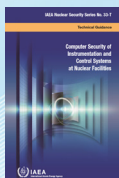


Nuclear Security



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Atoms for Peace and Development

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Website: www.iaea.org/books

Printed by the IAEA in Austria
July 2018

Nuclear Security Publications

Nuclear Security Publications Overview

Nuclear Security Fundamentals

14 IAEA Objective and Essential Elements of a State's Nuclear Security Regime
IAEA Nuclear Security Series No. 20

Recommendations

19 Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control
IAEA Nuclear Security Series No. 15

20 Nuclear Security Recommendations on Radioactive Material and Associated Facilities
IAEA Nuclear Security Series No. 14

21 Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)
IAEA Nuclear Security Series No. 13

Implementing Guides

3 Building Capacity for Nuclear Security
IAEA Nuclear Security Series No. 31-G

4 Sustaining a Nuclear Security Regime
IAEA Nuclear Security Series No. 30-G

5 Developing Regulations and Associated Administrative Measures for Nuclear Security
IAEA Nuclear Security Series No. 29-G

7 Physical Protection of Nuclear Material and Nuclear Facilities (Implementation of INFCIRC/225/Revision 5)
IAEA Nuclear Security Series No. 27-G

8 Security of Nuclear Material in Transport
IAEA Nuclear Security Series No. 26-G

9 Use of Nuclear Material Accounting and Control for Nuclear Security at Facilities
IAEA Nuclear Security Series No. 25-G

10 Risk Informed Approach for Nuclear Security Measures for Nuclear and Other Radioactive Material out of Regulatory Control
IAEA Nuclear Security Series No. 24-G

11 Security of Nuclear Information
IAEA Nuclear Security Series No. 23-G

12 Radiological Crime Scene Management
IAEA Nuclear Security Series No. 22-G

13 Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material out of Regulatory Control
IAEA Nuclear Security Series No. 21

15 Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme
IAEA Nuclear Security Series No. 19

16 Nuclear Security Systems and Measures for Major Public Events
IAEA Nuclear Security Series No. 18

23 Security of Radioactive Sources
IAEA Nuclear Security Series No. 11

24 Development, Use and Maintenance of the Design Basis Threat
IAEA Nuclear Security Series No. 10

25 Security in the Transport of Radioactive Material
IAEA Nuclear Security Series No. 9

26 Preventive and Protective Measures against Insider Threats
IAEA Nuclear Security Series No. 8

27 Nuclear Security Culture
IAEA Nuclear Security Series No. 7

32 Nuclear Forensics in Support of Investigations
IAEA Nuclear Security Series No. 2-G (Rev.1)

Technical Guidance

1 Computer Security of Instrumentation and Control Systems at Nuclear Facilities
IAEA Nuclear Security Series No. 33-T

2 Establishing a System for Control of Nuclear Material for Nuclear Security Purposes at a Facility during Use, Storage and Movement
IAEA Nuclear Security Series No. 32-T

6 Self-assessment of Nuclear Security Culture in Facilities and Activities
IAEA Nuclear Security Series No. 28-T

17 Computer Security at Nuclear Facilities
IAEA Nuclear Security Series No. 17

18 Identification of Vital Areas at Nuclear Facilities
IAEA Nuclear Security Series No. 16

22 Educational Programme in Nuclear Security
IAEA Nuclear Security Series No. 12

28 Combating Illicit Trafficking in Nuclear and Other Radioactive Material
IAEA Nuclear Security Series No. 6

29 Identification of Radioactive Sources and Devices
IAEA Nuclear Security Series No. 5

30 Engineering Safety Aspects of the Protection of Nuclear Power Plants against Sabotage
IAEA Nuclear Security Series No. 4

31 Monitoring for Radioactive Material in International Mail Transported by Public Postal Operators
IAEA Nuclear Security Series No. 3

Proceedings Series

33 International Conference on Nuclear Security: Commitments and Actions
Summary of an International Conference Held in Vienna, Austria
5–9 December 2016
Proceedings Series

TECDOC Series

34 Identification of High Confidence Nuclear Forensics Signatures
Results of a Coordinated Research Project and Related Research
IAEA TECDOC Series No. 1820

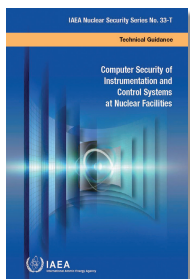
Non-Serial

35 Conducting Computer Security Assessments at Nuclear Facilities

36 Computer Security Incident Response Planning at Nuclear Facilities

37 Nuclear Security Management for Research Reactors and Related Facilities

38 Nuclear Security in the Uranium Extraction Industry



Computer Security of Instrumentation and Control Systems at Nuclear Facilities

IAEA Nuclear Security Series No. 33-T

Technical Guidance

Computer security as a discipline is challenged by increasing threat vectors targeting a dynamic technological environment. This publication establishes guidance addressing the challenge of applying computer security measures to instrumentation and control (I&C) systems at nuclear facilities. The measures are intended to protect these I&C systems throughout their entire lifecycles against malicious acts perpetrated by threat actors. The technical basis and methodologies for the application of these computer security measures are considered. The publication also addresses the application of such measures to the development, simulation and maintenance environments of these I&C systems. In addition, account is taken of developments in human factors engineering and nuclear safety. This Technical Guidance references and takes into account other IAEA Safety Guides and Nuclear Security Series publications that provide guidance relating to I&C design.

(58 pp.; 2018) • ISBN 978-92-0-103117-4 • STI/PUB/1787

€42.00

Forthcoming

Establishing a System for Control of Nuclear Material for Nuclear Security Purposes at a Facility during Use, Storage and Movement

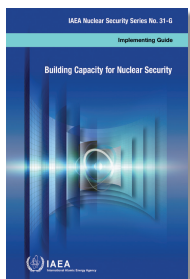
IAEA Nuclear Security Series No. 32-T

Technical Guidance

Control of nuclear material comprises the administrative and technical measures applied to ensure that nuclear material is not misused or removed from its assigned location without approval and/or without proper accounting. This publication, which builds upon the Implementing Guide IAEA Nuclear Security Series No. 25-G, focuses on the control of nuclear material during storage, use and movement using a facility's nuclear material accounting and control (NMAC) system. It describes practical measures for controlling nuclear material for nuclear security purposes during all activities at a facility, including movements, and how to use a graded approach in applying such measures. The technical guidance provided is targeted at States and their competent authorities on how to use individual elements of the NMAC system, but will be also useful for persons responsible for designing, operating and assessing nuclear security systems, physical protection of nuclear facilities, nuclear security management and staff; operations and managers of NMAC systems; as well as for those preparing associated regulations; and persons responsible for computer security at nuclear facilities.

ISBN 978-92-0-103017-7 • STI/PUB/1786

€38.00



Building Capacity for Nuclear Security

IAEA Nuclear Security Series No. 31-G

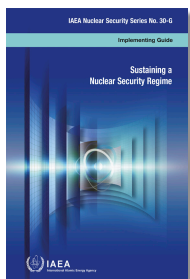
Implementing Guide

Each State has the primary responsibility to build the capacity of organizations and people in order to develop, implement, and sustain a nuclear security regime.

To discharge its responsibilities, the State has to strengthen its capacity at national, organizational and individual levels. Specifically, the State has to be able to enhance the competences and capabilities of relevant stakeholders in fulfilling their responsibilities within the nuclear security regime. Such endeavour involves various elements in capacity building, ranging from education and training to the development of a knowledge network. This publication is intended to serve as a reference document for Member States to develop a national capacity building strategy for nuclear security. It addresses all organizations involved in nuclear security and reflects the multi-disciplinary and cross-institutional nature of this task, as well as the long term efforts that are required.

(62 pp.; 2018) ISBN 978-92-0-111916-2 • STI/PUB/1764

€40.00



Sustaining a Nuclear Security Regime

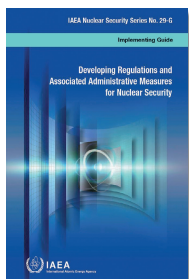
IAEA Nuclear Security Series No. 30-G

Implementing Guide

This publication addresses the sustainability of all aspects of a national nuclear security regime, including those relating to nuclear material and nuclear facilities, other radioactive material and associated facilities, and nuclear and other radioactive material out of regulatory control. The publication is relevant for States that have established a nuclear security regime as well as for States that are in the process of establishing one. It includes guidance on how to address challenges in sustaining a nuclear security regime over time. It also addresses the initial development and implementation of the regime, particularly where sustainability can be built into it as part of its design.

(26 pp.; 2018) ISBN 978-92-0-111816-5 • STI/PUB/1763

€25.00



Developing Regulations and Associated Administrative Measures for Nuclear Security

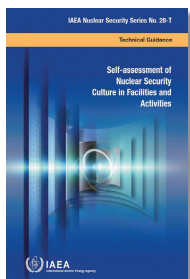
IAEA Nuclear Security Series No. 29-G

Implementing Guide

This publication aims to assist States to identify the responsibilities of those involved in nuclear security so that suitable regulations, agreements and associated administrative measures may be developed for establishing and sustaining an effective nuclear security regime. The publication is structured to provide an overview of the most important aspects to be covered by a State's legislative and regulatory framework for governing nuclear security. States may therefore use this publication to undertake a gap analysis of their legislative and regulatory framework for nuclear security in order to take actions to update their framework as necessary.

(60 pp.; 2018) • ISBN 978-92-0-111716-8 • STI/PUB/1762

€39.00



Self-assessment of Nuclear Security Culture in Facilities and Activities

IAEA Nuclear Security Series No. 28-T

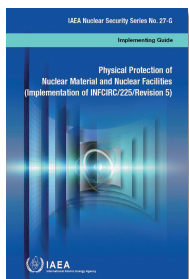
Technical Guidance

The IAEA has developed a comprehensive methodology for evaluating nuclear security culture. When implemented by a State, this methodology will help to make nuclear security culture sustainable. It will also promote cooperation and the sharing of good practices related to nuclear security culture. This publication is the first guidance for assessing nuclear security culture and analysing its strengths and weaknesses in a facility or activity, or in an organization. It reflects, within the context of assessment, the nuclear security culture model, principles and criteria set out in the Implementing Guide, IAEA Nuclear Security Series No. 7. This guidance will be useful for organizations and operating facilities in conducting the self-assessment of nuclear security culture by providing practical methods and tools for their conduct. It will also help regulatory bodies and other competent authorities to understand the self-assessment methodology used by operators, encourage operators to start the self-assessment processor or, if appropriate, conduct independent assessments of nuclear security culture.

(107 pp., 8 figs; 2017)

ISBN 978-92-0-111616-1 • STI/PUB/1761

€55.00



Physical Protection of Nuclear Material and Nuclear Facilities

(Implementation of INFCIRC/225/Revision 5)

IAEA Nuclear Security Series No. 27-G

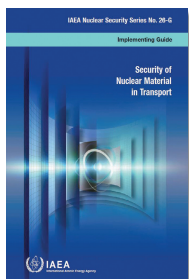
Implementing Guide

This publication is the lead Implementing Guide in a suite of guidance on implementing the Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5), IAEA Nuclear Security Series No. 13. It provides guidance and suggestions to assist States and their competent authorities in establishing, strengthening and sustaining their national physical protection regime and implementing the associated systems and measures, including operators' physical protection systems.

(120 pp., 7 figs; 2018)

ISBN 978-92-0-111516-4 • STI/PUB/1760

€46.00



Security of Nuclear Material in Transport

IAEA Nuclear Security Series No. 26-G

Implementing Guide

This publication provides guidance to States and their competent authorities on how to implement and maintain a physical protection regime for transport of nuclear material. It will also be useful to shippers or carriers in the design and implementation of their physical protection systems.

Arabic Edition (110 pp.; 2 figs; 2018)

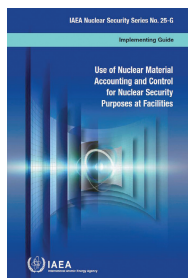
ISBN 978-92-0-604117-8 • STI/PUB/1686

€48.00

English Edition (104 pp., 2 figs; 2015)

ISBN 978-92-0-102015-4 • STI/PUB/1686

€48.00



Use of Nuclear Material Accounting and Control for Nuclear Security Purposes at Facilities

IAEA Nuclear Security Series No. 25-G

Implementing Guide

Nuclear material accounting and control (NMAC) measures are designed to protect nuclear facilities and nuclear material from adversaries such as non-State actors both inside and outside the nuclear facility. This publication focuses on measures to prevent and mitigate the risk posed by insider threats. It describes elements of a programme that can be implemented at a nuclear facility in coordination with other systems existing at the facility level, such as operations, measurements and physical protection, for the purpose of deterring and detecting unauthorized removal of nuclear material.

Arabic Edition (65 pp.; 2018)

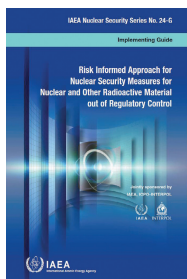
ISBN 978-92-0-609017-6 • STI/PUB/1685

€30.00

English Edition (63 pp.; 2015)

ISBN 978-92-0-101915-8 • STI/PUB/1685

€30.00



Risk Informed Approach for Nuclear Security Measures for Nuclear and Other Radioactive Material out of Regulatory Control

IAEA Nuclear Security Series No. 24-G

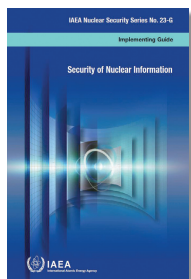
Implementing Guide

This publication provides guidance to States for developing a risk informed approach and for conducting threat and risk assessments as the basis for the design and implementation of sustainable nuclear security systems and measures for prevention of, detection of, and response to criminal and intentional unauthorised acts involving nuclear and other radioactive material out of regulatory control. It describes concepts and methodologies for a risk informed approach, including identification and assessment of threats, targets, and potential consequences; threat and risk assessment methodologies, and the use of risk informed approaches as the basis for informing the development and implementation of nuclear security systems and measures. The publication is an Implementing Guide within the IAEA Nuclear Security Series and is intended for use by national policy makers, law enforcement agencies and experts from competent authorities and other relevant organizations involved in the establishment, implementation, maintenance or sustainability of nuclear security systems and measures related to nuclear and other radioactive material out of regulatory control.

(69 pp., 11 figs; 2015)

ISBN 978-92-0-100315-7 • STI/PUB/1678

€41.00



Security of Nuclear Information

IAEA Nuclear Security Series No. 23-G

Implementing Guide

This publication provides guidance on implementing the principle of confidentiality and on the broader aspects of information security (i.e. integrity and availability). It assists States in bridging the gap between existing government and industry standards on information security, the particular concepts and considerations that apply to nuclear security and the special provisions and conditions that exist when dealing with nuclear material and other radioactive material. Specifically it seeks to assist States in the identification, classification, and assignment of appropriate security controls to information that could adversely impact nuclear security if compromised.

Arabic Edition (58 pp.; 2016)

ISBN 978-92-0-612316-4 • STI/PUB/1677

€30.00

English Edition (54 pp.; 2015)

ISBN 978-92-0-110614-8 • STI/PUB/1677

€30.00

French Edition (60 pp.; 2017)

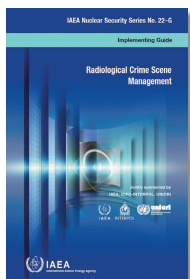
ISBN 978-92-0-204317-6 • STI/PUB/1677

€30.00

Spanish Edition (Forthcoming)

ISBN 978-92-0-305417-1 • STI/PUB/1677

€30.00



Radiological Crime Scene Management

IAEA Nuclear Security Series No. 22-G

Implementing Guide

Radiological crime scene management is the process used to ensure safe, secure, effective and efficient operations at a crime scene where nuclear or other radioactive materials are known, or suspected, to be present. Managing a radiological crime scene is a key part of responding to a nuclear security event. Evidence collection at radiological crime scenes may share a wide range of characteristics with that at conventional crime scenes, such as evidence search patterns, geographical scene modelling and evidence recording, whether or not explosives are involved. This publication focuses on the framework and functional elements for managing a radiological crime scene that are distinct from any other crime scene. It assumes that States have a capability for managing conventional crime scenes.

Arabic Edition (93 pp., 25 figs; 2017)

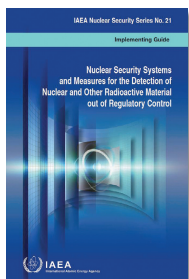
ISBN 978-92-0-604217-5 • STI/PUB/1672

€48.00

English Edition (93 pp., 25 figs; 2014)

ISBN 978-92-0-108714-0 • STI/PUB/1672

€48.00



Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material out of Regulatory Control

IAEA Nuclear Security Series No. 21

Implementing Guide

This publication provides guidance to Member States for the development, or improvement of nuclear security systems and measures for the detection of criminal or unauthorized acts with nuclear security implications involving nuclear and other radioactive material out of regulatory control. It describes the elements of an effective nuclear security detection architecture which is comprised of an integrated set of nuclear security systems and measures, and is based on an appropriate legal and regulatory framework for the implementation of the national detection strategy. The publication is an Implementing Guide within the IAEA Nuclear Security Series and is intended for use by national policy makers, legislative bodies, competent authorities, institutions, and individuals involved in the establishment, implementation, maintenance or sustainability of nuclear security systems and measures for the detection of nuclear and other radioactive material out of regulatory control.

Arabic Edition (66 pp., 3 figs; 2015)

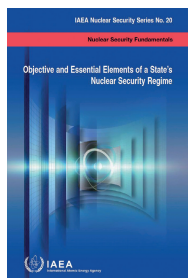
ISBN 978-92-0-605515-1 • STI/PUB/1613

€30.00

English Edition (60 pp., 3 figs; 2013)

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Objective and Essential Elements of a State's Nuclear Security Regime

IAEA Nuclear Security Series No. 20

Nuclear Security Fundamentals

This IAEA Nuclear Security Series publication provides nuclear security fundamentals, recommendations, and supporting guidance for Member States to assist them in implementing new nuclear security regimes, or in reviewing and, if necessary, strengthening existing ones. The publication is aimed at national policy makers, legislative bodies, competent authorities, institutions and individuals involved in the establishment, implementation, maintenance or sustainability of a State's nuclear security regime.

Arabic Edition (13 pp.; 2014)

ISBN 978-92-0-606114-5 • STI/PUB/1590 **€20.00**

Chinese Edition (12 pp.; 2014)

ISBN 978-92-0-505514-5 • STI/PUB/1590 **€20.00**

English Edition (15 pp.; 2013)

ISBN 978-92-0-137810-1 • STI/PUB/1590 **€20.00**

French Edition (17 pp.; 2014)

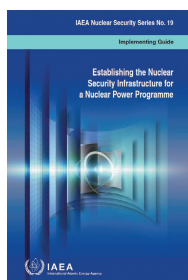
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Spanish Edition (17 pp.; 2014)

ISBN 978-92-0-307014-0 • STI/PUB/1590 **€20.00**



Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme

IAEA Nuclear Security Series No. 19

Implementing Guide

This publication provides guidance on the actions to be taken by a State in implementing an effective nuclear security infrastructure for a nuclear power programme. The topics covered are: development of national policy and strategy; common nuclear security measures; infrastructure issues relating to nuclear and other radioactive material; associated facilities; and cooperation with other States. The guidance provided is intended primarily for use by national policy makers, national legislators, competent authorities, institutions and individuals involved in the establishment, implementation, maintenance or sustainability of the nuclear security infrastructure for a nuclear power programme.

Arabic Edition (79 pp., 1 fig.; 2015)

ISBN 978-92-0-609515-7 • STI/PUB/1591

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English Edition (73 pp., 1 fig.; 2013)

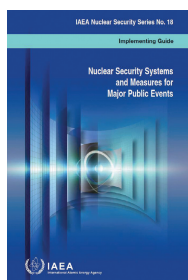
ISBN 978-92-0-138010-4 • STI/PUB/1591

€29.00

French Edition (89 pp., 1 fig.; 2018)

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€29.00



Nuclear Security Systems and Measures for Major Public Events

IAEA Nuclear Security Series No. 18

Implementing Guide

This publication provides an overview, based on practical experience and lessons learned, for establishing nuclear security systems and measures for major public events. It covers technical and administrative nuclear security measures for developing the necessary organizational structure, developing plans, strategies and concepts of operations, and making arrangements for implementing the developed plans, strategies and concepts.

Arabic Edition (60 pp., 14 figs; 2016)

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€30.00

English Edition (56 pp., 14 figs; 2012)

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€30.00

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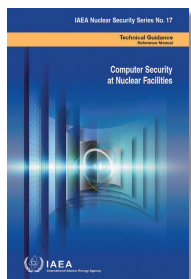
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Spanish Edition (62 pp., 14 figs; 2018)

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€30.00



Computer Security at Nuclear Facilities

IAEA Nuclear Security Series No. 17

Technical Guidance

This publication provides guidance specific to nuclear facilities on implementing a computer security programme and evaluating existing programmes. The use of computer systems to cover an increasing range of functions at nuclear facilities introduces new vulnerabilities that could seriously endanger nuclear security if not addressed in a rigorous and balanced manner. Digital systems are increasingly being introduced in safety, safety related and security systems throughout facilities. Non-availability or malfunction of these systems can seriously impact nuclear safety and security, and potentially facilitate sabotage of the facility and/or theft of material. Computer security must, therefore, be a key component of overall facility security.

Arabic Edition (76 pp., 7 figs; 2013)

ISBN 978-92-0-642210-6 • STI/PUB/1527

€33.00

Chinese Edition (62 pp., 7 figs; 2012)

ISBN 978-92-0-536110-9 • STI/PUB/1527

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English Edition (69 pp., 7 figs; 2011)

ISBN 978-92-0-120110-2 • STI/PUB/1527

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French Edition (75 pp., 7 figs; 2013)

ISBN 978-92-0-237010-4 • STI/PUB/1527

€33.00

Russian Edition (80 pp., 7 figs; 2012)

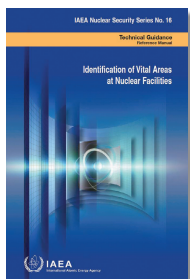
ISBN 978-92-0-435510-9 • STI/PUB/1527

€33.00

Spanish Edition (75 pp., 7 figs; 2013)

ISBN 978-92-0-337310-4 • STI/PUB/1527

€33.00



Identification of Vital Areas at Nuclear Facilities

IAEA Nuclear Security Series No. 16

Technical Guidance

This publication provides detailed guidance with regard to the identification of vital areas at nuclear facilities. It presents a structured approach to identifying those areas that contain equipment, systems and components to be protected against sabotage. The process for selection of a specific set of vital areas to be protected is based on consideration of the potential radiological consequences of sabotage, and on the design, operational and safety features of a nuclear facility. The method builds upon safety analysis to develop logic models for sabotage scenarios that could cause unacceptable radiological consequences. The sabotage actions represented in the logic models are linked to the areas from which they can be accomplished. The logic models are then analysed to determine areas that should be protected to prevent these unacceptable radiological consequences. The publication is part of a set of supporting publications in the IAEA Nuclear Security Series with the aim of assisting States in the design, implementation and evaluation of their physical protection systems for nuclear material and nuclear facilities.

English Edition (37 pp., 2 figs; 2013)

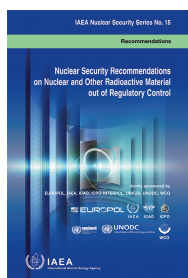
ISBN 978-92-0-114410-2 • STI/PUB/1505

€22.00

French Edition (39 pp., 2 figs; 2016)

ISBN 978-92-0-210915-5 • STI/PUB/1505

€22.00



Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control

IAEA Nuclear Security Series No. 15

Recommendations

This publication presents recommendations for the nuclear security of nuclear and other radioactive material that is out of regulatory control. It is based on national experience and practices and guidance publications in the field of security as well as the nuclear security related international instruments. The recommendations include guidance for States with regard to the nuclear security of nuclear and other radioactive material that has been reported as being out of regulatory control as well as of material that is lost, missing or stolen but has not been reported as such, or has been otherwise discovered. In addition, these recommendations adhere to the detection and assessment of alarms and alerts and to a graded response to criminal or unauthorized acts with nuclear security implications.

Arabic Edition (34 pp.; 2012)

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Chinese Edition (32 pp.; 2011)

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English Edition (33 pp.; 2011)

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French Edition (38 pp.; 2012)

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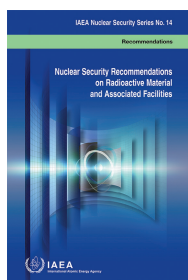
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€23.00

Spanish Edition (51 pp.; 2012)

ISBN 978-92-0-324410-7 • STI/PUB/1488

€23.00



Nuclear Security Recommendations on Radioactive Material and Associated Facilities

IAEA Nuclear Security Series No. 14

Recommendations

The purpose of this publication is to provide guidance to States and competent authorities on how to develop or enhance, implement and maintain a nuclear security regime for facilities dealing with radioactive material and associated activities. This is to be achieved through the establishment or improvement of their capabilities to implement a legislative and regulatory framework to address the security of radioactive material, and of associated facilities and activities, in order to reduce the likelihood of malicious acts involving such material. These recommendations reflect a broad consensus among States on the requirements which should be met for the security of radioactive material, and associated facilities and activities.

Arabic Edition (30 pp.; 2011)

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Chinese Edition (25 pp.; 2012)

ISBN 978-92-0-524010-7 • STI/PUB/1487 €22.00

English Edition (27 pp.; 2011)

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French Edition (29 pp.; 2012)

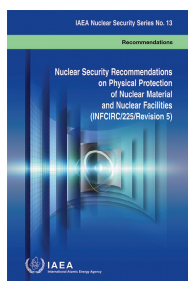
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Russian Edition (35 pp.; 2011)

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Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities

(INFCIRC/225/Revision 5)

IAEA Nuclear Security Series No. 13

Recommendations

This publication, the fifth revision of Nuclear Security Recommendation on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225), is intended to provide guidance to States and their competent authorities on how to develop or enhance, implement and maintain a physical protection regime for nuclear material and nuclear facilities, through the establishment or improvement of their capabilities to implement legislative and regulatory programmes. The recommendations presented in this publication reflect a broad consensus among IAEA Member States on the requirements which should be met for the physical protection of nuclear materials and nuclear facilities.

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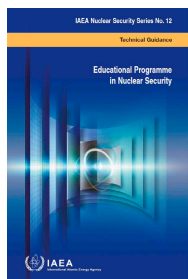
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Educational Programme in Nuclear Security

IAEA Nuclear Security Series No. 12

Technical Guidance

Higher education plays an essential role in nuclear security capacity building. It ensures the availability of experts able to provide the necessary competencies

for effective national nuclear security oversight of nuclear and other radioactive material and to establish and maintain an appropriate nuclear regime in a State. This publication presents both the theoretical knowledge and the practical skills necessary to meet the requirements described in the international framework for nuclear security. Emphasis is placed on the implementation of these requirements and recommendations in States. On the basis of this guidance, a university should be able to develop its own academic programme tailored to suit State specific educational needs in the area of nuclear security and to meet national requirements.

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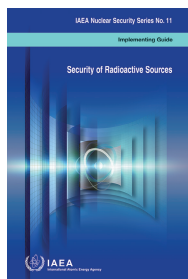
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Implementing Guide

There are concerns that terrorist or criminal groups could gain access to high activity radioactive sources and use these sources maliciously. The IAEA is

working with Member States to increase control, accounting and security of radioactive sources to prevent their malicious use and the associated potential consequences. Based on extensive input from technical and legal experts, this Implementing Guide sets forth guidance on the security of sources and will serve as a useful tool for legislators and regulators, physical protection specialists, and facility and transport operators, as well as for law enforcement officers.

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This publication provides guidance on how to develop, use and maintain a design basis threat (DBT). It is intended for decision makers from organizations with roles and responsibilities for the development, use and maintenance of the DBT. This Implementing Guide describes a DBT; identifies and recommends the roles and responsibilities of organizations that should be involved in the development, use and maintenance of a DBT; describes how to conduct a national threat assessment as a precursor to a DBT; explains how a DBT can be developed; explains how a DBT is incorporated into a State's nuclear security regime; and explains the conditions for review of the DBT, and how the review and update are conducted.

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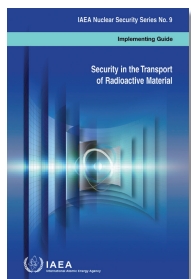
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Security in the Transport of Radioactive Material

IAEA Nuclear Security Series No. 9

Implementing Guide

This publication addresses the vulnerability of radioactive material during transport. Given the international concern over acts of nuclear terrorism, it is imperative to have a well defined plan for the security of sensitive materials during transport. This publication provides guidance on implementing, maintaining or enhancing a State's nuclear security regime to protect radioactive material in transport against theft, sabotage or other malicious acts. It will be of use to regulators and to operating personnel engaged in the transport of such material.

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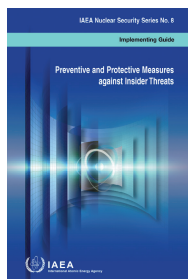
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Preventive and Protective Measures against Insider Threats

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Implementing Guide

This Implementing Guide presents a comprehensive methodology for the development of preventive and protective measures against insider threats to nuclear facilities and nuclear material transport operations of all types. Institutional insiders who are privy to the inner workings of security systems present a unique challenge to the establishment of effective control systems for nuclear material. They generally possess access rights which, together with their authority and knowledge of facilities, grant them far greater opportunity than any outsider to bypass dedicated physical protection elements or other provisions such as safety systems and operating procedures. Furthermore, insiders, as trusted persons, are capable of methods of defeat that are not available to outsiders. This publication provides guidance and measures for reducing these and other risks posed by insiders.

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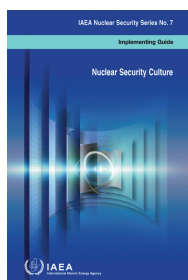
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Implementing Guide

This publication defines the basic concepts and elements of nuclear security culture, with the aim of providing Member States with international consensus guidance on planning and implementing a programme to improve nuclear security culture. Particular emphasis is placed on areas such as regulation, government institutions and general public awareness. The publication provides an overview of the necessary attributes of an effective nuclear security culture and emphasizes that its success is ultimately dependent on individuals: policy makers, regulators, managers, individual employees and, to a certain extent, members of the general public. Practical methods to assess and improve the effectiveness of security culture are also included.

Arabic Edition (43 pp., 2 figs; 2012)

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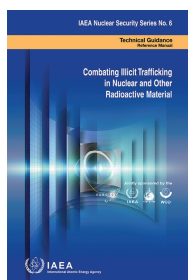
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Combating Illicit Trafficking in Nuclear and Other Radioactive Material

IAEA Nuclear Security Series No. 6

Technical Guidance

This publication is intended for individuals and organizations that may be called upon to deal with the detection of and response to criminal or unauthorized acts involving nuclear or other radioactive material. It will also be useful for legislators, law enforcement agencies, government officials, technical experts, lawyers, diplomats and users of nuclear technology. In addition, the manual emphasizes the international initiatives for improving the security of nuclear and other radioactive material, and considers a variety of elements that are recognized as being essential for dealing with incidents of criminal or unauthorized acts involving such material.

Chinese Edition (140 pp., 23 figs; 2012)

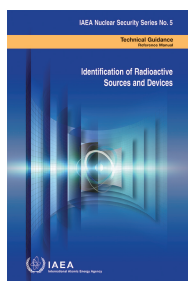
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Identification of Radioactive Sources and Devices

IAEA Nuclear Security Series No. 5

Technical Guidance

This manual has been produced as part of the IAEA's Action Plan for the Safety of Radiation Sources and Security of Radioactive Material. It is intended to:

assist in the recognition and identification of objects thought to be radioactive devices, sources and transport packages; provide instruction on what to do and how to obtain further help; enhance awareness of the existence of radioactive devices, sources and transport packages; and provide information on the International Catalogue of Sealed Radioactive Sources and Devices through regulatory authorities in IAEA Member States. It will also help in identifying sources involved in events that are reported for inclusion in the IAEA's Illicit Trafficking Database.

Chinese Edition (140 pp., 148 figs; 2011)

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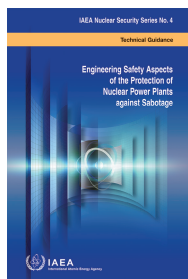
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Engineering Safety Aspects of the Protection of Nuclear Power Plants against Sabotage

IAEA Nuclear Security Series No. 4

Technical Guidance

This publication provides guidelines for evaluating the engineering safety aspects of the protection of nuclear power plants against sabotage. The guidance, which is the result of extensive dialogue among safety and security specialists, takes into account the existing robustness of structures, systems and components and emphasizes those aspects of sabotage protection that work synergistically with the protection against extreme external occurrences of accidental origin, such as earthquakes, tornadoes and human induced events. The report introduces a defence in depth approach to sabotage protection, with layers comprising safety and security related systems and activities, and promotes self-assessment by the licensee in cooperation with the competent authorities.

Chinese Edition (56 pp., 1 fig.; 2012)

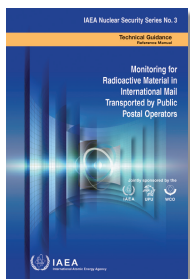
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Monitoring for Radioactive Material in International Mail Transported by Public Postal Operators

IAEA Nuclear Security Series No. 3

Technical Guidance

The illegal transport of conventional explosives and biological material has been observed in public mail and could lead to serious health hazards. In response to Member State requests to establish guidance on detecting the movement of radioactive material in international mail, the IAEA and the Universal Postal Union (UPU) undertook a joint effort to prepare this publication. It considers how radioactive materials in international mail might be detected, how best to monitor for these materials in mail facilities and how to respond appropriately. This publication provides a concise but comprehensive description of the various techniques and equipment used to detect and control radioactive material during mail processing.

Chinese Edition (38 pp., 4 figs; 2012)

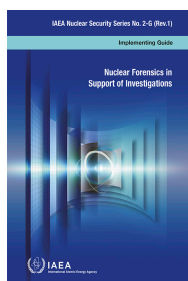
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Nuclear Forensics in Support of Investigations

IAEA Nuclear Security Series No. 2-G (Rev.1)

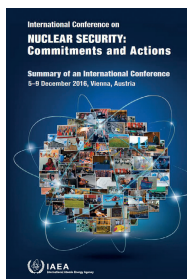
Implementing Guide

This publication is a revision of IAEA Nuclear Security Series No. 2, Nuclear Forensics Support, which was published in 2006. Since then, there has been substantive expansion and confidence in the application of nuclear forensics globally to effectively counter the threat of nuclear and other radioactive materials out of regulatory control. Most significantly, nuclear forensics has been applied in response to a number of incidents involving the illicit trafficking of highly enriched uranium and plutonium. The essential lessons learned from these experiences are incorporated in the revised publication to update the procedures and methods used in the conduct of a nuclear forensic examination as well as stress the importance of international cooperation.

(80 pp., 2 figs; 2015)

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International Conference on Nuclear Security: Commitments and Actions

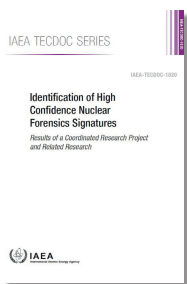
*Summary of an International
Conference Held in Vienna, Austria
5–9 December 2016*

Proceedings Series

This publication presents the proceedings of an international conference in the field of nuclear security, which took place at the IAEA Headquarters in Vienna from 5–9 December 2016. The conference was convened to discuss the international community's experiences and achievements in strengthening nuclear security, to enhance understanding of current approaches to nuclear security worldwide, to identify trends and to provide an inclusive forum at which ministers, policy makers, senior officials and nuclear security experts could formulate and exchange views on future directions and priorities for nuclear security. The publication contains the President's summary of the conference, a summary of the ministerial segment, the full text of the ministerial declaration adopted by the conference, statements from the opening and closing sessions, an outline of the conference programme and a list of invited contributions. For the first time, the IAEA invited students and young professionals to submit an essay on a topic related to the conference for review by a panel of international judges. The three winning essays are reproduced in this publication. The attached CD-ROM contains the full conference programme, the list of conference participants, the national statements from the ministerial segment, and a selection of papers and presentations from the conference.

(84 pp.; 2017) • ISBN 978-92-0-107017-3 • STI/PUB/1794

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Identification of High Confidence Nuclear Forensics Signatures

Results of a Coordinated Research Project and Related Research

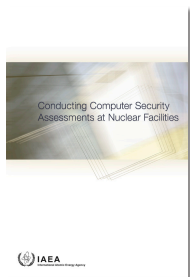
IAEA TECDOC Series No. 1820

TECDOC Series

This publication presents the results of a Coordinated Research Project and related research on the identification of high confidence nuclear forensic isotopic, chemical and physical data characteristics, or signatures and provides information on signatures that can help identify the origin and history of nuclear and other radioactive material encountered out of regulatory control. This research report compiles findings from investigations of materials obtained from throughout the nuclear fuel cycle to include radioactive sources. The publication further provides recent results used to identify, analyse in the laboratory, predict and interpret these signatures relative to the requirements of a nuclear forensics examination. It describes some of the controls on the incorporation and persistence of these signatures in these materials as well as their potential use in a national system of identification to include a national nuclear forensics library.

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Conducting Computer Security Assessments at Nuclear Facilities

Non-Serial

Computer security is increasingly recognized as a key component in nuclear security. As technology advances, it is anticipated that computer and computing systems will be used to an even greater degree in all aspects of plant operations including safety and security systems. A rigorous and comprehensive assessment process can assist in strengthening the effectiveness of the computer security programme. This publication outlines a methodology for conducting computer security assessments at nuclear facilities. The methodology can likewise be easily adapted to provide assessments at facilities with other radioactive materials.

English Edition (2016)

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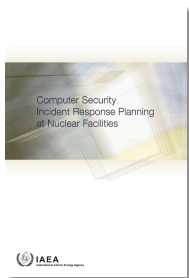
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Computer Security Incident Response Planning at Nuclear Facilities

Non-Serial

The purpose of this publication is to assist Member States in developing comprehensive contingency plans for computer security incidents with the potential to impact nuclear security and/or nuclear safety. It provides an outline and recommendations for establishing a computer security incident response capability as part of a computer security programme, and considers the roles and responsibilities of the system owner, operator, competent authority, and national technical authority in responding to a computer security incident with possible nuclear security repercussions.

English Edition (2016)

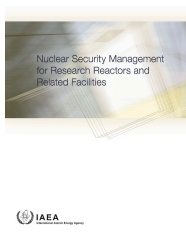
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Nuclear Security Management for Research Reactors and Related Facilities

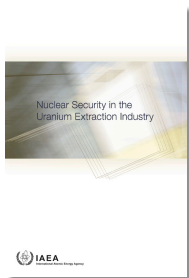
Non-Serial

This publication provides a single source guidance to assist those responsible for the implementation of nuclear security

measures at research reactors and associated facilities in developing and maintaining an effective and comprehensive programme covering all aspects of nuclear security on the site. It is based on national experience and practices as well as on publications in the field of nuclear management and security. The scope includes security operations, security processes, and security forces and their relationship with the State's nuclear security regime. The guidance is provided for consideration by States, competent authorities and operators.

(2016) • ISBN 978-92-0-111315-3 • IAEA-TDL-004

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Nuclear Security in the Uranium Extraction Industry

Non-Serial

This publication provides States and operators with advice for defining, implementing, maintaining or enhancing their nuclear security regime for the protection of uranium ore concentrate against unauthorized removal. It defines prudent management practice as required by IAEA Nuclear Security Series No. 13, Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5), for this category of material. This advice can be adopted in the form of regulations or applied as voluntary standards. States, regulatory bodies, and industry may choose to tailor their implementation of this advice to meet their national circumstances.

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