

To:  
Directors  
Prefectural Labour Bureaus

From:  
Director  
Labour Standards Bureau,  
Ministry of Health, Labour and Welfare  
(Official seal omitted)

**Enforcement of the Ordinance on Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works.**

The “Ordinance on Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works” (Ordinance of Ministry of Health, Labour and Welfare No. 152 of 2011, hereinafter referred to as the “Ionizing Radiation Ordinance for Decontamination”), the “Methods, Criteria and Categories Defined by the Minister of Health, Labour and Welfare Based on Provisions of Paragraph 6 of Article 2, etc. of the Ordinance on Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works” (Public Notice of Ministry of Health, Labour and Welfare No. 468 of 2011, hereinafter referred to as the “Standard Public Notice”) and the “Special Education Rule for Decontamination and Related Works” (Public Notice of Ministry of Health, Labour and Welfare No. 469 of 2011, hereinafter referred to as the “Special Education Rule”) were today promulgated and will be enforced on 1 January 2012.

Along with full enforcement on 1 January 2012 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, hereinafter referred to as the “Act on Special Measures”), considering that the works of decontamination, etc. and the work for collecting waste, etc. will be performed with regard to the radioactive materials discharged by accident at TEPCO’s Fukushima Daiichi Nuclear Power Station associated with the Great East Japan Earthquake and limited to the radioactive materials as defined in Paragraph 2, Article 2 of the Ordinance on Prevention of Ionizing Radiation Hazards (Ordinance of Ministry of Labour No. 41 of 1972, hereinafter referred to as the “Ionizing Radiation Ordinance”), hereinafter referred to as the radioactive materials discharged by the accident, the Ionizing Radiation Ordinance for Decontamination was newly enacted to prevent health impairment to the workers from the

radioactive materials discharged by the accident in these works.

In addition, in order to more appropriately promote measures for prevention of radiation hazards in works of decontamination, etc. and work for collecting waste, etc., we established the “Guidelines on Prevention of Radiation Hazards for Workers Engaged in Decontamination Works” (Labour Standards Bureau Notification No. 1222-6 of 2011, hereinafter referred to as the “Guidelines”), which aimed at collectively providing the essence of the actions that employers should take and the provisions specified in the Industrial Safety and Health Act and other relevant laws and regulations, in addition to the provisions specified in the Ionizing Radiation Ordinance for Decontamination.

Therefore, in order for employers to appropriately implement the matters described in the Guidelines and the Ionizing Radiation Ordinance for Decontamination, we would like you to let employers know about the measures and give them instructions so that they can take measures to prevent the radiation hazards corresponding to actual situations in their workplaces, while considering the following items, and would like you to make preparations for complete enforcement of the Ionizing Radiation Ordinance for Decontamination and other measures.

## Notes

### I Objectives of Enactment

Due to the accident at TEPCO’s Fukushima Daiichi Nuclear Power Station associated with the Tohoku District Off the Pacific Ocean Earthquake That Occurred on 11 March 2011, environmental contamination has occurred resulting from the radioactive materials discharged by the accident, and thus it is deemed as an urgent challenge to quickly reduce the effects thereof on people’s health and their living environments.

In August 2011, therefore, the Act on Special Measures was approved and established and is to be fully enforced on 1 January 2012.

The Act on Special Measures defines the criteria, etc. concerning

- (1) Management of the waste contaminated by the radioactive materials, and
- (2) Measures for works, including decontamination of soil, etc., contaminated by the radioactive materials.

However, no measures have yet been taken to prevent the workers engaged in these activities from undergoing health impairment from the ionizing radiation.

The Ionizing Radiation Ordinance defines measures to be taken, on the assumption that the workers work mainly indoors under circumstances where there are radiation sources at specific places, such as in medical facilities and nuclear power plants, but defines no measures corresponding to such works as works of decontamination, etc. and work for collecting waste, etc. based on the Act on Special Measures on the assumption that the workers work outdoors in places where the radiation sources are omnipresent.

On the other hand, the Basic Principles based on the Act on Special Measures, which was approved by the Cabinet on 11 November 2011 describes that “In taking measures to respond to environmental contamination, it is an essential prerequisite to secure the safety of the workers. Therefore the employers shall pay careful attention to industrial safety and health, including

radiation protection for the workers engaged in response to environmental contamination, and shall take such measures as management of exposure doses that were received by workers engaged in radiation works and offer opportunities for the said workers to obtain knowledge of radiation protection, etc.”

We decided to establish the Ionizing Radiation Ordinance for Decontamination, a ministerial ordinance providing the measures, based on the types of works of decontamination, etc. and work for collecting waste, etc., to prevent the workers engaged in these works from undergoing health impairment due to ionizing radiation.

## II Detailed Items

### 1 Scope

#### (1) Adjustment (Related to Article 29)

The exposure doses received while engaging in radiation works as defined in Paragraph 3, Article 2 of the Ionizing Radiation Ordinance shall be considered as the doses received during the works (hereinafter referred to as the “decontamination related works”) concerning the works of decontamination, etc. or the work for collecting waste, etc. (hereinafter referred to as “decontamination and related works”), and thus this amount should be added to the exposure doses received during the decontamination related works, and then the sum of dose for individual workers should not exceed the exposure dose limits as defined in Articles 3 and 4 during the decontamination related works.

In addition, the exposure doses that were received by workers engaged in the decontamination related works before the enforcement of the Ionizing Radiation Ordinance for Decontamination should also be added.

#### (2) Ionizing Radiation Ordinance (Related to Articles 3 and 4 of Supplementary Provisions)

a Due to revision of the Ionizing Radiation Ordinance in accordance with Article 3 of the Supplementary Provisions, the “works of decontamination, etc.” as defined in Paragraph 5, Article 2 of the Ionizing Radiation Ordinance for Decontamination and the “work for collecting waste, etc.” as defined in Paragraph 7 are excluded from the “radiation works” as defined in Paragraph 3, Article 2 of the “Ionizing Radiation Ordinance” (excluding those related to Article 59-2 of the “Ionizing Radiation Ordinance”), and therefore, the Ionizing Radiation Ordinance (excluding Article 59-2) shall not be applied to those works to which the Ionizing Radiation Ordinance for Decontamination is applied.

b Regardless of “a” above, in accordance with the provision of Article 4 of the Supplementary Provisions, the Ionizing Radiation Ordinance shall be applied, after enforcement of the same as before, to the radiation works including the decontamination and related works (the radiation works as defined in Paragraph 3, Article 2 of the Ionizing Radiation Ordinance before revised) actually performed in the controlled areas as defined in Paragraph 1, Article 3 of the Ionizing Radiation Ordinance as of the date of enforcement of the Ionizing Radiation Ordinance for Decontamination.

## 2 General Provisions (Related to Chapter 1)

### (1) Basic principles (Related to Article 1)

Article 1 shall define the basic principles applicable to the entire Ionizing Radiation Ordinance for Decontamination because possibilities of stochastic effects cannot be denied even in the event that the dose received by a human body from radiation is equal to or less than the limit defined by the Ionizing Radiation Ordinance for Decontamination.

### (2) Definitions (Related to Article 2)

- a This article shall present definitions of the terms used in the Ionizing Radiation Ordinance for Decontamination.
- b Concerning the special decontamination area as defined in Paragraph 1, Article 25 of the Act on Special Measures or the intensive contamination survey areas as defined in Paragraph 1, Article 32 of the same act, which are defined in Paragraph 5 (hereinafter referred to as the “special decontamination areas, etc.”), those specified as of the date of enforcement of the Ionizing Radiation Ordinance for Decontamination shall be as listed in Attachment 1.
- c The reason why Paragraphs 6 and 7 focus only on the radioactivity concentrations of cesium 134 and cesium 137, out of the radioisotopes contained in the radioactive materials discharged by the accident, is that the effective doses by the other radioisotopes are extremely low when compared with those of cesium 134 and cesium 137, and it is considered appropriate to focus on the deposition amounts of cesium 134 and cesium 137 in future exposure dose evaluations and decontamination measures.
- d In Paragraphs 6 and 7, 10,000 Bq/kg, which is the lower limit of radioactivity concentrations of cesium 134 and cesium 137 in the removed soil and contaminated waste, shall be the lower limit of radioactivity concentrations of cesium 134 and cesium 137 belonging to the definition of the “radioactive materials” specified in Paragraph 2, Article 2 of the Ionizing Radiation Ordinance and Attached Table 1 of the Ionizing Radiation Ordinance.
- e The reason why Paragraph 7 does not include the disposal works of the removal soil or the contaminated waste (e.g., works at water/sewage facilities, incineration facilities, intermediate treatment facilities, and landfill facilities, etc.) is that significant radiation exposure from the administrated radiation source, such as sludge from sewage or incineration ash, etc., is expected in these works, which are mainly performed indoors, and thus, the Ionizing Radiation Ordinance should be applied to those works instead of the Ionizing Radiation Ordinance for Decontamination.

### (3) Method to calculate radiation concentrations in removed soil and contaminated waste (Related to Article 1 of the Standard Public Notice)

- a The “method defined by the Minister of Health, Labour and Welfare” in Paragraphs 6 and 7 shall be based on Article 1 of the Standard Public Notice.
- b The “removed soil that is expected to have the highest radioactivity concentration” in Paragraph 1, Article 1 of the Standard Public Notice shall include the removed soil in the location where the highest air dose rate was observed among air dose measurement

points of the workplace or in the locations where rainwater, mud, or soil tend to be accumulated, or in plants and their roots.

- c Several materials shall be sampled from each workplace (every 1,000 m<sup>2</sup> when the size of the workplace is larger than 1,000 m<sup>2</sup>). However, for the workplace whose size is significantly larger than 1,000 m<sup>2</sup> and where radioactivity concentrations are relatively consistent for farmland, contaminated soil and wastes, removed soil or contaminated waste, the number of materials to be sampled may be considered as at least one for every 1,000 m<sup>2</sup>.
- d The analysis method in accordance with Item 2, Paragraph 1 of the Standard Public Notice is prepared as a simplified measurement method used in the case where it is difficult to perform the analysis as defined in Item 1 of the same paragraph, and the simplified measurement procedures for radioactivity concentration are specifically defined in Attachment 6-1 of the Guideline.

### 3 Exposure dose limits and measurements (Related to Chapter 2)

#### (1) Exposure dose limits for workers engaged in decontamination and related works (Related to Paragraph 1, Article 3)

- a As for the exposure dose limits as defined in Paragraph 1, Article 3, the same exposure dose limits as those for the radiation workers as defined in Articles 4 and 6 of the Ionizing Radiation Ordinance shall be applied, based on a recommendation in 2007 (Publication 103) by the International Commission on Radiological Protection (hereinafter referred to as “ICRP”), which describes that, for the currently-exposing condition (exposure condition including a long-term condition after an emergency condition, in which the radiation source was already present when the decisions had to be made concerning control thereof), the limit of occupational exposure in a planned exposure condition (exposure condition in which the radiation source is controlled) shall be applied.
- b The equivalent dose limit for the eye lens and the equivalent dose limit for the skin shall not be defined. Because the equivalent doses for the eye lens and the skin cannot exceed their limits, respectively, if satisfying the effective dose limits as defined in Article 3, by reason that, for the eye lens, it cannot be expected that only eyes are exposed by high doses due to no presence of radiation sources having high directivities in the decontamination related works, and for the skin, it cannot be expected that the equivalent dose for the skin by beta radiation exceeds 10 times the effective dose by gamma radiation in the decontamination related works.
- c In order to appropriately perform exposure dose control for workers engaged in decontamination and related works in multiple different operation sites, the period of “five years” defined in Paragraph 1 shall start on 1 January 2012 uniformly for all the operation sites where all decontamination and related works are performed as business operation, and shall be “from 1 January 2012 to 31 December 2016”. This rule shall also be applied to employers who start decontamination and related works as business

operation during the period from 1 January 2012 to 31 December 2016, and in this case, the value obtained by multiplying the number of remaining years until 31 December 2016 from the date of start of operation by 20 mSv shall be deemed as the dose limit until 31 December 2016 as defined in Paragraph 1, based on which the related provisions shall be applied.

- d “One year” defined in Paragraph 1 shall be one year starting on the date when the period of “five years” starts and therefore, shall be “from 1 January 2012 to 31 December 2012”. Note, however, that exposure doses received after 11 March 2011 are considered as the exposure dose received on 1 January 2012, and thus this amount shall be added on the exposure dose actually received during the period from 1 January 2012 to 31 December 2012.
- e If employers employ new workers for engaging in decontamination and related works in the midst of the period of “five years”, they shall check the exposure dose history of each worker, received from the corresponding first date of the “five years” till the date prior to engaging in the decontamination and related works by using his/her record issued by his/her previous employer (if no records are available, records shall be reissued by the previous operation site).
- f Employers employing workers whose effective doses exceed 20 mSv for one year shall be required to make efforts to reduce exposure to the said workers by improving their working environment, working methods and procedures, and working time, etc. The workers engaged in decontamination and related works shall be notified of the dates of start as defined in c and d above.

(2) Exposure dose limits (Related to Paragraph 2, Article 3)

- a As for Paragraph 2, employers of workers engaged in decontamination related works shall ensure that the effective doses received by their female workers with a fetus in the time when they do not notice the pregnancy, do not exceed 5 mSv per three months under such a special condition, so as not to exceed the effective dose received by the public. Note that “5 mSv per three months” is obtained by assigning “100 mSv per 5 years” to 3-month periods.
- b The date of start of the first “3-month period” among all of the “3-month periods” shall be the same as the date of start of the “1-year period” as described in Paragraph 1. Since the date of start of the “1-year period” is “1 January”, the dates of start of the “3-month periods” shall be “1 January, 1 April, 1 July and 1 October”.
- c The workers engaged in decontamination and related works shall be notified of the dates of start described in b.
- d For females who have received doctors’ diagnoses of “having no possibility to become pregnant”, the effective dose limits shall be in accordance with Paragraph 1, while confirmation of the said diagnoses shall be based on arbitrary submission of the said medical certificates from the said females, and thus the said females shall not be obliged to submit the said medical certificates to their employers.

(3) Exposure dose limits (Related to Article 4)

It was decided that, for females who have received doctors' diagnoses of being pregnant, limits severer than those for other workers shall be applied in order to make exposure to the unborn children equivalent to or less than the public exposure.

(4) Measurement of radiation exposure doses (Related to Article 5)

- a "The dose due to external exposure received by workers engaged in decontamination related works in special decontamination areas, etc." described in Paragraph 1 shall be the external exposure dose that the workers receive when they are working at workplaces (during duty hours of the works) and shall not include the exposure dose that they receive when they are in daily life.
- b The value of 2.5  $\mu\text{Sv/h}$  described in Paragraph 2 shall be obtained by dividing 1.3 mSv per 3 months (5 mSv per year), which is the criterion for setting of a controlled area as defined in Article 3 of the Ionizing Radiation Ordinance, by 40 hours/week by 52 weeks per year, in which 40 multiplied by 52 is the working hours in one year.
- c The reason why measurement shall be performed once a month or more frequently in the case of females (excluding those having received diagnoses of no possibility of pregnancy) described in Item 1, Paragraph 2 and once every three months or more frequently in the case of other workers shall be controlled to prevent the individual exposure doses from exceeding their limits by means of calculating and recording the doses during a period that is shorter than the period to which the individual exposure dose limits are applied. For females having no possibility of exposure dose exceeding 1.7 mSv/month, however, one measurement in three months or more frequently shall be allowed due to no possibility of exposure dose exceeding 5 mSv per three months. Note that the "possibility that the effective dose received in one month exceeds 1.7 mSv" shall be determined by mere reasonable judgement from such items as the individual exposure history, the contents of the works in which the worker will be engaged, and the average ambient dose rate in the workplace.

(5) Methods of calculation of average ambient dose rate (Related to Paragraph 2, Article 5, and Article 2 of the Standard Public Notice)

- a The method of calculation of average ambient dose rate as described in Paragraph 2, Article 5 shall be as defined in Article 2 of the Standard Public Notice.
- b The estimation method described in Items 1 and 2, Article 2 of the Standard Public Notice shall define the method of calculation of the average ambient dose rate in the case where it is expected that the contamination conditions are relatively even, in such cases that the workplace is in a farmland.
- c The estimation method described in Item 3, Article 2 of the Standard Public Notice defines the method of calculation of the average ambient dose rate by use of the time average in the case where it is expected that great differences are occurring in the ambient dose rates within the workplace, and thus attention shall be paid to the following items for calculation:
  - ① The "cases where the radioactive materials discharged by the accident are concentrated at specific positions in the workplaces" shall include the areas where

rain water is collected and where the collected rain water exits in residential areas, etc., plants and their roots, locations where rainwater, mud, or soil tend to be accumulated, the structures to which small particles tend to be attached, and areas around them.

- ② In the areas where it is expected that the ambient dose rates are high, measurements shall be performed at a height of one meter above the ground (specified measurement point) at several positions per 1,000 square meters.
- ③ Calculation shall be performed for the representative individual who is expected to have the highest exposure dose.
- ④ In the case where work in the same workplace continues for two or more days, calculation shall be performed by considering the work day from which the highest exposure dose is received.

(6) Measurement of internal exposure (Related to Items 1 and 2, Paragraph 2, Article 5)

- a Item 1, Paragraph 2, Article 5 shall define obligation of measurement of internal exposure once every three months because the effective dose of internal exposure may exceed 1 mSv/year if an unprotected situation or condition without wearing a dust mask is assumed when work handling highly radioactive contaminated soil and wastes, limited to those having radioactivity concentrations exceeding 500,000 Bq/kg (Same to be applied hereinafter), is conducted at a place where the dust concentration exceeds 10 mg/m<sup>3</sup>.

Note that highly radioactive contaminated soil and wastes having radioactivity concentrations exceeding 500,000 Bq/kg shall hardly be observed out of the deliberate evacuation area and the restricted area.

- b Item 2, Paragraph 2, Article 5 shall define obligation that, in the case of works at places where the dust concentration exceeds 10 mg/m<sup>3</sup> or works handling highly radioactive contaminated soil and wastes, based on the result of assumption in “a” above, the measurement of internal exposure as described in Item 1, Paragraph 2 of the same article shall not be performed immediately but measurement of internal exposure shall be performed once every three months in the event that the reference value as defined in (7) is exceeded in the screening inspection as defined in Item 2, Paragraph 2 of the same article that is carried out when the work for the day is finished.

Even in a place where the dust concentration does not exceed 10 mg/m<sup>3</sup> and in addition, even in the case when highly radioactive contaminated soil and wastes are not handled, it shall be defined that it is desirable to perform a screening inspection if exposure to a sudden high dust concentration occurs.

- c In Paragraph 2, Article 5, it shall be determined, in accordance with the following items, whether a work is a work performed in a place where the dust concentration exceeds 10 mg/m<sup>3</sup>:

- ① In the case where stripping of topsoil, etc., grinding/chipping of asphalt/concrete surfaces, weeding, gathering/packing of removed soil, etc., disassembling of buildings/structures and the like are performed in dry conditions, those works shall be



deemed as works in places where the dust concentration exceeds  $10 \text{ mg/m}^3$ , and thus the measures as defined in the individual items, Paragraph 2, Article 5 shall be taken.

- ② Regardless of “①”, if the dust concentration is measured during work, whether the work is a work under high dust concentration shall be determined based on the measurement result. The methods of determination by measurement shall include those defined in Attachment 3 of the Guideline.

(7) Screening tests (Related to Item 2, Paragraph 2, Article 5 and Paragraph 3, Article 5)

- a Internal exposure screening tests in accordance with the methods provided by the Minister of Health, Labour and Welfare, which is described in Item 2, Paragraph 2, Article 5, shall be in conformity with Article 3 of the Standard Public Notice.
- b The reference values provided by the Minister of Health, Labour and Welfare, which are described in Paragraph 3, Article 5, shall be provided in Article 4 of the Standard Public Notice. In the same article, the criteria for the screening tests with regard to the surface density of the radioactive materials attached onto the dust mask or in the intranasal area shall be low enough to ensure that the total dose due to the internal exposure received by a worker engaged in decontamination and related works from decontamination related works in one day is well below 1 mSv when converted to a value for three months. Reference values as a guide, which were set for the judgement of screening tests, shall be as follows:
  - ① 10,000 cpm on the surface of a mask for the screening test (this is equivalent to 0.01 mSv based on the calculation using a protection coefficient of 2 instead of 3, which is normally used with severer assumption, and assuming that 50% of the radioactive materials were attached on the mask surface and the other 50% were inhaled).
  - ② 1,000 cpm (equivalent to approximately 0.03 mSv of internal effective dose) or 10,000 cpm (equivalent to approximately 0.3 mSv of internal effective dose) for the measurement of the surface density of the radioactive materials attached in the intranasal area (hereinafter referred to as the nasal smear test), which is assumed to be conducted as a secondary screening test.
- c The measures to be taken in the case where the criteria provided by the Minister of Health, Labour and Welfare, which are described in Paragraph 3, Article 5, are exceeded shall include the following methods in the event that the reference values of “b” are used for the judgment of the screening test:
  - ① In the case that the result of the test for a dust mask exceeds the reference value, the nasal smear test shall be conducted.
  - ② In the case that nasal smear test exceeds 10,000 cpm, internal exposure shall be measured once every three months. For female workers who have been clinically confirmed as having a capability to become pregnant, internal exposure shall be measured immediately when the nasal smear test exceeds the reference value.
  - ③ In the case that the nasal smear test result exceeds 1,000 cpm but is equal to 10,000 cpm or less, the results shall be recorded. In case that the nasal smear test result exceeds 1,000 cpm several times, then the internal exposure shall be measured once

every three months.

(8) Measurement of radiation exposure doses (Related to Paragraphs 4, 5 and 7 of Article 5)

- a The unit of “1 cm dose equivalent” provided for in paragraph 4 shall be used for the measurements of the dose due to external exposure. It is conservative for the measurements of the external exposure dose due to cesium 134 and cesium 137.
- b Attaching a radiation measuring instrument to the parts of the body designated in Paragraph 5 is to calculate the effective doses of workers and the equivalent doses on abdominal surfaces of female workers, based on the results of the measurement with the unit of 1 cm dose equivalent received at the said parts.
- c The methods of measurement of the internal exposure doses provided by the Minister of Health, Labour and Welfare, which is defined in Paragraph 7, shall be based on those defined in Article 6 of the Standard Public Notice.

(9) Measurement of external exposure doses in areas where the average ambient dose rates are 2.5  $\mu\text{Sv/h}$  or less (Related to Paragraph 6 of Article 5)

- a The method provided by the Minister of Health, Labour and Welfare, which is defined in Paragraph 6 of Article 5, shall be based on those defined in Article 5 of the Standard Public Notice.
- b In the case of evaluation of external exposure by use of the method as described in Item 1, Article 5 of the Standard Public Notice, since the parts where the radiation measuring instruments as defined in Paragraph 5, Article 5 are attached differ by the sex, etc., in a workplace where there are female workers engaged in decontamination related works (excluding those having received diagnoses of no possibility of pregnancy), at least one worker shall be selected respectively from among the workers who wears the radiation measuring instruments on the chest or on the abdomen.
- c In order to evaluate the external exposure dose by the method as described in Item 2, Article 5 of the Standard Public Notice, the working hours of each worker engaged in decontamination and related works shall be taken and multiplied by the average ambient dose rate, which is calculated by the method as defined in Article 2 of the Standard Public Notice, so as to obtain the external exposure dose received by each worker engaged in decontamination and related works.

(10) Confirmation, recording, etc. of dose measurement results (Related to Article 6)

- a With dose check once every three months or once a month, the workers engaged in decontamination and related works, for whom the dose for one day due to external exposure may exceed 1 mSv in the unit of 1 cm radiation dose equivalent, may receive exposure exceeding the exposure dose limit as defined in Articles 3 and 4 during the period between checks, and thus Paragraph 1 shall define obligation that the dose measurement result shall be confirmed every day. For these workers engaged in decontamination and related works, the employers shall pay attention in order to prevent exposure to a certain degree by such measures as having the workers attach a radiation measuring instrument with alarm function.
- b Considering the late stochastic somatic effect of radiation, Paragraph 2 shall define that

employers of decontamination and related works shall keep dose measurement results of their workers for 30 years. Note that the “organization designated by the Minister of Health, Labour and Welfare” will be specified separately.

- c The reason that employers of decontamination and related works shall calculate and record quarterly totals of the effective dose for their workers described in Item 1, Paragraph 2, and monthly totals of the effective dose for their female workers (except female workers who were diagnosed with no possibility of pregnancy) described in Items 2 and 3 in the same paragraph, is to control the individual exposure dose so as not to exceed the exposure dose limit, by calculating and recording the doses during a period that is shorter than the period applied to the said exposure dose limit.
- d Item 1, Paragraph 2 defines that, for those who received effective dose of 20 mSv or less in any one year during the past five years, it is not required to confirm and record the total dose during the said five-year period, but for those who received effective dose exceeding 20 mSv in any one year during the past five years, it shall be required, thereafter, to additionally confirm and record their cumulative doses from the start of the five-year period concerned.
- e As to recording described in Item 1, Paragraph 2, when employing fixed-term contract workers or temporary workers for a pre-defined period of less than three months, the exposure dose shall be determined and recorded every month.

#### 4 Measures for conducting decontamination and related works (Related to Chapter 3)

##### (1) Preliminary survey (Related to Article 7)

- a As to the decontamination and related works, since each workplace has radiation sources in different locations and each worker has a different exposure condition due to the workplace shape and the contents of works, Article 7 shall define obligation that, prior to performance of the decontamination and related works, the condition in the place of the decontamination related works, the average ambient dose rate, the radioactivity concentration values of cesium 134 and cesium 137 of the contaminated soil, etc. or removed soil to be handled in the works or of the contaminated waste shall be surveyed, and the results thereof shall be recorded.
- b The “condition in the place of the decontamination related works” described in Item 1, Paragraph 1 shall include the ground surface, grasses and trees, buildings and structures, places where rainwater gathers, and inclinations in the place of the decontamination related works, the condition around the workplace, as well as the availability of water supply, electricity, and roads to the workplace.
- c Presentation of the results of the preliminary surveys and the like to the workers as described in Paragraph 2 shall be in writing.

##### (2) Work plan (Related to Article 8)

- a The work plan shall be prepared based on the preliminary surveys as defined in Article 7.
- b The place of the “decontamination related works” as described in Item 1, Paragraph 2 shall include resting areas where the workers can smoke, eat, and drink and

contamination screening areas for a person leaving the area and for objects being taken out.

- c The “methods of decontamination related works” as described in Item 1, Paragraph 2 shall include distribution of the workers engaged in the decontamination and related works, instructions to handle machinery, work procedures, work environment, etc.
- d The “methods of measurement of exposure doses” as described in Item 2, Paragraph 2 shall include the method of measurement of average ambient dose rate, types and quantity of the radiation measuring instruments, methods of use of the radiation measuring instruments, etc.
- e The “measures to reduce exposure” as described in Item 3, Paragraph 2 shall include the ways to reduce exposure by reduction of working hours, etc., estimation of the exposure dose from the average ambient dose rate and the working hours, and setting target values for exposure dose control based on the estimates of the exposure dose.
- f The “emergency measures in the case of occurrence of occupational injury and diseases” as described in Item 5, Paragraph 2 shall include the methods to stop each piece of machinery used in decontamination related works in a safe manner, measures to prevent spread of contamination, methods of evacuation to safe places, methods of alerting, measures to aid victims, etc.

(3) Operation leaders (Related to Article 9)

- a Article 9 shall define the obligation that an operation leader shall be assigned and shall be made to direct the works in order to perform appropriate works based on the work plan as defined in Article 8 in the decontamination related works.
- b The “persons who are recognized to have the necessary ability” as described in Article 9 shall be either those who have experience in works similar to the decontamination related works and have completed the special education as defined in Article 19 or are recognized to have sufficient knowledge and skills with regard to all the subjects of the said special education, or those who have completed education that meets the following items and have completed the special education as defined in Article 19.
  - ① Decisions about work methods and distribution of workers engaged in the decontamination and related works
  - ② Methods of direction to the workers engaged in the decontamination and related works
  - ③ Measures to be taken in the case of occurrence of an abnormal situation

(4) Submission of work notice (Related to Article 10)

Since it is difficult for the labour standards inspection organization to follow the workplaces due to moving in a short time based on the characteristics of the works to decontaminate soil and wastes, Article 10 shall define the obligation that the primary employers that perform the said works in such places as within a special decontamination area (only areas where the average ambient dose rate exceeds 2.5  $\mu\text{Sv/h}$ : Set forth in Paragraph 2, Article 5) shall, in advance, submit a work notice to the Head of Labour Standards Inspection Office having jurisdiction over the region in which the operation site exists (hereinafter referred to as “the

Head of the relevant Labour Standards Inspection Office”).

(5) Medical examinations, etc. (Related to Article 11)

- a Regarding Article 11, employers of decontamination and related works shall promptly provide their workers with medical examination or treatment in such a case that radiation hazards may be caused to them.
- b “Those who have inhaled or ingested radioactive materials by mistake” described in Item 2, Paragraph 1 shall be limited to those who are expected to undergo internal exposure to a certain degree, such as those who swallowed a large amount of soil, sand, or contaminated water because they were buried in a large amount of soil and sand by accident, etc., or those who showed a contamination level over the criterion as the results of their nasal smear test, etc.

5 Preventions of contamination spreading (Related to Chapter 4)

(1) Measures for restriction of dust dispersion (Related to Article 12)

The “wetting condition” as described in Article 12 shall be a condition where the ground surface, etc. are made wet by such ways as spraying of a mist. In order to wet the objects, they should not be dampened using water applied by hoses, etc., but by spraying a mist (wetting with a mist) in order to control generation of contaminated water.

In addition, “etc.” in “making a wetting condition, etc.” shall include spraying of chemicals that have effects of restriction of dust dispersion. Note that if a mist to spray is unavailable, works shall be performed with appropriate protective equipment.

(2) Use of containers for collecting waste, etc. (Related to Article 13)

- a The “objects that are considerably difficult to put in containers” in the text of Paragraph 1 shall include large size machines, logs, or dismantled objects bigger than the container, etc.
- b The “case where necessary measures are taken to prevent the objects from dispersing or leaking” as described in the note of Paragraph 1 shall include a case where such measures are taken as covering them with plastic sheets, etc.
- c Item 2, Paragraph 2 shall intend that in works concerning transportation of removed soil or contaminated waste, the surface dose rate of the carrying vehicles with containers loaded shall be restricted based on the shielding effects of the carrying vehicles.
- d The “posting of signs” as described in Paragraph 3 shall be large enough for the unauthorized people to clearly identify, and the colors of the letters shall be clearly identifiable.
- e For the “fences” as described in Item 2, Paragraph 4, such simple ones as tapes or ropes connecting multiple colored pylons shall be allowed.

(3) Contamination screening for a person who is leaving the controlled area (Related to Article 14)

- a The “contamination screening area” as described in Paragraph 1, Article 14 shall be equipped with radiation measuring instruments used for contamination screening, facilities for decontamination, such as a washing facility, and facilities for temporary storage of contaminated waste including dust masks. The contamination screening area

- may be outdoor but shall be covered by a tent, etc. to prevent spreading of contamination.
- b The “workplaces where the decontamination and related works are performed and places around them” as described in Paragraph 1, Article 14 shall include the following places:
    - ① In principle, places nearby the boundaries between the places of the decontamination related works, which were outsourced to the employers of decontamination and related works, and other places, but if this is difficult due to the geographical features, etc., places near the boundaries shall be included.
    - ② It is allowed to place, at a certain location, a unified contamination screening area for multiple workplaces, if one employer of decontamination and related works undertakes decontamination related works in several workplaces and takes measures to prevent contamination by potentially contaminated workers or goods from spreading during movement from workplaces to the contamination screening area, such as movement using air-tight vehicles, etc. This applies to the case that several employers of decontamination and related works set and use a unified contamination screening area collectively or that the contamination screening area is set by the contractee. In such cases, regardless of ①, these contamination screening areas shall be considered as a “place near the workplaces”.
  - c “Leaving the workplace” as described in Paragraph 1, Article 14 shall not apply to a case of moving to another workplace, while taking measures to prevent spreading of contamination, such as use of an air-tight vehicle.
  - d It shall be allowed that “40 Bq/cm<sup>2</sup>” as set forth in Item 1, Paragraph 2 may be deemed equivalent to 13,000 counts/minute with a GM counter reading. If it is difficult to measure the contamination limit of 40 Bq/cm<sup>2</sup> due to a high ambient dose rate around the area, the contamination screening area shall be placed where the ambient dose rate is sufficiently low.
  - e Since it is necessary to have those persons who cannot make his/her body contamination equal to or less than 40 Bq/cm<sup>2</sup> even by his/her body washing, etc. receive medical examinations by doctors in accordance with the provision in Item 3, Paragraph 1, Article 11, the said persons shall be allowed to leave the workplaces for the medical examinations.

(4) Contamination screening of objects to be taken-out (Related to Article 15)

- a Contamination screening of “objects to be taken-out” as defined in Paragraph 1, Article 15 is not necessary for parts, such as tires, which directly touch the ground because they can be contaminated again on the driving route even after decontamination to below the contamination limit at the contamination screening area.
- b For vehicles transporting removed soil or contaminated waste, it is desirable to decontaminate and check the contamination at the unloading place of the cargo carrier areas, etc. However, if that is difficult, they may be driven back to the contamination screening area again for inspection and decontamination by covering the carrier areas, etc. with plastic sheets, etc. in order to prevent removed soil or contaminated waste from dispersing or leaking as defined in Article 13.

(5) Protective equipment (Related to Article 16)

- a The categories provided by the Minister of Health, Labour and Welfare, which are defined in Paragraph 1, Article 16 shall be set forth in Article 8 of the Standard Public Notice.
- b As to the dust collection efficiency of the dust mask as defined in Article 8 of the Standard Public Notice, it shall be an obligation to wear a hemispheric dust mask with a dust collection efficiency of 95% or more, with which a protective factor of 7 or higher can be expected, in order to make the internal exposure dose equal to or less than 1 mSv/year, even taking into account the leakage, in the case of work in which highly radioactive contaminated soil and wastes are handled at a place where the dust concentration exceeds 10 mg/m<sup>3</sup>.
- c In the event that either work in which highly radioactive contaminated soil and wastes are handled or work in a place where the dust concentration exceeds 10 mg/m<sup>3</sup> is performed, it shall be an obligation to wear a dust mask with a dust collection efficiency of 80% or more in order to realize sufficient protection.
- d In the event that work in which highly radioactive contaminated dust soil and wastes are not handled is performed in a place where the dust concentration is 10 mg/m<sup>3</sup> or less, it shall not be an obligation to wear a dust mask since calculation of the predicted value indicates that the internal exposure is 0.15 mSv/year or so at maximum. Note, however, that surgical masks, etc. shall be worn even in work, such as handling grass and trees or leaf mold, etc., to which the criteria, which are defined from the viewpoint of prevention of pneumoconiosis in Article 27 of the Ordinance on Prevention of Hazards Due to Dust (Ordinance of Ministry of Labour No. 18 of 1979) are not applied.

(6) Protective clothing, etc. (Related to Article 16)

- a The categories provided by the Minister of Health, Labour and Welfare, which are defined in Paragraph 1, Article 16 shall be in conformity with the descriptions in Article 8 of the Standard Public Notice.
- b When carrying out work in which highly radioactive contaminated soil and wastes are handled, it shall be an obligation to wear rubber gloves to prevent the spread of contamination.
- c In the event that work in which highly radioactive contaminated soil and wastes are handled is performed in a place where the dust concentration exceeds 10 mg/m<sup>3</sup>, it shall be an obligation to wear highly dust-proof protective clothing, such as whole body chemical protective clothing (e.g. air-tight Tyvek suites), in order to prevent spreading of contamination.
- d Since water is often used in decontamination related works, it shall be an obligation to wear shoes made of impermeable materials, such as rubber boots, in order to prevent penetration of contamination into human bodies and clothing and make decontamination easier in the event of contamination. Note if it is difficult to wear rubber boots, etc. due to the nature of the work, it shall be required to take measures such as covering the shoes with plastics.

(7) Prohibition of smoking, etc. (Related to Article 18)

- a Places that are not the “workplaces where the radioactive materials discharged by the accident may be inhaled or ingested” as described in Paragraph 1, Article 18 shall be basically isolated from the open air, such as inside of vehicles, etc., but if it is difficult to find such places, those places shall be allowed in the places that satisfy the following requirements. Smoking shall also be allowed outside where the following requirements are met:
- ① Highly radioactive contaminated soil and wastes do not exist in the vicinity.
  - ② All workers shall take a break simultaneously to prevent the inhalation of dust and wait for about 20 minutes after interruption of the work before eating, drinking, or smoking.
  - ③ The place shall be located on the windward side of the workplace. In the event that the workers cannot move in a windward direction, they shall not go to the downwind direction of the workplace at least.
  - ④ All workers shall take off contaminated equipment, such as gloves, dust masks, etc., before eating, drinking, or smoking and decontaminate their hands by washing, etc. Workers shall check for contamination before eating and drinking when they handled highly radioactive contaminated soil and wastes.
  - ⑤ The dust masks used during works shall be either stored in a manner that the radioactive particles do not migrate to the inner surface side of the masks or discarded. Note that, before discarding, the surface density of radioactive materials discharged by the accident on the surfaces of the masks shall be measured for screening inspections.
  - ⑥ Drinking of water during works shall be allowed only in an unavoidable case to prevent heat stroke, etc. It is necessary to move to the windward side of the workplace and to take preventive measures for contamination before drinking by taking off gloves, etc.
- b “Explicit presentation to workers” as described in Paragraph 1, Article 18 shall be performed by such methods as delivery or posting of writings.

6 Special education (Related to Chapter 5)

(1) Special education (Related to Article 19)

- a Article 19 shall define obligation to provide those workers who are engaged in decontamination and related works with special education, including subjects for knowledge and practical training necessary to appropriately take the measures as defined in the Ionizing Radiation Ordinance for Decontamination.
- b The items defined by the Minister of Health, Labour and Welfare described in Paragraph 2, Article 19 shall be in accordance with the Special Education Rule.
- c The items 1 to 4, Paragraph 1 shall be lecture courses and those in Item 5 in the same paragraph shall be practical training courses and the scope and hours for each subject shall be in accordance with Articles 2 and 3 of the special education rule.



- d With regard to the subjects in the lecture courses described in Items 1 to 4, Paragraph 1, it shall be planned to create a standard textbook.

## 7 Medical examinations (Related to Chapter 6)

### (1) Medical examinations (Related to Article 20)

- a The medical examinations as defined in Article 20 shall be performed to appropriately perform industrial health control on those employees who are engaged in decontamination and related works by continuously following the health conditions of the said employees.
- b It shall be required in paragraph 1, in principle, to perform the inspections as described in the individual Items of the same paragraph at the time of employment or reallocation, in the event that effects similar to those of ionizing radiation occur after a worker has been engaged in decontamination and related works, in order to determine whether the effects are derived from the decontamination and related works and in order to know to what degree the said worker has been affected by engagement in the said decontamination and related works.
- c “Existence and evaluation of subjective symptoms” as described in Item 1, Paragraph 1 shall be defined so that doctors can appropriately determine whether they may omit the individual inspection items as described in Items 2 to 5 of the same paragraph.
- d Paragraph 2 shall define that for the workers whose effective doses did not exceed 5 mSv in “one year”, which is one year before the year to which the date of the periodical medical examination of this time belongs (one year starting on the date specified by the employer for each operation site), and whose effective doses are not likely to exceed 5 mSv in one year, to which the date of the periodical medical examination of this time belongs, it shall be allowed, in principle, to perform only the medical examination item as defined in Item 1, Paragraph 1 in the periodical medical examinations and to perform some or all of the medical examination items as defined in Items 2 to 5 of the same paragraph only if medical doctors determine those examinations are necessary based on the results of examinations as defined in Item 1 of the same paragraph.
- e It shall be defined that it shall be allowed for the judgement of whether there is “no likelihood of exceeding 5 mSv” as described in Paragraph 2 to be made reasonably based on the exposure history of the individual and the work contents, work frequency, etc. planned for the future.
- f With regard to the investigation item as described in Item 1, Paragraph 1 and determination whether medical examination items as described in Items 2 to 5 may be omitted, refer to “Details of Investigation Items concerning Investigation of Radiation Exposure History in Medical Examinations as Defined in Article 56 of the Ordinance on Prevention of Ionizing Radiation Hazards” (Industrial Health Division Notification No. 18 of 22 June 2001).
- g For those workers who are engaged in decontamination and related works but not always engaged therein, it shall be defined that it is desirable to perform investigation and

evaluation of radiation exposure history described in Item 1, Paragraph 1, Article 20 at the time of employment or of being transferred to the work.

(2) Hearing of medical doctor's opinions on medical examination results (Related to Article 22)

Employers of decontamination and related works shall seek opinions from the medical doctor about the results of the medical examination as soon as possible in the event that, due to workers' health conditions, it is required to urgently take the measures as defined in Paragraph 1, Article 66-5 of the Industrial Safety and Health Act (Act No. 57 of 1972). The employers shall make a medical doctor record and confirm his/her opinions and observations in the field of "Doctor's opinions" on each employee's personal medical examination card.

(3) Notification of medical examination results (Related to Article 23)

"Without delay" shall intend to mean immediately after the employers received the results from medical doctors, medical examination institutions, etc. that performed medical examinations.

(4) Reports on medical examination results (Related to Article 24)

Reporting in accordance with Article 24 shall be performed regardless of the scale of business operation.

(5) Measures based on medical examinations, etc. (Related to Article 25)

a Whether "a radiation related disorder has been developed", "a radiation related disorder is suspected to have been developed ", and "a radiation related disorder may have been developed" as described in Article 25 shall be determined by the doctor who performed the medical examinations.

b The cases where "a radiation related disorder is suspected to have been developed " shall include such cases that abnormality has been recognized at present, but it is difficult to determine whether it has resulted from engagement in decontamination and related works.

c The cases where "a radiation related disorder may have been developed" shall include such cases that no abnormality has been recognized at present but a radiation hazard ailment may occur when the radiation dose equivalent, which has been received by the worker, is taken into account or that new or continuous engagement in the future in decontamination and related works may cause an impediment to occur when the worker's current health condition is taken into account.

8 Miscellaneous provisions (Related to Chapter 7)

(1) Provision of radiation measuring instruments (Related to Article 26)

Note in Article 26, "when any measures have already been taken to make radiation measuring instruments easily available anytime when needed" shall include such cases that a contract has been concluded to make radiation measuring instruments provided at the place geographically close to the operation site available anytime when needed .

(2) Delivery of records and other information (Related to Articles 27 and 28)

a For fixed-term contract workers or temporary workers engaged in decontamination and related works, at the end of their contract period, employers shall sum up the effective dose, which they received during their contract period, and determine the exposure doses

from the results, record them, and issue a copy of the records to them who are going to leave the job or to all of them if they terminate employment, in addition to the items as defined in Article 6.

- b When employers provide medical examinations for the workers who are not regularly engaged in works for decontamination and related works specified in Article 20, they shall prepare the ionizing radiation medical examination cards for decontamination and related works based on the results of the medical examinations and keep them. Employers shall issue copies of the medical examination cards to the workers who are going to leave the jobs.

#### 9 Concerning supplementary provisions

- (1) Date of enforcement (Related to Article 1 of Supplementary Provisions)

This ministerial ordinance shall be enforced on 1 January 2012.

- (2) Partial amendment to the Ordinance on Industrial Safety and Health (Related to Article 2 of Supplementary Provisions)

The decontamination and related works shall be added to works for which the special education defined by Article 36 of the Ordinance on Industrial Safety and Health is required.

The Work Notice (Form 1) of works of decontamination, etc. and the Personal Record of Medical Examination Concerning Ionizing Radiation for Decontamination and Related Works (Form 2) shall define the minimal necessary items to be described, and thus shall not prevent use of forms different there from.

- (3) Partial amendments to the Industrial Safety and Health Act and the ministerial ordinances with regard to registration and specification concerning the orders based thereon (Related to Article 5 of Supplementary Provisions)

- a The criteria for specification, the obligation of performance, etc. shall be clarified with regard to the organizations designated by the Minister of Health, Labour and Welfare, which are provided in Paragraph 2, Article 6; Article 21; Paragraph 1, Article 27; and Paragraph 1, Article 28.

- b With regard to handling of an act of endowment by an incorporated foundation, it shall be defined that it may be deemed as an article of incorporation of the said foundation based on the provisions in Article 40 of the Act on the Revision, etc. of Related Acts that Accompany the Enforcement of the Act on General Incorporated Association and General Incorporated Foundation and the Act on the Authorization, etc. of Public-interest Incorporated Associations and Public-interest Incorporated Foundation (Act No. 50 of 2006).

- (4) Partial amendment to the Enforcement Regulations of the Act on Securing the Proper Operation of Worker Dispatching Undertakings and Improved Working Conditions for Dispatched Workers (Related to Article 6 of Supplementary Provisions)

- a The employers that receive worker dispatching services and use dispatched employees (hereinafter referred to as “employers receiving worker dispatching services”) shall, without delay, create copies of the Personal Records of Medical Examination Concerning

Ionizing Radiation for Decontamination and Related Works (Form 2) that record the results of special medical examinations and the medical doctors' opinions and send them to the business operators that dispatch the said dispatched employees (hereinafter referred to as "dispatching business operators").

- b The dispatching business operators shall keep the copies of the Personal Records of Medical Examination Concerning Ionizing Radiation for Decontamination and Related Works (Form 2) sent from the employers receiving worker dispatching services for 30 years.
- c The employers receiving worker dispatching services shall offer the said special medical examinations concerning employment of the dispatched workers at the time of start of offer of services by the said workers.

(5) The Ministerial Ordinance Concerning Utilization of Information Communications Technologies for Storage, etc. of Writings Performed by Private Business Operators Based on Provisions of Laws and Regulations Governed by Ministry of Health, Labour and Welfare (Related to Article 7 of Supplementary Provisions)

For the record of the dose of a worker engaged in decontamination and related works as described in Paragraph 2, Article 6, the record of the preliminary survey prior to performance of decontamination and related works as described in Article 7, and the record of the results of medical examinations as described in Article 21, it shall be defined that electromagnetic recording, in place of writing, may be used for recording or creation and storage.

### III Others

#### 1 Supporting provisions and penal regulations

The Ionizing Radiation Ordinance for Decontamination is a ministerial ordinance that is based on Articles 22, 27, etc. of the Industrial Safety and Health Act, and thus penal regulations shall be applied. Note that the provisions, etc. that support the Ionizing Radiation Ordinance for Decontamination shall be as described in Attachment 2.

#### 2 Instructions to employers other than those of business operations in which decontamination and related works are performed

If performing decontamination and related works in their own premises, facilities, etc., the employers, other than those of decontamination and related works, shall be given instructions so that the effective doses received by the workers from the said works shall not exceed 1 mSv/year.

### IV Amendment to Relevant Notification

The following item is to be added as Note 3 to "Instructions Based on Exposure Dose of Worker Who Had Been Engaged in Emergency Works from Radiation Works Other than Emergency Works Thereafter" (Labour Standards Bureau Notification No. 0428-1 dated 28 April 2011).

"3 "1" shall be handled only by the radiation workers as defined in Paragraph 1, Article 4 of the Ordinance on Prevention of Ionizing Radiation Hazards, not by the workers engaged in decontamination and related works as described in Paragraph 2, Article 2 of the Ordinance on

Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works (Ordinance of Ministry of Health, Labour and Welfare No. 152 of 2011).”

List of special decontamination areas, etc. specified as of the date of enforcement of Ionizing Radiation Ordinance for Decontamination

## 1 Special decontamination area

- Designated areas  
Restricted area or deliberate evacuation area
- Designated areas

	Number of municipalities	Designated areas
Fukushima Prefecture	11	All areas in Naraha-town, Tomioka-town, Okuma-town, Futaba-town, Namie-town, Katsurao-village, and Iitate-village; and restricted areas or planned evacuation areas in Tamura-city, Minamisoma-city, Kawamata-town and Kawauchi-village

## 2 Intensive contamination survey areas

- Designated areas  
Areas where the dose rate is equal to 0.23  $\mu$ Sv/h or higher
- Designated areas

	Number of municipalities	Designated areas
Iwate Prefecture	3	All areas in Ichinoseki-city, Oshu-city and Hiraizumi-town
Miyagi Prefecture	8	All areas in Ishinomaki-city, Shiroishi-city, Kakuda-city, Kurihara-city, Shichikashuku-town, Ogawara-town, Marumori-town and Yamamoto-town
Fukushima Prefecture	40	All areas in Fukushima-city, Koriyama-city, Iwaki-city, Shirakawa-city, Sukagawa-city, Soma-city, Nihonmatsu-city, Date-city, Motomiya-city, Koori-town, Kunimi-town, Otama-village, Kagamiishi-town, Tenei-village, Aizubange-town, Yugawa-village, Mishima-town, Showa-village, Aizumisato-town, Nishigo-village, Izumizaki-village, Nakajima-village, Yabuki-town, Tanagura-town, Yamatsuri-town, Hanawa-town, Samegawa-village, Ishikawa-town, Tamakawa-village, Hirata-village, Asakawa-town, Furudono-town, Miharu-town, Ono-town, Hirono-town and Shinchi-town; and areas excluding restricted areas and planned evacuation areas in Tamura-city, Minamisoma-city, Kawamata-town and Kawauchi-village
Ibaraki Prefecture	20	All areas in Hitachi-city, Tsuchiura-city, Ryugasaki-city, Joso-city, Hitachiota-city, Takahagi-city, Kitaibaraki-city, Toride-city, Ushiku-city, Tsukuba-city, Hitachinaka-city, Kashima-city, Moriya-city, Inashiki-city, Hokota-city, Tsukubamirai-city, Tokai-village, Miho-village, Ami-town and Tone-town
Tochigi Prefecture	8	All areas in Sano-city, Kanuma-city, Nikko-city, Ohtawara-city, Yaita-city, Nasushiobara-city, Shioya-town and Nasu-town
Gunma Prefecture	12	All areas in Kiryu-city, Numata-city, Shibukawa-city, Annaka-city, Midori-city, Shimonita-town, Nakanojyo-town, Takayama-village, Higashiagatsuma-town, Katashina-village, Kawaba-village and Minakami-town
Saitama Prefecture	2	All areas in Misato-city and Yoshikawa-city
Chiba Prefecture	9	All areas in Matsudo-city, Noda-city, Sakura-city, Kashiwa-city, Nagareyama-city, Abiko-city, Kamagaya-city, Inzai-city and Shiroy-city
Total	102	

Supporting Provisions for the Ordinance on Prevention of Ionizing Radiation Hazard at Works to  
Decontaminate Soil and Wastes Contaminated by Radioactive Materials Resulting from the Great East  
Japan Earthquake and Related Works

The Ionizing Radiation Ordinance for Decontamination		Industrial Safety and Health Act		
Articles	Paragraphs	Supporting Provisions	Penalties (Sentence)	Penalties (Provisions)
Article 1		(Implementing ministerial ordinance)	None	
Article 2		(Implementing ministerial ordinance)	None	
Article 3		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 4		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 5	Paragraphs 1 to 6	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 7	(Implementing ministerial ordinance)	None	
	Paragraph 8	Article 27, Paragraph 1 (Related to Article 26)	A fine of 500,000 yen	Article 120, Item 1
Article 6	Paragraph 1	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 22, Item 2) Article 103, paragraph 1	Imprisonment not exceeding 6 months or a fine of 500,000 yen A fine of 500,000 yen	Article 119, Item 1 Article 120, Item 1
	Paragraph 3	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 7		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 8		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 9		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1

Article 10		Article 100, Paragraph 1	A fine of 500,000 yen	Article 120, Item 5
Article 11	Paragraph 1	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 2	Article 100, Paragraph 1	A fine of 500,000 yen	Article 120, Item 5
Article 12		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 13		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 14	Paragraphs 1 and 2	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 3	Article 27, Paragraph 1 (Related to Article 26)	A fine of 500,000 yen	Article 120, Item 1
Article 15	Paragraph 1	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 26) Article 27, Paragraph 1 (Related to Article 22, Item 2)	A fine of 500,000 yen Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 120, Item 1 Article 119, Item 1
Article 16	Paragraph 1	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 26)	A fine of 500,000 yen	Article 120, Item 1
Article 17		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 18	Paragraph 1	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 26)	A fine of 500,000 yen	Article 120, Item 1
Article 19		Article 59, Paragraph 3	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 20	Paragraph 1	Article 66, Paragraph 2	A fine of 500,000 yen	Article 120, Item 1
	Paragraph 2	(Implementing ministerial ordinance)	None	



Article 21		Article 66-3 Article 103, Paragraph 1	A fine of 500,000 yen	Article 120, Item 1
Article 22		Article 66-4	None	
Article 23		Article 66-6	A fine of 500,000 yen	Article 120, Item 1
Article 24		Article 100, Paragraph 1	A fine of 500,000 yen	Article 120, Item 5
Article 25		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 26		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 27	Paragraph 1	(Implementing ministerial ordinance)	None	
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 28	Paragraph 1	(Implementing ministerial ordinance)	None	
	Paragraph 2	Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1
Article 29		Article 27, Paragraph 1 (Related to Article 22, Item 2)	Imprisonment not exceeding 6 months or a fine of 500,000 yen	Article 119, Item 1