
(2) The provisions of the preceding paragraph apply mutatis mutandis to workers who received the medical examinations provided for in Article 56-2, paragraph (1) (limited to those required to be conducted upon separation from service).

(Reporting of Results of Medical Examinations)

Article 58 When an employer conducted the medical examinations provided for in Article 56, paragraph (1) (limited to those conducted periodically) or the medical examinations provided for in Article 56-2, paragraph (1), the employer must submit a Report on Results of Medical Examinations on Ionizing Radiation (Form 2) or a Report on Results of Medical Examinations on Emergency Ionizing Radiation (Form 2-2) for each medical examination to the Head of the Competent Labour Standards Inspection Office without delay.

(Measures Based on Medical Examinations)

Article 59 If, as a result of an ionizing radiation medical examination or emergency ionizing radiation medical examination (excluding those required to be conducted upon separation from service), an employer finds that any worker is suffering or suspected of suffering from a hazard caused by Radiation or may suffer from a hazard caused by Radiation, the employer must take necessary measures to maintain their health, such as changing their workplace, assigning another operation to them, reducing exposure time or changing the work method, until the hazard, suspicion or possibility no longer exists.

Chapter IX Submission of Records of Workers Engaging in Designated Emergency Work

(Submission of Records of Workers Engaging in Designated Emergency Work)

Article 59-2 (1) When an employer has prepared records of the results of the medical examination of each of the following items which workers currently or previously engaging in Emergency Work (limited to the work designated by the Minister of Health, Labour and Welfare) or Exceptional Emergency Work (hereinafter referred to as "designated emergency work, etc." in this paragraph and in Form 3) (the workers are referred to as "workers engaging in designated emergency work, etc." in the following paragraph and in Form 3) received

during the period when the workers engaged in the designated emergency work, etc. or Radiation Work (or the period during which these medical examinations should be conducted when the workers have medical examinations based on the provisions of Article 66, paragraph (4) of the Act), the employer must submit without delay a copy of the records (or when the records are prepared in the form of electronic or magnetic records (meaning records prepared by an electronic method, magnetic method or any other method unrecognizable to human perception and used for information processing by an electronic computer), a copy of the electronic or magnetic records made onto an electronic or magnetic recording medium) to the Minister of Health, Labour and Welfare:

- (i) medical examination card provided for in Article 51 of the Safety and Health Regulation (limited to records of the results of the medical examinations provided for in Article 44, paragraph (1) and in Article 45, paragraph (1) of the Safety and Health Regulation and the medical examinations conducted based on the direction under the provisions of Article 66, paragraph (4) of the Act) (Form 5 in the Safety and Health Regulation); or
 - (ii) Ionizing Radiation Medical Examination Card (Form 1-2) or Emergency Ionizing Radiation Medical Examination Card (Form 1-3) provided for in Article 57, or Ionizing Radiating Medical Examination Card for Decontamination (Form 2) provided for in Article 21 of the Regulation on Decontamination.
- (2) An employer must prepare a Control Implementation Status Report on Dose, etc. (Form 3), which contains the doses by category of the workers listed in each of the following items (limited to workers engaging in designated emergency work, etc.) calculated according to the method prescribed by the Minister of Health, Labour and Welfare as provided in Article 9, paragraph (2) (referred to as "doses" in the following Article), the record provided for in Article 45, paragraph (1) and other necessary matters of the workers and based on the results of measurement or calculation under Article 8, paragraph (3) or paragraph (5), and submit the report in writing or on a recording medium by an electronic or magnetic means (meaning electronic method, magnetic method or any other method unrecognizable to human perception; the same applies in the following Article) to the Minister of Health, Labour and Welfare by the date prescribed in each corresponding item:
- (i) workers engaging in Emergency Work: last day of each month (limited to the period during which the workers engage in Emergency Work); and
 - (ii) workers engaging in Radiation Work (excluding Emergency Work): last day of each quarter (limited to the period during which the workers engage in Radiation Work (excluding Emergency Work)).

(Reporting of Implementation Status of Emergency Work)

Article 59-3 An employer (if there is any person that is deemed to fall under a principal employer with respect to the operations undertaking the Radiation Work, limited to this person) must prepare a report on each of the items listed below, and submit it in writing or on a recording medium by an electronic or magnetic means to the Minister of Health, Labour and Welfare by the date prescribed in each corresponding item:

- (i) Emergency Work Implementation Status Report (external dose) (Form 4) that contains the number of workers, among workers engaging in Emergency Work (including workers belonging to relevant subcontractors provided for in Article 15, paragraph (1) of the Act in case of a principal employer; the same applies hereinafter in this item and the following item), in each category of dose exceeding 50 mSv per year due to external exposure in the Emergency Work: the day on which 15 days have elapsed from the day on which the Emergency Work commenced, and thereafter each day on which 10 days have elapsed from the day (limited to the period during which the workers engage in Emergency Work)
- (ii) Emergency Work Implementation Status Report (effective dose) (Form 5) that contains the number of workers engaging in Emergency Work in each category of dose: last day of each month (excluding months in which any accident to which the Emergency Work pertains) (limited to the period during which the workers engage in Emergency Work)

Chapter X Miscellaneous Provisions

(Preparation of Radiation Measuring Instruments)

Article 60 An employer must prepare necessary radiation measuring instruments to fulfill the obligations provided for in this Regulation; provided, however, that this does not apply when the employer takes measures to make radiation measuring instruments easily available as needed.

(Notification of Work Using Gamma-ray Irradiation Devices for Radiography)

Article 61 When an employer uses a gamma-ray irradiation device for radiography in a place other than the employer's place of business to perform work, the employer must submit written notification in Form 6 to the Head of the Labour Standards Inspection Office having jurisdiction over the area where the workplace is located, with a drawing showing the Controlled Area and a drawing of its surroundings attached.

(Delivery of Records)

Article 61-2 (1) An employer who prepares and stores the records provided for in Article 9, paragraph (2) is to deliver the records to the organization designated

by the Minister of Health, Labour and Welfare when discontinuing its business.

(2) An employer who prepares and stores Ionizing Radiation Medical Examination Cards or Emergency Ionizing Radiation Medical Examination Cards shall deliver the Ionizing Radiation Medical Examination Cards or Emergency Ionizing Radiation Medical Examination Cards to the organization designated by the Minister of Health, Labour and Welfare when discontinuing its business.

(Adjustment)

Article 61-3 The doses to which Radiation Workers who are the workers engaged in decontamination and related works provided for in Article 2, paragraph (3) of the Order on Decontamination or those who once were workers engaged in decontamination and related works under the same paragraph, or the workers engaging in work at the designated dose rate provided for in paragraph (4) of the same Article or those who once were workers engaged in work at the designated dose rate under the same paragraph are or were exposed as workers engaged in decontamination and related works or workers engaging in work at the designated dose rate in the decontamination and related work provided for in paragraph (9) of the same Article or in the work at the designated dose rate provided for in paragraph (10) of the same Article are deemed as doses when these workers are exposed during Radiation Work.

Article 61-4 With regard to workers constantly engaging in Radiation Work who may enter Controlled Areas and who were previously worker engaged in decontamination and related works provided for in Article 2, paragraph (3) of the Regulation on Decontamination just before transfer to this work, the medical examinations the workers last took under Article 20, paragraph (1) of the Regulation on Decontamination (limited to medical examinations conducted within six months before transfer to the work) are deemed as medical examinations at the time of transfer under Article 56, paragraph (1).

(Mutatis Mutandis Application)

Article 62 The provisions of Article 3, paragraph (4) (including as applied mutatis mutandis pursuant to Article 15, paragraph (3), Article 22, paragraph (2), Article 33, paragraph (3), Article 36, paragraph (2), Article 41-4, paragraph (2) and Article 41-8, paragraph (2)), Article 7, paragraph (3), Article 8, Article 9, the main clause of Article 18, paragraph (1) (including as applied mutatis mutandis pursuant to paragraph (2) of the same Article), Article 31, Article 32, Article 33, paragraph (1), Article 34, paragraph (1), Article 35, paragraph (1) (including as applied mutatis mutandis pursuant to Article 41-9 (including the cases where it is applied by replacing the term and phrase pursuant to Article

41-10, paragraph (2))), Article 36, paragraph (1), Article 38, Article 39, Article 41, Article 41-2 (including as applied mutatis mutandis pursuant to Article 41-9), Article 41-6, paragraph (1), Article 41-7, paragraph (1), Article 41-8, paragraph (1), Article 42, paragraphs (1) and (3), Article 44, Article 45, paragraph (1), Article 54, paragraph (4), Article 59-2 and Article 61-2, paragraph (1) apply mutatis mutandis to employers that undertake operations other than Radiation Work in places of business where Radiation Work is performed (excluding the employers provided for in Article 2, paragraph (1) of the Regulation on Decontamination) and their workers.

Supplementary Provisions

(Effective Date)

Article 1 This Ministerial Order comes into effect as of October 1, 1972.

(Repeal)

Article 2 The Regulation on Prevention of Ionizing Radiation Hazards (Ministry of Labour Order No. 21 of 1963) is repealed.

Supplementary Provisions [Ministry of Labour Order No. 19 of May 21, 1974] [Extract]

(Effective Date)

Article 1 The provisions of this Ministerial Order come into effect as of the date designated in each of the following items according to the categories of the corresponding items:

- (i) provisions other than the provisions of the following item and of item (iii):
May 25, 1974

Supplementary Provisions [Ministry of Labour Order No. 12 of March 29, 1975]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 1975; provided, however, that the provisions listed in each of the following items come into effect as of the date designated in the corresponding item:

- (i) the provisions revising the Table of Contents (limited to the portion of Chapter VI-2), the provisions revising Article 10, Article 13, Article 14 and Article 18, the provisions adding nine Articles after Article 18 (limited to the portions of Article 18-2 through Article 18-4 and Article 18-10), the provisions revising Article 19, Article 42, Article 44 and Article 47, the

provisions adding one Chapter after Chapter VI, the provisions adding one Article after Article 61, and the provisions adding the form after Form 5:
July 1, 1975

(ii) the provisions adding nine Articles after Article 18 (limited to the portions of Article 18-5 to Article 18-9): October 1, 1975

(Transitional Measure Concerning Penal Provisions)

Article 2 Prior laws continue to govern the applicability of penal provisions to acts committed prior to the enforcement of this Ministerial Order that violate any of the provisions of the Regulation on Prevention of Ionizing Radiation Hazards before amendment.

Supplementary Provisions [Ministry of Labour Order No. 20 of August 1, 1975] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of the enforcement of the Act (August 1, 1975).

Supplementary Provisions [Ministry of Labour Order No. 28 of July 9, 1976] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of promulgation.

Supplementary Provisions [Ministry of Labour Order No. 25 of August 31, 1977]

This Ministerial Order comes into effect as of September 1, 1977.

Supplementary Provisions [Ministry of Labour Order No. 33 of August 16, 1978]

This Ministerial Order comes into effect as of September 1, 1978.

Supplementary Provisions [Ministry of Labour Order No. 35 of October 17, 1981]

- (1) This Ministerial Order comes into effect as of the date of promulgation.
- (2) The license for Type-II radiation protection supervisor set forth in Article 35, paragraph (1) of the Act on Prevention of Radiation Hazards Due to

Radioisotopes, etc. before amendment by the Act Partially Amending the Act on Prevention of Radiation Hazards Due to Radioisotopes, etc. (Act No. 52 of 1980) which was issued pursuant to the provisions of paragraph (1) of the same Article is deemed as the Type-II radiation protection supervisor (general) provided for in Article 17-4, paragraph (1) of the Order for Enforcement of the Act on Prevention of Radiation Hazards Due to Radioisotopes, etc. in connection with the application of Article 51, item (i) and Article 52-4, item (iii).

Supplementary Provisions [Ministry of Labour Order No. 32 of October 1, 1988]

- (1) This Ministerial Order comes into effect as of April 1, 1989.
- (2) Prior laws continue to govern the applicability of penal provisions to acts committed prior to the enforcement of this Ministerial Order that violate any of the provisions of the Regulation on Prevention of Ionizing Radiation Hazards before amendment.

Supplementary Provisions [Ministry of Labour Order No. 30 of December 18, 1990]

This Ministerial Order comes into effect as of January 1, 1991.

Supplementary Provisions [Ministry of Labour Order No. 19 of April 12, 1993]

This Ministerial Order comes into effect as of the date of promulgation.

Supplementary Provisions [Ministry of Labour Order No. 20 of March 30, 1994] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of July 1, 1994.

(Transitional Measure Concerning Notifications of Plans)

Article 2 (1) Notifications under the provisions of Article 37, paragraph (1) of the Order on Prevention of Organic Solvent Poisoning before amendment by this Ministerial Order (hereinafter referred to as the "Old Organic Solvent Poisoning Regulation"), Article 61, paragraph (1) of the Regulation on Prevention of Lead Poisoning before amendment by this Ministerial Order (hereinafter referred to as the "Old Lead Poisoning Regulation"), Article 28, paragraph (1) of the Regulation on Prevention of Tetraalkyl Lead Poisoning

before amendment by this Ministerial Order (hereinafter referred to as the "Old Tetraalkyl Lead Poisoning Regulation"), Article 52, paragraph (1) of the Regulation on Prevention of Hazards Due to Specified Chemical Substances before amendment by this Ministerial Order (hereinafter referred to as the "Old Specified Chemical Substances Regulation"), Article 61, paragraph (1) of the Regulation on Prevention of Ionizing Radiation Hazards before amendment by this Ministerial Order (hereinafter referred to as the "Old Ionizing Radiation Hazards Regulation"), Article 24, paragraph (1) of the Regulation on Health Standards in the Office before amendment by this Ministerial Order (hereinafter referred to as the "Old Office Regulation") or Article 28, paragraph (1) of the Regulation on Prevention of Hazards Due to Dust before amendment by this Ministerial Order (hereinafter referred to as the "Old Dust Regulation") which are made in connection with construction works to be commenced after the date of enforcement of this Ministerial Order (hereinafter referred to the "Enforcement Date") are to remain in force as notifications provided for in Article 88, paragraph (1) of the Industrial Safety and Health Act (hereinafter referred to as the "Act") even after the enforcement of this Ministerial Order.

(2) Notifications under the provisions of Article 37, paragraph (3) of the Old Organic Solvent Poisoning Regulation, Article 61, paragraph (3) of the Old Lead Poisoning Regulation, Article 28, paragraph (3) of the Old Tetraalkyl Lead Poisoning Regulation, Article 52, paragraph (3) of the Old Specified Chemical Substances Regulation, Article 61, paragraph (3) of the Old Ionizing Radiation Hazards Regulation, Article 25 of the Old Office Regulation, or Article 28, paragraph (3) of the Old Dust Regulation which are made in connection with construction works to be commenced after the Enforcement Date are to remain in force as notifications set forth in Article 88, paragraph (1) of the Act as applied mutatis mutandis pursuant to paragraph (2) of the same Article even after the enforcement of this Ministerial Order.

(Transitional Measure Concerning Penal Provisions)

Article 5 Prior laws continue to govern the applicability of penal provisions to acts committed before the enforcement of this Ministerial Order, and to acts committed after the enforcement of this Ministerial Order which, pursuant to Article 3 of the Supplementary Provisions, continue to be governed by prior laws.

Supplementary Provisions [Ministry of Labour Order No. 35 of September 13, 1996] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of October 1, 1996.

Supplementary Provisions [Ministry of Labour Order No. 31 of September 25, 1997] [Extract]

(Effective Date)

- (1) This Ministerial Order comes into effect as of the date of enforcement of the provisions listed in Article 1, item (i) of the Supplementary Provisions to the Act on Arrangement of Relevant Acts of the Ministry of Labour for Securing, etc. of Equal Opportunity and Treatment between Men and Women in Employment (October 1, 1996).

Supplementary Provisions [Ministry of Labour Order No. 4 of January 11, 1999]

(Effective Date)

- (1) This Ministerial Order comes into effect as of the date of promulgation.

(Transitional Measure)

- (2) Forms in a format before amendment existing at the time of the enforcement of this Ministerial Order may be used by making corrections until otherwise provided for by law.

Supplementary Provisions [Ministry of Labour Order No. 46 of November 30, 1999]

This Ministerial Order comes into effect as of January 30, 2000.

Supplementary Provisions [Ministry of Labour Order No. 2 of January 31, 2000] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 2000.

(Transitional Measure for Disposition, Application)

Article 2 The disposition, including permission, or other conduct (hereinafter referred to as the "Disposition and Other Conduct") made by the Director of the Prefectural Labour Standards Bureau or the Prefectural Governor before the enforcement of the Act on Arrangement of Relevant Acts for Promotion of Decentralization of Authority (hereinafter referred to as the "Decentralization Promotion Act") pursuant to the respective Acts before amendment or the provisions of the Cabinet Order thereunder (including the provisions of other

Acts to which these provisions apply mutatis mutandis or the provisions of the Cabinet Order thereunder; the same applies hereinafter) or the application, including permission, or other conduct (hereinafter referred to as the "Application and Other Conduct") being made to the Director of the Prefectural Labour Standards Bureau or the Prefectural Governor at the time of the enforcement of the Decentralization Promotion Act pursuant to the respective Acts before amendment or the provisions of the Cabinet Order thereunder, for which administrative operations for this conduct are done by the Director of the Prefectural Labour Bureau as of the date of the enforcement of the Decentralization Promotion Act pursuant to the respective Acts revised by the Decentralization Promotion Act or the provisions of the Ministry of Labour Order thereunder (including the provisions of other Acts to which these provisions apply mutatis mutandis or the provisions of the Cabinet Order thereunder; the same applies hereinafter) are deemed as the Disposition and Other Conduct made by the Director of the Prefectural Labour Bureau or as the Application and Other Conduct made to the Director of the Prefectural Labour Bureau pursuant to the respective Acts after amendment or corresponding provisions of the Ministry of Labour Order thereunder, with respect to the application of the respective Acts after amendment or the Ministry of Labour Order thereunder on or after the date of the enforcement of the Decentralization Promotion Act.

Article 3 The Disposition and Other Conduct made before the enforcement of this Ministerial Order pursuant to the provisions of the respective Ministry Orders before amendment or the Application or Other Conduct being made at the time of the enforcement of this Ministerial Order pursuant to the provisions of the respective Ministry Orders before amendment, for which operations are done by different persons as of the date of the enforcement of this Ministerial Order, are deemed as the Disposition and Other Conduct or the Application and Other Conduct made pursuant to the corresponding provisions of the respective Ministry Orders after amendment, with respect to the application of the respective Ministry Orders after amendment on or after the date of the enforcement of this Ministerial Order.

Article 4 If matters that must be reported, notified, submitted or otherwise processed to an agency or an official of the government or a local government before the enforcement this Ministerial Order pursuant to the provisions of the respective Ministerial Orders before amendment have not yet been so processed before the date of the enforcement of this Ministerial Order, the matters that must be reported, notified or submitted to the corresponding agency or official of the government or a local government pursuant to the

corresponding provisions of the respective Ministerial Orders after amendment are deemed as having not yet been so processed, and the provisions of the respective Ministerial Orders amended by this Ministerial Order apply.

Article 6 Applications, etc. of the forms provided for in respective Ministerial Order before amendment by this Ministerial Order submitted or issued at the time of the enforcement of this Ministerial Order are deemed as applications, etc. of the corresponding forms provided for in the respective Ministerial Order after amendment by this Ministerial Order.

Article 7 Forms for application, etc. in a format provided for in respective Ministerial Order before amendment by this Ministerial Order existing at the time of the enforcement of this Ministerial Order may be used by making necessary revisions until otherwise provided for by law.

Supplementary Provisions [Ministry of Labour Order No. 7 of March 24, 2000]

(Effective Date)

(1) This Ministerial Order comes into effect as of April 1, 2000.

(Transitional Measure)

(2) Forms in a format before amendment existing at the time of the enforcement of this Ministerial Order may be used by making corrections until otherwise provided for by law.

Supplementary Provisions [Ministry of Labour Order No. 41 of October 31, 2000] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of the enforcement of the Act Partially Amending the Cabinet Act (Act No. 88 of 1999) (January 6, 2001).

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 42 of March 27, 2001]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 2001.

(Transitional Measure in Connection with Partial Amendment of the

Regulation on Prevention of Ionizing Radiation Hazards)

Article 2 Prior laws continue to govern the applicability of the provisions of Article 3 and Article 3-2 of the Regulation on Prevention of Ionizing Radiation Hazards after amendment by the provisions of Article 2 (hereinafter referred to as the "New Ionizing Radiation Hazards Regulation") to employers who undertake Radiation Work at the time of the enforcement of this Ministerial Order until March 31, 2003.

Article 3 Prior laws continue to govern the applicability of the provisions of Article 12 and Article 13 of the New Ionizing Radiation Hazards Regulation to employers who have made notification of the installation of Specified X-ray Devices at the time of the enforcement of this Ministerial Order pursuant to Article 88, paragraph (1) (including as applied mutatis mutandis pursuant to paragraph (2) of the same Article) of the Industrial Safety and Health Act.

Article 4 The provisions of Article 9, paragraph (2) or Article 57 of the New Ionizing Radiation Hazards Regulation apply to the records kept by employers at the time of the enforcement of this Ministerial Order pursuant to Article 9, paragraph (2) or Article 57 of the Regulation on Prevention of Ionizing Radiation Hazards before amendment by this Ministerial Order

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 171 of July 16, 2001] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of promulgation.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 97 of July 26, 2002]

- (1) This Ministerial Order comes into effect as of the date of promulgation.
- (2) Prior laws continue to govern the applicability of penal provisions to acts committed before the enforcement of this Ministerial Order.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 175, December 1, 2001] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of March 31, 2004.

(Transitional Measure Concerning Forms)

Article 11 Applications, etc. having been filed or delivered in the forms provided for in respective Ministerial Orders before amendment by this Ministerial Order at the time of the enforcement of this Ministerial Order are deemed as applications, etc. in the corresponding forms provided for in the respective Ministerial Orders after amendment by this Ministerial Order.

Article 12 Forms for application, etc. in a format provided for in respective Ministerial Order before amendment by this Ministerial Order existing at the time of the enforcement of this Ministerial Order may be used by making necessary revisions until otherwise provided for by law.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 98 of June 1, 2005]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of promulgation.

(Transitional Measure)

Article 2 The provisions of the Order on Prevention of Ionizing Radiation Hazards after amendment by this Ministerial Order (hereinafter referred to as the "New Ionizing Radiation Hazards Regulation") do not apply to appliances provided only with materials coming to fall under Radioactive Materials set forth in Article 2, paragraph (2) of the New Ionizing Radiation Hazards Regulation as a result of the enforcement of this Ministerial Order (hereinafter referred to as "New Radioactive Materials") or appliances sealing only New Radioactive Materials manufactured or imported before the date of enforcement of this Ministerial Order and to those of the same models as these appliances manufactured or imported before April 1, 2007.

Article 3 Prior laws continue to govern the applicability of the provision of Article 17, paragraph (2) of the New Ionizing Radiation Hazards Regulation to the entrance through which personnel constantly enter and leave an available Radiation Equipment Room where an appliance loaded with Radioactive Materials (meaning the Radiation Equipment Room provided for in Article 15, paragraph (1) of the Regulation on Prevention of Ionizing Radiation Hazards) at the time of the enforcement of this Ministerial Order.

Article 4 Prior laws continue to govern the applicability of penal provisions to acts committed before the enforcement of this Ministerial Order.

Supplementary Provisions [Order of the Ministry of Health, Labour and

Welfare No. 170 of December 1, 2005]

This Ministerial Order comes into effect as of December 1, 2005.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 1 of January 5, 2006] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 2006.

(Transitional Measure Concerning Forms)

Article 11 Applications, etc. having been filed or delivered in the forms provided for in respective Ministerial Orders before amendment by this Ministerial Order at the time of the enforcement of this Ministerial Order are deemed as applications, etc. of the corresponding forms provided for in the respective Ministerial Orders after amendment by this Ministerial Order.

Article 12 Forms for application, etc. in a format provided for in respective Ministerial Orders before amendment by this Ministerial Order existing at the time of the enforcement of this Ministerial Order may be used by making necessary revisions until otherwise provided for by law.

(Transitional Measure Concerning Application of Penal Provisions)

Article 13 Prior laws continue to govern the applicability of penal provisions to acts committed before the date of enforcement of this Ministerial Order.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 55 of March 30, 2009] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of March 31, 2009.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 5 of April 14, 2011] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 2011.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 129 of October 11, 2011]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of promulgation.

(Transitional Measure)

Article 2 (1) With regard to records of the results of the medical examinations which specified emergency workers engaging in designated emergency work, etc. (meaning the "workers engaging in designated emergency work, etc." provided for in Article 59-2, paragraph (1) of the Regulation on Prevention of Ionizing Radiation Hazards after amendment by this Ministerial Order (hereinafter referred to as the "New Regulation"); the same applies hereinafter) took during the period in which the workers engaged in designated emergency work (meaning the "designated emergency work, etc." provided for in the same paragraph; the same applies hereinafter) or Radiation Work (including the period during which the medical examinations should be conducted when the workers took medical examinations based on the direction under the provision of Article 66, paragraph (4) of the Industrial Safety and Health Act) before the date of enforcement of this Ministerial Order, the provisions of Article 59-2, paragraph (1) of the New Regulation apply by deeming the phrase in the same paragraph "When an employer has prepared records of the results of the medical examination of each of the following items which workers currently or previously engaging in Emergency Work (limited to the work designated by the Minister of Health, Labour and Welfare) or Exceptional Emergency Work (hereinafter referred to as "designated emergency work, etc." in this paragraph and in Form 3) (the workers are referred to as "workers engaging in designated emergency work, etc." in the following paragraph and in Form 3) received during the period when the workers engaged in the designated emergency work, etc. or Radiation Work (or the period during which these medical examinations should be conducted when these workers have medical examinations based on the provision of Article 66, paragraph (4) of the Act), the employer must submit without delay a copy of the records" to be replaced with "An employer must submit, no later than November 30, 2011, a copy of the records of the results of the medical examinations of workers currently or previously engaging in Emergency Work (limited to the work designated by the Minister of Health, Labour and Welfare) or Exceptional Emergency Work (hereinafter referred to as "designated emergency work, etc." in this paragraph and in Form 3) (the workers are referred to as "workers engaging in designated emergency work, etc." in the following paragraph and in Form 3)."

(2) The provisions of Article 59-2, paragraph (2) (excluding each item) of the New Regulation also apply to employers having used workers engaging in designated emergency work, etc. (excluding the workers listed in each item of

the same paragraph) before the date of enforcement of this Ministerial Order. In this case, the phrase "by category of the workers listed in each of the following items" in the same paragraph deemed to be replaced with "with respect to the workers having been used for it," and "by the date prescribed in each corresponding item" with "by October 31, 2011."

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 152 of December 22, 2011] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of January 1, 2012.

(Transitional Measure in Connection with Partial Amendment of the Regulation on Prevention of Ionizing Radiation Hazards)

Article 4 Prior laws continue to govern the provisions of the Regulation on Prevention of Ionizing Radiation Hazards before amendment by the provisions of the preceding Article (hereinafter referred to as the "Old Ionizing Radiation Hazards Regulation ") (excluding Article 31, Article 32 and Article 44 (limited to the portion relating to paragraph (1), item (iv) of the same Article)) relating to the Radiation Work provided for in Article 2, paragraph (3) of the Old Ionizing Radiation Hazards Regulation and performed in the Controlled Areas provided for in Article 3, paragraph (1) of the Regulation on Prevention of Ionizing Radiation Hazards (limited to the reactor facilities (meaning the reactor facilities for power generation provided for in Article 43-3-5, paragraph (2), item (v) of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Act No. 166 of 1957)) and steam turbines and their accessory equipment belonging to the Fukushima Daiichi Nuclear Power Plant of Tokyo Electric Power Company or areas around them where the average air dose rate may exceed 0.1 mSv per hour (hereinafter referred to as "Specified Facilities, etc.)) at the time of the enforcement of the provisions of the preceding Article, notwithstanding the provisions of Article 2, paragraph (3) of the Order on Prevention of Ionizing Radiation Hazards after amendment by the provisions of the preceding Article.

(Special Measure Concerning Employers Directing Workers to Engage in Work That Handles Radioactive Materials at Specified Facilities)

Article 4-2 The provisions of Article 11 (limited to the portion of paragraph (1), item (iii) of the same Article), Article 14 and Article 15 (excluding the provision of paragraph (1) of the same Article) apply to employers directing workers to engage in any work that handles the Radioactive Materials provided for in Article 2, paragraph (2) of the Regulation on Prevention of Ionizing Radiation

Hazards at Specified Facilities, etc. In this case, the phrases "workers engaged in decontamination and related works" in Article 11, paragraph (1) are deemed to be replaced with "Radiation Workers provided for in Article 4, paragraph (1) of the Ionizing Radiation Hazards Regulation (merely referred to as "Radiation Workers" in the following paragraph and Article 14)," "workers engaged in decontamination and related works" in paragraph (2) of the same Article with "Radiation Workers," the phrases "decontamination and related works " "decontamination work, etc." and "workers engaged in decontamination and related works" in Article 14, paragraph (1) with "work that handles unsealed Radioactive Materials provided for in Article 2, paragraph (2) of the Ionizing Radiation Hazards Regulation," "work that handles unsealed Radioactive Materials" and "Radiation Workers," respectively, "workers engaged in decontamination and related works" in paragraphs (2) and (3) of the same Article with "Radiation Workers," "decontamination and related works" in the main clause of Article 15, paragraph (1) with "work that handles unsealed Radioactive Materials provided for in Article 2, paragraph (ii) of Ionizing Radiation Hazards Regulation," and "main clause of Article 13, paragraph (1)" and "decontamination and related works" in the proviso of paragraph (2) of the same Article with "main clause of Article 37, paragraph (1) of the Ionizing Radiation Hazards Regulation" and "work that handles unsealed Radioactive Materials provided for in Article 2, paragraph (2) of the Ionizing Radiation Hazards Regulation," respectively.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 94 of June 15, 2012] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of July 1, 2012.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 129 of September 14, 2012]

This Ministerial Order comes into effect as of the date of enforcement of the Act for Establishment of the Nuclear Regulation Authority (September 19, 2012).

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 57 of April 12, 2013] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of July 1, 2013; provided, however, that the provisions revising Article 57, the provisions deleting the

heading of Article 61-3 and adding a heading before the same Article, the provisions adding an Article after the same Article, the provisions adding a form after Form 1, and the provisions of Article 6 of the Supplementary Provisions (limited to the provisions deleting the heading of Article 29 of the Regulation on the Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Waste Contaminated by Radioactive Materials Resulted from the Great East Japan Earthquake and Related Works (Order of the Ministry of Health, Labour and Welfare No. 152 of 2011), adding a heading before the same Article, and adding an Article after the same Article) come into effect as of the date of promulgation.

(Transitional Measure Concerning Prevention of Contamination)

Article 2 Dedicated work rooms where any work that handles unsealed accident-derived waste, etc. is actually performed at the time of the enforcement of this Ministerial Order or dedicated passages, etc. for workers engaging in this work, in either case complying with the provision of Article 23 of the Regulation on Prevention of Ionizing Radiation Hazards before amendment by this Ministerial Order, are deemed as complying with the provision of Article 41-5 of the Regulation on Prevention of Ionizing Radiation Hazards after amendment by this Ministerial Order only to the extent they will be used as before.

(Transitional Measure Concerning Application of Penal Provisions)

Article 3 Prior laws continue to govern the applicability of penal provisions to acts committed before the date of enforcement of this Ministerial Order.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 89 of July 8, 2013]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of the date of enforcement of the provisions of Article 1, item (iv) of the Act for Establishment of the Nuclear Regulation Authority (July 8, 2013).

(Transitional Measure)

Article 2 Prior laws continue to govern the applicability of penal provisions to acts committed before the enforcement of this Ministerial Order.

Supplementary Provisions [Order of the Ministry of Health, Labour and Welfare No. 134 of August 31, 2015] [Extract]

(Effective Date)

Article 1 This Ministerial Order comes into effect as of April 1, 2016.

(Transitional Measure Concerning Forms)

Article 2 Applications, etc. having been filed or delivered in the forms provided for in the Regulation on Prevention of Ionizing Radiation Hazards before amendment by this Ministerial Order (hereinafter referred to as the "Old Ionizing Radiation Hazards Regulation") at the time of the enforcement of this Ministerial Order are deemed as applications, etc. of the corresponding forms provided for in the Regulation on Prevention of Ionizing Radiation Hazards after amendment by this Ministerial Order (hereinafter referred to as the "New Ionizing Radiation Hazards Regulation").

Article 3 Forms for application, etc. in a format provided for in the Old Ionizing Radiation Hazards Regulation existing at the time of the enforcement of this Ministerial Order may be used by making necessary revisions until otherwise provided for by law.

(Transitional Measure Concerning Reporting of Implementation Status of
Emergency Work)

Article 4 With respect to the application of the provisions of Article 59-3 of the New Ionizing Radiation Hazards Regulation to employers who direct workers to engage in the Emergency Work provided for in Article 7, paragraph (1) of the Regulation on Prevention of Ionizing Radiation Hazards at the time the enforcement of this Ministerial Order, the phrase "the day on which 15 days have elapsed from the day on which the Emergency Work commenced," in item (i) of the same Article is deemed to be replaced with "April 15, 2016," and "months in which any accident to which the Emergency Work pertains" in item (ii) of the same Article with "April 2016."

(Transitional Measure Concerning Application of Penal Provisions)

Article 5 Prior laws continue to govern the applicability of penal provisions to acts committed before the date of enforcement of this Ministerial Order.

Appended Table 1 (Re: Art. 2)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Population	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
GDP	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Exports	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Imports	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
FDI	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Government Expenditure	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Government Revenue	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Public Debt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Private Debt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Unemployment	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Inflation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Interest Rate	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Exchange Rate	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Trade Balance	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Current Account	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Capital Account	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Balance of Payments	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Remarks

- (1) The unit of concentration Bq/g means Becquerel per gram.
- (2) The parent nuclides and progeny nuclides to be included in radioactive equilibrium in connection with the quantity and the concentration listed in column 2 and column 3 are listed in the table below.

親核種 Parent nuclide	子孫核種 Progeny nuclide
28Mg	28Al
44Ti	44Sc
60Fe	60mCo
68Ge	68Ga
83Rb	83mKr
82Sr	82Rb
90Sr	90Y
87Y	87mSr
93Zr	93mNb
97Zr	97Nb
95mTc	95Tc (0. 04)
106Ru	106Rh
108mAg	108Ag (0. 089)
121mSn	121Sn (0. 776)
126Sn	126mSb
122Xe	122I
137Cs	137mBa
140Ba	140La
144Ce	144Pr
148mPm	148Pm (0. 046)
146Gd	146Eu
172Hf	172Lu
178W	178Ta
188W	188Re
189Re	189mOs (0. 241)
194Os	194Ir
189Ir	189mOs
188Pt	188Ir
194Hg	194Au
195mHg	195Hg (0. 542)
210Pb	210Bi, 210Po
212Pb	212Bi, 208Tl (0. 36), 212Po (0. 64)
210mBi	206Tl
212Bi	208Tl (0. 36), 212Po (0. 64)
220Rn	216Po
222Rn	218Po, 214Pb, 214Bi, 214Po
223Ra	219Rn, 215Po, 211Pb, 211Bi, 207Tl
224Ra	220Rn, 216Po, 212Pb, 212Bi, 208Tl (0. 36), 212Po (0. 64)
226Ra	222Rn, 218Po, 214Pb, 214Bi, 214Po, 210Pb, 210Bi, 210Po
228Ra	228Ac
225Ac	221Fr, 217At, 213Bi, 213Po (0. 978), 209Tl (0. 0216), 209Pb (0. 978)
227Ac	223Fr (0. 0138)
237Np	233Pa
242mAm	242Am
243Am	239Np

Appended Table 2 (Re: Art. 2)

第1欄 Column 1	第2欄 Column 2
放射性同位元素の種類 Type of Radioisotope	数量 (Bq) Quantity
Th	3.7×10^6
U	3.7×10^6
Pu	3.7×10^3
	(ただし、 ^{243}Pu 、 ^{245}Pu 及び ^{246}Pu にあつては、 3.7×10^5) (However, the quantity shall be 3.7×10^5 in the case of ^{243}Pu , ^{245}Pu , and ^{246}Pu .)

Appended Table 3 (Re: Art. 3, 28, 29, 30, 31, 32, 33, 39, 41 and 44)

Limits on surface contamination

区分 Category	限度 (Bq/cm ²) Limit
アルファ線を放出する放射性同位元素 Radioisotopes that emit alpha rays	4
アルファ線を放出しない放射性同位元素 Radioisotopes that do not emit alpha rays	40

Form 1 (Re: Art. 41-14)

Form 1-2 (Re: Art. 57)

Form 1-3 (Re: Art. 57)

Form 2 (Re: Art. 58)

Form 2-2 (Re: Art. 58)

Form 3 (Re: Art. 59-2)

Form 4 (Re: Art. 59-3)

Form 5 (Re: Art. 59-3)

Form 6 (Re: Art. 61)