

Ordinance 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

((Ordinance of the Ministry of Health, Labour and Welfare No. 152, 2011))

Pursuant to the provisions of the Industrial Safety and Health Act (Act No.57, 1972) and the Enforcement Order of Industrial Safety and Health Act (Cabinet Order No. 318, 1972), and in order to enforce the said Act, the Ordinance 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 shall be enacted as below.

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Chapter I General Provisions

(Basic Principles for Prevention of Radiation Hazards Pertaining to Works to Decontaminate Soil and Waste Contaminated by Radioactive Materials

Discharged by the Accident)

Article 1 Employers must endeavor to minimize exposure to ionizing radiation for workers engaged in decontamination and related works, workers under a designated dose rate, or other workers in special decontamination areas, etc.

(Definitions)

Article 2 (1) "Employers" in this Ordinance means employers who conduct Decontamination and Related Works or Works under a Designated Dose Rate.

(2) "Special Decontamination Areas, etc." in this Ordinance means special decontamination areas prescribed in paragraph(1) of Article 25 of the Act on Special Measures Concerning the Handling of Environmental Pollution by Radioactive Materials Discharged by the Nuclear Power Plant Accident Associated with the Tohoku District Off the Pacific Ocean Earthquake That Occurred on 11 March 2011 (Act No. 110 of 2011), or intensive contamination survey areas prescribed in paragraph (1) of Article 32 of said act.

(3) "Workers Engaged in Decontamination and Related Works" in this Ordinance means workers engaged in Decontamination and Related Works.

(4) "Workers under a Designated Dose Rate" in this Ordinance means workers engaged in Works under a Designated Dose Rate.

(5) "Ionizing Radiation" in this Ordinance means the ionizing radiation described in paragraph (1) of Article 2 of the Ordinance on Prevention of Ionizing Radiation Hazards (Ordinance of the Ministry of Labour No. 41 of 1972, hereinafter referred to as "Ionizing Radiation Ordinance").

(6) "Radioactive Materials Discharged by the Accident" in this Ordinance means radioactive materials discharged by the nuclear power plant due to the accident of the said nuclear power plant caused by the Tohoku District Off the Pacific Ocean Earthquake That Occurred on 11 March 2011 (Limited to the radioactive materials described in paragraph (2) of Article 2 of the Ionizing Radiation Ordinance).

(7) "Decontamination and Related Works" in this Ordinance means the operations set forth in the following items (excluding those conducted in the workplace where works related to disposal described in Article 41-3 of the Ionizing Radiation Ordinance are conducted):

(i) in taking measures for the soil, vegetation and structures in the Special Decontamination Areas, etc. contaminated by Radioactive Materials Discharged by the Accident, removal of soil, fallen leaves, fallen branches, and sludge accumulated in water drainage channels, etc. connected to said contamination (hereinafter referred to as "Contaminated Soil and Waste"), and prevention of the spread of contamination or other works to take necessary measures to minimize the harmful impact of said contamination (hereinafter referred to as "Works of Decontamination, etc. of Soil, etc.");

- (ii) collection, transportation, or storage of those contaminated by Radioactive Materials Discharged by the Accident set forth in (a) or (b) below in the Special Decontamination Areas, etc. (hereinafter referred to as "Work for Collecting Wastes, etc."):
- (a) soil generated by the work described in the preceding item or the following item (limited to the soil that contains Radioactive Materials Discharged by the Accident, exceeding 10,000 Bq/kg of cesium-134 and cesium-137 measured by the methods specified by the Minister of Health, Labour and Welfare, hereinafter referred to as "Removed Soil"); or
- (b) wastes contaminated by the Radioactive Materials Discharged by the Accident (limited to the waste that contains Radioactive Materials Discharged by the Accident, exceeding 10,000 Bq/kg of cesium-134 and cesium-137 measured by the methods specified by the Minister of Health, Labour and Welfare, hereinafter referred to as "Contaminated Waste"); and
- (iii) works other than those set forth in the preceding two items and works for handling of designated contaminated soil and waste. (limited to Contaminated Soil and Waste that contains Radioactive Materials Discharged by the Accident, exceeding 10,000 Bq/kg of cesium-134 and cesium-137, measured by the methods specified by the Minister of Health, Labour and Welfare. The same applies hereinafter.) (Hereinafter referred to as "Works for Handling Designated Contaminated Soil and Waste.")
- (8) "Operations under a Designated Dose Rate" in this Ordinance means works other than Decontamination and Related Works provided by Employers at the locations where Average Ambient Dose Rate obtained by the methods specified by the Minister of Health, Labour and Welfare (hereinafter simply referred to as "Average Ambient Dose Rate") exceeds 2.5 $\mu\text{Sv/h}$ due to Radioactive Materials Discharged by the Accident in the Special Decontamination Areas, etc. and the other works set forth in appended table 2 of Order for Enforcement of Industrial Safety and Health Act.
- (9) "Decontamination Related Duties" in this Ordinance means duties pertaining to Decontamination and Related works in the Special Decontamination Areas, etc.
- (10) "Duties under a Designated Dose Rate" in this Ordinance means duties pertaining to Works under a Designated Dose Rate in the Special Decontamination Areas, etc.

Chapter II Prevention of Ionizing Radiation Hazards in Decontamination and Related Works

Section 1 Exposure Dose Limit and Measurements

(Exposure Dose Limit for Workers Engaged in Decontamination and Related Works)

Article 3 (1) Employers must ensure that the effective doses to which Workers Engaged in Decontamination and Related Works are subject do not exceed 100 mSv per five years and 50 mSv per one year.

(2) Regardless of the provisions in the preceding paragraph, Employers must ensure that the effective dose to which female Workers Engaged in Decontamination and Related Works are subject do not exceed 5 mSv per three-month period. This excludes female workers who were diagnosed as being unable to conceive and those described in the next paragraph.

Article 4 Employers must ensure the doses to which female Workers Engaged in Decontamination and Related Works are subject do not exceed the doses specified in the items in the following categories, starting from the time they are diagnosed as pregnant until delivery (hereinafter referred to as "pregnancy"):

(i) effective dose due to internal exposure: 1 mSv; and

(ii) equivalent dose to which that on abdomen surface is subject: 2 mSv

(Dose Measurements)

Article 5 (1) Employers must measure the external exposure dose to which Workers Engaged in Decontamination and Related Works (excluding workers engaged in Works for Handling Designated Contaminated Soil and Waste only at the locations where the Average Ambient Dose Rate is 2.5 μ Sv/h or less. The same applies for paragraph (6) and paragraph (8) of the next Article and paragraph (2) of Article 27.) are subject.

(2) Beyond dose measurement pursuant to the provisions of the preceding paragraph, Employers must measure the committed dose to which Workers Engaged in Decontamination and Related Works in the Special Decontamination Areas are subject (limited to the locations where the Average Ambient Dose Rate is above 2.5 μ Sv/h; the same applies to paragraph (8) and Article 10) or provide examinations for internal exposure pursuant to the provisions of the following items:

(i) it measures Workers Engaged in Decontamination and Related Works for the committed dose at the locations where dust concentration exceeds 10 mg/m³ and contaminated soil, removed soil, or Contaminated Wastes are handled (Limited to those containing Radioactive Materials Discharged by the Accident that exceeds 500,000 Bq/kg of cesium-134 and cesium-137 determined by the methods specified by the Minister of Health, Labour and Welfare. These are referred to as "Highly Radioactive Contaminated Soil and Waste" in the next item) once every three months (every month for female

- workers who are likely to be subject to an effective dose of 1.7 mSv or more (excluding female workers who were diagnosed as being unable to conceive), and pregnant workers);
- (ii) it provides Workers Engaged in Decontamination and Related Works described in (a) or (b) shall be provided with examinations for internal exposure by the methods specified by the Minister of Health, Labour and Welfare:
- (a) work involving handling Highly Radioactive Contaminated Soil and Waste at the locations where the dust concentration is 10 mg/m³ or less; or
- (b) work involving handling of contaminated soil and waste, removed soil, or Contaminated Wastes other than Highly Radioactive Contaminated Soil and Waste at the locations where the dust concentration exceeds 10 mg/m³.
- (3) When the committed dose exceeds the standards specified by the Minister of Health, Labour and Welfare in the results of examinations performed for Workers Engaged in Decontamination and Related Works in accordance with the provisions of item (2) in the preceding paragraph, Employers must measure the committed dose of Workers Engaged in Decontamination and Related Works by the method specified in item (1) of the same paragraph.
- (4) The measurement of the external exposure dose pursuant to the provisions of paragraph (1) shall be conducted using the 1 cm dose equivalent rate.
- (5) The measurement of the external exposure dose pursuant to the provisions of paragraph (1) must be conducted with radiation monitors on the chest for male workers and female workers who were diagnosed as being unable to conceive and on the abdomen for other female workers.
- (6) Regardless of the provisions in the two preceding paragraphs, Employers may measure the external exposure dose specified in paragraph (1) to which Workers Engaged in Decontamination and Related Works in the Special Decontamination Areas during Decontamination and Related Duties are subject (limited to the locations where the Average Ambient Dose Rate is 2.5 µSv/h or less) by the methods specified by the Minister of Health, Labour and Welfare.
- (7) The internal exposure dose pursuant to the provisions of paragraph (2) is to be measured by the methods specified by the Minister of Health, Labour and Welfare.
- (8) Workers Engaged in Decontamination and Related Works must wear radiation monitors in the Special Decontamination Areas where Decontamination and Related Duties are implemented.

(Measuring and Recording of Dose Monitoring Results)

Article 6 (1) When Workers Engaged in Decontamination and Related Works are likely to be subject to an external exposure dose exceeding 1 mSv according to

the 1 cm dose equivalent rate per day, the Employer must confirm the measurement results of the external exposure dose pursuant to the provisions of paragraph (1) in the preceding Article every day.

- (2) Based on the results of the measurement or calculation under the provisions of paragraph (5) to paragraph (7) in the preceding Article, Employers must calculate and record the dose to which Workers Engaged in Decontamination and Related Works described in the following list of items are subject by the methods specified by the Minister of Health, Labour and Welfare without delay and store the records for 30 years.; provided, however, that this does not apply when such records are transferred to an organization designated by the Minister of Health, Labour and Welfare, after being kept for five years or after termination or reallocation of Workers Engaged in Decontamination and Related Works from their current responsibilities:
- (i) a total effective dose for three-month, one-year, and five-year periods for each male worker and each female worker who was diagnosed as being unable to conceive (a total effective dose for three-month and one-year periods for workers whose effective dose has never exceeded 20 mSv per one year for five years);
 - (ii) a total effective dose for one-month, three-month and one-year periods for each female worker (excluding those who were diagnosed as being unable to conceive) (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 one month);and
 - (iii) the amount of an effective dose due to internal exposure and an equivalent dose to which the abdomen surface is subject for every month, and a total of the effective dose and the equivalent dose during the period of pregnancy for pregnant female workers.
- (3) Based on the records under the provisions of the preceding paragraph employers must notify the dose results listed in each item without delay to the Workers Engaged in Decontamination and Related Works.

Section 2 Measures for Implementation of Decontamination and Related Works

(Preliminary Survey)

Article 7 (1) When conducting Decontamination and Related Works (excluding Works for Handling Designated Contaminated Soil and Waste), Employers must. conduct a survey in advance regarding the matters set forth in the following items at the sites where Decontamination Related Works will be implemented (excluding Decontamination and Related Duties pertaining to Works for Handling Designated Contaminated Soil and Waste; hereinafter

referred to as "Duties for Handling Designated Contaminated Soil, and Waste". The same applies in this paragraph and paragraph (3). The records of the results of the survey must be stored:

- (i) conditions of the Decontamination Related Works sites;
 - (ii) average Ambient Dose Rate of the Decontamination Related Duties sites;
and
 - (iii) concentrations of cesium-134 and cesium-137 determined by the methods specified by the Minister of Health, Labour and Welfare among Radioactive Materials Discharged by the Accident, contained in Contaminated Soil and Waste, Removed Soil, or Contaminated Wastes that are targets of collected during Decontamination Related Duties.
- (2) When implementing Works for Handling Designated Contaminated Soil and Waste, Employers must conduct a survey and store the records of the matters set forth in the items in the preceding paragraph for the sites where the Duties for Handling Designated Contaminated Soil and Waste are implemented prior to commencing said operations and every two weeks thereafter.
- (3) When Employers have their workers engage in Decontamination Related Duties, Employers must clearly indicate the completion date of the survey described in paragraph (1), and the summary of the methods and the results of the survey to the workers in advance.
- (4) When Employers have their workers engage in Duties for Handling Designated Contaminated Soil, etc., Employers must clearly indicate the completion date of the survey described in paragraph (2) and the summary of the methods and the results of the survey to the workers prior to commencing said work and every two weeks thereafter.

(Duty Plan)

- Article 8 (1) When Employers intend to implement Decontamination and Related Works (excluding the Works for Handling Designated Contaminated Soil and Waste conducted in the location where the Average Ambient Dose Rates are 2.5 $\mu\text{Sv/h}$ or less; the same applies in this Article, the next Article, and paragraph (1) of Article 20), they must have a duty plan for the Decontamination Related Works ready (excluding the Duties for Handling Designated Contaminated Soil Waste conducted in the location where the Average Ambient Dose Rate is 2.5 $\mu\text{Sv/h}$ or less; the same applies in this Article and the next Article), and the Decontamination Related Duties must be conducted in accordance with said duty plan.
- (2) The duty plan in the preceding paragraph must address the following matters:
- (i) locations and methods of the Decontamination Related Duties;
 - (ii) measurement methods of the exposure dose received by Workers Engaged

in Decontamination and Related Works (excluding workers engaged in Works for Handling Designated Contaminated Soil and Waste conducted in the location where the Average Ambient Dose Rates are 2.5 µSv/h or less; the same applies in this Article, the next Article, Articles 20 to 23, and paragraph (2) of Article 28);

(iii) measures to minimize the exposure dose to Workers Engaged in Decontamination and Related Works;

(iv) type and performance of the machines, tools, and other equipment to be used for Decontamination Related Duties("machinery" in Item (2) of the next Article and paragraph (1) of Article 19);and

(v) emergency measures in case of industrial accidents.

(3) When Employers establish the duty plan in paragraph (1), they must make the matters described in the provisions of the preceding paragraph known to relevant workers.

(Duty Manager)

Article 9 Employers must appoint an operation leader for the decontamination related works from workers who have competence and leadership in directing Decontamination Related Duties. The employers must have the appointed manager lead the Decontamination Related Duties in accordance with the work plan described in paragraph (1) of the preceding Article and have this person implement all of the following matters:

(i) define the procedures of the Decontamination Related Duties and allocate responsibilities to Workers Engaged in Decontamination Related Works;

(ii) inspect machinery to be used for the Decontamination Related Duties and replace any defective items;

(iii) supervise the usage of radiation monitors and protective equipment; and

(iv) keep unauthorized personnel from entering the places where workers engage in Decontamination Related Duties.

(Duty Notice)

Article 10 Employers (limited to primary contractors specified in paragraph (1), Article 15 of the Industrial Safety and Health Act (hereinafter referred to as "The law"), when intending to implement works of decontamination, etc. or Works for Handling a Designated Contaminated Soil and Waste within the Special Decontamination Areas, etc., must submit the duty notice in Form 1 to the Head of the Labour Standards Inspection Office which has jurisdiction over the site of the workplace (hereinafter referred to as the "Head of the relevant Labour Standards Inspection Office").

(Medical Examinations)

- Article 11 (1) Employers must ensure that their Workers Engaged in Decontamination and Related Works who fall under any of the following items promptly receive medical examinations or treatment by medical doctors:
- (i) when the worker has been subject to an effective dose exceeding the limit specified in paragraph 1 of Article 3;
 - (ii) when the worker has mistakenly inhaled or ingested Radioactive Materials Discharged by the Accident;
 - (iii) when the worker is not able to reduce levels of contamination to 40 Bq/cm² or less by washing; and
 - (iv) when the wound has been contaminated by radioactive materials.
- (2) Employers must report to the Head of the relevant Labour Standards Inspection Office when any of their Workers Engaged in Decontamination and Related Works falls under the items in the previous paragraph.

Section 3 Prevention of Contamination

(Measures to Control Dust Dispersion)

Article 12 When Employers have their Workers Engaged in Decontamination and Related Duties (excluding workers engaged in Duties Engaged in Works for Handling Designated Contaminated Soil and Waste) implement Decontamination and Related Duties prescribed in each item specified in paragraph (2) of Article 5 (excluding Duties for Handling Designated Contaminated Soil and Waste, the same applies hereinafter in this Article), Employers must take measures to control dust dispersion. For example, keeping Contaminated Soil and Wastes, removed soil, or other wastes in wet conditions helps control dust dispersion.

(Usage of Containers for Collecting Wastes)

Article 13 (1) When Employers conduct Work for Collecting Wastes, etc., they must use containers to prevent spread of contamination; provided, however, that this does not apply to the case in which storing wastes in the containers is especially difficult, or necessary measures have already been taken for prevention of removed soil or Contaminated Wastes from scattering and leaking.

- (2) Employers must use the aforementioned containers that have the structures with the following specifications appropriate for the respective category of Work for Collecting Wastes, etc.:
- (i) works related to collection or storage of removed soil or Contaminated Wastes: The containers with no fear of scattering or leaking of removed soil or Contaminated Wastes; and
 - (ii) works related to transfer of removed soil or Contaminated Wastes: The

containers with no fear of scattering or leaking of removed soil or Contaminated Wastes, and with the capability to provide the 1 cm dose equivalent rate at 1 m from the surface of the container of the package which does not exceed 0.1 mSv/h; provided, however, that exceptions are approved in cases in which measures for shielding of radiation are necessary when transporting containers with special carriers. The necessary shielding measures to block radiation shall be taken such that the maximum 1 cm dose equivalent rate at 1 m from front, rear, and both sides of the vehicle (from the vertical plane connected to the outer rim of the vehicle tire if it is an open type vehicle) does not exceed 0.1 mSv/h.

- (3) Employers must indicate the containers for removed soil or Contaminated Wastes used in paragraph (1) with labels.
- (4) When storing removed soil or Contaminated Wastes Employers must use the aforementioned containers in paragraph (1) or take the following measures beyond the measures in the proviso in the same paragraph:
 - (i) indicate the containers in which removed soil or Contaminated Wastes are stored with labels; and
 - (ii) prevent unauthorized personnel from entering the site by enclosing the site.

(Contamination Screening of Workers Leaving the Site for the Day)

Article 14 (1) Employers must establish a radiation contamination screening station at or near the site, where Decontamination and Related Works are implemented and inspect the levels of contamination on workers' bodies, clothing, shoes, protective equipment, and other equipment (hereinafter in this article referred to as "equipment") that came in contact with their bodies before they leave their work sites for the day.

- (2) Employers must not allow the Workers Engaged in Decontamination and Related Works to leave their work site when the levels of contamination on their bodies or their equipment exceed 40 Bq/cm², when assessed in accordance with the provisions in the preceding paragraph, until the following measures are taken at the contamination screening station:
 - (i) if workers' bodies are contaminated, they need to reduce their levels of contamination to 40 Bq/cm² or less by washing, etc.; and
 - (ii) if the equipment attached to the workers is contaminated, the workers need to take off, or otherwise remove, the contaminated equipment.
- (3) Workers Engaged in Decontamination and Related Works must wash their bodies, take off, or otherwise remove, the equipment as instructed by the Employers pursuant to the provisions of the preceding paragraph.

(Contamination Screening of Items to be Removed)

Article 15 (1) Employers must survey contamination of the items to be taken

from the site where Decontamination and Related Works are conducted at the contamination screening station established in accordance with the requirements in paragraph (1) of the preceding Article; provided, however, that this does not apply when the containers in the main paragraph (1) of Article 13 are used or measures in the proviso in the same paragraph are taken to transport them to the other sites where Decontamination and Related Works are conducted.

(2) Employers and workers must not remove the items if they are determined to be contaminated above 40 Bq/cm² during screening in the preceding paragraph; provided, however, that this does not apply when the containers in the main paragraph (1) of Article 13 are used, or measures in the proviso in the same paragraph are taken to transport them to the decontamination facilities, storage facilities, disposal facilities, or other sites where Decontamination and Related Works are conducted.

(Protective Equipment)

Article 16 (1) Before Workers Engaged in Decontamination and Related Works start their work specified in the items in paragraph (2) of Article 5, Employers must prepare effective respiratory protective equipment such as dust masks, protective clothing effective against contamination, gloves, or footwear and ensure the appropriate use of this protective equipment by the Workers Engaged in Decontamination and Related Works when they conduct the Decontamination and Related Works, according to the classification of the Decontamination and Related Works specified by the Minister of Health, Labour and Welfare.

(2) Workers Engaged in Decontamination and Related Works must use the protective equipment in the preceding paragraph when implementing works described in the same paragraph.

(Decontamination of Protective Equipment)

Article 17 Employers must ensure Workers Engaged in Decontamination and Related Works do not use protective equipment specified in the preceding paragraph when its level of radioactivity contamination is determined to exceed 40 Bq/cm² until such equipment is decontaminated by washing, etc. to the levels of 40 Bq/cm² or less.

(Prohibition of Smoking)

Article 18 (1) Employers must prohibit workers from smoking, eating, or drinking at the sites where they are likely to inhale or ingest Radioactive Materials Discharged by the Accident and they must inform their workers about the risk associated with such activities in advance.

(2) Workers must not smoke, eat, or drink at the sites described in the preceding paragraph.

Section 4 Special Education

(Special Education Regarding Decontamination and Related Works)

Article 19 (1) Employers must provide special education to the workers regarding the following topics:

- (i) knowledge for effects of Ionizing Radiation on organisms and methods of exposure dose control;
- (ii) knowledge for methods and procedures of Decontamination and Related Works;
- (iii) knowledge regarding structure and handling methods of machinery used for Decontamination and Related Duties. (Limited to the knowledge about the name and usage of the machinery used for Duties for Handling Designated Contaminated Soil and Waste, when the Employers has workers engage in Works for Handling Designated Contaminated Soil and Waste.);
- (iv) relevant laws and ordinances; and
- (v) methods and procedures concerning Decontamination and Related Duties including how to use machinery. (Limited to the procedures for Duties for Handling Designated Contaminated Soil and Waste, when the Employers engage the workers in Works for Handling Designated Contaminated Soil and Waste.)

(2) Necessary matters for implementing the special education program of the preceding paragraph are provided by the Minister of Health, Labour and Welfare, beyond the matters specified in Article 37 and Article 38 of the Ordinance on Industrial Safety and Health (Ordinance of the Ministry of Health, Labour and Welfare No. 32 of 1972).

Section 5 Medical Examinations

(Medical Examinations)

Article 20 (1) Employers must provide Workers Engaged in Decontamination and Related Works who are regularly engaged in Decontamination and Related Works with medical examinations by medical doctors when they assign workers Engaged in Decontamination and Related Works, regarding the matters listed in the following items at the time of employment and periodically once every six months thereafter and at the time of reallocation:

- (i) investigation and evaluation of the exposure history. (If the worker has an exposure history, it is necessary to confirm the location, nature of work, duration, and other details concerning radiation exposure, beyond existence

- of subjective symptoms.);
- (ii) examinations of white blood cell count and differential;
 - (iii) examinations of red blood cell count and hemoglobin contents or hematocrit values;
 - (iv) examinations of eyes for cataract; and
 - (v) skin examinations.
- (2) Regardless of the provisions of the preceding paragraph, the requirements described in (2) through (5) in the preceding paragraph can be exempted if medical doctors determine those examinations are unnecessary for the workers whose effective doses did not exceed 5 mSv in the year before the medical examinations (limited to periodical examinations; the same shall apply to the present item), and their effective doses are not likely to exceed 5 mSv in the year the medical examinations will be conducted.

(Recording the Results of Medical Examinations)

Article 21 Based on the results of the medical examinations described in paragraph (1) of the preceding Article, the Employers must prepare decontamination and related works ionizing radiation medical examination cards (Form No. 2) for individual workers and preserve them for 30 years. (The cards include medical examinations provided to the Workers Engaged in Decontamination and Related Works in cases of the proviso in paragraph (5) of Article 66 of the Law. Hereinafter referred to as "Decontamination and Related Works Ionizing Radiation Medical Examinations"); provided, however, that this does not apply when such records are transferred to an organization designated by the Minister of Health, Labour and Welfare, after being kept for five years or after termination or reallocation of the Workers Engaged in Decontamination and Related Works from their current responsibilities.

(Seeking Advice from Medical Doctors about the Results of the Medical Examinations)

Article 22 Based on the results of Decontamination and Related Works Ionizing Radiation Medical Examinations pursuant to the provisions of Article 66-4 of the Law, the Employers must seek advice from the medical doctors in accordance with the requirements of the following items:

- (i) within three months from the day the Decontamination and Related Works Ionizing Radiation Medical Examinations are conducted (from the day the written proofs of the medical examination results are submitted by the Workers Engaged in Decontamination and Related Works in cases of the proviso in paragraph(5) of Article 66 of the Law); and
- (ii) opinions and observations of the medical doctors shall be recorded in the decontamination and related works ionizing radiation medical examination

cards.

(Notification of the Medical Examination Results)

Article 23 Employers must notify their Workers Engaged in Decontamination and Related Works about the results of their Decontamination and Related Works Ionizing Radiation Medical Examinations without delay.

(Reporting the Results of Medical Examinations)

Article 24 Once a Decontamination and Related Works Ionizing Radiation Medical Examinations (limited to periodical examinations) has been done, Employers must submit the report of decontamination and related works ionizing radiation medical examination results (Form No. 3) to the Head of the relevant Labour Standards Inspection Office without delay.

(Measures Based on the Medical Examinations)

Article 25 Based on the results of the Decontamination and Related Works Ionizing Radiation Medical Examinations, the Employers must take needed measures to protect the health of their workers who have or may have developed a radiation related disorder. For example, Employers may need to transfer the workers to alternative positions or locations, or change the hours of work or work procedures until complete remission.

Chapter III Prevention of Ionizing Radiation Hazards During Works under a Designated Dose Rate

Section 1 Radiation Exposure Dose Limit and Measurement

(Radiation Exposure Dose Limit for Workers under a Designated Dose Rate)

Article 25-2 (1) Employers must ensure that the effective doses to which Workers under a Designated Dose Rate are subject do not exceed 100 mSv per five years and 50 mSv per one year.

(2) Regardless of the provisions in the preceding paragraph, employers must ensure that the effective doses to which female workers (excluding female workers who were diagnosed as being unable to conceive and those described in the next article) engaged in works under a designated dose rate are subject do not exceed 5 mSv per three-month period.

Article 25-3 Employers must ensure that the doses to which female workers who are diagnosed as pregnant are subject do not exceed 2 mSv on each worker's abdomen surface during her pregnancy while engaged in Works under a Designated Dose Rate.

(Dose Measurement)

Article 25-4 (1) Employers must measure the exposure dose to which Workers under a Designated Dose Rate are subjected due to Duties under a Designated Dose Rate .

- (2) The measurement of the exposure dose in accordance with the provisions of the preceding paragraph is conducted by the 1 cm dose equivalent rate.
- (3) The measurement of the external exposure dose pursuant to the provisions of paragraph (1) must be conducted with radiation monitors on the chest for male workers and female workers who were diagnosed as being unable to conceive and on the abdomen for other female workers.
- (4) Workers under a Designated Dose Rate must wear radiation monitors where Duties under a Designated Dose Rate is conducted in the Special Decontamination Areas.

(Measuring and Recording of Dose Monitoring Results)

Article 25-5 (1) When Workers under a Designated Dose Rate may receive the external exposure dose exceeding 1 mSv using the 1 cm dose equivalent rate per day, the measurement results of the external exposure dose pursuant to the provisions of paragraph (1) in the preceding Article must be confirmed every day.

- (2) Based on the results of the measurement under the provisions of paragraph (3) in the preceding Article, Employers must calculate the exposure doses received by Workers under a Designated Dose Rate listed in the following items by the methods specified by the Minister of Health, Labour and Welfare and store the records for 30 years; provided, however, that this does not apply when such records are transferred to an organization designated by the Minister of Health, Labour and Welfare, after being kept for five years or after termination or reallocation of the workers' engagement for Works under a Designated Dose Rate from their current responsibilities:
 - (i) a total effective dose for three-month, one-year, and five-year periods for each male worker and each female worker who was diagnosed as being unable to conceive. (A total effective dose for three-month and one-year periods should be measured for workers whose effective doses have never exceeded 20 mSv per one year for five years.);
 - (ii) a total effective dose for one-month, three-month, and one-year periods for each female worker except for female workers who were diagnosed as being unable to conceive. (A total effective dose for three-month and one-year periods should be measured for workers whose effective doses are not likely to exceed 1.7 mSv per one month.); and
 - (iii) The total equivalent dose to which the abdominal surface of a pregnant female worker is subject every month and during the whole pregnancy.

- (3) Based on the records under the provisions of the preceding paragraph, Employers must notify those workers engaged for Works under a Designated Dose Rate of the exposure dose listed in each item of the preceding paragraph without delay.

Section 2 Measures to Implement Works under a Designated Dose Rate

(Preliminary Survey)

- Article 25-6 (1) When conducting Works under a Designated Dose Rate, Employers must conduct a survey on the Average Ambient Dose Rate of the sites where Duties under a Designated Dose Rate will be implemented prior to commencing the works and every two weeks thereafter and store the records.
- (2) When assigning workers to Duties under a Designated Dose Rate, Employers must specify the completion date of the survey described in the preceding paragraph and the summary of the methods and results to the workers prior to commencing the works and every two weeks thereafter.

(Medical Examinations)

- Article 25-7 (1) Employers must ensure that their Workers Engaged in Works under a Designated Dose Rate who correspond to any of the following conditions promptly receive medical examinations or treatment by medical doctors:
- (i) when the worker has received an effective dose exceeding the limit specified in paragraph (1) of Article 25-2;
 - (ii) when the worker has mistakenly inhaled or ingested Radioactive Materials Discharged by the Accident;
 - (iii) when the worker is not able to reduce the levels of contamination to 40 Bq/cm² or less by washing ; and
 - (iv) when the wound has been contaminated by radioactive materials.
- (2) Employers must immediately report to the Head of the relevant Labor Standards Inspection Office if any Workers Engaged in Works under a Designated Dose Rate correspond to the conditions in the preceding paragraph.

Section 3 Special Education

(Special Education Regarding Works under a Designated Dose Rate)

- Article 25-8 (1) When assigning Workers Engaged in Works under a Designated Dose Rate, Employers must provide special education to the workers regarding the following topics:
- (i) knowledge for effects of Ionizing Radiation on organisms and methods of exposure dose control;

- (ii) knowledge for methods and procedures of radiation measurement; and
 - (iii) related laws and ordinances.
- (2) Necessary matters for implementing the special education program of the preceding paragraph are provided by the Minister of Health, Labour and Welfare, beyond the matters specified in Article 37 and Article 38 of the Ordinance on Industrial Safety and Health.

Section 4 Investigation of Exposure History

Article 25-9 Employers must investigate exposure history (If the worker has an exposure history, information about the location, nature of work, duration, and other details concerning radiation exposures should be collected) of Workers Engaged in Works under a Designated Dose Rate at the time of employment or reassignment to Works under a Designated Dose Rate and store the records for 30 years; provided, however, that this does not apply when such records are transferred to an organization designated by the Minister of Health, Labour and Welfare, after being kept for five years or after termination or reallocation of the Workers Engaged in works under a Designated Dose Rate from their current responsibilities.

Chapter IV Miscellaneous Provisions

(Providing Radiation Measurement Instruments)

Article 26 Employers must provide radiation measurement instruments to the workers necessary to fulfill the duties specified herein; provided, however, that this does not apply if arrangements have already been made to make radiation measurement instruments available anytime.

(Transferring Records and Other Information)

Article 27 (1) Employers, who prepare and keep the records described in paragraph (2) of Article 6, paragraph (2) of Article 25-5, or Article 25-9, is to transfer such records to an organization designated by the Minister of Health, Labour and Welfare when dissolving their businesses.

(2) Employers, who prepare and keep the records described in paragraph (2) of Article 6, paragraph (2) of Article 25-5, or Article 25-9, must issue copies of records to Workers Engaged in Decontamination and Related Works or Workers under a Designated Dose Rate when dissolving their businesses or when the workers terminate their employment.

Article 28 (1) Employers, who issue the decontamination and related works ionizing radiation medical examination cards for individual workers and keep

them, are to transfer these cards to an organization designated by the Minister of Health, Labour and Welfare when dissolving their businesses.

- (2) Employers, who issue the decontamination and related works ionizing radiation medical examination cards for individual workers and keep, must issue copies of these cards to Workers Engaged in Decontamination and Related Works when dissolving their businesses or when the workers terminate their employment.

(Adjustment)

Article 29 (1) The Dose to which persons who are or were Workers Engaged in Decontamination and Related works or Workers under a Designated Dose Rate and constituting radiation workers as referred to in paragraph (1) of Article 4 of the Ionizing Radiation Ordinance or radiation workers as referred to in said paragraph are or were subjected as radiation workers at the time they are or were engaged in radiation work described in paragraph (3) of Article 2 of Ionizing Radiation Ordinance, are deemed to be doses to which they are subject during Decontamination and Related Duties or Duties under a Designated Dose Rate in Special Decontamination Areas; The Dose to which person who are or were radiation workers engaged as emergency workers of paragraph (1) of Article 7 of the Ionizing Radiation Ordinance and workers engaged in emergency works of paragraph (3) of the said Article(including the application mutatis mutandis of Article 62 of the Ionizing Radiation Ordinance)(hereinafter referred to as "emergency workers" in this paragraph) are or were subjected as emergency workers at the time they are or were engaged in duties, are deemed to be doses to which they are subject during emergency works described in paragraph (1)of Article 7of the Ionizing Radiation Ordinance are deemed to be doses to which they are subject during Decontamination and Related Duties or Duties under a Designated Dose Rate in Special Decontamination Areas; The Dose to which person who are or were the temporarily entering workers of paragraph(1) of Article 8 of the Ionizing Radiation Ordinance (including the application mutatis mutandis of Article 62 of the Ionizing Radiation Ordinance) (hereinafter referred to as "temporarily entering workers" in this paragraph) are or were subjected as temporarily entering workers at the time of them temporarily entering in the controlled areas described in paragraph (1) of Article 7 of the Ionizing Radiation Ordinance , are deemed to be doses to which they are subject during Decontamination and Related Duties or Duties under a Designated Dose Rate in Special Decontamination Areas

- (2) Doses to which current or former Workers under a Designated Dose Rate that constitute Workers Engaged in Decontamination and Related Works are or were subjected as Workers under a Designated Dose Rate when engaged in

Works under a Designated Dose Rate ,are deemed to be doses to which are subject during Duties under a Designated Dose Rate in the Special Decontamination Areas.

- (3) Doses to which current or former Workers Engaged in Decontamination and Related Works that constitute Workers under a Designated Dose Rate are or were subjected as Workers Engaged in Decontamination and Related Works when engaged in Decontamination and Related Works , are deemed to be doses to which they are subject during Duties under a Designated Dose Rate in the Special Decontamination Areas.

Article 30 The latest ionizing radiation health examination under paragraph (1) of Article 56 of the Ionizing Radiation Ordinance (limited to that provided within 6 months before the date of the transfer) that was provided to Workers Engaged in Decontamination and Related Works regularly engaged in Decontamination and Related Works, who were radiation workers as referred to in paragraph (1) of Article 4 of the Ionizing Radiation Ordinance immediately before being transferred to Decontamination and Related Works is considered to be the ionizing radiation health examination at the time of their transfer to works in another place as stipulated in paragraph (1) of Article 20.

Supplementary Provisions [Extract]

(Effective Date)

Article 1 This ordinance comes into effect from 1 January 2012.

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

(Effective Date)

Article 1 This ordinance comes into effect from 1 July 2012.

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

(Effective Date)

Article 1 This ordinance comes into effect from 1 July 2013; provided, however, that a revision of Article 57, a revision that deletes the heading of Article 61-3 and adds a heading before the said Article, a revision that adds an article subsequent to the said Article and a revision that adds a form subsequent to Form 1 and Article 6 of the Supplementary Provisions (limited to a revision that deletes the heading of the Article 29 of the Ordinance on Prevention of

Ionizing Radiation Hazards at Works to Decontaminate the Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works (Ordinance of the Ministry of Health, Labour and Welfare, No. 152, 2011) and adds a heading before the said Article and a revision that adds an article subsequent to the said Article) come into effect from the day of the enactment.

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

(Effective Date)

Article 1 This ordinance comes into effect from 1 April 2016

Form 1 (Related to Article 10)

Form 2 (Related to Article 21)

Form 3 (Related to Article 24)