RESPONSE FROM THE IAEA SECRETARIAT TO THE PROPOSALS FROM THE RUSSIAN FEDERATION

Developing the criteria for decision making during transboundary transport of people, freights and vehicles with superficial radioactive contamination in case of a large-scale radiation accident

Managing radioactive waste generated during decontamination of people and decontamination and disposal of freights and vehicle arriving from suffering states in case of a large-scale accident

Both these topics are related and can be considered together.

Generic criteria have been developed in the draft revised safety requirements for emergency preparedness and response (DS457 – revised GS-R-2 [1]) for commodities intended for international trade as well as for vehicles, equipment and other items leaving the affected area after an emergency. These are: 1 mSv/a for international trade in commodities and 10 mSv/a for vehicles, equipment and other items leaving the area affected by an emergency. There is ongoing work on the development of guidance and operational intervention levels in support of these criteria. Technical guidance including operational intervention levels already exists with regard to the management (including decontamination) of contaminated people and other items in the aftermath of an emergency (Ref: [2-7]).

Requirement 5.22 of the BSS [8] states that “the regulatory body or other relevant authority shall establish specific reference levels for exposure due to radionuclides in commodities such as construction material, food, feed and drinking water, each of which shall typically be expressed as, or based on, an annual effective dose to the representative person generally that does not exceed a value of about 1 mSv”. This requirement does not differentiate between radioactive material present as surface contamination or incorporated within the commodity in question, between radioactive material of natural and artificial origin or between materials destined for national use or likely to be traded internationally.

No work has been initiated so far to develop further guidance material on the application of this reference level and on supporting activity concentrations to be used for existing exposure situation. However, RASSC has already identified this as an issue requiring attention.

There are extensive IAEA Safety Standards and guidance in relation to radioactive waste management. They apply for a radioactive waste irrespective of the fact how the radioactive waste was generated (Ref: [9-14]). Transboundary issues are dealt with in the framework of existing conventions, treaties and bilateral agreements [10]. Waste generated during decontamination activities that fulfils the criteria to be exempted or cleared [15] is to be managed through conventional waste streams, according to national regulations. Therefore, it is considered that this topic is already sufficiently covered.

The Agency recognizes the need to develop more detailed guidance in relation to commodities. It is therefore proposed to carry out, in cooperation with international experts, a review of existing guidance (specifically safety standards and TEDDOCs) in order to identify the extent to which these may be applicable and, consequently, the additional specific topics on which further guidance is required. The outcome of this review will be brought to RASSC and TRANSSC for discussion and advice in relation to further work. It should be noted that the development of a safety guide may not be the preferred option.
Ensuring radiation protection of the public in case of a radiation accident at a non-radiation facility (a steel mill, a carrier) leading to radioactive contamination of an area.

This topic is already covered in all relevant IAEA Safety Standards and guidance in emergency preparedness and response [1-6]. Namely, such an emergency is recognized as a radiological emergency in category IV and adequate emergency arrangements need to be put in place to deal with such an emergency, should it occur. Therefore, there is no need for further guidance as all Safety Standards and guidance in EPR relevant to category IV are applicable for such an emergency.

The safety guide “Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries” (SSG-17) was published in 2012. Chapter 6 of this safety guide deals with the remediation of contaminated areas and chapter 7 addresses the management of recovered radioactive material.

The safety guide “Remediation Process for Areas Affected by Past Activities and Accidents” (GS-G-3.1) is also relevant. This safety guide is currently under review and will be replaced in due course by the safety guide “Remediation Process for Areas with Residual Radioactive Material” (DS468).

Regulatory control of use of examination equipment which may cause additional man-induced irradiation of people

The justification of such radiation exposures is covered by the safety guide “Justification of Practices, including Non-Medical Human Imaging” (IAEA Safety Standards Series No. GSG-5). This safety guide is currently awaiting publication and is available on the IAEA website.

The regulation of such justified practices will be addressed in the safety guide “Radiation Safety of X-ray Generators and Radiation Sources Used for Inspection Purposes and for Non-Medical Imaging”. The DPP for this safety guide was approved by the Safety Standards Committees in 2013.
REFERENCES:


