

Industrial Health Division Notification No. 1119-1

19 November 2013

To: Director of Labour Standards Department, Fukushima Prefectural Labour Bureau

Director of Industrial Health Division
Industrial Safety and Health Department
Labour Standards Bureau
Ministry of Health, Labour and Welfare
(Seal omitted)

**Re: Interim policy on reuse, etc. of construction by-products generated
by public construction works in Fukushima Prefecture**

Regarding the matter in the subject above, it shall be advised that the “Interim policy on reuse, etc. of construction by-products generated by public construction works in Fukushima Prefecture” was issued by the Nuclear Emergency Response Headquarters as is in the Annex.

**Interim policy on reuse, etc. of construction by-products generated by
public construction works in Fukushima Prefecture**

Team in Charge of Assisting the Lives of Disaster Victims
Nuclear Emergency Response Headquarters
Cabinet Office
Reconstruction Agency
Ministry of Health, Labour and Welfare
Ministry of Agriculture, Forestry and Fisheries
Ministry of Land, Infrastructure, Transport and Tourism
Ministry of the Environment

1. Introduction

- On 26 December 2011, the Nuclear Emergency Response Headquarters (NERH) decided the “Basic policy and issues to be challenged for rearranging the restricted areas and the evacuation areas on the basis of completion of Step 2 on the restoration plan of the TEPCO Fukushima Daiichi Nuclear Power Station(FDNPS)” and has since promoted the review of areas in order.
- In the decision, it was stipulated that restoration of infrastructure, etc., shall be conducted after reviewing evacuation areas, aiming at residents returning to and reconstructing the community, and in the future aiming at areas in which the residents are not permitted to live. Additionally, it was stipulated that the direction to be taken for restoration of infrastructure in areas where it is expected that the residents will have difficulties in returning for a long time shall be considered by discussions with the relevant parties.
- Conventionally, in the projects directly managed by the national government , it has been stipulated that recycled materials such as recycled crushed stones , recycled asphalt mixture, etc. obtained by recycling waste, shall be utilized from the viewpoint of suppressing the amount of waste generated, presupposing the safety of the structure.
- In the future, associated with commencement of full-scale operation of works for restoring infrastructure at evacuation areas, etc., based on requests, etc. of Fukushima Prefecture, the NERH has decided the basic policy on reuse and recycling (hereinafter collectively referred to as “reuse etc.”) of construction by-products generated by dismantling and repairing work, etc. of buildings, etc. contaminated by radioactive materials.

2. Basic concept of reuse etc. of construction by-products

(1) Reuse, etc. for construction work

1) Reuse, etc. of soil generated by construction, asphalt and concrete

When carrying out reuse, etc. of construction by-products, the radiation dose of the construction by-products is expected to be reduced by the contaminated surface being removed, etc. Additionally, it is not a common practice to carry out reuse, etc. at places far away from the generated place. Therefore, reuse, etc. of construction by-products shall be basically carried out at areas with a radiation dose equivalent to or higher than that at the generated place. Specifically, those generated from areas where it is expected that the residents will have difficulties in returning for a long time shall be basically reused at areas where it is expected that the residents will have difficulties in returning for a long time, and those from areas in which the residents are not permitted to live shall be reused at areas where it is expected that the residents will have difficulties in returning for a long time or areas in which the residents are not permitted to live.

Regarding construction by-products generated from areas in which evacuation orders are ready to be lifted, similar to those generated from areas with no evacuation orders, it is appropriate not to impose restrictions on the areas of their reuse, etc. from the viewpoint of promoting the reuse, etc.

2) Public construction work conducted by the national government and Fukushima Prefecture, etc.

For public construction work conducted by the national government, Fukushima Prefecture and municipalities in Fukushima Prefecture, reuse, etc. of construction by-products shall be promoted based on the policy above.

Especially, for public construction work at areas where it is expected that the residents will have difficulties in returning for a long time and areas in which the residents are not permitted to live, the radiation exposure dose for workers and residents shall be minimized by:

- i) taking measures to reduce the radiation exposure dose to the extent possible by, for instance, removing the top soil;
- ii) limiting reuse, etc. of construction by-products generated from areas where it is expected that the residents will have difficulties in returning for a long time or areas in which the residents are not permitted to live to outdoor public construction works for roads, rivers, etc.; and,
- iii) confirming that the radiation dose rate did not significantly increase because of the public construction work, by measuring the ambient dose rate before and after the work and the surface dose rate or surface counting rate of places at which construction by-products are reused.

(2) Metals and wood chips derived from construction

When carrying out reuse, etc. of contaminated metals or wood chips derived from construction, as indicated in the “Near-term policy to ensure the safety for treating and disposing contaminated waste around the site of the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company” (3 June 2011, Nuclear Safety Commission), products produced by reusing these must be confirmed to be properly controlled so that the concentration of radioactive materials is at or below the standard used for setting the clearance level (10 $\mu\text{Sv}/\text{year}$) before being distributed in the market.

Among metals and wood chips derived from construction, those from indoors are considered to be less contaminated, but attention needs to be paid to those that were placed outdoors or adjacent to outdoor areas since the occurrence of the accident on 11 March 2011.

3. Reuse etc. at areas with a radiation dose less than that of the generated area

Construction by-products generated from areas where it is expected that the residents will have difficulties in returning for a long time or areas in which the residents are not permitted to live can be reused etc. at areas with a radiation dose less than that of the generated area, if the construction by-products satisfy at least one of the conditions below.

- 1) When the radioactivity concentration of materials produced by recycling construction by-products (including soil generated by construction; hereinafter referred to as “recycled materials”) is 100 Bq/kg or below, the recycled materials are allowed to be used without any construction restrictions. The radioactivity concentration of construction by-products may be checked, for instance, by a) measuring the concentration as frequently as possible for the construction by-products produced from contaminated soil for which the maximum depth is measured and the surface is removed to the maximum depth with addition of a tolerance, and by b) measuring the concentration as comprehensively as possible.

However, as an interim measure, regarding recycled materials used for outdoor public construction work for roads, rivers, etc. at the Hama-dori and Naka-dori regions of Fukushima Prefecture, use of those with the surface dose rate of 0.23 $\mu\text{Sv}/\text{hour}$ or below is allowed. When measuring the surface dose rate, it shall be carried out as comprehensively as possible under an environment with adequately low ambient dose rate or under an environment where the effects of external radiation can be adequately shielded by, for instance, using lead shielding.

- 2) When used outdoors in conjunction with materials with a radiation shielding effect, etc. so that the additional radiation exposure dose to users and nearby residents is controlled at 10 $\mu\text{Sv}/\text{year}$ or below, for example, when used as the low-layer base coarse material and covered by a layer of soil,

etc. of 30 cm or thicker, recycled materials with 3000 Bq/kg or below can be used. In this case, it is required to appropriately maintain the site and retain the shielded state even after completion of the construction work. Additionally, when carrying out such reuse etc., the history of the generation place, etc., average radiocesium concentration, amount used, place used, etc., of the relevant recycled materials shall be recorded and shall be appropriately retained by the manager of the relevant facility.

4. Other matters

- 1) The radiation dose received by workers shall be minimized on the basis of the “as low as reasonably achievable” principle. It is required to properly manage the radiation exposure dose of workers by, for instance, strictly observing 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 that was revised to cover restoration and revitalization works other than the decontamination works.
- 2) Among construction by-products that are produced by public construction work, etc., those that are difficult to be reused shall undergo appropriate processing based on the Waste Management Act and the Act on Special Measures Concerning the Handling of Radioactive Pollution (i.e. the Act on Disaster Special Measures).
- 3) On carrying out reuse, etc. of construction by-products, the relevant laws and ordinances shall be strictly observed.
- 4) On carrying out reuse, etc. of construction by-products, when processing at a recycling facility is required, extra attention shall to be paid not to significantly raise the ambient dose rate around the relevant facility.
- 5) When carrying out dredging of harbors, rivers, etc., there is a possibility that the radioactivity concentration of the dredged soil is different from that of the soil on the ground. The surface radiation dose, etc. of the dredged soil shall be measured, and the dredged soil shall be appropriately handled so as not to raise the radiation dose received by the nearby residents of the place at which the dredged soil is placed.
- 6) From the viewpoint of further improving the propriety in promoting reuse, etc. of construction by-products, any change in the situation, etc. shall be properly addressed including reviewing of the present policy.

(Reference) Policies referred to in considering the criteria for reuse, etc.

For the criterion in **2. (2)**

The materials are expected to be distributed throughout the country, and considerations are made based on the concept of reuse in the “Near-term policy to ensure the safety for treating and disposing contaminated waste around the site of the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company” (decided by the Nuclear Safety Commission on 3 June 2011).

For the criterion in **3. 1)**

The radiocesium concentration of 100 Bq/kg, which was derived assuming the radiation dose received by the use of the relevant materials, etc. to be 10 μ Sv/year, or as put forward by the International Atomic Energy Agency (IAEA) as the exemption level, was used as the criterion.

The expert committee on shipping standards of crushed stones and gravel of the Ministry of Economy, Trade and Industry (METI) investigated the shipping standards of crushed stones and gravel, and decided that employers who produce and ship the said products can ship them if the concentration is 100 Bq/kg or below, for stone and gravel pits at the Hama-dori and Naka-dori regions of Fukushima Prefecture. However, for products used for outdoor public construction works for roads, rivers, etc. in the subject area, the expert committee adopted an interim policy allowing shipment if the surface radiation dose is 0.23 μ Sv/hour or below.

For the criteria in **3. 2)**

The policy of enabling the recycled materials to be used under the situation where the additional radiation exposure dose to users and nearby residents is controlled to be 10 μ Sv/year or below when used as base coarse material, etc. of roads, etc. in the “Recycling of disaster waste, such as concrete waste, under a controlled situation” (27 December 2011, Ministry of the Environment (MOE)) was applied.