April 22 2011

Tentative Translation

〔Attachment 1〕

GUIDELINE ON RADIATION MEASUREMENT FOR EXPORT CONTAINERS IN PORTS

Security and Emergency Management Office, Ports and Harbours Bureau

This guideline provides a measurement method of dose equivalent rate of radiation (hereafter "dose rate") for export containers in ports. Parties undertaking the measurement of dose rate for export containers are requested to use this guideline as a reference.

1. Location

In principle, measurement should take place at the terminal gate. Alternative locations may be decided in consultation with parties concerned if measurement at terminal gate is difficult.

2. Equipment

The equipment to be used for the measurement should meet the following specifications:

Type: GM, scintillator, ionization chamber and semi-conductor survey meter;

Emitter: γ ray is to be detected;

Range for detection:

Energy range: 60 keV to 1.25 Mev for γ ray detection;

Measurement range: 0.1 μ Sv/h to 10 μ Sv/h and wider for 1 cm dose equivalent rate;

Accuracy: ±20 % for ^{137}Cs;

Calibration: Proper calibration should be confirmed by a certificate of recognized organizations or their equivalent companies, inspection records by equipment supplier or copy of in-house inspection records. Annual calibration is recommended.

As some countries/regions have the criteria set by Bq/cm^2 instead of μ Sv/h, careful consideration is required in selecting the equipment.

3. Method

(1) Dose rate of container on chassis should be measured at a point 1.5m above ground level on three surfaces (aft (door), right and left), in principle, when the tractor is connected. The equipment should be placed as close as possible to the surface of the measurement point, though it should not be in contact with the surface. The measurement should take place in such a manner that the time of measurement is sufficient for the equipment to stabilize to indicate the dose rate (approximately three times the response time) and that both the maximum and minimum values for the respective point are recorded.

(2) Dose rate of container on the chassis should be measured on four surfaces (fore, aft (door), right and left), in principle, by the same manner of (1), when the tractor is removed.

The background dose rate should be read and recorded at the same time of the measurement of dose rate for container.

4. Attestation

(1) When the measurement is conducted by port authorities

When ship operators or the other parties request the port authority to conduct measurement of dose rate for export containers, port authority conducts the measurement in accordance with the measurement method provided in this guideline (chapter 3) and issues a document for attestation. The attestation is issued by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and port authority jointly, certifying the following items (refer to FORM-1)

Items: Date and Location of Measurement, Container Number, Survey Equipment (type, model), confirmation that the measurement method follows the guideline and the result of measurement.

(2) When the measurement is conducted by ship operators or other parties

When ship operators or other parties conduct measurement of dose rate for export containers by themselves and request the port authority to confirm that the manner of measurement is in accordance with the guideline, the port authority issues a document for attestation after confirming that the measurement was done properly. The attestation is issued by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and port authority jointly, certifying the following items (refer to FORM-2)

Items: Date and Location of Measurement, Container Number, Name of inspector, Survey Equipment (type, model), confirmation that the measurement method follows the guideline and the result of measurement.

5. Indicative criteria

In accordance with the IAEA technical document, IAEA-TECDOC-1162, the value to require decontamination of a container is provided as three times the measured background dose rate (Criteria of Decontamination).

In accordance with the IMDG Code, paragraph 7.1.14.12, the value to require port authorities or terminal operators to inform related organizations before decontamination is provided as 5 μ Sv/h (Criteria for Report).

6. Action to be taken when criteria are exceeded

The handling procedure for containers in which measured dose rate exceeds criteria should be provided by MLIT, port authority and all parties concerned beforehand and notified to related organizations at the beginning of measurement of dose rate for export containers in ports.

When one dose rate exceeds "Criteria of Decontamination" for a container using the measurement method defined in chapter 3, decontamination of the container should be done at the area specified by the port authority.

If the dose rate of the contaminated container falls below "Criteria of Decontamination" after decontamination, it should then be handled as a normal container. If the dose rate of the contaminated container remains above "Criteria of Decontamination" after decontamination, related organizations must be informed.

When one dose rate exceeds "Criteria for Report" for a container using the measurement

method defined in chapter 3, related organizations must be informed.

Note: Some countries or regions have schemes in place in which decontamination or detailed investigations are required when the dose rate measured at the surface of containers exceeds three times the measured background dose rate, on the grounds that containers may potentially be contaminated.

7. Miscellaneous

This guideline will be subject to change if the situation changes greatly.

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Date; YYYY/MM/DD

ATTESTATION

(For Radiation Dose Measurement)

This is to certify that ○○port authority did, at the request of ○○ Co., Ltd. Measure the radiation levels as follows;

Date of Measurement:	YYYY/MM/DD, 00:00AM
Location of Measurement:	Port of ○○, ○○Berth, ○○Container Terminal
Container Number:	ABCU12234561
Survey Equipment:	GM type Survey Meter, (○○○○ Model 123456)
Measurement Method:	The radiation measurement was implemented based on "the guideline for radiation measurement on export containers" of the Ministry of Land, Infrastructure, Transport and Tourism

I hereby attest that the following measurement results were observed.

Measurement Point	Max. Value (μSv/h)	Min. Value (μSv/h)
1. Left Surface	○. ○	○. ○
2. Right Surface	○. ○	○. ○
3. Aft (Door) Surface	○. ○	○. ○
4. Fore Surface	○. ○	○. ○

*) 4.Fore surface shall be measured only when tractor is removed.

Measurement Point	μSv/h
Background Radiation	○. ○

Hiroshi Hayashida/ Director General
Ports and Harbours Bureau
Ministry of Land, Infrastructure,
Transport and Tourism

○○○○/ Director General
Bureau of Port and Harbor
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Date; YYYY/MM/DD

ATTESTATION

(For Radiation Dose Measurement)

This is to certify that ○○port authority confirmed the radiation measurement by ○○ Co., Ltd.,. Details of the radiation measurement are as follows;

Date of Measurement:	YYYY/MM/DD, 00:00AM
Location of Measurement:	Port of ○○, ○○Berth, ○○Container Terminal
Surveyor:	○○ Co., Ltd.,
Container Number:	ABCU12234561
Survey Equipment:	GM type Survey Meter, (○○○○　Model 123456)
Measurement Method:	The radiation measurement was implemented, by ○○ Co. Ltd., based on “the guideline for radiation measurement on export containers” of the Ministry of Land, Infrastructure, Transport and Tourism

I hereby attest that the following measurement results were observed.

Measurement Point	Max. Value (μSv/h)	Min. Value (μSv/h)
1. Left Surface	○．○	○．○
2. Right Surface	○．○	○．○
3. Aft (Door) Surface	○．○	○．○
4. Fore Surface	○．○	○．○

*) 4.Fore surface shall be measured only when tractor is removed.

Measurement Point	μSv/h
Background Radiation	○．○

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