

1 **DRAFT CODE OF CONDUCT ON THE TRANSBOUNDARY MOVEMENT**
2 **OF RADIOACTIVE MATERIAL INADVERTENTLY INCORPORATED**
3 **INTO SCRAP METAL AND SEMI-FINISHED PRODUCTS OF THE METAL**
4 **RECYCLING INDUSTRIES**

5
6 **FOREWORD**
7

8 Metal recycling has become an important industrial activity. The worldwide
9 consumption of scrap metal is of the order of five hundred millions of tonnes each
10 year. The presence of radioactive material in scrap metal or the semi-finished
11 products of the metal recycling industries may cause health, economic and public
12 acceptance problems. Furthermore, this industrial activity has a large international
13 dimension since there is substantial transboundary movement of scrap metal and the
14 semi-finished products of the metal recycling industries. The International Conference
15 on Control and Management of Radioactive Material Inadvertently Incorporated into
16 Scrap Metal was organized in Tarragona, Spain, in 2009 to share experiences in order
17 to contribute towards the resolution of the problems caused by the inadvertent
18 presence of radioactive material in scrap metal. Many participants considered that the
19 main problems come from importing scrap metal from other States.

20 The participants of the conference unanimously recognized “the potential benefit that
21 would result from establishing some form of binding international agreement between
22 governments to unify the approach to trans-border issues concerning scrap metal
23 containing radioactive material”.

24 In September 2009, in resolution GC(53)/RES/10, the IAEA General Conference
25 noted “the outcomes from the International Conference on Control and Management
26 of Radioactive Material Inadvertently Incorporated into Scrap Metal held in Spain in
27 February 2009, and [requested] the Secretariat to take into account the
28 recommendations of this conference”.

29 In response, the IAEA Secretariat held a Consultancy Meeting in Vienna in July 2010
30 “to develop an initial draft proposal for an international agreement concerning the
31 trans-boundary movement of scrap metal containing radioactive material”. In
32 September 2010, the IAEA General Conference requested, in resolution
33 GC(54)/RES/7, “the Secretariat to begin preparatory work on the development of a
34 non-binding international instrument, including the convening of an open-ended
35 group of technical and legal experts to undertake discussions in line with the findings
36 of the Consultancy Meeting that was held in July 2010”.

37 The first Open-ended Meeting of Technical and Legal Experts to Develop a Non-
38 Binding Instrument on the Transboundary Movement of Scrap Metal that may
39 Inadvertently Contain Radioactive Material was held in Vienna in July 2011. This
40 meeting agreed that the non-binding instrument should take the form of a Code of
41 Conduct and held initial discussions on a draft text. In resolution GC(55)/RES/9, the
42 General Conference noted “the outcomes of [the] open-ended meeting of technical
43 and legal experts ... concerning the development of a non-binding instrument on the
44 transboundary movement of scrap metal that may inadvertently contain radioactive
45 material, and [called] upon the Secretariat to proceed with the development of a Code
46 of Conduct”.

1 The second Open-ended Meeting of Technical and Legal Experts to Develop a Non-
2 Binding Instrument on the Transboundary Movement of Scrap Metal that may
3 Inadvertently Contain Radioactive Material was held in Vienna on 30 January to 3
4 February 2012. This meeting agreed the text of the draft Code and recommended that
5 the Secretariat solicit further input by circulating it and any necessary background
6 information to all Member States for comment.

7 This Code of Conduct takes account of other related developments spanning the past
8 decade or so that relate to the safety and security of radioactive sources. These
9 developments are described below.

10 A particularly important step was the development of an international undertaking on
11 the safety and security of radioactive sources. The concept of such an international
12 undertaking was highlighted in the major findings of the International Conference on
13 the Safety of Radiation Sources and the Security of Radioactive Materials held in
14 Dijon, France, in September 1998. This led to the Code of Conduct on the Safety and
15 Security of Radioactive Sources which was approved by the IAEA Board of
16 Governors in 2003 and, in resolution GC(47)/RES/7, endorsed by the General
17 Conference. The general objective of the Code of Conduct on the Safety and Security
18 of Radioactive Sources is to achieve a high level of safety and security of radioactive
19 sources that may pose a significant risk to health. These are referred to as Category 1,
20 2 and 3 sources and are defined in Annex I of the Code. The Code includes guidance
21 on general basic principles, legislation and the regulatory body, with some specific
22 guidance on the import and export of radioactive sources. In response to a request
23 from the Chairman of the Board of Governors, the matter of the import and export of
24 radioactive sources was further explored and this led to the development of further
25 guidance which is given in “Guidance on the Import and Export of Radioactive
26 Sources” to supplement the Code. A revised text was approved by the Board of
27 Governors in September 2011 and the General Conference, in resolution
28 GC(55)/RES/9, endorsed it. It is focused on those radioactive sources in Categories 1
29 and 2 of Annex I of the Code.

30 In spite of the efforts made to improve the safety and security of the radioactive
31 sources that may pose a significant risk to individuals, society and the environment,
32 such sources may still inadvertently be incorporated into scrap metal. Radioactive
33 sources in lower categories than those considered by the Code of Conduct on the
34 Safety and Security of Radioactive Sources may also present a risk to health or be the
35 source of contamination in metal recycling facilities. Furthermore, radioactive
36 material in unsealed form may be present in scrap metal, either as radionuclides of
37 natural origin or for reasons of inadequate control of radioactive material used in
38 nuclear or industrial facilities.

39 The development of internationally agreed values of activity concentration for
40 radionuclides in bulk amounts of material (commodities, in general) marked the
41 culmination of efforts spanning several years. In September 2000, the General
42 Conference requested the Secretariat “to develop, using the Agency’s radiation
43 protection advisory mechanisms and in collaboration with the competent organs of the
44 United Nations and with the specialized agencies concerned, [...] radiological criteria
45 for long-lived radionuclides in commodities, particularly foodstuffs and wood, and to
46 submit them to the Board of Governors for its approval”. Work on non-comestible
47 commodities was subsequently carried out by the Secretariat. The result of this was
48 the publication of the IAEA Safety Guide *Application of the Concepts of Exclusion,*

1 *Exemption and Clearance* (IAEA Safety Standards Series No. RS-G-1.7, Vienna,
2 2004), which provides values of activity concentration for radionuclides (both of
3 natural and of artificial origin) in bulk amounts of materials and provides guidance on
4 their application to national and international trade in commodities.

5 In September 2004, the Board of Governors approved the use of these radiological
6 criteria for radionuclides in commodities in the application of the International Basic
7 Safety Standards for Protection against Ionizing Radiation and for the Safety of
8 Radiation Sources (BSS) and encouraged Member States to make use of them, for
9 example, to facilitate trade. The Board's approval was subsequently welcomed by the
10 General Conference. These values were later incorporated into Radiation Protection
11 and Safety of Radiation Sources: International Basic Safety Standards (IAEA General
12 Safety Requirements Part 3, Vienna, 2011) and into IAEA Safety Guide, *Orphan*
13 *Sources and Other Radioactive Material in the Metal Recycling and Production*
14 *Industries* (IAEA Safety Standards Series No. SSG-17, Vienna, 2012).

15 This Code of Conduct on the Transboundary Movement of Radioactive Material
16 Inadvertently Incorporated into Scrap Metal and Semi-finished Products of the Metal
17 Recycling Industries was approved by the Board of Governors on ... In resolution ...,
18 the General Conference in September ... welcomed the adoption of the Code by the
19 Board, and endorsed the Code. It also encouraged Member States to apply the Code to
20 the recycling of scrap metal and requested the Secretariat to assist Member States in
21 the implementation of the Code within available resources. [Para. to be updated
22 following Board approval and GC endorsement.]

23 While the Code of Conduct is non-binding, the Secretariat expects that its
24 implementation will help national authorities to ensure that radioactive material that
25 has inadvertently been incorporated into scrap metal or the semi-finished products of
26 the metal recycling industries will be discovered and appropriately managed within an
27 appropriate radiation safety framework.

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1 **THE IAEA'S MEMBER STATES**

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3 Noting that radioactive sources are used throughout the world for a wide variety of
4 beneficial purposes, e.g. in industry, medicine, research, agriculture and education,

5 Noting that unsealed radioactive material may inadvertently be present in scrap metal
6 and the semi-finished products of the metal recycling industries,

7 Noting that the absence or loss of control has resulted in the incorporation of
8 radioactive material, particularly radioactive sources, into scrap metal, which has
9 sometimes resulted in serious health consequences, and that the subsequent melting of
10 radioactive material with scrap metal has sometimes led to serious economic
11 consequences and to health detriment resulting from radiation exposure,

12 Recognizing the need to protect people, property and the environment from the
13 harmful effects of ionizing radiation arising from radioactive material, whether as
14 discrete sources or in unsealed form,

15 Recognizing that there is substantial international trade in scrap metal and the semi-
16 finished products of the metal recycling industries,

17 Noting that the risks associated with radioactive material inadvertently incorporated
18 into scrap metal and the semi-finished products of the metal recycling industries
19 varies over many orders of magnitude and the occurrence of such radioactive material
20 in these industries is relatively rare,

21 Noting that the size of operations within the metal recycling industries varies widely,
22 from small facilities involving small tonnage of scrap metal to large facilities handling
23 hundreds of thousands of tonnes or more of scrap metal and therefore that a graded
24 approach is necessary with the main focus being on large facilities such as those that
25 operate shredders and melt scrap metal,

26 Recognizing that, in most cases, radioactive material that is found at a metal recycling
27 facility has been delivered by a third party without the consent or approval of the
28 affected metal recycling facility and that such facilities are not usually subject to
29 regulatory requirements for authorization for handling radioactive material,

30 Recognizing that the shielding inherent in bulk quantities of scrap metal may mask
31 the presence of radionuclides,

32 Recognizing that the risks arising from such incidents are minimized and protected
33 against through the application of appropriate radiation safety standards, including
34 administrative controls,

35 Recognizing that many States have established radiation monitoring at borders
36 primarily for the purpose of nuclear security and that such monitoring systems will
37 also detect radioactive material that has been inadvertently incorporated into scrap
38 metal or the semi-finished products of the metal recycling industry,

39 Noting that *Radiation Protection and Safety of Radiation Sources: International Basic*
40 *Safety Standards* (IAEA General Safety Requirements Part 3, Vienna, 2011) contain
41 recommendations for protection against exposure to ionizing radiation and for the
42 safety of radioactive sources, and that *Governmental, Legal and Regulatory*
43 *Framework for Safety* (IAEA General Safety Requirements Part 1, Vienna, 2010)
44 contains recommendations regarding the necessary infrastructure for safety,

1 Taking account of the provisions of the Convention on Early Notification of a Nuclear
2 Accident (1986) and of the provisions of the Convention on Assistance in the Case of
3 a Nuclear Accident or Radiological Emergency (1986) and the arrangements given in
4 the *Operations Manual for Incident and Emergency Communication* (IEComm 2012)
5 for communicating to the IAEA in emergencies,

6 Taking account of the provisions of the Joint Convention on the Safety of Spent Fuel
7 Management and on the Safety of Radioactive Waste Management (1997) that apply
8 to “radioactive waste” and disused “sealed sources” as defined therein,

9 Taking account of the guidance given in the Code of Conduct on the Safety and
10 Security of Radioactive Sources (2004), in particular those provisions relating to the
11 need for gaining or regaining control over orphan sources in Categories 1, 2 and 3,

12 Taking account of the Guidance on the Import and Export of Radioactive Sources,
13 which contains provisions relating to the import and export of Category 1 and 2
14 radioactive sources,

15 Taking account of the IAEA Safety Requirements, *Regulations for the Safe Transport*
16 *of Radioactive Material* (IAEA Safety Standards Series No. SSR-6, Vienna 2012),

17 Taking account of the guidance given in the IAEA Safety Guide, *Application of the*
18 *Concepts of Exclusion, Exemption and Clearance* (IAEA Safety Standards Series No.
19 RS-G-1.7, Vienna, 2004) and in the IAEA Safety Guide, *Control of Orphan Sources*
20 *and Other Radioactive Material in the Metal Recycling and Production Industries*
21 (IAEA Safety Standards Series No. SSG-17, Vienna, 2012),

22 Noting that the prevention and detection of, and response to, malicious acts involving
23 radioactive material are considered in the IAEA Nuclear Security Series,

24 Noting that much of the guidance in this Code could also apply to radioactive material
25 that is inadvertently present in scrap metal or semi-finished products that are not
26 subject to transboundary movement, even though such material is excluded from this
27 Code,

28 Recognizing that while finished metal products are excluded from this Code, there
29 may be circumstances where radioactive material may be inadvertently incorporated
30 into finished products. When discovered, there may be circumstances where they
31 should be managed in accordance with the objectives of this Code,

32 Recognizing that some States require additional technical guidance concerning the
33 implementation of this Code, within the metal recycling industry,

34 Recognizing the global role of the IAEA in the area of radiation safety,

35 DECIDE that the following Code of Conduct should serve as guidance to States and
36 industry for — *inter alia* — the development and harmonization of policies, laws and
37 regulations on the transboundary movement of radioactive material inadvertently
38 incorporated into scrap metal and the semi-finished products of the metal recycling
39 industries.

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1 **I. DEFINITIONS**

2 For the purposes of this Code:

3 “consignment” means a load of scrap metal or the semi-finished products of the metal
4 recycling industries destined for or delivered to an importing facility from an
5 exporting facility.

6 “export” means the physical transfer of a consignment from an exporting State to a
7 State of transit or an importing State.

8 “exporting facility” means the natural or legal person in an exporting State from
9 which an export of a consignment originates.

10 “exporting State” means the State of origin of a consignment.

11 “import” means the physical transfer of a consignment into an importing State.

12 “importing facility” means the natural or legal person in an importing State that
13 receives imports of a consignment.

14 “importing State” means the State of final destination of imports of a consignment.

15 “investigation level” means the value of a quantity such as a radiation level or count
16 rate, at or above which, an investigation should be conducted.

17 “metal recycling industries” means all those physical and legal entities involved in the
18 recycling of scrap metal, such as facilities carrying out collection, sorting and
19 processing of scrap metal, including foundries, and metallurgical operations.

20 “radiation monitoring” means the use of suitable equipment and measurement
21 methods for the detection of radiation in scrap metal and semi-finished products.

22 “radioactive material” means a radioactive source, or other material with an activity
23 concentration above the relevant value given in Annex I of this Code for purposes of
24 transboundary movement of consignments or, within its territory, as specified by the
25 regulatory body.

26 “radioactive source” means material that is: (a) permanently sealed in a capsule; or (b)
27 closely bonded and in a solid form, containing radionuclides with activity levels
28 above the relevant value given in Annex II of this Code.

29 “regulatory body” means an authority or a system of authorities designated by the
30 government of a State as having legal authority for conducting the regulatory process
31 — including the issuing of authorizations — and thereby regulating nuclear, radiation,
32 radioactive waste and transport safety.

33 “regulatory control” means any form of control or regulation applied to facilities or
34 activities by a regulatory body.

35 “safety” means the protection of people, property and the environment against
36 radiation risks, and the safety of facilities and activities that give rise to radiation risks.

37 “scrap metal” means metal that is no longer in use and is available for recycling or is
38 being recycled for reuse.

39 “semi-finished products” means initial products produced in whole or in part from
40 scrap metal through metallurgical operations.

41 “State of transit” means any State, other than the exporting State or importing State,
42 through whose territory a transboundary movement is planned or takes place.

1 “transboundary movement” means any movement of a consignment from one State to
2 or through another.

3 “visual inspection” means an attempt to recognize by sight radioactive sources and
4 their containers and the various signs, labels and placards that are used to indicate
5 their presence.

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7 **II. OBJECTIVES**

8 1. The objective of this Code is to protect people, property and the environment
9 from ionizing radiation arising from the transboundary movement of
10 radioactive material that may be inadvertently incorporated into scrap metal
11 and semi-finished products of the metal recycling industries by bringing that
12 radioactive material under regulatory control.

13 2. In particular, this Code is aimed at harmonizing the approach of States with
14 regard to:

15 (a) Discovering the presence of; and

16 (b) Handling and managing in a safe manner;

17 radioactive material that may inadvertently be present in a consignment.

18 3. This Code is intended to complement existing international legal instruments,
19 standards and guidance relating to radiation, transport and radioactive waste
20 safety.

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22 **III. SCOPE**

23 4. This Code sets out provisions for the discovery of, and response to, radioactive
24 material inadvertently incorporated into scrap metal and the semi-finished
25 products of the metal recycling industries destined for or delivered to an
26 importing State from an exporting State.

27 5. Implementation of this Code is without prejudice to the authorized movement
28 of radioactive material.

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30 **IV. IMPLEMENTATION OF THIS CODE**

31 6. Implementation of this Code should be accomplished through the development,
32 harmonization and implementation of national policies, laws, regulations,
33 guidance, and strategies, as applicable, and through the fostering of
34 international cooperation. In implementing this Code, States are encouraged to
35 make appropriate use of the IAEA’s safety standards.

36 7. Every State should encourage the metal recycling industries and national
37 authorities to cooperate in order to meet the objectives of this Code and in
38 particular, to bring any radioactive material discovered under regulatory
39 control in order to protect people, property and the environment.

40 8. Every State should adopt a graded approach according to the possible
41 radiation risks, the size of the metal recycling facility and the capabilities of
42 the operator of the facility to address the problem.

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V. POINT OF CONTACT

9. Every State should identify a point of contact or channel of communication for the purpose of facilitating communication among the exporting State, the importing State and the State(s) of transit in the event that radioactive material is discovered in a consignment. If more than one point of contact is designated by a State, the State should indicate which point of contact should be contacted under which circumstances. States are encouraged to provide the details of these points of contact or channel of communication to the IAEA.

VI. ROLE OF THE STATE

GENERAL

- 10. Every State should, in order to protect people, property and the environment, take the appropriate measures necessary to ensure, to the extent possible, that consignments do not contain radioactive material.
- 11. Every State should ensure that provisions are established regarding the responsible organizations and arrangements for dealing with the response to, and the consequences of, any discovery of radioactive material in a consignment within its territory. These provisions should be consistent with requirements for radiological emergencies, transport of radioactive material, and radioactive waste management, as appropriate.
- 12. Every State should implement provisions such that operators of metal recycling facilities are encouraged to report the discovery of radioactive material in order that appropriate action may be taken by the State to bring the material under regulatory control.
- 13. Every State should ensure that any radioactive waste arising from radioactive material that has been inadvertently incorporated into a consignment is managed in an appropriately safe manner.
- 14. Every State should encourage importing facilities to make it a contractual obligation, where appropriate, for the exporting facility to provide a radiation monitoring report with the information given in Annex III of this Code, to obtain assurance that the consignment contains no radioactive material, as far as can be ascertained.
- 15. Every State should promote cooperation and establish arrangements with relevant importing States, exporting States and State(s) of transit regarding the discovery of, and response to, the presence of radioactive material in consignments.
- 16. Every State should ensure that the appropriate personnel of facilities in the metal recycling industries, and national customs and/or border control authorities are aware:
 - (a) That radioactive material may inadvertently have been incorporated into a consignment;
 - (b) Of procedures for reviewing associated radiation monitoring reports containing the information given in Annex III of this Code; and

1 (c) Of the actions necessary to deal with the suspected presence of
2 radioactive material in a consignment.

3 17. Every State should ensure that adequate resources are available to implement
4 this Code.

5 18. Every State should, as appropriate, inform persons who may be involved in the
6 discovery of, and response to, radioactive material in consignments, such as
7 industry and government bodies, of the measures it has taken to implement
8 this Code.

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10 MANAGEMENT OF RADIOACTIVE MATERIAL DISCOVERED IN A 11 CONSIGNMENT

12 19. Every State should ensure that any radioactive material discovered in a
13 consignment within its territory, or under its jurisdiction or control, is
14 promptly brought under regulatory control and managed safely.

15 20. Every State should promptly inform potentially affected States, directly or
16 through the IAEA or through another mechanism, in the event of it becoming
17 aware that radioactive material may be present in a consignment that has been
18 dispatched.

19 21. Every importing State or State of transit should, on discovery of radioactive
20 material in a consignment, notify the exporting State without undue delay.

21 22. If the importing State or State of transit decides to return radioactive material
22 discovered in a consignment within its territory to the exporting State, the
23 importing State or State of transit should satisfy itself, insofar as practicable,
24 that the exporting State has the appropriate administrative and technical
25 capability, resources and regulatory infrastructure needed to manage the
26 radioactive material safely.

27 23. Every exporting State should allow for re-entry into its territory of any
28 radioactive material discovered in a consignment initially exported from its
29 territory.

30 24. Every State should ensure that the return of any radioactive material
31 discovered in a consignment within its territory should take place in a manner
32 consistent with existing relevant international standards relating to the safe
33 transport of radioactive material.

34 25. Each State should take appropriate measures consistent with its national law to
35 protect the confidentiality of any information that it receives in confidence
36 under this Code of Conduct from another State or through participation in an
37 activity carried out for the implementation of this Code of Conduct.

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39 VII. ROLE OF THE REGULATORY BODY

40 26. The regulatory body should:

41 (a) Liaise and coordinate with the metal recycling industries, and the
42 customs and/or border authorities, in order to ensure effective
43 cooperation in the event of the discovery of radioactive material;

- 1 (b) Assist, as necessary, in a graded manner according to the radiation risk,
2 in confirming the presence of radioactive material that has
3 inadvertently been incorporated into scrap metal or the semi-finished
4 products of metal recycling, following notification by the facility, or
5 the customs and/or border authorities or other relevant national
6 authorities;
- 7 (c) In cooperation with other relevant national authorities, develop policies
8 and strategies for the safe management of radioactive material
9 discovered in scrap metal, the semi-finished products of the metal
10 recycling industry;
- 11 (d) Liaise with regulatory bodies in other States, and relevant regional and
12 international organizations to promote cooperation, the exchange of
13 information and the harmonization of approaches concerning matters
14 within the scope of this Code;
- 15 (e) Encourage the development of radiation safety awareness and
16 appropriate training programmes for metal recycling facilities, customs
17 and/or border authorities, police and emergency response
18 organizations;
- 19 (f) As appropriate, promote or establish regulations and/or issue guidance
20 to give effect to this Code.

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22 **VIII. ROLE OF THE INDUSTRY**

- 23 27. The metal recycling industries should ensure that their own safety policies
24 give an appropriately high priority to radiation safety in furtherance of this
25 Code.
- 26 28. The metal recycling industries should ensure, to the extent practicable, that the
27 following are undertaken with respect to each consignment:
- 28 (a) If there is a history of consignments from specific exporting facilities
29 containing radioactive material, a more thorough investigation for the
30 presence of radioactive material than would normally be the case;
- 31 (b) A review of the radiation monitoring report provided by the exporting
32 facility. If no such report has been provided, a more thorough
33 investigation for the presence of radioactive material should be
34 undertaken than would normally be the case;
- 35 (c) A visual inspection of the consignment by an appropriately trained
36 person;
- 37 (d) Radiation monitoring at appropriate stages in the movement and
38 processing of scrap metal and the manufacture of semi-finished
39 products where radioactive material might be detected, including
40 entrances and exits of facilities up to and within the melting facility;
- 41 (e) Specification of the immediate safety actions to be taken in the event
42 of:
- 43 (i) Visible evidence of the presence of a radioactive source in
44 scrap metal;

- 1 (ii) An investigation level being exceeded; or
2 (iii) The presence of radioactive material in a consignment being
3 otherwise suspected;
4 (f) Specification of the procedures to confirm that radioactive material is
5 present and to control and isolate any discovered radioactive material;
6 (g) Notification to the regulatory body in the event of the discovery of
7 radioactive material in accordance with national arrangements, as
8 appropriate.
9 29. The metal recycling industries should ensure, where appropriate, that a
10 radiation monitoring report containing the information specified in Annex III
11 of this Code is provided for each consignment.
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13 **IX. ROLE OF THE IAEA**

- 14 30. The IAEA should, as appropriate and subject to the availability of funds:
15 (a) Assist States, upon their own request, in implementation of this Code;
16 (b) Collect and disseminate information on laws, regulations and technical
17 standards relating to the discovery of, and response to, radioactive
18 material inadvertently incorporated into a consignment and the safe
19 management of any radioactive material that is discovered;
20 (c) Develop and establish relevant technical standards for the purposes of
21 this Code and provide for the application of these standards at the
22 request of any State;
23 (d) Gather and disseminate lessons learned from instances involving the
24 presence of radioactive material inadvertently incorporated into a
25 consignment;
26 (e) Disseminate this Code and related information widely;
27 (f) Maintain an up-to-date list of the points of contact described in Section
28 V; and
29 (g) In particular, implement the measures approved by its policy-making
30 organs.
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ANNEX I

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Radionuclide	Activity Concentration (Bq/g)
Am-241, Ag-110m, Co-60, Cs-137, Pu-238, Pu-239, Zn-65	0.1
Cm-244, Ir-192, Nb-95, Sr-90, Tc-99, Tl-204, Zr-95, each radionuclide in the uranium and thorium decay chains	1
K-40	10
Ni-63	100
Pm-147	1000

4 A complete list of values of activity concentration for radionuclides and a
5 methodology for applying these values to material containing more than one
6 radionuclide can be found in Table I-2, and paras I-14 and I-15, respectively, of
7 *Radiation Protection and Safety of Radiation Sources: International Basic Safety*
8 *Standards* (IAEA General Safety Requirements Part 3, Vienna, 2012).

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ANNEX II

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Radionuclide	Activity (Bq)	Radionuclide	Activity (Bq)
Fe-55	1×10^6	Tm-170	1×10^6
Co-57	1×10^6	Yb-169	1×10^7
Co-60	1×10^5	Ir-192	1×10^4
Ni-63	1×10^8	Au-198	1×10^6
Ge-68	1×10^5	Tl-204	1×10^4
Se-75	1×10^6	Po-210	1×10^4
Sr-90	1×10^4	Ra-226	1×10^4
Ru-106	1×10^5	Pu-238	1×10^4
Pd-103	1×10^8	Pu-239	1×10^4
Cd-109	1×10^6	Am-241	1×10^4
Cs-137	1×10^4	Cm-244	1×10^4
Pm-147	1×10^7	Cf-252	1×10^4
Gd-153	1×10^7		

4 A complete list of values of activities for radionuclides and a methodology for
 5 applying these values to radioactive sources containing more than one radionuclide
 6 can be found in Table I-1 and para. I-7, respectively, of *Radiation Protection and*
 7 *Safety of Radiation Sources: International Basic Safety Standards* (IAEA General
 8 Safety Requirements Part 3, Vienna, 2012).

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ANNEX III

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The radiation monitoring report, provided electronically or in paper form, or any other documentation associated with a consignment, should refer to this Code and should, in particular, address the following:

- Identification of the exporting facility (name, address, telephone number, etc.);
- Identification of the importing facility (name, address, telephone number, etc.);
- (Unique) identifier of the consignment that has been monitored;
- Type and quantity of scrap metal and/or semi-finished products in the consignment;
- Details of the radiation monitoring carried out, e.g., instruments used and readings obtained; position of the monitoring equipment relative to the consignment;
- Background and investigation levels used;
- Name, signature and position of the appropriately trained person who carried out the monitoring;
- Statement that radioactive material was not discovered in the consignment prior to dispatch;
- Date and place of monitoring;