IAEA Publications

Catalogue

2015–2016

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IAEA Publications
Catalogue

2015–2016

Full Details of Publications Published 2014–2016,
Forthcoming Publications and a Stocklist of
Publications Published 2012–2015

INTRODUCTION

This publications catalogue lists all sales publications of the IAEA published in 2014 and 2015 and those forthcoming in 2015–2016.

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The Fukushima Daiichi Accident

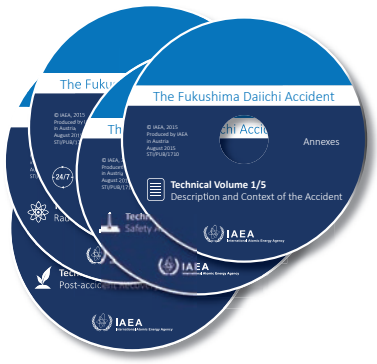
The Fukushima Daiichi Accident consists of a Report by the IAEA Director General and five technical volumes. It is the result of an extensive international collaborative effort involving five working groups with about 180 experts from 42 Member States with and without nuclear power programmes and several international bodies. It provides a description of the accident and its causes, evolution and consequences, based on the evaluation of data and information from a large number of sources available at the time of writing.

The Fukushima Daiichi Accident will be of use to national authorities, international organizations, nuclear regulatory bodies, nuclear power plant operating organizations, designers of nuclear facilities and other experts in matters relating to nuclear power, as well as the wider public.

The set contains six printed parts and five supplementary CD-ROMs.
(~1258 pp.; 313 figs; 2015) • ISBN 978-92-0-107015-9 • STI/PUB/1710 • €60.00

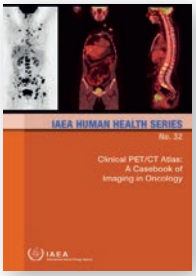
Contents:

Section 1: Introduction	The Report on the Fukushima Daiichi Accident					
Section 2: The accident and its assessment	Description of the accident	Nuclear safety considerations	**Technical Volumes 1 & 2**			
Section 3: Emergency preparedness and response	Initial response in Japan to the accident	Protecting emergency workers	Protecting the public	Transition from the emergency phase to the recovery phase and analyses of the response	Response within the international framework for emergency preparedness and response	**Technical Volume 3**
Section 4: Radiological consequences	Radioactivity in the environment	Protecting people against radiation exposure	Radiation exposure	Health effects	Radiological consequences for non-human biota	**Technical Volume 4**
Section 5: Post-accident recovery	Off-site remediation of areas affected by the accident	On-site stabilization and preparations for de-commissioning	Management of contaminated material and radioactive waste	Community revitalization and stakeholder engagement	**Technical Volume 5**	
Section 6: The IAEA response to the accident	IAEA activities	Meetings of the Contracting Parties to the Convention on Nuclear Safety	**Technical Volumes 1 & 3**			



CONTENTS

MEDICAL PHYSICS, DOSIMETRY AND DIAGNOSIS

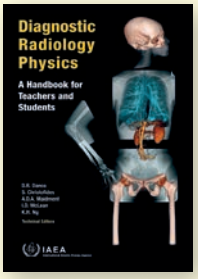


Clinical PET/CT Atlas: A Casebook of Imaging in Oncology

IAEA Human Health Series No. 32

Integrated positron emission tomography/computed tomography (PET/CT) has evolved since its introduction into the commercial market more than a decade ago. It is now a key procedure, particularly in oncological imaging. Over the last years in routine clinical service, PET/CT has had a significant impact on diagnosis, treatment planning, staging, therapy, and monitoring of treatment response and has therefore played an important role in the care of cancer patients. The high sensitivity from the PET component and the specificity of the CT component give this hybrid imaging modality the unique characteristics that make PET/CT, even after over 10 years of clinical use, one of the fastest growing imaging modalities worldwide. This publication combines over 90 comprehensive cases covering all major indications of fluorodeoxyglucose (18F-FDG)-PET/CT as well as some cases of clinically relevant special tracers. The cases provide an overview of what the specific disease can look like in PET/CT, the typical pattern of the disease's spread as well as likely pitfalls and teaching points. This PET/CT Atlas will allow professionals interested in PET/CT imaging to embrace the variety of oncological imaging by providing clinically relevant teaching files on the effectiveness and diagnostic quality of FDG-PET/CT imaging in routine applications.

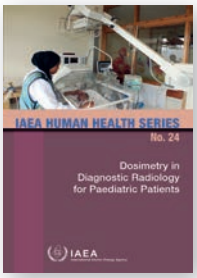
(201 pp., 195 figs; 2015) • ISBN 978-92-0-101115-2 • STI/PUB/1680 • €70.00



Diagnostic Radiology Physics: A Handbook for Teachers and Students

This publication is written for students and teachers involved in programmes that train medical physicists for work in diagnostic radiology. It provides, in the form of a syllabus, a comprehensive overview of the basic medical physics knowledge required for the practice of modern diagnostic radiology. This makes it particularly useful for graduate students and residents in medical physics programmes. The material presented in the publication has been endorsed by the major international organizations and is the foundation for academic and clinical courses in diagnostic radiology physics and in emerging areas such as imaging in radiotherapy.

(682 pp., 251 figs; 2014) • ISBN 978-92-0-131010-1 • STI/PUB/1564 • €90.00



Dosimetry in Diagnostic Radiology for Paediatric Patients

IAEA Human Health Series No. 24

This publication draws on an IAEA coordinated research project and provides recommendations specific to the measurement and interpretation of radiation dose to children received as a result of undergoing diagnostic radiological examinations. It complements the work of Dosimetry in Diagnostic Radiology: An International Code of Practice (Technical Reports Series No. 457) and extends this work in methodologies for dosimetry in clinical environments to that required for non-adult patients. It includes

dosimetry methodologies for general radiography, fluoroscopy and computed tomography for both phantom and patient measurements. Details are given on dose audit strategies that take into account the size of children and on how the results of such audits can be used to indicate or be related to diagnostic reference levels. The effects of radiation on non-adults are also reviewed, as are the factors involved in the management of paediatric dosage in the clinical setting.

(160 pp., 14 figs; 2014) • ISBN 978-92-0-141910-1 • STI/PUB/1609 • €46.00

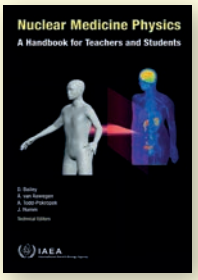
Guided Intraoperative Scintigraphic Tumour Targeting (GOSTT)

Implementing Advanced Hybrid Molecular Imaging and Non-imaging Probes for Advanced Cancer Management

IAEA Human Health Series No. 29

This publication provides an updated source for professionals involved in employing guided intraoperative scintigraphic tumour targeting (GOSTT). Its content contributes to supporting both the clinical decision making process and the implementation of minimally invasive surgical procedures. The publication provides an update on innovations in the use of radiopharmaceuticals for sentinel lymph node mapping and sentinel lymph node biopsy. In addition, it provides an update on advances in the implementation of hybrid imaging technologies for the surgical management of patients with cancer in conjunction with intraoperative regional lymph node mapping. The experience with the use of small field scintigraphic imaging devices in the operating theatre is also presented.

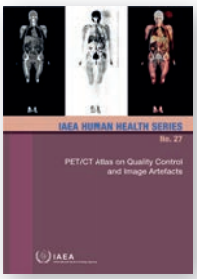
(314 pp., 76 figs; 2014) • ISBN 978-92-0-102214-1 • STI/PUB/1648 • €75.00



Nuclear Medicine Physics: A Handbook for Teachers and Students

This publication provides the basis for the education of medical physicists initiating their university studies in the field of nuclear medicine. The handbook includes 20 chapters and covers topics relevant to nuclear medicine physics, including basic physics for nuclear medicine, radionuclide production, imaging and non-imaging detectors, quantitative nuclear medicine, internal dosimetry in clinical practice and radionuclide therapy. It provides, in the form of a syllabus, a comprehensive overview of the basic medical physics knowledge required for the practice of medical physics in modern nuclear medicine.

(736 pp., 237 figs; 2015) • ISBN 978-92-0-143810-2 • STI/PUB/1617 • €105.00

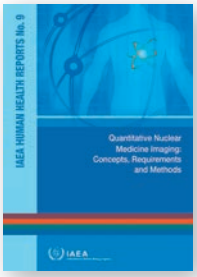


PET/CT Atlas on Quality Control and Image Artefacts

IAEA Human Health Series No. 27

Positron emission tomography/computed tomography (PET/CT), as any other imaging modality, is acceptable for routine clinical and research applications only if technical pitfalls can be avoided. Artefacts from incorrect or sub-optimal acquisition procedures should be recognized and, if possible, corrected retrospectively and the resulting image information interpreted correctly, which entails an appreciation of variants of the represented image information. This publication provides guidance on the physics and technical aspects behind PET and PET/CT image distortions. Cases are presented to provide nuclear medicine and radiology professionals with an assortment of examples of possible image distortions and errors in order to support correct image interpretation. Nearly 70 typical PET and PET/CT cases, comprising image sets and case descriptions, have been collected in this volume, all catalogued and augmented with explanations as to the causes of, and solutions to, each individual image problem. The atlas will prove useful to physicists, physicians, technologists, and service engineers in the clinical field.

(89 pp., 101 figs; 2014) • ISBN 978-92-0-101014-8 • STI/PUB/1642 • €60.00



Quantitative Nuclear Medicine Imaging: Concepts, Requirements and Methods

IAEA Human Health Reports No. 9

This publication reviews the current state of the art of image quantification and provides a solid background of tools and methods for medical physicists and other professionals who are faced with quantification of radionuclide distribution in clinical practice. It describes and analyses the physical effects that degrade image quality and affect the accuracy of quantification, and describes methods to compensate for them in planar, single photon emission computed tomography (SPECT) and positron emission tomography (PET) images.

(59 pp., 23 figs; 2014) • ISBN 978-92-0-141510-3 • STI/PUB/1605 • €33.00

Radiation Protection in Medicine: Setting the Scene for the Next Decade

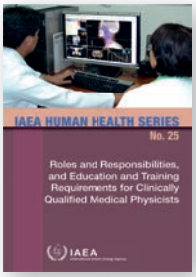
Proceedings of an International Conference held in Bonn, Germany, 3–7 December 2012

Proceedings Series

This publication presents the proceedings of the International Conference on Radiation Protection in Medicine: Setting the Scene for the Next Decade. The aims were to indicate gaps in current approaches

to radiation protection in medicine; identify tools for improving radiation protection in medicine; review advances, challenges and opportunities in the field; and assess the impact of the international action plan for the radiation protection of patients, in order to prepare new international recommendations. The Conference drew up the 10-point Bonn Call for Action, which identifies responsibilities of and proposes priorities for stakeholders regarding radiation protection in medicine for the next decade.

(Forthcoming 2015) • ISBN 978-92-0-103914-9 • STI/PUB/1663 • €130.00

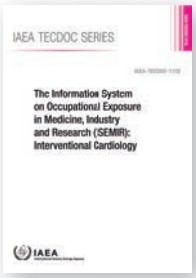


Roles and Responsibilities, and Education and Training Requirements for Clinically Qualified Medical Physicists

IAEA Human Health Series No. 25

This publication addresses the shortfall of well trained and clinically qualified medical physicists working in radiation medicine. The roles, responsibilities and clinical training requirements of medical physicists have not always been well defined or well understood by health care professionals, health authorities and regulatory agencies. To fill this gap, this publication provides recommendations for the academic education and clinical training of clinically qualified medical physicists, including recommendations for their accreditation, certification and registration, along with continuous professional development. The goal is to establish criteria that support the harmonization of education and clinical training worldwide.

English Edition (71 pp., 2 figs; 2013) • ISBN 978-92-0-142010-7 • STI/PUB/1610 • €32.00
French Edition (Forthcoming 2015) • ISBN 978-92-0-207114-8 • STI/PUB/1610 • €32.00
Russian Edition (Forthcoming 2015) • ISBN 978-92-0-409414-5 • STI/PUB/1610 • €32.00
Spanish Edition (73 pp., 2 figs; 2014) • ISBN 978-92-0-304514-8 • STI/PUB/1610 • €32.00

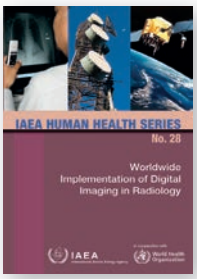


The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Interventional Cardiology

IAEA TECDOC Series No. 1735

This publication presents the results achieved by the Working Group on Interventional Cardiology in assessing the status of occupational radiation protection in interventional cardiology (IC) throughout the world. It also reports on the main activities in developing an international database to be used by IC facilities as a tool for benchmarking and improving their implementation of occupational radiation protection.

(2014) • ISBN 978-92-0-100514-4 • IAEA-TECDOC-1735 • €18.00



Worldwide Implementation of Digital Imaging in Radiology

IAEA Human Health Series No. 28

This publication provides a basic introduction to digital technology and digital networks as well as an overview of the issues to consider when implementing such technology in diagnostic radiology. In an area that is under rapid development, it provides a careful analysis of the principles and advice on implementation and sustainability of digital imaging and teleradiology. The transition from film to digitally based medical imaging is complex and requires knowledge and planning to be successful. This comprehensive resource guide contains information on the needs and implications of a transition to digital imaging with case studies for different facilities requiring different levels of communication connectivity. It is aimed at hospital administrators and managers, radiologists and radiographers/technologists, medical physicists and clinical engineers as well as information technology staff.

(195 pp., 14 figs; 2015) • ISBN 978-92-0-102114-4 • STI/PUB/1647 • €60.00

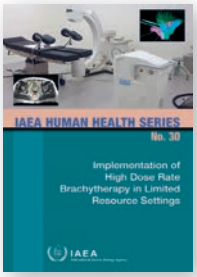
RADIOTHERAPY

Accuracy Requirements and Uncertainties in Radiation Therapy

IAEA Human Health Series No. 31

Accuracy requirements in radiation oncology have been defined in multiple publications, however, these have been based on differing radiation technologies. In the meantime, the uncertainties in radiation dosimetry reference standards have been reduced and more detailed patient outcome data are available. No comprehensive literature on accuracy and uncertainties in radiotherapy has been published so far. The IAEA has therefore developed a new international consensus document on accuracy requirements and uncertainties in radiation therapy, to promote safer and more effective patient treatments. This publication addresses accuracy and uncertainty issues related to the vast majority of radiation therapy departments including both external beam radiotherapy and brachytherapy. It covers clinical, radiobiological, dosimetric, technical and physical aspects.

(Forthcoming 2015) • ISBN 978-92-0-100815-2 • STI/PUB/1679 • €76.00



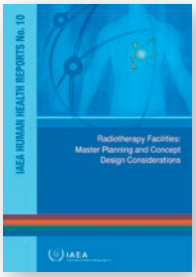
Implementation of High Dose Rate Brachytherapy in Limited Resource Settings

IAEA Human Health Series No. 30

Brachytherapy is an essential component of the curative treatment of cervical cancer, a disease with high incidence in many developing countries The IAEA supports

the use of high dose rate brachytherapy for centres with a large number of patients with this disease. HDR brachytherapy is also used in other common cancers such as breast cancer, lung, oesophagus and prostate. This publication provides guidance to radiation oncologists, medical physicists and planners on establishing and operating a high dose rate brachytherapy unit with modern standards and presents the main issues to be addressed for its effective and safe operation.

(97 pp., 21 figs; 2015) • ISBN 978-92-0-107214-6 • STI/PUB/1670 • €45.00

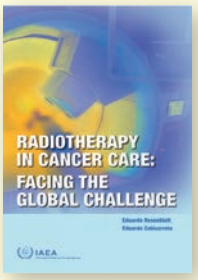


Radiotherapy Facilities: Master Planning and Concept Design Considerations

IAEA Human Health Reports No. 10

This publication provides guidelines on how to plan a radiotherapy facility in terms of the strategic master planning process including the legal, technical and infrastructure requirements. It outlines a risk assessment methodology and a typical project work plan, and describes the professional expertise required for the implementation of such a project. Generic templates for a block design are suggested, which include possibilities for future expansion. These templates can be overlaid onto the designated site such that the most efficient workflow between the main functional areas can be ensured. A sample checklist is attached to act as a guideline for project management and to indicate the critical stages in the process where technical expert assistance may be needed. The publication is aimed at professionals and administrators involved in infrastructure development, planning and facility management, as well as engineers, building contractors and radiotherapy professionals.

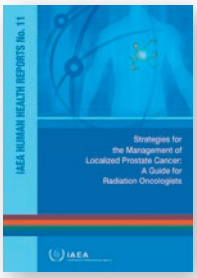
(31 pp., 7 figs; 2014) • ISBN 978-92-0-101914-1 • STI/PUB/1645 • €29.00



Radiotherapy in Cancer Care: Facing the Global Challenge

Cancer treatment is complex and calls for a diverse set of services. Radiation therapy is recognized as an essential tool in the cure and palliation of cancer. Currently, access to radiation treatment is limited in many countries and non-existent in some. This lack of radiation therapy resources exacerbates the burden of disease and underscores the continuing health care disparity among States. Closing this gap represents an essential measure in addressing this global health equity problem. This publication presents a comprehensive overview of the major topics and issues to be taken into consideration when planning a strategy to address this global problem, in particular in low and middle income countries. With contributions from leaders in the field, it provides an introduction to the achievements and issues of radiation therapy as a cancer treatment modality around the world. Dedicated chapters focus on the new radiotherapy technologies, proton beams, carbon ion, intra operative radiotherapy, radiotherapy for children, treatment of HIV-AIDS malignancies, and costing and quality management issues.

(565 pp., 29 figs; 2015) • ISBN 978-92-0-115013-4 • STI/PUB/1638 • €62.00

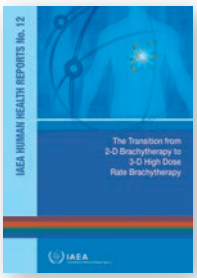


Strategies for the Management of Localized Prostate Cancer: A Guide for Radiation Oncologists

IAEA Human Health Reports No. 11

Clinical guidelines for the management of prostate cancer exist in the published literature. However, these guidelines have usually been developed in and for affluent health care environments where all modern diagnostic and treatment modalities are available. In limited resource environments, the radiation oncologist is faced with the question: what would be the minimum acceptable (evidence based) line of action with the limited resources available? Clinical guidelines focusing on low–middle income countries aim to provide a practical tool to these practitioners. This publication is aimed at the radiation oncologists working in centres with limited resources and treating a large number of patients with prostate cancer on a daily basis. The approach and techniques recommended are intended to be simple, feasible and resource sparing to the extent possible when dealing with a complex treatment modality. The publication takes into consideration the cost and benefit of the intervention to avoid unnecessary overtreatment of indolent tumours.

(39 pp., 4 figs; 2014) • ISBN 978-92-0-102014-7 • STI/PUB/1646 • €38.00



The Transition from 2-D Brachytherapy to 3-D High Dose Rate Brachytherapy

IAEA Human Health Reports No. 12

Brachytherapy is a major treatment modality in the treatment of common cancers including cervical cancer. This publication addresses the recent technological change in brachytherapy treatment planning with better access to 3-D volumetric patient imaging modalities including computed tomography (CT) and magnetic resonance (MR) as opposed to traditional 2-D planar images. In the context of 2-D and 3-D brachytherapy, the publication provides definitions, clinical indications, transitioning milestones, commissioning steps, quality assurance measures, and a related questionnaire. Staff training and resourcing are also addressed. The publication will serve as a guide to radiotherapy departments in Member States who wish to make the transition from 2-D to 3-D brachytherapy.

(33 pp., 8 figs; 2015) • ISBN 978-92-0-101415-3 • STI/PUB/1681 • €23.00

NUCLEAR MEDICINE (INCLUDING RADIOPHARMACEUTICALS)

Cyclotron Produced Radionuclides: Emerging Positron Emitters for Medical Applications: ^{64}Cu and ^{124}I

The growing number of medical cyclotrons and positron emission tomography/computed tomography (PET/CT) centres as well as the proven high clinical utility of fluorodeoxyglucose (FDG) in cancer patients has led to interest in possibilities for the use of PET tracers which are in different stages of clinical evaluation. This publication presents the outcome of an IAEA coordinated research project on this topic and provides a comprehensive overview of the technologies involved in the production of copper-64 and iodine-124, techniques on preparation of targets, irradiation of targets under high beam currents, target processing, target recovery and labelling. It provides guidance to enhance copper-64 and iodine-124 production and applications. This book will appeal to scientists and technologists involved in putting cyclotron based radioisotope production into practice, as well as postgraduate students in the field.

(Forthcoming 2015) • €38.00

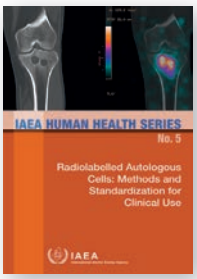
Quality Management Audits in Nuclear Medicine Practices

Second Edition

IAEA Human Health Series No. 33

Quality management systems are essential and should be maintained with the intent to continuously improve effectiveness and efficiency, enabling nuclear medicine to achieve the expectations of its quality policy, satisfy its customers and improve professionalism. The quality management (QM) audit methodology in nuclear medicine practice, introduced in this publication, is designed to be applied to a variety of economic circumstances. A key outcome is a culture of reviewing all processes of the clinical service for continuous improvement in nuclear medicine practice. Regular quality audits and assessments are vital for modern nuclear medicine services. More importantly, the entire QM and audit process has to be systematic, patient oriented and outcome based. The management of services should also take into account the diversity of nuclear medicine services around the world and multidisciplinary contributions. The latter include clinical, technical, radiopharmaceutical, medical physics and radiation safety procedures.

(96 pp., 8 figs;) • ISBN 978-92-0-101715-4 • STI/PUB/1683 • €45.00



Radiolabelled Autologous Cells: Methods and Standardization for Clinical Use

IAEA Human Health Series No. 5

This publication serves as a useful resource for nuclear medicine physicians, radiologists, radiopharmacists, pharmacologists and other researchers engaged with radiolabelling of autologous products for clinical application. It provides practical guidelines towards clinical work with radiolabelled autologous products and aims to streamline the variety of strategies that have evolved, for example, in the handling of radiolabelled red and white blood cells. The publication highlights the importance of the quality of radiolabelling services, provides advice on safety issues, and also addresses the use of other radiolabelled autologous products and their translation into the clinical environment.

(111 pp., 17 figs; 2014) • ISBN 978-92-0-101310-1 • STI/PUB/1437 • €55.00

Radiopharmaceuticals for Sentinel Lymph Node Detection: Status and Trends

IAEA Radioisotopes and Radiopharmaceuticals Series No. 6

This book summarizes the current status and future trends in the development of radiopharmaceuticals for sentinel lymph node detection (SLND), an essential diagnostic tool for the effective treatment of superficial cancers such as breast tumours and melanoma. The publication covers all current aspects of this diagnostic methodology, including the production of nanocolloidal particles, their biological mechanism of action and relevant clinical applications. It also illustrates the recent developments in the field fuelled by the introduction of molecular imaging agents for SLND and of multimodality optical and radioactive agents. Included in the results presented in this book, are those on the novel generation of SLND radiopharmaceuticals obtained through an IAEA coordinated research project.

(162 pp., 43 figs; 2015) • ISBN 978-92-0-109714-9 • STI/PUB/1674 • €39.00

Yttrium-90 and Rhenium-188 Radiopharmaceuticals for Radionuclide Therapy

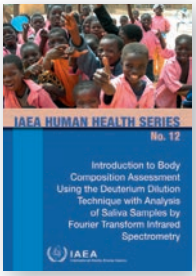
IAEA Radioisotopes and Radiopharmaceuticals Series No. 5

A key requirement for the effective implementation of the therapeutic approach, based on the intravenous administration of radiolabelled compounds (radionuclide therapy), is the sufficient availability of radionuclides with appropriate physical characteristics. Based on their nuclear

properties, ^{188}Re and ^{90}Y are considered among the most interesting radionuclides for therapy. Furthermore, they are produced through portable generators, which give opportunities for ensuring a worldwide distribution of these radionuclides. This publication illustrates recent studies aimed at investigating efficient quality control methods to ensure both the radionuclidic purity of generator eluates, and the proper preparation of new target specific ^{188}Re and ^{90}Y radiopharmaceuticals for various clinical applications.

(301 pp., 164 figs; 2015) • ISBN 978-92-0-103814-2 • STI/PUB/1662 • €52.00

NUTRITION

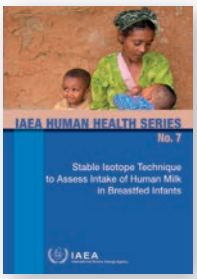


Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Saliva Samples by Fourier Transform Infrared Spectrometry

IAEA Human Health Series No. 12

This publication provides information on the theoretical background as well as on the practical application of state of the art methodology to monitor changes in body composition, based on the analysis of deuterium in saliva by Fourier transform infrared spectrometry.

English Edition (77 pp., 30 figs; 2011) • ISBN 978-92-0-103210-2 • STI/PUB/1450 • €37.00
French Edition (84 pp., 30 figs; 2013) • ISBN 978-92-0-214513-9 • STI/PUB/1450 • €37.00
Spanish Edition (81 pp., 30 figs; 2014) • ISBN 978-92-0-314013-3 • STI/PUB/1450 • €37.00



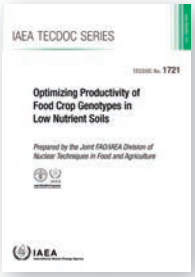
Stable Isotope Technique to Assess Intake of Human Milk in Breastfed Infants

IAEA Human Health Series No. 7

This publication was developed by an international group of experts as an integral part of the IAEA's efforts to contribute to the transfer of technology and knowledge in nutrition. Its aim is to assist Member States in their efforts to combat malnutrition by facilitating the use of relevant nuclear techniques. The stable (non-radioactive) isotope technique has been developed to assess intake of human milk in breastfed infants. The practical application of the stable isotope technique, based on analysis of deuterium by Fourier transform infrared spectrometry (FTIR), is presented in this book.

English Edition (67 pp., 39 figs; 2010) • ISBN 978-92-0-114009-8 • STI/PUB/1429 • €32.00
French Edition (71 pp., 39 figs; 2015) • ISBN 978-92-0-207914-4 • STI/PUB/1429 • €32.00

FOOD AND AGRICULTURE

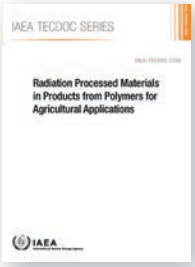


Optimizing Productivity of Food Crop Genotypes in Low Nutrient Soils

IAEA TECDOC Series No. 1721

Global climate change and variability are likely to exacerbate plant abiotic stress in the coming decades by increasing water stress and by accelerating soil fertility degradation. To respond to this set of challenges, there is a need to develop agricultural systems with significantly greater productivity and resilience, while at the same time making more efficient use of limited nutrient resources. This publication summarizes the results from a FAO/IAEA coordinated research project (CRP) on optimizing productivity of food crop genotypes in low nutrient environments over a five year period across a wide range of geographical areas and environments.

(2014) • ISBN 978-92-0-113113-3 • IAEA-TECDOC-1721 • €18.00



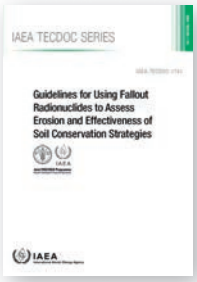
Radiation Processed Materials in Products from Polymers for Agricultural Applications

IAEA TECDOC Series No. 1745

This publication results from a technical meeting on radiation processed materials in products from polymers for agricultural applications. The meeting provided a forum for the sharing of practical experiences and lessons learned, and reviewed the recent developments in the use of radiation technologies for the preparation of environmentally friendly products based on polymers for agricultural applications.

(2014) • ISBN 978-92-0-106414-1 • IAEA-TECDOC-1745 • €18.00

SOIL FERTILITY AND IRRIGATION



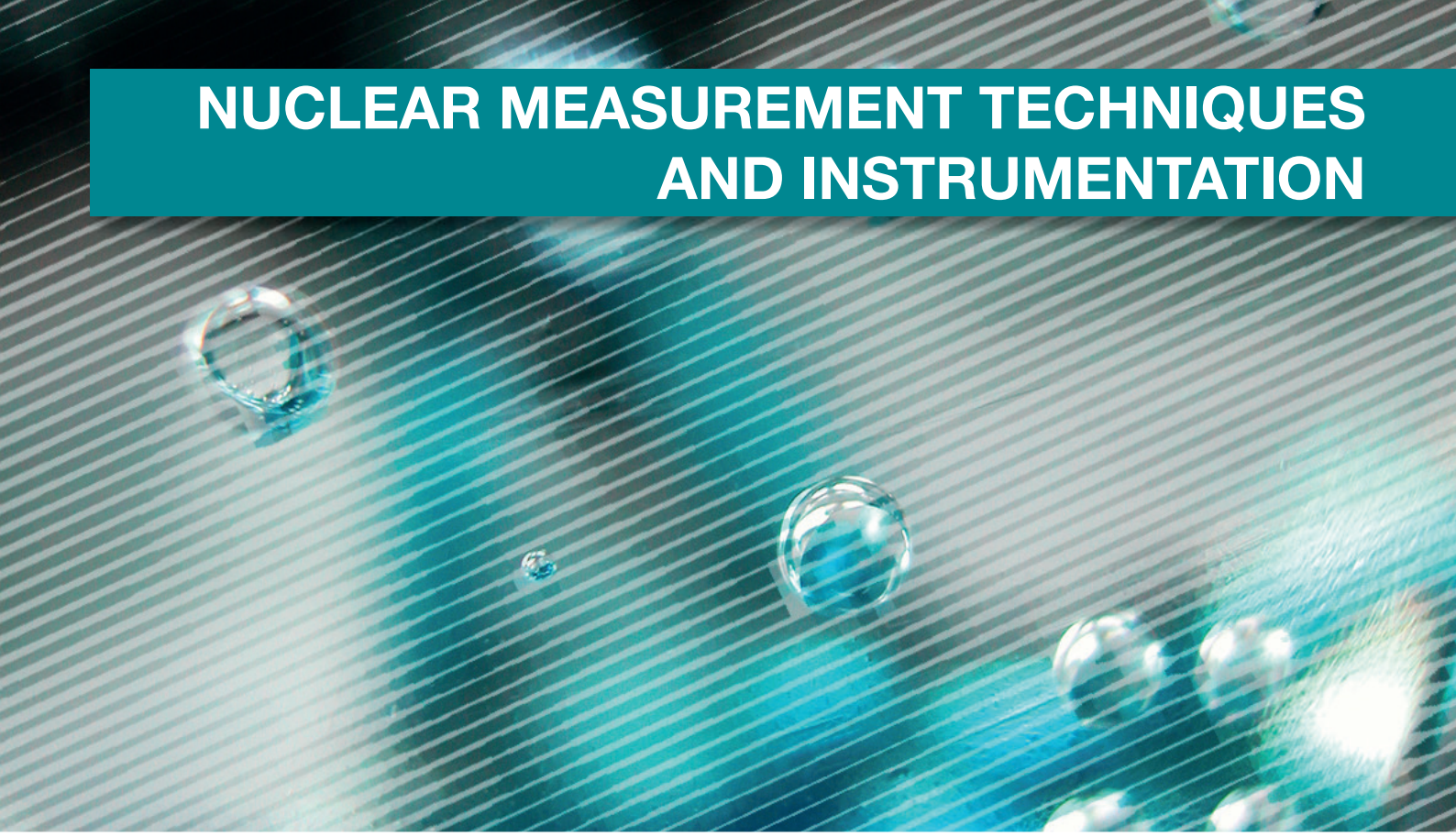
Guidelines for Using Fallout Radionuclides to Assess Erosion and Effectiveness of Soil Conservation Strategies

IAEA TECDOC Series No. 1741

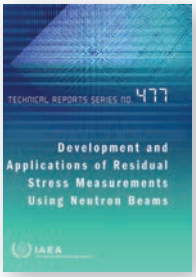
This publication provides comprehensive step by step guidance in the application of fallout radionuclides (FRNs) for investigating soil erosion and soil redistribution affecting agro-ecosystems. It is written for scientists and technicians from disciplines such as soil science, ecology, and agronomy, as well as undergraduate and graduate students, and staff of non-governmental organizations involved in agricultural development at local, national, regional and international level. The publication concludes with a paper which presents current and future trends and opportunities in the use of FRNs to document agricultural soil redistribution from field to landscape scales across the short, medium and long term. The publication is also available in CD format.

(2014) • ISBN 978-92-0-105414-2 • IAEA-TECDOC-1741 • €18.00

NUCLEAR MEASUREMENT TECHNIQUES AND INSTRUMENTATION



NUCLEAR ANALYTICS



Development and Applications of Residual Stress Measurements Using Neutron Beams

Technical Reports Series No. 477

This publication is the result of an IAEA coordinated research project and presents a survey of the basic principles, requirements, preparation, design, execution and standardization of residual stress measurements using neutron beams. It includes details of experimental techniques, associated equipment and instrumentation, their commissioning and calibration, control and data acquisition. A separate chapter is dedicated to data analysis and interpretation. Finally, the document provides, with a number of selected examples, applications of residual stress measurements as well as future trends for development and use of this powerful technique. The publication is a comprehensive and useful resource to the neutron beam user community including academia and industrial partners. It may serve as an introduction to the field for young researchers and graduate students as well as guidelines to those operating or planning to implement/modernise their facilities for residual stress measurements. Ultimately, the publication presents neutron beams as a valuable and effective tool for performing residual stress measurements both for basic research and various applications.

(158 pp., 63 figs; 2014) • ISBN 978-92-0-113313-7 • STI/DOC/010/477 • €40.00

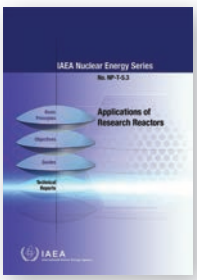
Training Guidelines in Non-destructive Testing Techniques — 2013 Edition

IAEA TECDOC Series No. 628

This publication is an update of IAEA TECDOC Series No. 628. Its content has been revised in light of the issuance of EN ISO 9712:2012, based on the experience of the experts as well as comments of the end-user industries. The details of the topics on each subject have been expanded to include the latest developments in the respective methods. The incorporated changes will assist the end-user industries to update their non-destructive testing (NDT) techniques qualification and certification schemes, and course materials. This publication, like the previous version, will continue to play an important role towards international harmonization in the field of NDT training and certification.

(2014) • ISBN 978-92-0-109214-4 • IAEA-TECDOC-628/Rev. 3 • €18.00

RESEARCH REACTORS AND PARTICLE ACCELERATORS (APPLICATIONS)



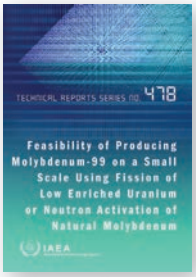
Applications of Research Reactors

IAEA Nuclear Energy Series No. NP-T-5.3

This publication is a comprehensive study that reviews the current situation in a great number of applications of research

reactors. It revises the contents of IAEA TECDOC-1234, The Applications of Research Reactors, giving detailed updates on each field of research reactor uses worldwide. Operations with reactors of all sizes and capabilities can benefit from the sharing of current practices and research enabled via this updated publication, which describes the requirements for, among others, neutron activation analysis, education and training, neutron scattering and neutron imaging, silicon doping and radioisotope production, and material/fuel irradiation and testing. Operators of underutilized research reactors can learn how to diversify their technical capabilities, services and products. The publication also addresses current issues facing the vast majority of research reactors by including sections describing user and customer relations as well as strategic planning considerations.

(97 pp., 31 figs; 2014) • ISBN 978-92-0-145010-4 • STI/PUB/1627 • €32.00



Feasibility of Producing Molybdenum-99 on a Small Scale Using Fission of Low Enriched Uranium or Neutron Activation of Natural Molybdenum

Technical Reports Series No. 478

This publication documents the work performed within an IAEA coordinated research project (CRP) on developing techniques for small scale indigenous molybdenum-99 production using low enriched uranium (LEU) fission or neutron activation. This captures the steps participants undertook in examining the feasibility of becoming small scale ^{99}Mo producers. Most participants carried out work related to the entire production process, from target assembly through irradiation, planning for target disassembly in hot cells, chemical processing of targets, quality control practices, and managing waste streams. Some participants focused on one particular area, for example, testing new methods for production of LEU foil for targets and the production of gel generators from ^{99}Mo solution. The publication aggregates all of the work undertaken as part of the CRP in order to present the results as a whole.

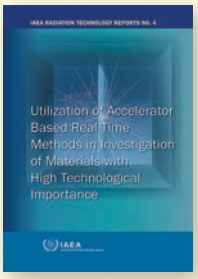
(168 pp., 80 figs; 2015) • ISBN 978-92-0-114713-4 • STI/DOC/010/478 • €44.00

Research Reactor Benchmarking Database: Facility Specification and Experimental Data

Technical Reports Series No. 480

This publication contains the facility specifications, experiment descriptions, and corresponding experimental data for nine different research reactors covering a wide range of research reactor types, power levels and experimental configurations. Each data set was prepared in order to serve as a stand-alone resource of well documented experimental data, which can subsequently be used in benchmarking and validation of the neutronic and thermal hydraulic computational methods and tools employed for improved utilization, operation and safety analysis of research reactors.

CD Edition (2015) • ISBN 978-92-0-151714-2 • STI/DOC/010/480 • €39.00



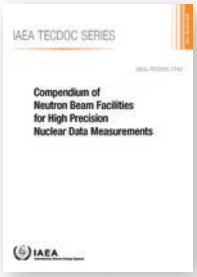
Utilization of Accelerator Based Real Time Methods in Investigation of Materials with High Technological Importance

IAEA Radiation Technology Reports No. 4

This publication presents the state of the art in the development and application of various accelerator based real time techniques. It reports examples of multidisciplinary scientific topics and challenges where application of accelerator based methods would bring significant benefits in terms of research data and further understanding of the scientific issues. The research activities that can profit from real time material characterizations using synchrotron radiation, neutron, ion and electron beams, and simultaneous combinations of different techniques are also briefly discussed. A recurrent theme emerging from the presented papers is that further work is needed to develop more robust and longer working life materials for energy applications.

(104 pp., 66 figs; 2015) • ISBN 978-92-0-102314-8 • STI/PUB/1649 • €37.00

NUCLEAR DATA

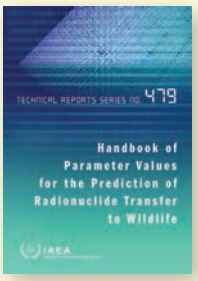


Compendium of Neutron Beam Facilities for High Precision Nuclear Data Measurements

IAEA TECDOC Series No. 1743

This publication is a summary of a technical meeting on use of neutron beams for high precision nuclear data measurements and additional materials supplied by international experts, together with the individual contributions describing the current status of their respective neutron beam facilities, highlighting major achievements and future developments in this field. It describes both the research reactor and accelerator based neutron beam facilities for nuclear data measurements, and classifies them according to the type of neutron source (reactor or accelerator based), the neutron energy accessible to individual facilities or the measurement technique employed. In addition, the state of the art of experimental sample and target preparation, instrumentation, data acquisition and new research trends in the field are summarized. Each individual facility report is available on the CD-ROM accompanying this publication.

(2014) • ISBN 978-92-0-106614-5 • IAEA-TECDOC-1743 • €18.00



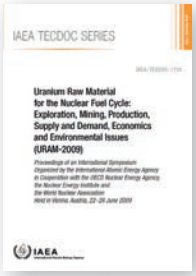
Handbook of Parameter Values for the Prediction of Radionuclide Transfer to Wildlife

Technical Reports Series No. 479

This handbook provides generic parameter values for estimating the transfer of radionuclides from environmental media to wildlife for the purpose of assessing potential radiation exposure under equilibrium conditions. These data are intended for use where site specific data are either not available or not required, and to parameterize generic assessment models. They are based on a comprehensive review of the available literature, including many Russian language publications that have not previously been available in English. The publication addresses the limitations of the parameter values and the applicability of data. Some general background information on the assessment of potential impacts of radioactive releases on wildlife is also included. It complements the existing handbook in the same IAEA series with parameters to assess the radiological impact to humans.

(211 pp., 2014) • ISBN 978-92-0-100714-8 • STI/DOC/010/479 • €55.00

URANIUM GEOLOGY, EXPLORATION AND MINING



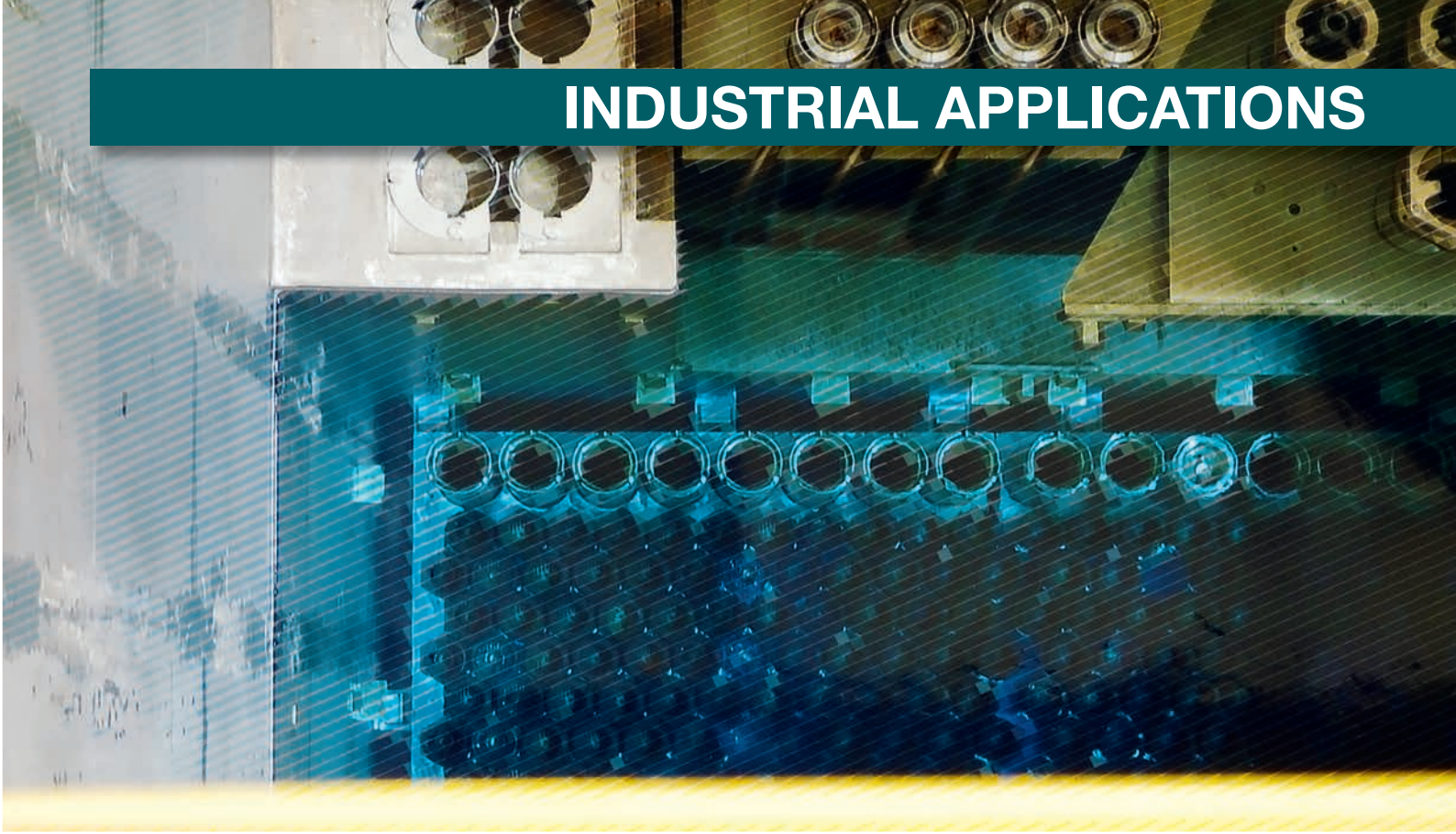
Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2009)

Proceedings of an International Symposium held in Vienna, Austria, 22–26 June 2009

IAEA TECDOC Series No. 1739

This is the proceedings of an IAEA symposium to analyse uranium supply–demand scenarios and to present and discuss new developments in uranium geology, exploration, mining and processing, as well as in environmental requirements for uranium operations and site decommissioning. Within their sessions the meeting participants covered six basic themes: uranium markets and economics; social licensing in the uranium production cycle; uranium exploration and geology; uranium mining and processing; environmental and regulatory issues; and human resources development. The publication includes 27 papers presented in oral sessions, a report of the panel discussion, and 25 papers presented as posters (on CD-ROM).

(2014) • ISBN 978-92-0-105014-4 • IAEA-TECDOC-1739 • €18.00



INDUSTRIAL APPLICATIONS

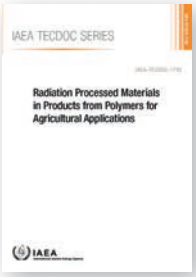
RADIATION PROCESSING

Nanoscale Radiation Engineering of Advanced Materials for Potential Biomedical Applications

IAEA Radiation Technology Reports No. 5

There are critical needs for advanced materials in the area of biomaterial engineering, primarily in generating biomaterials of enhanced specific functionalities, improved biocompatibility and minimal natural rejection, and with enhanced interfacial adhesion. These can be achieved by the introduction of proper functionalities at the nanoscale dimension. Radiation techniques are uniquely suited for such a task due to their favourable characteristics. This publication presents the results of an IAEA coordinated research project on nanoscale radiation engineering of advanced materials for potential biomedical applications, summarizing the achievements of the participating institutions.

(Forthcoming 2015) • ISBN 978-92-0-101815-1 • STI/PUB/1684 • €49.00



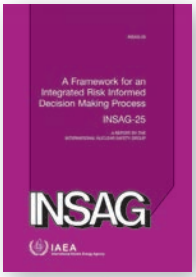
Radiation Processed Materials in Products from Polymers for Agricultural Applications

IAEA TECDOC Series No. 1745

This publication results from a technical meeting on radiation processed materials in products from polymers for agricultural applications. The meeting provided a forum for the sharing of practical experiences and lessons learned, and reviewed the recent developments in the use of radiation technologies for the preparation of environmentally friendly products based on polymers for agricultural applications.

(2014) • ISBN 978-92-0-106414-1 • IAEA-TECDOC-1745 • €18.00

NUCLEAR AND RADIOLOGICAL SAFETY AND SECURITY

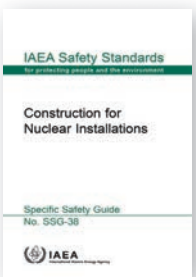


A Framework for an Integrated Risk Informed Decision Making Process

INSAG Series No. 25

Experience has shown that an integrated decision making process, including deterministic and probabilistic analyses together with good engineering practices, consideration of operating experience and sound managerial arrangements, is effective in refining and improving safe design and safe operation of nuclear installations. This publication is intended to promote a common understanding among the international nuclear community of how the concept of risk can be used in making safety decisions relating to nuclear installations. It identifies the framework, principles and key elements for integrated risk informed decision making (IRIDM) and describes the interrelationship between the key elements as well as the integration of their input. Although this publication is focused on the use of IRIDM in the context of nuclear power plants, including their fuel handling and storage systems, it can be equally applied with appropriate adjustments to other nuclear facilities and activities as well as to non-nuclear applications.

English Edition (24 pp., 2 figs; 2011) • ISBN 978-92-0-114110-1 • STI/PUB/1499 • €21.00
Russian Edition (30 pp., 2 figs; 2014) • ISBN 978-92-0-406814-6 • STI/PUB/1499 • €21.00



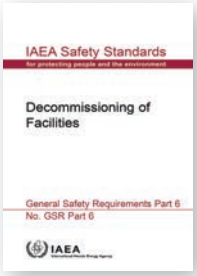
Construction for Nuclear Installations

Specific Safety Guide

IAEA Safety Standards Series No. SSG-38

This Safety Guide provides recommendations and guidance based on international good practices in the construction of nuclear installations, which will enable construction to proceed with high quality. It can be applied to support the development, implementation and assessment of construction methods and procedures and the identification of good practices for ensuring the quality of the construction to meet the design intent and ensure safety. It will be a useful tool for regulatory bodies, licensees and new entrant countries for nuclear power plants and other nuclear installations.

(Forthcoming 2015) • ISBN 978-92-0-102715-3 • STI/PUB/1693 • €42.00



Decommissioning of Facilities

General Safety Requirements

IAEA Safety Standards Series No. GSR Part 6

Decommissioning is the last step in the lifetime management of a facility. It must also be considered during the design, construction, commissioning and operation of facilities. This publication establishes requirements for the safe decommissioning of a broad range of facilities: nuclear power plants, research reactors, nuclear fuel cycle facilities, facilities for processing naturally occurring radioactive material, former military sites, and relevant medical, industrial and research facilities. It addresses all the aspects of decommissioning that are required to ensure safety, aspects such as roles and responsibilities, strategy and planning for decommissioning, conduct of decommissioning actions and termination of the authorization for decommissioning. It is intended for use by those involved in policy development, regulatory control and implementation of decommissioning.

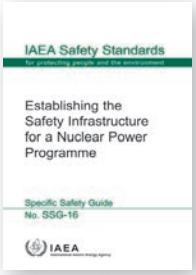
(23 pp., 2 figs; 2014) • ISBN 978-92-0-102614-9 • STI/PUB/1652 • €25.00

Establishing a National Nuclear Security Support Centre

IAEA TECDOC Series No. 1734

In recent years, requests for IAEA support in human resource development and for technical and scientific support in nuclear security have significantly increased. As a result the IAEA has identified the need to develop a concept that seeks to effectively pass ownership of nuclear security knowledge and associated technical skills to States through the establishment of nuclear security support centres (NSSCs). This publication provides an overview of the functions and the structure of an NSSC and provides guidance on implementing the suggested NSSC concept. It outlines the developmental, organizational and financial framework that should be considered in conjunction with the decision to establish an NSSC and highlights the importance of implementing national commitments stemming from adherence to international instruments for nuclear security. The publication is primarily addressed to senior decision makers responsible for nuclear security functions.

(2014) • ISBN 978-92-0-100414-7 • IAEA-TECDOC-1734 • €18.00



Establishing the Safety Infrastructure for a Nuclear Power Programme

Specific Safety Guide

IAEA Safety Standards Series No. SSG-16

This Safety Guide provides guidance on the establishment of a national nuclear safety infrastructure as a key component of the overall preparations required for emerging nuclear power programmes. It provides recommendations, presented in the form of 200 sequential actions, on meeting the applicable IAEA safety requirements during the first three phases of the development of a nuclear power programme. It is intended for use by persons or organizations participating in the preparation and implementation of a nuclear power programme, including government officials and legislative bodies, regulatory bodies, operating organizations and external support entities.

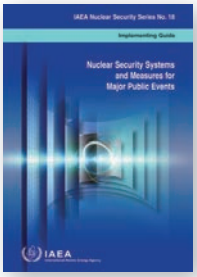
English Edition (158 pp., 7 figs; 2012) • ISBN 978-92-0-115310-4 • STI/PUB/1507 • €40.00
Russian Edition (188 pp., 7 figs; 2015) • ISBN 978-92-0-405614-3 • STI/PUB/1507 • €40.00

Nuclear Forensics in Support of Investigations

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

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.

(Forthcoming 2015) • ISBN 978-92-0-102115-1 • STI/PUB/1687 • €38.00

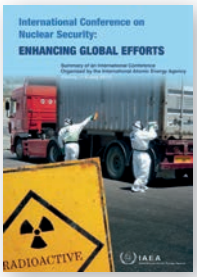


Nuclear Security Systems and Measures for Major Public Events

IAEA Nuclear Security Series No. 18

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.

English Edition (56 pp., 14 figs; 2012) • ISBN 978-92-0-127010-8 • STI/PUB/1546 • €30.00
Russian Edition (67 pp., 14 figs; 2014) • ISBN 978-92-0-401414-3 • STI/PUB/1546 • €30.00



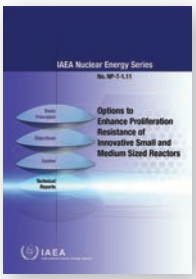
Nuclear Security: Enhancing Global Efforts

Proceedings of an International Conference held in Vienna, Austria, 1–5 July 2013

Proceedings Series

This publication presents the proceedings of an international conference on nuclear security, which was convened at the IAEA's headquarters in Vienna, the first such conference to include ministerial level participation. The conference adopted a ministerial declaration and provided a forum where experiences and lessons learned could be discussed. Ideas were exchanged to identify emerging trends and to consider medium and long term objectives for international nuclear security efforts, as well as to inform the development of the IAEA's Nuclear Security Plan 2014–2017. The President's summary highlights the main conclusions and key issues, drawing on the reports from the sessions. The conference attracted more than 1300 registered participants from 125 Member States, 34 of which were represented at ministerial level, and 21 intergovernmental and non-governmental organizations.

(119 pp.; 2014) • ISBN 978-92-0-101514-3 • STI/PUB/1643 • €90.00

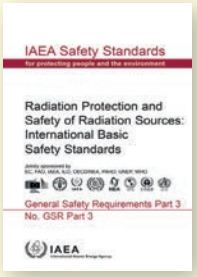


Options to Enhance Proliferation Resistance of Innovative Small and Medium Sized Reactors

IAEA Nuclear Energy Series No. NP-T-1.11

This publication addresses specific considerations for proliferation resistance and safeguards for small and medium sized reactors (SMRs). It describes the framework analysis through comparing and harmonizing the Generation IV International Forum and the International Project on Innovative Nuclear Reactors and Fuel Cycles methodologies, defines the proliferation resistance assessment and safeguards by design approach and presents the current implementation of proliferation resistance measures in innovative SMRs. The appendices include information on the example of a procedure to support a facility's analysis of the safeguarding situation in support of safeguards by design, and a template listing required proliferation resistance related design information. An overview of SMR design and development activities and State perspectives is given in the annexes.

(63 pp., 2 figs; 2014) • ISBN 978-92-0-145510-9 • STI/PUB/1632 • €28.00



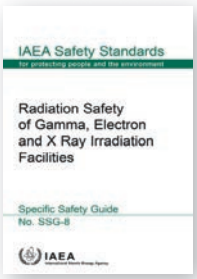
Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards

General Safety Requirements

IAEA Safety Standards Series No. GSR Part 3

This publication is the new edition of the International Basic Safety Standards. The edition is co-sponsored by seven other international organizations — European Commission (EC/Euratom), FAO, ILO, OECD/NEA, PAHO, UNEP and WHO. It replaces the interim edition that was published in November 2011 and the previous edition of the International Basic Safety Standards which was published in 1996. It has been extensively revised and updated to take account of the latest finding of the United Nations Scientific Committee on the Effects of Atomic Radiation, and the latest recommendations of the International Commission on Radiological Protection. The publication details the requirements for the protection of people and the environment from harmful effects of ionizing radiation and for the safety of radiation sources. All circumstances of radiation exposure are considered.

(436 pp., 2 figs; 2014) • ISBN 978-92-0-135310-8 • STI/PUB/1578 • €68.00



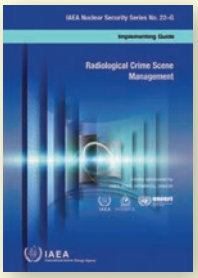
Radiation Safety of Gamma, Electron and X Ray Irradiation Facilities

Specific Safety Guide

IAEA Safety Standards Series No. SSG-8

This Safety Guide provides recommendations on how to meet the requirements of the IAEA International Basic Safety Standards with regard to irradiation facilities. It gives practical information on the safe design and operation of gamma, electron and X ray irradiators in accordance with these requirements, and discusses the beneficial applications of ionizing irradiation and how to avoid potential radiation hazards at industrial irradiators, including contamination arising from damaged radioactive sources. The Safety Guide is intended for use by the designers and operating organizations of these facilities and also by regulatory bodies.

English Edition (94 pp., 8 figs; 2010) • ISBN 978-92-0-103710-7 • STI/PUB/1454 • €30.00
Spanish Edition (Forthcoming 2015) • ISBN 978-92-0-304314-4 • STI/PUB/1454 • €30.00

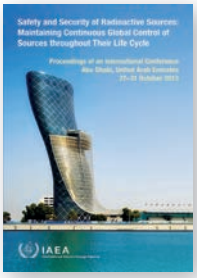


Radiological Crime Scene Management

IAEA Nuclear Security Series No. 22-G

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.

(93 pp., 25 figs; 2014) • ISBN 978-92-0-108714-0 • STI/PUB/1672 • €48.00



Safety and Security of Radioactive Sources: Maintaining Continuous Global Control of Sources throughout their Life Cycle

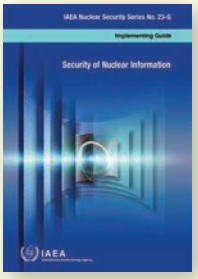
Proceedings of an International Conference held in Abu Dhabi, United Arab Emirates, 27–31 October 2013

Proceedings Series

The IAEA works with its Member States to help them ensure the safety and security of radioactive sources. The purpose of

this conference was to review current success and challenges in ensuring the safety and security of radioactive sources and to identify means to maintain the highest level of safety and security throughout their life cycle, from manufacture to disposal. These proceedings contain the opening addresses, the invited and contributed papers presented during the sessions, and summaries of the discussions. The accompanying CD-ROM contains the presentations of most of the papers presented orally, as well as the complete text of the printed volume. The CD-ROM also contains the national reports on implementation of the Code of Conduct submitted to the conference by States, as per the formalized process established in 2006.

(783 pp., 134 figs; 2015) • ISBN 978-92-0-105214-8 • STI/PUB/1667 • €90.00

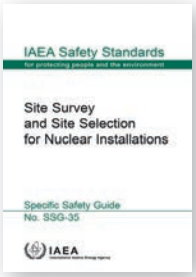


Security of Nuclear Information

IAEA Nuclear Security Series No. 23-G

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.

(54 pp.; 2015) • ISBN 978-92-0-110614-8 • STI/PUB/1677 • €30.00



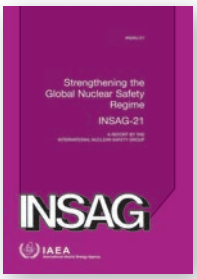
Site Survey and Site Selection for Nuclear Installations

Specific Safety Guide

IAEA Safety Standards Series No. SSG-35

This publication was prepared under the IAEA's programme for safety standards and complements other safety guides that deal with all safety considerations in site evaluation regarding the effects of external events and population distribution. It supplements and provides recommendations on meeting the requirements for nuclear installations established in the safety requirements publication on Site Evaluation for Nuclear Installations (IAEA Safety Standards Series No. NS-R-3) in terms of the safety aspects to be considered during the stages of the selection process of a site for a nuclear installation.

(Forthcoming 2015) • ISBN 978-92-0-102415-2 • STI/PUB/1690 • €31.00



Strengthening the Global Nuclear Safety Regime

INSAG Series No. 21

The Global Nuclear Safety Regime is the framework for achieving the worldwide implementation of a high level of safety at nuclear installations. At its core are the activities undertaken by each country to ensure the safety and security of the nuclear installations within its jurisdiction. But national efforts are, and should be, augmented by the activities of a variety of international enterprises that facilitate nuclear safety — intergovernmental organizations; multinational networks among operators, regulators or scientists; the international nuclear industry and other stakeholders (public, news media, NGOs). All of these efforts should be harnessed to effectively enhance the implementation of safety principles. The existing Global Nuclear Safety Regime is functioning at an effective level today. However, its impact on improving safety could be enhanced. This publication recommends action in the following areas: use of the review meetings of the Nuclear Safety Convention as a vehicle for open and critical peer review and a source for learning about the best safety practices of others; enhanced utilization of IAEA safety standards for the harmonization of national safety regulations to the extent feasible; enhanced exchange of operating experience for improving operating and regulatory practices and multinational cooperation in the safety review of new nuclear power plant designs. These actions, which are described more fully in this publication, should serve to enhance the effectiveness of the regime.

English Edition (24 pp.; 2006) • ISBN 92-0-111306-4 • STI/PUB/1277 • €18.00
Russian Edition (32 pp.; 2014) • ISBN 978-92-0-408814-4 • STI/PUB/1277 • €18.00

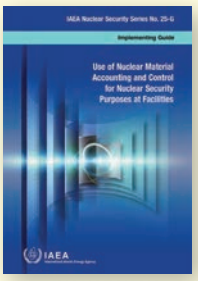
The Management System for Nuclear Installations

Safety Guide

IAEA Safety Standards Series No. GS-G-3.5

This Safety Guide has been issued in support of the Safety Requirements publication on the Management System for Facilities and Activities, IAEA Safety Standards Series No. GS-R-3. It contains detailed recommendations in relation to nuclear installations, to complement the general recommendations provided in IAEA Safety Standards Series No. GS-G-3.1. This Safety Guide is applicable throughout the lifetime of a nuclear installation, including site evaluation, design, construction, commissioning, operation and decommissioning.

English Edition (139 pp., 5 figs; 2009) • ISBN 978-92-0-103409-0 • STI/PUB/1392 • €35.00
Russian Edition (160 pp., 5 figs; 2014) • ISBN 978-92-0-400614-8 • STI/PUB/1392 • €35.00



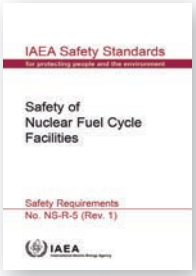
Use of Nuclear Material Accounting and Control for Nuclear Security at Facilities

IAEA Nuclear Security Series No. 25-G

Nuclear material accounting and control (NMAC) works in a complementary fashion with the international safeguards programme and physical protection systems to help prevent, deter or detect the unauthorized acquisition and use of nuclear materials. These three methodologies are employed by Member States to defend against external threats, internal threats and both State actors and non-State actors. This publication offers guidance for implementing NMAC measures for nuclear security at the nuclear facility level. It focuses on measures to mitigate the risk posed by insider threats and describes elements of a programme that can be implemented at a nuclear facility in coordination with the physical protection system for the purpose of deterring and detecting unauthorized removal of nuclear material.

(63 pp.; 2015) • ISBN 978-92-0-101915-8 • STI/PUB/1685 • €30.00

FUEL FABRICATION AND STORAGE



Safety of Nuclear Fuel Cycle Facilities

Safety Requirements

IAEA Safety Standards Series No. NS-R-5 (Rev. 1)

This publication covers the broad scope of requirements for fuel cycle facilities that, in light of the experience and present state of technology, must be satisfied to ensure safety for the lifetime of the facility. Topics of specific relevance include aspects of nuclear fuel generation, storage, reprocessing and disposal.

(102 pp., 4 figs; 2014) • ISBN 978-92-0-100114-6 • STI/PUB/1641 • €20.00

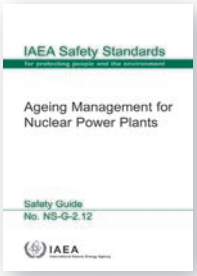
International Safeguards in the Design of Fuel Fabrication Plants

IAEA Nuclear Energy Series No. NF-T-4.7

This publication is the third in a series from the IAEA that provides guidance on the early consideration of safeguards requirements in the design and construction of nuclear facilities. It is principally intended for designers and operators of nuclear fuel fabrication facilities; however, vendors, State authorities and investors may also benefit from the information provided. This guidance is introductory rather than comprehensive; more detailed information on IAEA safeguards implementation can be found in the Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols (IAEA Services Series No. 21, December 2014) and other publications in that series. This document expands upon the general considerations addressed in International Safeguards in Nuclear Facility Design and Construction (Nuclear Energy Series No. NP-T-2.8, April 2013).

(Forthcoming 2015) • ISBN 978-92-0-103315-4 • STI/PUB/1699 • €30.00

NUCLEAR POWER PLANTS



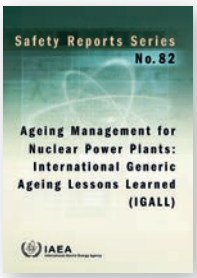
Ageing Management for Nuclear Power Plants

Safety Guide

IAEA Safety Standards Series No. NS-G-2.12

The median age of nuclear power plants connected to the grid worldwide is increasing. Ageing management has become an important issue in ensuring the availability of required safety functions throughout the service life of a plant. This Safety Guide provides recommendations on meeting the requirements for safe long term operation and identifies key elements of effective ageing management for nuclear power plants.

English Edition (48 pp., 6 figs; 2009) • ISBN 978-92-0-112408-1 • STI/PUB/1373 • €20.00
Russian Edition (54 pp., 6 figs; 2014) • ISBN 978-92-0-400214-0 • STI/PUB/1373 • €20.00



Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL)

Safety Reports Series No. 82

This publication provides a common internationally agreed basis on what constitutes an acceptable ageing management programme, as well as a knowledge base on ageing management for the design of new plants and design and safety reviews, and aims to serve as a roadmap to available information on ageing management. It addresses ageing management of passive and active structures and components for water moderated reactors that can have an impact, directly or indirectly, on the safe operation of the plant and that are susceptible to ageing degradation. The information provided is relevant for plants under normal operation, for plants considering long term operation, as well as for new plants including new designs. It underlines that ageing management should be implemented from the start of operation of nuclear power plants and that adequate provisions to facilitate effective ageing management should be made during the plant design, construction, commissioning, operation, and decommissioning.

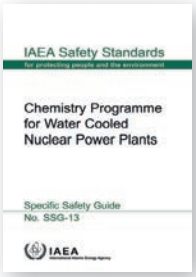
(87 pp.; 2015) • ISBN 978-92-0-110214-0 • STI/PUB/1675 • €38.00

Approaches to Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL) Final Report

IAEA TECDOC Series No. 1736

This publication complements the IAEA Safety Report on proven ageing management programmes, the main deliverable of the International Generic Ageing Lessons Learned for Nuclear Power Plants, and presents a summary of the national approaches taken by Member States.

(2014) • ISBN 978-92-0-104414-3 • IAEA-TECDOC-1736 • €18.00



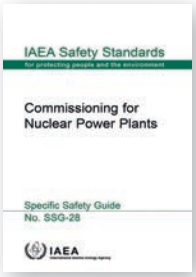
Chemistry Programme for Water Cooled Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-13

This publication provides guidance on establishing a high standard chemistry programme in accordance with plant safety policy and regulatory requirements. It will be useful to managers of operating organizations and other staff responsible for supporting or monitoring plant activities and for oversight of the plant chemistry programme, as well as to regulatory bodies.

English Edition (46 pp.; 2011) • ISBN 978-92-0-107610-6 • STI/PUB/1469 • €25.00
Russian Edition (52 pp.; 2014) • ISBN 978-92-0-400914-9 • STI/PUB/1469 • €25.00



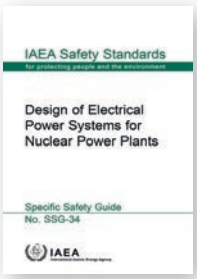
Commissioning for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-28

This Safety Guide provides recommendations on the basis of international best practices, as currently followed in IAEA Member States, on how to meet commissioning requirements for nuclear power plants. These requirements enable the commissioning of a nuclear power plant to proceed safely and to a high quality. The recommendations will also enable the necessary assurances to be provided that the plant has been constructed in accordance with the design intent and can be operated safely.

(84 pp., 2 figs; 2014) • ISBN 978-92-0-140110-6 • STI/PUB/1595 • €40.00



Design of Electrical Power Systems for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-34

This Safety Guide provides recommendations on the necessary characteristics of electrical power systems for nuclear power plants, and of the processes for developing these systems, in order to meet the safety requirements of IAEA Safety Standards Series No. SSR-2/1. It reflects the changes that have been made to SSR-2/1, in particular to Requirement 68 on Emergency Power Supply.

(Forthcoming 2015) • ISBN 978-92-0-109314-1 • STI/PUB/1673 • €47.00

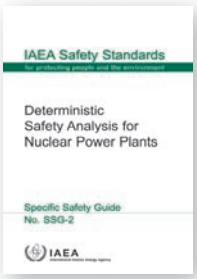
Design of Instrumentation and Control Systems for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-39

This publication is a revision and combination of two Safety Guides, IAEA Safety Standards Series No. NS-G-1.1 and No. NS-G-1.3. The revision takes into account developments in instrumentation and control (I&C) systems since the publication of the earlier Safety Guides. The main changes relate to the continuing development of computer applications and the evolution of the methods necessary for their safe, secure and practical use. In addition, account is taken of developments in human factors engineering and the need for computer security. This Safety Guide references and takes into account other IAEA Safety Standards and Nuclear Security Series publications that provide guidance relating to I&C design.

(Forthcoming 2015) • ISBN 978-92-0-102815-0 • STI/PUB/1694 • €54.00



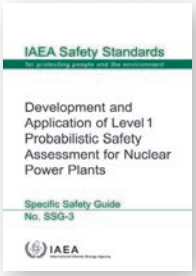
Deterministic Safety Analysis for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-2

The objective of this Safety Guide is to provide harmonized guidance to designers, operators, regulators and providers of technical support on deterministic safety analysis for nuclear power plants. It provides information on the utilization of the results of such analysis for safety and reliability improvements. The Safety Guide addresses conservative, best estimate and uncertainty evaluation approaches to deterministic safety analysis and is applicable to current and future designs.

English Edition (62 pp., 2 figs; 2010) • ISBN 978-92-0-113309-0 • STI/PUB/1428 • €23.00
Russian Edition (72 pp., 2 figs; 2014) • ISBN 978-92-0-401814-1 • STI/PUB/1428 • €23.00
Spanish Edition (66 pp., 2 figs; 2012) • ISBN 978-92-0-333010-7 • STI/PUB/1428 • €23.00



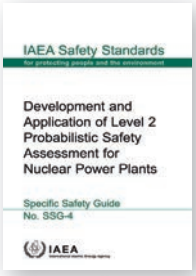
Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-3

The objective of this Safety Guide is to provide recommendations for meeting the IAEA safety requirements in performing or managing a level 1 probabilistic safety assessment (PSA) project for a nuclear power plant. These recommendations promote technical consistency among level 1 PSA studies and support applications of PSA and risk informed decision making. The Safety Guide's scope encompasses all operational conditions of the plant and potential initiating events and hazards.

English Edition (195 pp., 8 figs; 2010) • ISBN 978-92-0-114509-3 • STI/PUB/1430 • €35.00
Russian Edition (218 pp., 8 figs; 2014) • ISBN 978-92-0-406014-0 • STI/PUB/1430 • €35.00



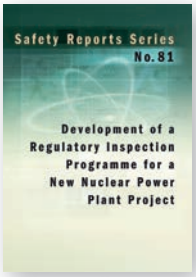
Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-4

The objective of this Safety Guide is to provide recommendations for meeting the IAEA safety requirements in performing or managing a level 2 probabilistic safety assessment (PSA) project for a nuclear power plant; thus it complements the Safety Guide on level 1 PSA. One of the aims of this Safety Guide is to promote a standard framework, standard terms and a standard set of documents for level 2 PSAs to facilitate regulatory and external peer review of their results. It describes all elements of the level 2 PSA that need to be carried out if the starting point is a fully comprehensive level 1 PSA.

English Edition (88 pp., 3 figs; 2010) • ISBN 978-92-0-102210-3 • STI/PUB/1443 • €22.00
Russian Edition (100 pp., 3 figs; 2014) • ISBN 978-92-0-404614-4 • STI/PUB/1443 • €22.00

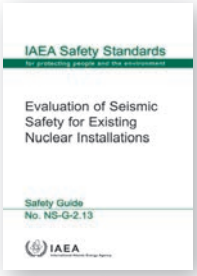


Development of a Regulatory Inspection Programme for a New Nuclear Power Plant Project

Safety Reports Series No. 81

This Safety Report provides general principles, guidance and technical rationale for regulatory inspections related to new nuclear power plant projects, and is based on the consideration of IAEA safety standards and experiences of Member States. The publication covers regulatory inspection during siting, design, construction and commissioning stages as well as the transition to operation. It takes into account approaches and practices of Member States recently involved in new nuclear facility projects, and it includes examples of Member States' regulatory inspection programmes and experiences.

(112 pp., 3 figs; 2014) • ISBN 978-92-0-113513-1 • STI/PUB/1636 • €35.00



Evaluation of Seismic Safety for Existing Nuclear Installations

Safety Guide

IAEA Safety Standards Series No. NS-G-2.13

This Safety Guide provides recommendations regarding the criteria and methodologies to be used for seismic safety evaluation of existing nuclear installations, including installations whose purpose and associated radiological risks have changed, installations where longer term operation is under consideration and installations where comprehensive seismic safety reassessments have become necessary. Two methodologies are discussed in detail: deterministic seismic margin assessment (SMA) and seismic probabilistic safety assessment (SPSA).

English Edition (84 pp; 2009) • ISBN 978-92-0-100409-3 • STI/PUB/1379 • €20.00
Russian Edition (76 pp; 2014) • ISBN 978-92-0-401314-6 • STI/PUB/1379 • €20.00

Improving the International System for Operating Experience Feedback

INSAG Series No. 23

This INSAG publication is intended to facilitate the dissemination of information on precursor events (which would nearly always precede a serious accident at a nuclear power plant), by means of an international system for the feedback of operating experience. A fuller understanding of precursor events would further reduce the probability of accidents, and information on such events would be particularly valuable for States in which there are only a small number of nuclear facilities. This publication describes the scope and objectives of a system for operating experience feedback, and the roles of both international and national organizations in understanding precursor events and preventing accidents.

English Edition (18 pp.; 2008) • ISBN 978-92-0-108008-0 • STI/PUB/1349 • €19.00
Russian Edition (24 pp.; 2014) • ISBN 978-92-0-408914-1 • STI/PUB/1349 • €19.00

Management of Spent Fuel from Nuclear Power Reactors

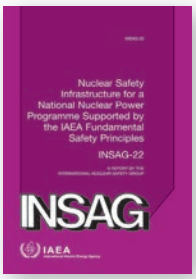
Proceedings of an International Conference held in Vienna, Austria, 31 May–4 June 2010

Proceedings Series

This publication presents the proceedings of an international conference on spent fuel

management organized by the IAEA in cooperation with the NEA of the OECD. The conference covered a broad range of topics from national strategies through safety and regulatory aspects, transport, technical innovation, fuel and material behaviour, operational experience with storage, new fuel and reprocessing developments, and long term storage and disposal. The conference also featured two round table discussion sessions covering regulatory frameworks and stakeholder issues. The proceedings include the opening presentations and the President's summary and the conclusions of the conference. A CD-ROM with contributed papers accompanies the publication.

**(48 pp.; 2015) • ISBN 978-92-0-103714-5 •
STI/PUB/1661 • €40.00**



Nuclear Safety Infrastructure for a National Nuclear Power Programme Supported by the IAEA Fundamental Safety Principles

INSAG Series No. 22

This INSAG publication presents insights drawn from the IAEA Fundamental Safety Principles, which constitute the conceptual basis for the IAEA's entire safety standards programme. The infrastructure issues discussed in this publication are supplemented by other IAEA guidance publications on the topic. The present publication is primarily intended for use by IAEA Member States considering the introduction of nuclear power for the first time. However, States with an active nuclear programme that are considering expansion may also find it useful in order to renew their knowledge of the early phases of the life of a nuclear power plant, and to correct any weaknesses in their nuclear safety infrastructure.

**English Edition (30 pp.; 2008) • ISBN 978-92-0-108108-7 •
STI/PUB/1350 • €20.00**
**Russian Edition (36 pp.; 2014) • ISBN 978-92-0-406714-9 •
STI/PUB/1350 • €20.00**

Review of Seismic Evaluation Methodologies for Nuclear Power Plants Based on a Benchmark Exercise

IAEA TECDOC Series No. 1722

This publication presents the results of the Kashiwazaki-Kariwa Research Initiative for Seismic Margin Assessment (KARISMA) benchmarking exercise to estimate how well the analytical results can predict the actual response and performance of structures, systems and components (SSCs) and to identify the areas that may need reinforcement, or highlight those areas where analytical results are not an accurate predictor of SSC performance.

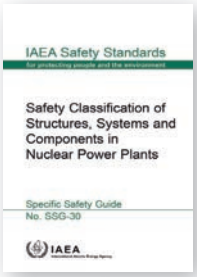
**(2014) • ISBN 978-92-0-114913-8 •
IAEA-TECDOC-1722 • €18.00**

Safe Management of the Operating Lifetimes of Nuclear Power Plants

INSAG Series No. 14

This publication deals with a general approach to the safe management of the operating lifetimes of nuclear power plants, which requires a continuing quest for excellence. It also responds to the concerns about maintaining adequate safety levels at ageing plants, even beyond their design lifetimes.

**English Edition (23 pp.; 1999) • ISBN 92-0-103099-1 •
STI/PUB/1085 • €10.00**
**Russian Edition (29 pp.; 2014) • ISBN 978-92-0-407514-4 •
STI/PUB/1085 • €10.00**



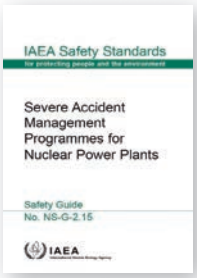
Safety Classification of Structures, Systems and Components in Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-30

This Safety Guide provides recommendations and guidance on how to meet the requirements established in Specific Safety Requirements No. SSR-2/1 and in General Safety Requirements No. GSR Part 4 for the identification of structures, systems and components (SSCs) important to safety in nuclear power plants and for their classification on the basis of their function and safety significance. This Safety Guide is intended primarily for use by organizations involved in the design of nuclear power plants, as well as by regulatory bodies and their technical support organizations. The Safety Guide can also be applied to other nuclear installations subject to appropriate adjustments relevant to the specific design of the type of the facility being considered.

**(24 pp., 2 figs; 2014) • ISBN 978-92-0-115413-2 •
STI/PUB/1639 • €22.00**



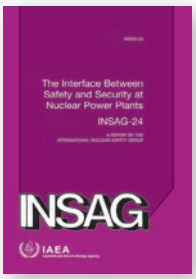
Severe Accident Management Programmes for Nuclear Power Plants

Safety Guide

IAEA Safety Standards Series No. NS-G-2.15

This Safety Guide provides recommendations for the development of accident management programmes to prevent, and to mitigate the consequences of, beyond design basis accidents, including severe accidents. Although primarily developed for use for light water reactors, the recommendations are valid for a wide range of nuclear reactors, both existing and new.

**English Edition (66 pp., 1 fig.; 2009) • ISBN 978-92-0-112908-6 •
STI/PUB/1376 • €25.00**
**Russian Edition (78 pp., 1 fig.; 2014) • ISBN 978-92-0-401614-7 •
STI/PUB/1376 • €25.00**



The Interface Between Safety and Security at Nuclear Power Plants

INSAG Series No. 24

This publication seeks to provide a better understanding of the interface between safety and security at nuclear power plants and to discuss the means to achieve both objectives in an optimal fashion. It provides information in a background chapter on the existing relevant documentation, discusses the expectations for administrative arrangements at different levels, surveys certain common principles, and suggests general solutions that can help ensure an integrated approach. Conclusions are drawn and high level recommendations are proposed with the goal of maximizing the protection of the public, property, society and the environment through an improved and strengthened interface between safety and security.

English Edition (24 pp.; 2010) • ISBN 978-92-0-107910-7 • STI/PUB/1472 • €22.00
Russian Edition (34 pp.; 2014) • ISBN 978-92-0-405914-4 • STI/PUB/1472 • €22.00

Topical Issues in Nuclear Installation Safety: Defence in Depth — Advances and Challenges for Nuclear Installation Safety

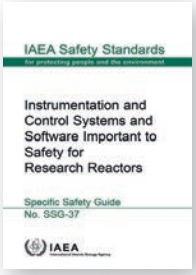
Proceedings of an International Conference held in Vienna, Austria, 21–24 October 2013

IAEA TECDOC Series No. 1749

The fifth International Conference on Topical Issues in Nuclear Installation Safety was dedicated to the defence in depth (DID) concept which is fundamental to the safety of nuclear installations. The main focus of the conference was to foster the exchange of information on the implementation of DID and the associated challenges. This CD-ROM contains the papers presented at the conference as well as the summary and conclusions, including recommendations for further actions to strengthen DID and its implementation.

(2014) • ISBN 978-92-0-158214-0 • IAEA-TECDOC-CD-1749 • €18.00

RESEARCH REACTORS



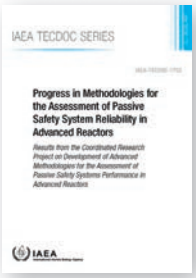
Instrumentation and Control Systems and Software Important to Safety for Research Reactors

Specific Safety Guide

IAEA Safety Standards Series No. SSG-37

This Safety Guide provides recommendations and guidance on instrumentation and control systems and software important to safety for research reactors, including instrumentation and control system architecture and associated components, from sensors to actuators, operator interfaces and auxiliary equipment. It also provides recommendations on computer based systems and software, including software requirements and design, verification and validation, integration, and operation. This publication also addresses safety classification, design, implementation, qualification and operation of instrumentation as well as control systems. The recommendations and guidance apply to both the design and configuration management of instrumentation and control systems for new research reactors and the modernization of the instrumentation and control systems to existing research reactor facilities. In addition this Safety Guide provides recommendations and guidance on human factors engineering and human machine interfaces, and for computer based systems and software for use in instrumentation and control systems important to safety.

(Forthcoming 2015) • ISBN 978-92-0-102615-6 • STI/PUB/1692 • €41.00



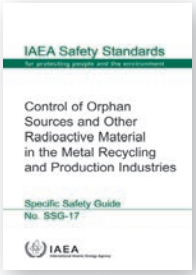
Progress in Methodologies for the Assessment of Passive Safety System Reliability in Advanced Reactors

IAEA TECDOC Series No. 1752

This publication summarizes the results of an IAEA coordinated research project on the development of advanced methodologies for the assessment of passive safety system performance in advanced reactors. It includes discussions on various methodologies to assess the performance of passive engineered safety features in innovative small reactors, including the Indian AHWR 300 LEU and the Argentinian CAREM25. The publication focuses on the different reliability assessment approaches, methodologies, analysis and evaluation of the results and technical challenges. It provides the insights resulting from the analysis on the technical issues associated with assessing the reliability of passive systems in the context of nuclear safety and probabilistic safety analysis. A viable path towards the implementation of the research efforts in the related areas is also delineated.

(2014) • ISBN 978-92-0-108614-3 • IAEA-TECDOC-1752 • €18.00

RADIATION SOURCES AND ACCELERATORS



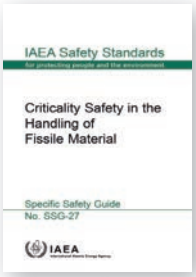
Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries

Specific Safety Guide

IAEA Safety Standards Series No. SSG-17

Accidents involving orphan sources and other radioactive material in the metal recycling and production industries have resulted in serious radiological accidents as well as in harmful environmental, social and economic impacts. This Safety Guide provides recommendations, the implementation of which should prevent such accidents and provide confidence that scrap metal and recycled products are safe.

Arabic Edition (97 pp., 4 figs; 2014) • ISBN 978-92-0-606914-1 • STI/PUB/1509 • €31.00
English Edition (82 pp., 4 figs; 2012) • ISBN 978-92-0-115510-8 • STI/PUB/1509 • €31.00
French Edition (88 pp., 4 figs; 2014) • ISBN 978-92-0-209114-6 • STI/PUB/1509 • €31.00
Spanish Edition (90 pp., 4 figs; 2013) • ISBN 978-92-0-344010-3 • STI/PUB/1509 • €31.00



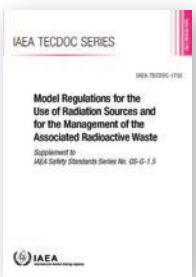
Criticality Safety in the Handling of Fissile Material

Specific Safety Guide

IAEA Safety Standards Series No. SSG-27

This Safety Guide provides guidance and recommendations on how to meet the relevant requirements for ensuring subcriticality when dealing with fissile material and for planning the response to criticality accidents. The guidance and recommendations are applicable to both regulatory bodies and operating organizations. The objectives of criticality safety are to prevent a self-sustained nuclear chain reaction and to minimize the consequences of this if it were to occur. The Safety Guide makes recommendations on how to ensure subcriticality in systems involving fissile materials during normal operation, anticipated operational occurrences, and, in the case of accident conditions, within design basis accidents, from initial design through commissioning, operation, and decommissioning and disposal.

(77 pp., 2 figs; 2014) • ISBN 978-92-0-140010-9 • STI/PUB/1594 • €40.00

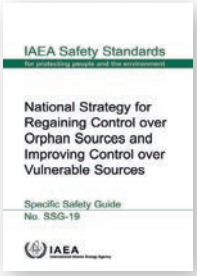


Model Regulations for the Use of Radiation Sources and for the Management of the Associated Radioactive Waste

IAEA TECDOC Series No. 1732

This publication provides advice on an appropriate set of regulations covering all aspects of the use of radiation sources and the safe management of the associated radioactive waste. The publication provides the framework for the regulatory requirements and conditions to be incorporated into individual authorizations for the use of radiation sources in industry, medical facilities, research and education, and agriculture. It also establishes criteria to be used for assessing compliance. The content allows States to appraise the adequacy of their existing regulations and regulatory guides, and acts as a reference for those States developing regulations for the first time. The publication is a supplement to the guidance in the IAEA Safety Guide GS-G-1.5, Regulatory Control of Radiation Sources.

English Edition (2013) • ISBN 978-92-0-115613-6 • IAEA-TECDOC-1732 • €18.00
Spanish Edition (2015) • ISBN 978-92-0-300915-7 • IAEA-TECDOC-1732 • €18.00



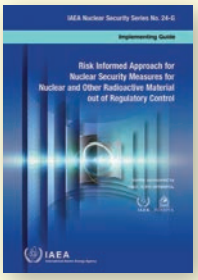
National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources

Specific Safety Guide

IAEA Safety Standards Series No. SSG-19

This Safety Guide is intended to provide recommendations on the establishment of a national strategy for regaining control over orphan radioactive sources and for improving control over vulnerable radioactive sources. It provides guidance on how to assess the national situation, and develop and implement a national strategy to achieve these goals.

Arabic Edition (92 pp., 4 figs; 2012) • ISBN 978-92-0-636210-5 • STI/PUB/1510 • €35.00
English Edition (100 pp., 4 figs; 2011) • ISBN 978-92-0-115610-5 • STI/PUB/1510 • €35.00
French Edition (Forthcoming 2015) • ISBN 978-92-0-210314-6 • STI/PUB/1510 • €35.00
Spanish Edition (102 pp., 4 figs; 2013) • ISBN 978-92-0-337110-0 • STI/PUB/1510 • €35.00



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

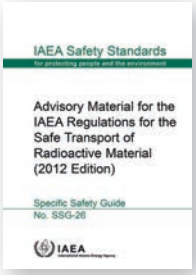
IAEA Nuclear Security Series No. 24-G

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

TRANSPORT OF RADIOACTIVE MATERIAL



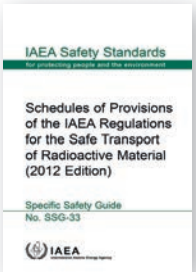
Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition)

Specific Safety Guide

IAEA Safety Standards Series No. SSG-26

This Safety Guide provides recommendations and guidance on achieving and demonstrating compliance with IAEA Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material (2012 Edition), which establishes the requirements to be applied to the national and international transport of radioactive material. Transport is deemed to comprise all operations and conditions associated with and involved in the movement of radioactive material, including the design, fabrication and maintenance of packaging, and the preparation, consigning, handling, carriage, storage in transit and receipt at the final destination of packages. This publication supersedes IAEA Safety Standards Series No. TS-G-1.1 Rev. 1, which was issued in 2008.

(450 pp., 17 figs; 2014) • ISBN 978-92-0-136910-9 • STI/PUB/1586 • €70.00



Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition)

Specific Safety Guide

IAEA Safety Standards Series No. SSG-33

This Safety Guide aims to aid users of radioactive material and regulators by providing a listing of relevant requirements of the regulations (IAEA Safety Standards Series No. SSR 6) as applicable to the type of radioactive material, package or shipment. Once a consignor has properly classified the radioactive material to be shipped (following the recommendations provided in Section 2 and Fig. 1 of this Safety Guide), the appropriate UN number can be assigned and the paragraph numbers of specific requirements for shipment can be found in the corresponding schedule.

(289 pp., 4 figs; 2015) • ISBN 978-92-0-104214-9 • STI/PUB/1666 • €61.00

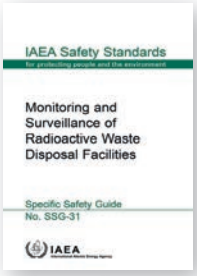
Security of Nuclear Material in Transport

IAEA Nuclear Security Series No. 26-G

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.

(Forthcoming 2015) • ISBN 978-92-0-102015-4 • STI/PUB/1686 • €48.00

WASTE REPOSITORIES



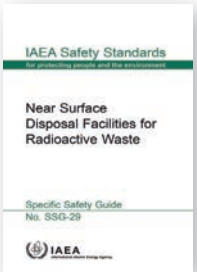
Monitoring and Surveillance of Radioactive Waste Disposal Facilities

Specific Safety Guide

IAEA Safety Standards Series No. SSG-31

This Safety Guide provides recommendations and guidance on how to plan and perform monitoring and surveillance programmes for disposal facilities for radioactive waste. The Safety Guide considers monitoring and surveillance for near surface disposal facilities, for geological disposal facilities and for facilities for the disposal of waste from mining and from mineral processing. The publication provides recommendations on how to use results from the monitoring and surveillance of radioactive waste disposal facilities over their entire lifetime. It covers the different objectives of monitoring and surveillance for the different periods of the lifetime of disposal facilities, from the initiation of work on a candidate site to the period after closure of the disposal facility.

(73 pp., 3 figs; 2014) • ISBN 978-92-0-115513-9 • STI/PUB/1640 • €40.00



Near Surface Disposal Facilities for Radioactive Waste

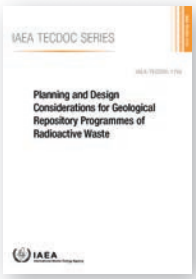
Specific Safety Guide

IAEA Safety Standards Series No. SSG-29

This Safety Guide provides recommendations on how to meet safety requirements on the disposal of radioactive waste. It is concerned with the disposal of solid radioactive waste by emplacement in designated facilities at or near the land surface. The Safety Guide provides guidance on the development, operation and closure of, and on the regulatory control of, near surface disposal facilities, which are suitable for the disposal of very low level waste and low level waste. The Safety Guide provides guidance on a range of disposal methods, including the emplacement of

solid radioactive waste in earthen trenches, in above ground engineered structures, in engineered structures just below the ground surface and in rock caverns, silos and tunnels excavated at depths of up to a few tens of metres underground. It is intended for use primarily by those involved with policy development for, with the regulatory control of, and with the development and operation of near surface disposal facilities.

(103 pp., 5 figs; 2014) • ISBN 978-92-0-114313-6 • STI/PUB/1637 • €36.00



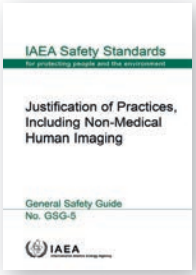
Planning and Design Considerations for Geological Repository Programmes of Radioactive Waste

IAEA TECDOC Series No. 1755

Disposal in a geological repository is the generally accepted solution for the long term management of high level and/or long lived radioactive wastes, in line with the general principles defined in the IAEA Safety Fundamentals. This publication presents practical information on the way a geological repository programme for radioactive waste could be defined and planned, with special attention to all aspects having an impact on the timing. Country specific examples for repository development phases are provided based on actual experiences from Member States.

(2014) • ISBN 978-92-0-109914-3 • IAEA-TECDOC-1755 • €18.00

RADIATION PROTECTION



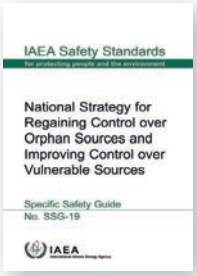
Justification of Practices, Including Non-medical Human Imaging

General Safety Guide

IAEA Safety Standards Series No. GSG-5

This Safety Guide was developed to assist governments and regulatory bodies with the assessment of particularly challenging proposals for the use of radiation; in particular, in human imaging for purposes other than medical diagnosis, medical treatment or biomedical research, such as for security screening at airports. It complements the guidance provided in the IAEA Safety Guide on the Regulatory Control of Radiation Sources. It provides guidance to governments and regulatory bodies on the elements that should be considered and the process that should be applied in determining whether the introduction of a particular type of practice is justified. It is intended to assist in the decision making process when confronted with a need or a request to authorize a novel type of practice or a need to review the justification of types of practice that are already established. The publication also provides some guidance to those wishing to demonstrate to the government or regulatory body that a particular type of practice is justified.

(57 pp., 2 figs; 2014) • ISBN 978-92-0-102414-5 • STI/PUB/1650 • €32.00



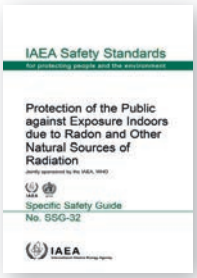
National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources

Specific Safety Guide

IAEA Safety Standards Series No. SSG-19

This Safety Guide is intended to provide recommendations on the establishment of a national strategy for regaining control over orphan radioactive sources and for improving control over vulnerable radioactive sources. It provides guidance on how to assess the national situation, and develop and implement a national strategy to achieve these goals.

Arabic Edition (92 pp., 4 figs; 2012) • ISBN 978-92-0-636210-5 • STI/PUB/1510 • €35.00
English Edition (100 pp., 4 figs; 2011) • ISBN 978-92-0-115610-5 • STI/PUB/1510 • €35.00
French Edition (Forthcoming 2015) • ISBN 978-92-0-210314-6 • STI/PUB/1510 • €35.00
Spanish Edition (102 pp., 4 figs; 2013) • ISBN 978-92-0-337110-0 • STI/PUB/1510 • €35.00



Protection of the Public against Exposure Indoors due to Radon and Other Natural Sources of Radiation

Specific Safety Guide

IAEA Safety Standards Series No. SSG-32

This Safety Guide provides recommendations on meeting the requirements established in the IAEA International Basic Safety Standards, for protection of the public against exposure indoors due to natural sources of radiation. Guidance is provided on the application of the requirements for justification and optimization of protection by national authorities in considering control of natural sources of radiation indoors such as radon and radionuclides of natural origin in materials used for the construction of dwellings, offices, industrial premises and other buildings. The Safety Guide provides recommendations and guidance to be followed by the regulatory body and by other authorities and organizations with responsibilities in relation to exposure to radiation from natural sources.

(90 pp., 3 figs; 2015) • ISBN 978-92-0-102514-2 • STI/PUB/1651 • €45.00

Radiation Protection in Medicine: Setting the Scene for the Next Decade

Proceedings of an International Conference held in Bonn, Germany, 3–7 December 2012

Proceedings Series

This publication presents the proceedings of the International Conference on Radiation Protection in Medicine: Setting the Scene for the Next Decade. The aims were to indicate gaps in current approaches

to radiation protection in medicine; identify tools for improving radiation protection in medicine; review advances, challenges and opportunities in the field; and assess the impact of the international action plan for the radiation protection of patients, in order to prepare new international recommendations. The Conference drew up the 10-point Bonn Call for Action, which identifies responsibilities of and proposes priorities for stakeholders regarding radiation protection in medicine for the next decade.

(Forthcoming 2015) • ISBN 978-92-0-103914-9 • STI/PUB/1663 • €130.00

Radiation Protection of Itinerant Workers

Safety Reports Series No. 84

This publication addresses the protection and safety issues associated with the use of itinerant workers. Such workers are defined for this report as occupationally exposed workers, who work in supervised and/or controlled areas at one or more locations and are not employees of the management of the facility where they are working. It focuses on the necessary communication and cooperation to establish a clear allocation of responsibilities among the relevant parties, including the itinerant worker, the employer of that worker and the management of the facility at which the work is occurring. Managerial and practical arrangements are described, to ensure the protection and safety of itinerant workers. Discussion topics include dose tracking and control, training, safety culture development and application of the requirements for protection and safety coherently with other requirements.

(Forthcoming 2015) • ISBN 978-92-0-102215-8 • STI/PUB/1688 • €41.00

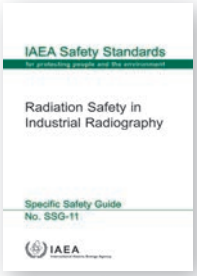
Radiation Safety for Consumer Products

Specific Safety Guide

IAEA Safety Standards Series No. SSG-36

In the IAEA safety standards, a 'consumer product' is defined as a device or manufactured item into which radionuclides have deliberately been incorporated or produced by activation, or which generates ionizing radiation, and which can be sold or made available to members of the public without special surveillance or regulatory control after sale. Many such products, including irradiated gemstones, are sold in commercial outlets and over the Internet. This Safety Guide outlines the regulatory approach to authorizing the manufacture and supply of such products to the public, including justification, safety assessment and application of the criteria for exemption. The guidance will also assist manufacturers, transport companies and suppliers to comply with regulatory requirements during the life cycle of consumer products, including recycling and disposal at the end of their useful life.

(Forthcoming 2015) • ISBN 978-92-0-102515-9 • STI/PUB/1691 • €52.00



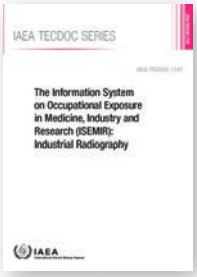
Radiation Safety in Industrial Radiography

Specific Safety Guide

IAEA Safety Standards Series No. SSG-11

This Safety Guide provides recommendations for ensuring radiation safety in industrial radiography used in non-destructive testing. This includes industrial radiography work that utilizes X ray and gamma sources, both in shielded facilities that have effective engineering controls and outside shielded facilities using mobile sources.

Arabic Edition (105 pp., 2 figs; 2012) • ISBN 978-92-0-633110-1 • STI/PUB/1466 • €33.00
English Edition (104 pp., 2 figs; 2011) • ISBN 978-92-0-107210-8 • STI/PUB/1466 • €33.00
French Edition (112 pp., 2 figs; 2013) • ISBN 978-92-0-236610-7 • STI/PUB/1466 • €33.00
Spanish Edition (112 pp., 2 figs; 2014) • ISBN 978-92-0-338710-1 • STI/PUB/1466 • €33.00



The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Industrial Radiography

IAEA TECDOC Series No. 1747

This publication presents the findings of the Working Group on Industrial Radiography (WGIR) in assessing the status of occupational radiation protection in industrial radiography (IR) throughout the world, and in developing an international database (ISEMIR-IR) to be used by IR facilities worldwide as a tool for benchmarking and improving their implementation of optimization of occupational radiation protection.

(2014) • ISBN 978-92-0-107714-1 • IAEA-TECDOC-1747 • €18.00

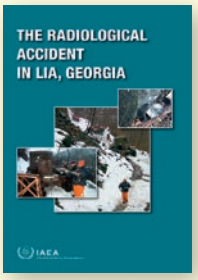
The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Interventional Cardiology

IAEA TECDOC Series No. 1735

This publication presents the results achieved by the Working Group on Interventional Cardiology in assessing the status of occupational radiation protection in interventional cardiology (IC) throughout the world. It also reports on the main activities in developing an international database to be used by IC facilities as a tool for benchmarking and improving their implementation of occupational radiation protection.

(2014) • ISBN 978-92-0-100514-4 • IAEA-TECDOC-1735 • €18.00

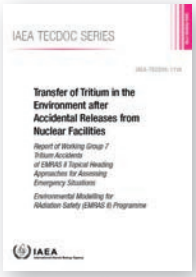
ACCIDENT RESPONSE



The Radiological Accident in Lia, Georgia

Under the Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency, the Georgian authorities requested assistance from the IAEA in relation to the 2001 radiological accident in Lia. This assistance related to advice on the dose assessment, source recovery and medical management of those involved in the accident. This report provides the detailed information on the accident and presents the findings and conclusions and lessons learned from the treatment of the overexposed victims. The aim is to help to avoid similar occurrences by improving safety, and to minimize the consequences of any such events that do occur.

(149 pp., 107 figs; 2014) • ISBN 978-92-0-103614-8 • STI/PUB/1660 • €42.00



Transfer of Tritium in the Environment after Accidental Releases from Nuclear Facilities

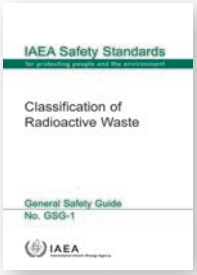
Report of Working Group 7 Tritium Accidents of EMRAS II Topical Heading Approaches for Assessing Emergency Situations Environmental Modelling for Radiation Safety (EMRAS II) Programme

IAEA TECDOC Series No. 1738

This publication presents the work and activities undertaken by Working Group 7 (WG7) of the IAEA's EMRAS II Programme and considers the conclusions drawn during EMRAS Phase I, 2003–2007. The working group members tested and compared environmental transfer models to be applied after short term releases of tritium from nuclear power plants in order to estimate exposures through inhalation of contaminated air and the ingestion of contaminated food. The main goal was to develop a harmonized, robust model for practical applications. The publication delineates all relevant processes as well as the analyses and evaluated models for the environmental transfer of tritium, and identifies sources of and quantifies model uncertainties. The present status and needs are summarized and further fields of activity are identified to improve the reliability and the application of models to assess tritium behaviour and the resulting radiological impacts to people and the environment.

(2014) • ISBN 978-92-0-102814-3 • IAEA-TECDOC-1738 • €18.00

RADIOACTIVE WASTE MANAGEMENT



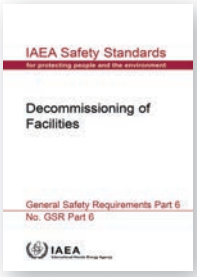
Classification of Radioactive Waste

General Safety Guide

IAEA Safety Standards Series No. GSG-1

This publication is a revision of an earlier Safety Guide of the same title issued in 1994. It recommends revised waste management strategies that reflect changes in practices and approaches since then. It sets out a classification system for the management of waste prior to disposal and for disposal, driven by long term safety considerations. It includes a number of schemes for classifying radioactive waste that can be used to assist with planning overall national approaches to radioactive waste management and to assist with operational management at facilities.

English Edition (48 pp., 2 figs; 2009) • ISBN 978-92-0-109209-0 • STI/PUB/1419 • €24.00
Russian Edition (54 pp., 2 figs; 2014) • ISBN 978-92-0-403514-8 • STI/PUB/1419 • €24.00
Spanish Edition (Forthcoming 2015) • ISBN 978-92-0-307414-8 • STI/PUB/1419 • €24.00



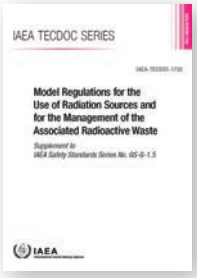
Decommissioning of Facilities

General Safety Requirements

IAEA Safety Standards Series No. GSR Part 6

Decommissioning is the last step in the lifetime management of a facility. It must also be considered during the design, construction, commissioning and operation of facilities. This publication establishes requirements for the safe decommissioning of a broad range of facilities: nuclear power plants, research reactors, nuclear fuel cycle facilities, facilities for processing naturally occurring radioactive material, former military sites, and relevant medical, industrial and research facilities. It addresses all the aspects of decommissioning that are required to ensure safety, aspects such as roles and responsibilities, strategy and planning for decommissioning, conduct of decommissioning actions and termination of the authorization for decommissioning. It is intended for use by those involved in policy development, regulatory control and implementation of decommissioning.

(23 pp., 2 figs; 2014) • ISBN 978-92-0-102614-9 • STI/PUB/1652 • €25.00



Model Regulations for the Use of Radiation Sources and for the Management of the Associated Radioactive Waste

IAEA TECDOC Series No. 1732

This publication provides advice on an appropriate set of regulations covering all aspects of the use of radiation sources

and the safe management of the associated radioactive waste. The publication provides the framework for the regulatory requirements and conditions to be incorporated into individual authorizations for the use of radiation sources in industry, medical facilities, research and education, and agriculture. It also establishes criteria to be used for assessing compliance. The content allows States to appraise the adequacy of their existing regulations and regulatory guides, and acts as a reference for those States developing regulations for the first time. The publication is a supplement to the guidance in the IAEA Safety Guide GS-G-1.5, Regulatory Control of Radiation Sources.

English Edition (2013) • ISBN 978-92-0-115613-6 • IAEA-TECDOC-1732 • €18.00
Spanish Edition (2015) • ISBN 978-92-0-300915-7 • IAEA-TECDOC-1732 • €18.00

Modelling of Biota Dose Effects: Report of Working Group 6 Biota Dose Effects Modelling of EMRAS II Topical Heading Reference Approaches for Biota Dose Assessment

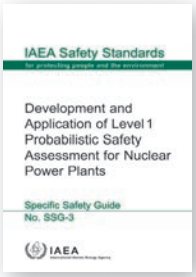
Environmental Modelling for Radiation Safety (EMRAS II) Programme

IAEA TECDOC Series No. 1737

The consideration of radiological protection of the environment during the licensing of nuclear facilities is a requirement formulated in the IAEA International Basic Safety Standards. Within this context the effect of ionizing radiation to flora and fauna is a key topic. This publication documents various important contributions to this area. A large number of dose effect studies were analysed statistically, and the database was used to elaborate dose response relationships to flora and fauna made in a unique ecosystem containing ^{238}U-series radionuclides and other metals/metalloids in lakes that received uranium effluents for several decades. Substantial progress was made in considering radiation effects in the presence of other contaminants. Advances were also achieved in modelling effects to populations of wildlife by improving the models that link effects from individuals to populations.

(2014) • ISBN 978-92-0-101114-5 • IAEA-TECDOC-1737 • €18.00

SAFETY ANALYSIS



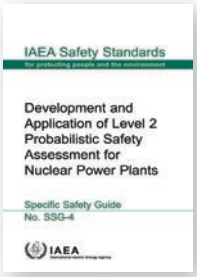
Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-3

The objective of this Safety Guide is to provide recommendations for meeting the IAEA safety requirements in performing or managing a level 1 probabilistic safety assessment (PSA) project for a nuclear power plant. These recommendations promote technical consistency among level 1 PSA studies and support applications of PSA and risk informed decision making. The Safety Guide's scope encompasses all operational conditions of the plant and potential initiating events and hazards.

English Edition (195 pp., 8 figs; 2010) • ISBN 978-92-0-114509-3 • STI/PUB/1430 • €35.00
Russian Edition (218 pp., 8 figs; 2014) • ISBN 978-92-0-406014-0 • STI/PUB/1430 • €35.00



Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-4

The objective of this Safety Guide is to provide recommendations for meeting the IAEA safety requirements in performing or managing a level 2 probabilistic safety assessment (PSA) project for a nuclear power plant; thus it complements the Safety Guide on level 1 PSA. One of the aims of this Safety Guide is to promote a standard framework, standard terms and a standard set of documents for level 2 PSAs to facilitate regulatory and external peer review of their results. It describes all elements of the level 2 PSA that need to be carried out if the starting point is a fully comprehensive level 1 PSA.

English Edition (88 pp., 3 figs; 2010) • ISBN 978-92-0-102210-3 • STI/PUB/1443 • €22.00
Russian Edition (100 pp., 3 figs; 2014) • ISBN 978-92-0-404614-4 • STI/PUB/1443 • €22.00

Ground Motion Simulation Based on Fault Rupture Modelling for Seismic Hazard Assessment in Site Evaluation for Nuclear Installations

Safety Reports Series No. 85

This publication explains the principles that underlay strong ground motion simulation, describes various methods for simulating strong ground motions, and shows some examples of strong ground motion simulations using fault rupture modelling. The detailed guidelines and practical tools presented in this Safety Report will be of value to researchers, operating organizations, regulatory bodies, vendors and technical support organizations in the areas of seismic hazard evaluation of nuclear installations. The information provided will also be of great importance for seismic hazard assessments following the Fukushima Daiichi NPP accident.

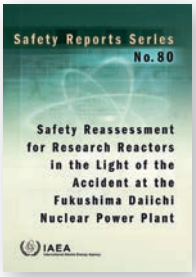
(Forthcoming 2015) • ISBN 978-92-0-102315-5 • STI/PUB/1689 • €59.00

Root Cause Analysis Following an Event at a Nuclear Installation: Reference Manual

IAEA TECDOC Series No. 1756

In the case of an event at a nuclear installation it is important to accurately determine the root causes, in order to allow corrective actions to be implemented to address them and prevent their recurrence. There are different analysis tools, techniques and methods available which can be used to evaluate the root causes of events, and this publication presents a comprehensive reference manual for them and allows organizations to deepen their knowledge of these instruments. In addition, it also provides new organizations with a broad overview of the root cause analysis process. The present manual is also intended to provide guidance to all organizations establishing a new process for root cause analysis, especially in countries embarking upon a nuclear power programme.

(2014) • ISBN 978-92-0-110014-6 • IAEA-TECDOC-1756 • €18.00



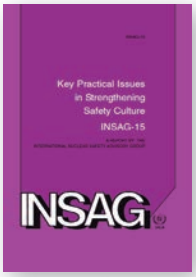
Safety Reassessment for Research Reactors in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant

Safety Reports Series No. 80

This publication provides guidance for all steps in performing safety reassessments for research reactors in the light of the feedback from the Fukushima – Daiichi accident. Although it primarily focuses on operating research reactors, the guidance provided by this publication also applies to research reactors that are in the design and construction phases or in an extended shutdown state. It is not intended to replace or supersede any of the requirements or guidance provided by the relevant IAEA safety standards, including those on safety analysis, evaluation of seismic and external hazards, and emergency preparedness and response for research reactors. However, this Safety Report should be used in close conjunction with these safety standards, whereby the main users will be operating organizations, regulatory bodies, design organizations and other entities involved in the safety of research reactors.

(33 pp.; 2014) • ISBN 978-92-0-100814-5 • STI/PUB/1615 • €20.00

QUALITY MANAGEMENT



Key Practical Issues in Strengthening Safety Culture

INSAG Series No. 15

This report discusses key issues in safety culture and practical matters such as the assessment of personal contributions to the enhancement of safety culture. It complements Safety Series No. 75-INSAG-4, Safety Culture (1991) and INSAG Series No. 13, Management of Operational Safety in Nuclear Power Plants.

English Edition (25 pp., 1 fig.; 2002) • ISBN 92-0-112202-0 • STI/PUB/1137 • €12.50
Russian Edition (Forthcoming 2015) • ISBN 978-92-0-401015-2 • STI/PUB/1137 • €12.50

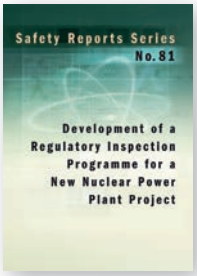
Performing Safety Culture Self-Assessments for Facilities and Activities

Safety Reports Series No. 83

This publication provides practical guidance on how to conduct a safety culture self-assessment. The focus is on using such assessments as a learning opportunity for organizational growth and development rather than as a fault-finding or 'find and fix' exercise. The approach involves considerable engagement with all levels of the organization. Methods applied include document reviews, questionnaires, interviews, observations and focus groups. Besides the complexity and subtleties of safety culture it also describes how to avoid common pitfalls in analysing results. The information presented in this publication will be of interest to individuals engaged in assessing and improving safety culture.

(Forthcoming 2015) • ISBN 978-92-0-101515-0 • STI/PUB/1682 • €63.00

LEGAL AND GOVERNMENTAL ASPECTS



Development of a Regulatory Inspection Programme for a New Nuclear Power Plant Project

Safety Reports Series No. 81

This Safety Report provides general principles, guidance and technical rationale for regulatory inspections related to new nuclear power plant projects, and is based on the consideration of IAEA safety standards and experiences of Member States. The publication covers regulatory inspection during siting, design, construction and commissioning stages as well as the transition to operation. It takes into account approaches and practices of Member States recently involved in new nuclear facility projects, and it includes examples of Member States' regulatory inspection programmes and experiences.

(112 pp., 3 figs; 2014) • ISBN 978-92-0-113513-1 • STI/PUB/1636 • €35.00

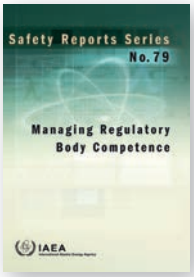
Independence in Regulatory Decision Making

INSAG Series No. 17

This INSAG report defines in detail the independence needed in the regulatory decision making process and how to meet the potential challenges to that independence. Thus, the report identifies a number of measures that need to be implemented at different levels to promote and protect independence in the

regulatory decision making process. The basic principles have to be embedded into the legal framework and followed up by systematic quality management of regulatory processes and activities.

English Edition (17 pp., 1 fig.; 2003) • ISBN 92-0-113303-0 • STI/PUB/1172 • €9.00
Russian Edition (20 pp., 1 fig.; 2014) • ISBN 978-92-0-409014-7 • STI/PUB/1172 • €9.00



Managing Regulatory Body Competence

Safety Reports Series No. 79

The ability of a regulatory body to fulfil its responsibilities depends largely on the competence of its staff. Building employees' skills and knowledge is an investment in each employee and in the future of the organization. This Safety Report provides generic guidance on managing the competence of regulatory bodies within their management system. It can be used as an example for Member States on how to meet the requirements of systematically assessing competence needs, in the near and long term, and delivering training and other elements of competence development, as well as continually improving this part of the management system.

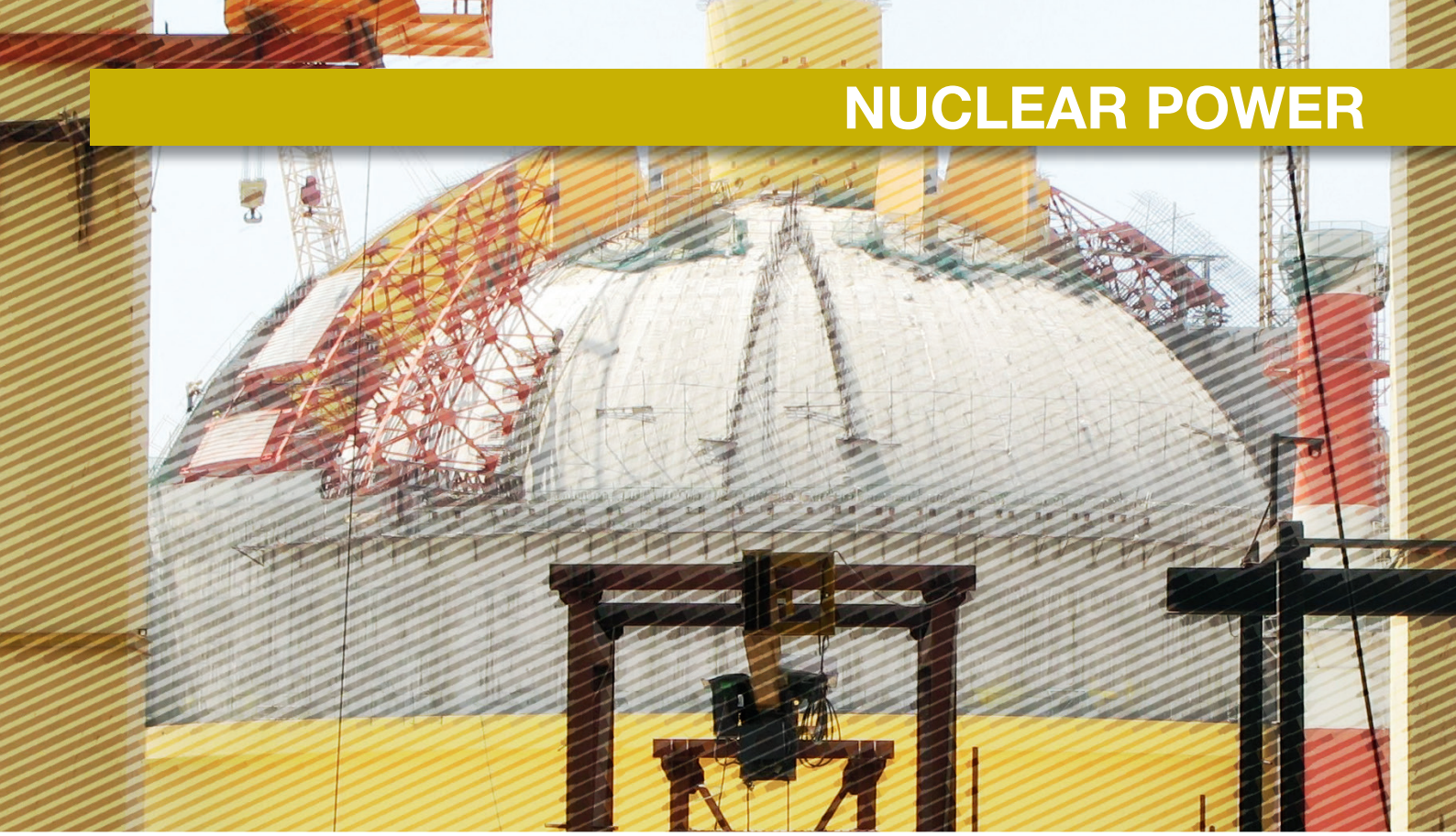
(96 pp., 2 figs; 2014) • ISBN 978-92-0-113413-4 • STI/PUB/1635 • €44.00

Methodology for the Systematic Assessment of the Regulatory Competence Needs (SARCoN) for Regulatory Bodies of Nuclear Installations

IAEA TECDOC Series No. 1757

This publication provides guidance for competence needs assessment (CNA) and offers a step by step approach to develop competence profiles for specific regulatory tasks. It explains how to analyse existing and required regulatory competences in order to identify gaps and thus training and competence needs. It also provides guidance on the development and implementation of tools and programmes to address these gaps in conjunction with IAEA Safety Reports Series No. 79 on Managing Regulatory Body Competence.

(2014) • ISBN 978-92-0-110514-1 • IAEA-TECDOC-1757 • €18.00



NUCLEAR POWER

Country Nuclear Power Profiles

2014 Edition

The Country Nuclear Power Profiles compile background information on the status and development of nuclear power programmes in Member States. The publication summarizes organizational and industrial aspects of nuclear power programmes and provides information about the relevant legislative, regulatory and international framework in each State. This 2014 edition, issued on CD-Rom, contains updated country information for 51 states.

**(2014) • ISBN 978-92-0-158514-1 •
IAEA-CNPP/2014/CD • €95.00**

INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Environmental Impact from Depletion of Resources

IAEA Nuclear Energy Series No. NG-T-3.13

INPRO is an international project to help ensure that nuclear energy is available to contribute in a sustainable manner to meeting the energy needs of the twenty-first century. A basic principle of INPRO in the area of environmental impact from depletion of resources is that a nuclear energy system will be capable of contributing to the energy needs in the twenty-first century while making efficient use of non-renewable resources. Recognizing that a national nuclear energy programme in a given country may be based both on indigenous resources and resources purchased from abroad, this publication provides background materials and summarizes the results of international global resource availability studies that could contribute to the corresponding national assessments.

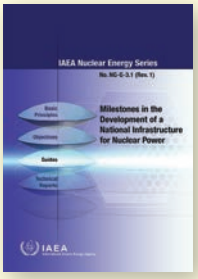
**(Forthcoming 2015) • ISBN 978-92-0-103415-1 •
STI/PUB/1700 • €33.00**

INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Infrastructure — INPRO Manual

IAEA Nuclear Energy Series No. NG-T-3.12

This publication is based on recommendations presented by Member States participating in INPRO, IAEA experts and the IAEA INPRO group. It provides guidance on assessing a nuclear energy system in the area of nuclear infrastructure, which can be defined as the collection of necessary capabilities of national institutions to achieve long term sustainability of a nuclear power programme.

**(68 pp.; 2014) • ISBN 978-92-0-106214-7 •
STI/PUB/1668 • €33.00**



Milestones in the Development of a National Infrastructure for Nuclear Power

IAEA Nuclear Energy Series No. NG-G-3.1 (Rev. 1)

The development and implementation of an appropriate infrastructure to support the successful introduction of nuclear power and its safe, secure, peaceful and sustainable application is an issue of central concern, especially for countries that are considering and planning their first nuclear power plant. In preparing the necessary nuclear infrastructure, there are several activities that need to be completed. These activities can be split into three progressive phases of development. This publication provides a description of the conditions expected to be achieved by the end of each phase to assist with the best use of resources. 'Milestones' refer to the conditions necessary to demonstrate that the phase has been successfully completed.

**(Forthcoming 2015) • ISBN 978-92-0-104715 •
STI/PUB/1704 • €40.00**

New Technologies for Seawater Desalination Using Nuclear Energy

IAEA TECDOC Series No. 1753

This publication compiles the findings of research and development activities relating to new technologies to support seawater desalination using nuclear energy. An overview of current progress on low temperature technologies for seawater desalination is included. The publication also provides information on competitiveness and sustainability of seawater desalination using nuclear energy and a techno-economic feasibility study of nuclear desalination.

(2015) • ISBN 978-92-0-100115-3 • IAEA-TECDOC-1753 • €18.00

Nuclear Power Reactors in the World

2014 Edition

Reference Data Series No. 2

This is the 34th edition of Reference Data Series No. 2, which presents the most recent reactor data available to the IAEA. It contains summarized information as of the end of 2013 on: power reactors operating, under construction, and shut down; and performance data on reactors operating in the IAEA Member States, as reported to the IAEA. The information is collected through designated national correspondents in the Member States and the data are used to maintain the IAEA's Power Reactor Information System (PRIS).

(79 pp., 6 figs; 2014) • ISBN 978-92-0-104914-8 • IAEA-RDS-2/34 • €15.00

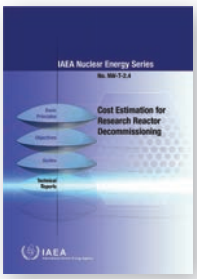
NUCLEAR POWER PLANNING AND ECONOMICS

Ageing Management of Concrete Structures in Nuclear Power Plants

IAEA Nuclear Energy Series No. NP-T-3.5

This publication is one in a series of reports on the assessment and management of ageing of major nuclear power plant components. Current practices for assessment of safety margins (fitness for service) and inspection, monitoring and mitigation of ageing related degradation of selected concrete structures related to NPPs are documented. Implications for and differences in new reactor designs are discussed. This information is intended to help all involved directly and indirectly in ensuring the safe operation of NPPs, and also to provide a common technical basis for dialogue between plant operators and regulators when dealing with age related licensing issues.

(Forthcoming 2015) • ISBN 978-92-0-102914-0 • STI/PUB/1654 • €55.00



Cost Estimation for Research Reactor Decommissioning

IAEA Nuclear Energy Series No. NW-T-2.4

The main aim of this publication is to disseminate experience in and guidance on cost estimates for research reactor decommissioning projects. It presents the principles and background for a costing methodology based on the International Structure for Decommissioning Costing of Nuclear Installations. The methodology presented implements actual experience in decommissioning costing and is in line with IAEA efforts promoting harmonization in this field. The IAEA has contributed to the development of software called CERREX (Cost Estimate for Research Reactors in Excel), a simpler version suitable for preliminary costing stages, which is included on the attached CD-ROM, together with a user manual. Several practical examples of software implementation and clarification of some details of available methodologies and models are also provided.

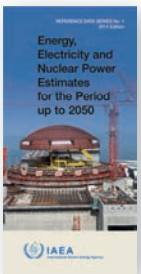
(95 pp., 23 figs; 2014) • ISBN 978-92-0-140210-3 • STI/PUB/1596 • €22.00

Developing Industrial Involvement to Support a National Nuclear Power Programme

IAEA Nuclear Energy Series No. NG-T-3.4

This publication, an update of Technical Reports Series No. 281, provides guidance in making the many considerations and decisions involved in preparing national industrial organizations for participation in a nuclear power programme, including those that will participate in the construction and commissioning of the first nuclear power plant units. Roles and responsibilities of government, industry, utility and other stakeholders are detailed.

(Forthcoming 2015) • ISBN 978-92-0-103715-2 • STI/PUB/1703 • €36.00



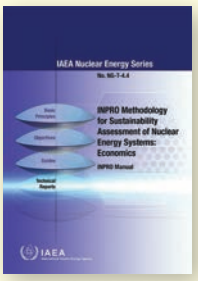
Energy, Electricity and Nuclear Power Estimates for the Period up to 2050

2014 Edition

Reference Data Series No. 1

The 34th edition of the annual Reference Data Series No. 1 contains estimates of energy, electricity and nuclear power trends up to the year 2050, using a variety of sources, such as the IAEA's Power Reactor Information System and data prepared by the United Nations.

(53 pp., 10 figs; 2014) • ISBN 978-92-0-108014-1 • IAEA-RDS-1/34 • €18.00

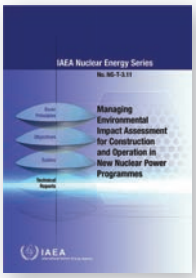


INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Economics

IAEA Nuclear Energy Series No. NG-T-4.4

As part of the INPRO methodology this manual provides guidance on assessing a nuclear energy system in the area of economics. This is an independent assessment of the economic competitiveness of nuclear power, compared with available alternatives. The publication starts with a short description of the goals and output of an energy system planning study, followed by general background information on performing an INPRO economic assessment, and presents a discussion of the basic principles and the associated user requirements and criteria. In the appendices, additional background information on economic terms and support tools is provided.

(90 pp.; 2014) • ISBN 978-92-0-102714-6 • STI/PUB/1653 • €40.00

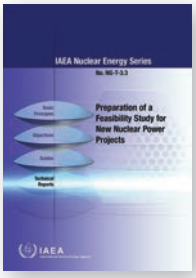


Managing Environmental Impact Assessment for Construction and Operation in New Nuclear Power Programmes

IAEA Nuclear Energy Series No. NG-T-3.11

This publication provides a holistic approach to environmental protection in new nuclear power programmes. It describes the environmental impact assessment (EIA) process, the subsequent utilization of the EIA, and the necessary infrastructure for such processes. The presumption is that a Member State embarking on such a programme already has an environmental regulatory framework in place, which may not be developed for nuclear power but instead for industrial projects; therefore the emphasis is on the environmental aspects that are unique to a nuclear power plant project. The publication is addressed to senior managers, project managers or coordinators and technical specialists of government authorities and agencies, including the regulatory body, operating organizations and supporting industries and other organizations involved in environmental issues.

(47 pp., 8 figs; 2014) • ISBN 978-92-0-144810-1 • STI/PUB/1625 • €29.00

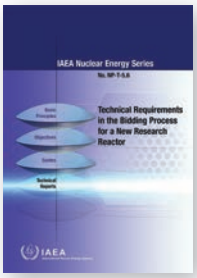


Preparation of a Feasibility Study for New Nuclear Power Projects

IAEA Nuclear Energy Series No. NG-T-3.3

A feasibility study represents an important step in the development of a new build nuclear power plant project. It is a complex but necessary step to determine whether a business opportunity is possible, practical and viable. Technical, economic, financial, regulatory, social and environmental aspects of a nuclear power plant programme need to be considered to allow authorities to make informed decisions regarding the possible implementation of the project. This publication assists Member States in developing a feasibility study for nuclear power projects and provides guidance to users who are planning to perform such a study, with consideration of both the technical and process areas. These guidelines condense the experience of individuals involved in previous feasibility study efforts and provide industry best practices in order to maximize the usefulness of any results.

(125 pp., 10 figs; 2014) • ISBN 978-92-0-145610-6 • STI/PUB/1633 • €39.00



Technical Requirements in the Bidding Process for a New Research Reactor

IAEA Nuclear Energy Series No. NP-T-5.6

Interest in developing research reactor programmes has grown significantly in recent years. Currently, a significant number of Member States are in different stages of new research reactor projects. The majority of them are building their first research reactor as a key national installation for the development of their nuclear science and technology programmes. In this context, this publication has been developed to assist Member States in the preparation of the technical requirements for the bidding process for a new research reactor. The publication addresses the preparation phase of the bidding process and discusses criteria that may be used in the evaluation of the bids. The guidance applies to all reactor types and technologies and it does not recommend a specific reactor type or technology or a specific design. However, it is assumed that the publication will be used by a Member State that has made a commitment to build a safe, sustainable, robust design and easily maintainable research reactor. The guidance provided in the publication is primarily oriented to Member States building their first research reactor; however, such guidance could also be useful for the bidding process for subsequent reactors.

(42 pp., 1 fig.; 2014) • ISBN 978-92-0-103414-4 • STI/PUB/1659 • €21.00

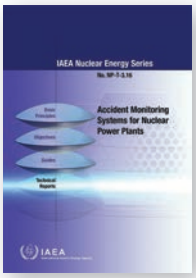
Techno-economic Comparison of Geological Disposal of Carbon Dioxide and Radioactive Waste

IAEA TECDOC Series No. 1758

This publication presents results of an IAEA coordinated research project and demonstrates that there are ample opportunities to learn from comparisons between the geological disposal of carbon dioxide and radioactive waste, and to derive insights that will assist scientists and experts involved in research and development as well as policymakers responsible for national energy strategies and international climate policies.

(2014) • ISBN 978-92-0-110114-3 • IAEA-TECDOC-1758 • €18.00

NUCLEAR POWER OPERATIONS



Accident Monitoring Systems for Nuclear Power Plants

IAEA Nuclear Energy Series No. NP-T-3.16

In the Fukushima Daiichi accident, the instrumentation provided for accident monitoring proved to be ineffective for a combination of reasons. The accident has highlighted the need to re-examine criteria for accident monitoring instrumentation. This publication covers all relevant aspects of accident monitoring in NPPs. The critical issues discussed reflect the lessons learned from the Fukushima Daiichi accident, involve accident management and accident monitoring strategies for nuclear power plants; selection of plant parameters for monitoring plant status; establishment of performance, design, qualification, display, and quality assurance criteria for designated accident monitoring instrumentation; and design and implementation considerations. Technology needs and techniques for accident monitoring instrumentation are also addressed.

(84 pp., 12 figs; 2015) • ISBN 978-92-0-110414-4 • STI/PUB/1676 • €32.00

Alternative Contracting and Ownership Approaches for New Nuclear Power Plants

IAEA TECDOC Series No. 1750

This publication examines alternative contracting and ownership approaches for the development, construction, commissioning, operation and decommissioning of new nuclear power plants. It identifies issues faced by IAEA Member States considering the applicability of such approaches to their respective national programmes. Two new approaches to nuclear project development are analysed. These are, firstly, the Build-Own-Operate (BOO)/Build-Own-Operate-Transfer (BOO(T)) and, secondly, regional approaches. The information includes practical examples, current practices and case studies, and reflects the presentations and discussions that took place in a series of IAEA meetings on this topic.

(2014) • ISBN 978-92-0-108314-2 • IAEA-TECDOC-1750 • €18.00

Development and Implementation of a Process Based Management System

IAEA Nuclear Energy Series No. NG-T-1.3

The implementation of a process based management system is challenging for many organizations accustomed to traditional, non-integrated, non-process based approaches to management systems. This publication provides practical guidance to nuclear organizations that are planning to implement a management system to comply with IAEA Safety Standards Series No. GS-R-3. It will also be beneficial for newcomer countries, since a vendor-provided “management system” delivered with a nuclear power plant to ensure safe operation is often a quality management system for operations and maintenance, which may integrate aspects related to safety and environmental protection. These quality assurance systems have to undergo a transition to a process based management system to ensure that the processes of the owner/operator will be tailored to achieve the goals and objectives for safe operation.

(Forthcoming 2015) • ISBN 978-92-0-103215-7 • STI/PUB/1698 • €34.00

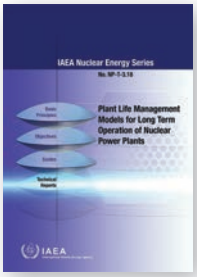
Operating Experience with Nuclear Power Stations in Member States in 2013

2014 Edition

Operating Experience

This CD-ROM contains the 45th edition of the IAEA’s series of annual reports on operating experience with nuclear power plants in Member States. It is a direct output from the IAEA’s Power Reactor Information System (PRIS) and contains information on electricity production and overall performance of individual plants during 2013. In addition to annual information, the report contains a historical summary of performance during the lifetime of individual plants and figures illustrating worldwide performance of the nuclear industry. The CD-ROM also contains an overview of design characteristics and dashboards of all operating nuclear power plants worldwide.

CD Edition (2014) • ISBN 978-92-0-157314-8 • STI/PUB/1671 • €75.00



Plant Life Management Models for Long Term Operation of Nuclear Power Plants

IAEA Nuclear Energy Series No. NP-T-3.18

When nuclear power plants reach the end of their nominal design life, they undergo a special safety review and an ageing assessment of their essential structures, systems and components for the purpose of validating or renewing their licence to operate for terms beyond the service period originally intended. Three different plant life management models have been used to qualify these nuclear power plants to operate beyond their original design life. This publication presents a collection of sample licensing practices for long term operation among IAEA Member States. The various plant life management models used to obtain long term operation authorizations are described and comparisons drawn against the standard periodic safety review model. Lessons learned and warnings about possible complications and pitfalls are also described to minimize the licensing risk during operation and future long term operation applications. The main intention of this publication is to support nuclear power plant owners and operators planning an extension of plant operation beyond its original design life, but it also serves as a useful guide for those interested in procuring, from the beginning, the necessary tools to implement ageing management in their future plant with long term operation in mind.

(134 pp., 43 figs; 2015) • ISBN 978-92-0-103014-6 • STI/PUB/1655 • €38.00

Third International Conference on Nuclear Power Plant Life Management

Proceedings of an International Conference held in Salt Lake City, USA, 14–18 May 2012

Proceedings Series

There is a current trend for the operational life of nuclear power plants to be extended beyond that of their original licence period. This publication is the proceedings of the third International Conference on Nuclear Power Plant Life Management, which demonstrated the value of an open exchange of information between experts from different countries and organizations. The presentations cover a wide range of subjects including: very specific solutions for reactor pressure vessel integrity; material degradation; ageing management and licensing renewal approaches; risk informed inspection; non-destructive examination methods; and tools to be used in various stages of plant life management programmes. The publication provides utilities, operators and regulators with a comprehensive state of the science and technology overview of the main issues concerning nuclear power plant life management.

CD Edition (2014) • ISBN 978-92-0-162510-6 • STI/PUB/1634 • €20.00

REACTOR TECHNOLOGY

Application of Field Programmable Gate Arrays in Instrumentation and Control Systems of Nuclear Power Plants

IAEA Nuclear Energy Series No. NP-T-3.17

Field programmable gate arrays (FPGAs) are gaining increased attention worldwide for application in nuclear power plant (NPP) instrumentation and control (I&C) systems, particularly for safety and safety related applications, but also for non-safety ones. NPP operators and equipment suppliers see potential advantages of FPGA based digital I&C systems as compared to microprocessor based applications. This is because FPGA based systems can be made simpler, more testable and less reliant on complex software (e.g. operating systems), and are easier to qualify for safety and safety related applications. This publication results from IAEA consultancy meetings covering the various aspects, including design, qualification, implementation, licensing, and operation, of FPGA based I&C systems in NPPs.

(Forthcoming 2015) • ISBN 978-92-0-103515-8 • STI/PUB/1701 • €33.00

Benchmark Analyses of Sodium Natural Convection in the Upper Plenum of the Monju Reactor Vessel

IAEA TECDOC Series No. 1754

This publication documents the main achievements and results of the benchmark analyses performed during an IAEA coordinated research project (CRP). The goal of the CRP was to improve analytical capabilities in the field of reactor vessel thermal hydraulics in sodium cooled fast reactors (SFRs). The CRP benefitted from the experimental data concerning a turbine trip transient test conducted in 1995 on the Monju SFR, provided by the Japan Atomic Energy Agency

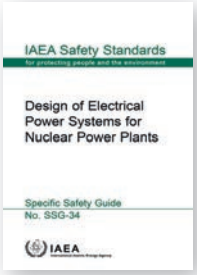
(2014) • ISBN 978-92-0-109614-2 • IAEA-TECDOC-1754 • €18.00

Benchmark Analyses on the Control Rod Withdrawal Tests Performed during the PHÉNIX End-of-Life Experiments

IAEA TECDOC Series No. 1742

This publication is based on the experience of an IAEA coordinated research project on control rod withdrawal and sodium natural circulation tests performed during the Phénix end-of-life experiments. The publication presents benchmark analyses on the control rod withdrawal tests. The experimental data gathered during these tests represent a unique resource for validation analyses and code-to-code comparisons. The benchmark analyses allowed participants to investigate and verify neutronics codes used in the analysis of sodium cooled fast reactor cores, as far as their capability to correctly evaluate relevant safety aspects such as control rod efficiency and core power deformation due to the insertion and withdrawal of control rods.

(2014) • ISBN 978-92-0-105314-5 • IAEA-TECDOC-1742 • €18.00



Design of Electrical Power Systems for Nuclear Power Plants

Specific Safety Guide

IAEA Safety Standards Series No. SSG-34

This Safety Guide provides recommendations on the necessary characteristics of electrical power systems for nuclear power plants, and of the processes for developing these systems, in order to meet the safety requirements of IAEA Safety Standards Series No. SSR-2/1. It reflects the changes that have been made to SSR-2/1, in particular to Requirement 68 on Emergency Power Supply.

(Forthcoming 2015) • ISBN 978-92-0-109314-1 • STI/PUB/1673 • €47.00

Digital Instrumentation and Control Systems for new Facilities and Modernization of Existing Research Reactors

IAEA Nuclear Energy Series No. NP-T-5.7

This publication draws on the results of a technical meeting which addressed key areas of modernization projects for instrumentation and control (I&C) systems in research reactors. The meeting provided a forum for international experts to exchange information on the technical and managerial aspects

of I&C systems and modernisation projects specifically related to I&C and to discuss all technical areas relevant to the complex process of research reactor I&C system modernization and the use of digital I&C in new research reactor projects. The publication includes a summary of all papers and provides detailed guidance to research reactor operators intending on upgrading existing facilities from analogue to digital or older digital to newer digital technology, and to governments or agencies seeking to construct a new research facility with the latest digital I&C systems.

(Forthcoming 2015) • ISBN 978-92-0-103015-3 • STI/PUB/1696 • €58.00

Heat Transfer Behaviour and Thermohydraulics Code Testing for Supercritical Water Cooled Reactors (SCWRs)

IAEA TECDOC Series No. 1746

In order to develop the supercritical water cooled reactor (SCWR) concept, thermohydraulics of supercritical pressure water is one of the most important areas to be clarified. This publication summarizes the outcome of an IAEA coordinated research project (CRP) on this topic. It provides researchers and engineers with a comprehensive and reliable thermohydraulics database and the current status of prediction methods for SCWR concept development. The publication includes descriptions of SCWR concepts, heat transfer and pressure loss characteristics of supercritical pressure fluids, development of new heat transfer prediction methods, critical flow during depressurization from supercritical conditions, and flow stability and natural circulation in supercritical pressure systems. It also covers the results of two code testing benchmark exercises for steady state heat transfer and flow stability in a heated channel.

(2014) • ISBN 978-92-0-107614-4 • IAEA-TECDOC-1746 • €18.00

Technical Challenges in the Application and Licensing of Digital I&C Systems in Nuclear Power Plants

IAEA Nuclear Energy Series No. NP-T-1.13

With the modernization of existing analogue instrumentation and control (I&C) systems in nuclear power plants through digital I&C technology, and the implementation of digital I&C systems in new plants, the industry is faced with significant challenges. These challenges appear in the form of difficulties in managing the necessarily incremental transition, highly integrated (and interdependent) architectures, the flexible configurability enabled by digital technology, and uncertainty and inconsistency in licensing digital I&C systems and equipment in the different Member States. This publication discusses 17 major issues utilities, developers, suppliers, and regulatory stakeholders, so that the industry can capture and benefit from shared experience, recent technological developments, and emerging best practices.

(Forthcoming 2015) • ISBN 978-92-0-102915-7 • STI/PUB/1695 • €33.00

QUALITY ASSURANCE

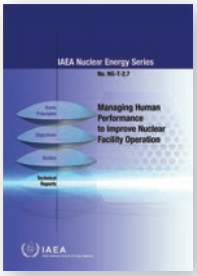
Use of a Graded Approach in the Application of the Management System Requirements for Facilities and Activities

IAEA TECDOC Series No. 1740

In general, a graded approach means a structured method by which the stringency of control to be applied to a product or process is commensurate with the risk associated with a loss of control. This publication presents an overview of grading fundamentals, the grading process, the role of classification in the process and the typical controls that can be graded. It provides practical guidance and examples of grading as required by IAEA Safety Standards Series No. GS-R-3 to develop and apply a method of grading appropriate to the organization. The information provided will be beneficial to users who are in the process of implementing or improving their current management system based on the IAEA safety requirements.

(2014) • ISBN 978-92-0-105114-1 • IAEA-TECDOC-1740 • €18.00

QUALIFICATION AND TRAINING OF PERSONNEL

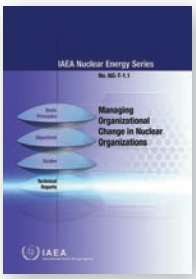


Managing Human Performance to Improve Nuclear Facility Operation

IAEA Nuclear Energy Series No. NG-T-2.7

The contribution of human performance to the occurrence of significant events and consequently to overall performance improvement in the nuclear field has been well documented. Nuclear industry experience shows that within nuclear power plants, 80% of significant events can be attributed to human error. Monitoring and continually improving human performance has now become one of the key challenges in the management of human resources for a nuclear facility. This publication provides practical guidance in this area and will assist Member States to review and improve the systems and process for improving human performance as a major contribution to sustaining and improving the performance of nuclear facilities.

(24 pp., 2 figs; 2014) • ISBN 978-92-0-144610-7 • STI/PUB/1623 • €18.00

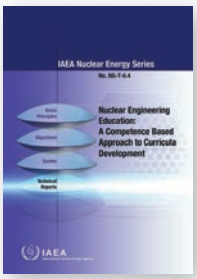


Managing Organizational Change in Nuclear Organizations

IAEA Nuclear Energy Series No. NG-T-1.1

It is widely recognized that engineering changes, if not properly considered and controlled, can have potentially major safety implications; however, organizational changes can also have potentially major safety implications. This publication is intended to assist the management of nuclear organizations in identifying, planning and implementing organizational change. The driving force for the change may be internal or external. Based on the assumption that any change made within a facility applying nuclear technology has the potential to impact safety and effectiveness, the publication provides a description of the basic principles for managing and implementing the organizational change effectively while remaining focused on safe and reliable operation. The guidance contained in the publication is relevant to all organizational changes within nuclear organizations.

(63 pp., 8 figs; 2014) • ISBN 978-92-0-140910-2 • STI/PUB/1603 • €45.00



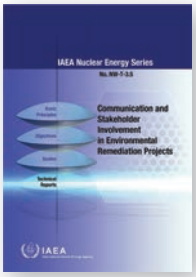
Nuclear Engineering Education: A Competence Based Approach to Curricula Development

IAEA Nuclear Energy Series No. NG-T-6.4

Maintaining nuclear competencies in the nuclear industry is one of the most critical challenges in the near future. With the development of a number of nuclear engineering educational programmes in several States, this publication provides guidance to decision makers on a competence based approach to curricula development, presenting the established practices and associated requirements for educational programmes in this field. It is a consolidation of best practices that will ensure sustainable, effective nuclear engineering programmes, contributing to the safe, efficient and economical operation of nuclear power plants. The information presented is drawn from a variety of recognized nuclear engineering programmes around the world and contributes to the main areas that are needed to ensure a viable and robust nuclear industry.

(39 pp., 4 figs; 2014) • ISBN 978-92-0-144910-8 • STI/PUB/1626 • €20.00

NUCLEAR FUEL CYCLE AND WASTE MANAGEMENT



Communication and Stakeholder Involvement in Environmental Remediation Projects

IAEA Nuclear Energy Series No. NW-T-3.5

This publication has been developed with the aim of translating the complex technical terminology and approaches embodied in the planning and implementation of environmental remediation programmes into a more accessible language. The objective is to help environmental remediation implementers and regulators engage and sustain dialogue with different stakeholders while developing a decision making process regarding the implementation of environmental remediation programmes. The publication deals with the technical and non-technical dimensions of environmental remediation and makes available experiences on how to proceed with communication and stakeholder engagement in environmental remediation programmes.

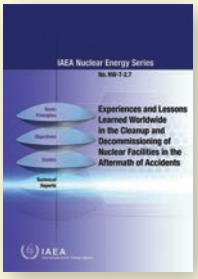
(43 pp.; 2014) • ISBN 978-92-0-145210-8 • STI/PUB/1629 • €28.00

Decommissioning of Pools in Nuclear Facilities

IAEA Nuclear Energy Series No. NW-T-2.6

Pools or ponds are usually an integrated part of a more complex nuclear facility, but in some particular cases pools may be considered as a separate nuclear facility with a specific license. A number of nuclear installations utilize pools for the cooling of spent fuel, or the shielding of research reactor cores or irradiator sources. Over a service lifetime that can span decades, nuclear pools may become contaminated as a result of the deposition of radioactive substances. Relevant aspects of pool decommissioning covered in this publication include project planning and management, health and safety, and the management of resulting waste.

(Forthcoming 2015) • ISBN 978-92-0-103115-0 • STI/PUB/1697 • €55.00

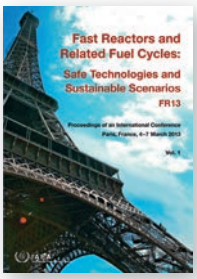


Experiences and Lessons Learned Worldwide in the Cleanup and Decommissioning of Nuclear Facilities in the Aftermath of Accidents

IAEA Nuclear Energy Series No. NW-T-2.7

This publication reviews experiences in IAEA Member States relevant to the cleanup and decommissioning of nuclear facilities in the aftermath of accidents and provides an overview of lessons learned worldwide. It also updates information from earlier publications on this topic, according to the different phases of activity after the accident has been declared ended (site stabilization, post-accident cleanup, safe enclosure) and, in the longer term, final decommissioning and site remediation.

(74 pp., 27 figs; 2014) • ISBN 978-92-0-101214-2 • STI/PUB/1644 • €31.00



Fast Reactors and Related Fuel Cycles: Safe Technologies and Sustainable Scenarios (FR13)

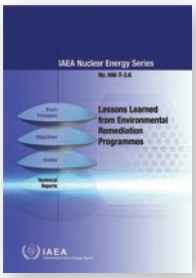
Proceedings of an International Conference held in Paris, France, 4–7 March 2013

Proceedings Series

This publication presents the proceedings of an international conference in the

field of fast reactors and related fuel cycle technologies. The conference provided a unique forum to discuss national and international fast reactor programmes, analyse new experience and advances arising from research and development programmes, and identify needs to be addressed in relation to the industrial deployment of fast reactors. A CD-ROM with contributed papers accompanies the proceedings. All the scientific contributions included in these proceedings were peer reviewed by the International Scientific Programme Committee of the Conference.

(519 pp., 168 figs; 2015) • ISBN 978-92-0-104114-2 • STI/PUB/1665 • €98.00



Lessons Learned from Environmental Remediation Programmes

IAEA Nuclear Energy Series No. NW-T-3.6

Environmental remediation, in the context of legacy sites, is being carried out in IAEA Member States at different paces. There is already significant experience and expertise present from around the world as nuclear and associated facilities are closed and move through the decommissioning and environmental remediation phases. Methodological approaches and remediation technologies have been developed to deal with different remediation situations and subsequently adapted to site specific conditions. They have also been further fine-tuned as they have been rolled out either on relatively small or large scale projects. This publication is intended to capture part of this experience and make it available to IAEA Member States, so that they can benefit from the existing knowledge when planning and implementing their remediation programmes.

(51 pp.; 2014) • ISBN 978-92-0-145310-5 • STI/PUB/1630 • €27.00

Management of Spent Fuel from Nuclear Power Reactors

Proceedings of an International Conference held in Vienna, Austria, 31 May–4 June 2010

Proceedings Series

This publication presents the proceedings of an international conference on spent fuel management organized by the IAEA in cooperation with the NEA of the OECD. The conference covered a broad range of topics from national strategies through safety and regulatory aspects, transport, technical innovation, fuel and material behaviour, operational experience with storage, new fuel and reprocessing developments, and long term storage and disposal. The conference also featured two round table discussion sessions covering regulatory frameworks and stakeholder issues. The proceedings include the opening presentations and the President's summary and the conclusions of the conference. A CD-ROM with contributed papers accompanies the publication.

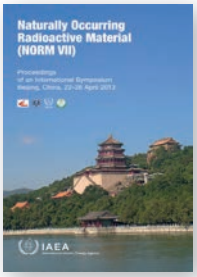
(50 pp.; 2015) • ISBN 978-92-0-103714-5 • STI/PUB/1661 • €40.00

Managing the Unexpected in Decommissioning

IAEA Nuclear Energy Series No. NW-T-2.8

This publication explores the implications of decommissioning in the light of unexpected events and the trade-off between activities to reduce them and factors militating against any such extra work. It classifies and sets out some instances where unexpected findings in a decommissioning programme led to a need to either stop, or reconsider the work, re-think the options, or move forward on a different path. It provides practical guidance in planning and management of decommissioning taking into account unexpected events. This guidance includes an evaluation of the experience and lessons learned in tackling decommissioning that is often neglected. Thus it will enable future decommissioning teams to adopt the relevant lessons to reduce additional costs, time delays and radiation exposures.

(Forthcoming 2015) • ISBN 978-92-0-103615-5 • STI/PUB/1702 • €35.00



Naturally Occurring Radioactive Material (NORM VII)

Proceedings of an International Symposium held in Beijing, China 22–26 April 2013

Proceedings Series

This publication is the proceedings of the Seventh International Symposium on Naturally Occurring Radioactive Material (NORM), which was organized in cooperation with the IAEA as part of its programme to promote application of the safety standards to natural sources of radiation and to disseminate information to Member States. NORM VII provided an opportunity to review the many developments that had taken place over the past three years since the previous symposium in this series. This period was characterized by ongoing activities to revise international standards on radiation protection and safety and the further implementation of these standards in many countries. The proceedings contain 48 oral presentations and four rapporteur reports, as well as a summary that concludes with the main findings of the symposium. Text versions of 19 poster presentations are provided on the attached CD-ROM.

(686 pp., 112 figs; 2015) • ISBN 978-92-0-104014-5 • STI/PUB/1664 • €95.00

Project Experiences in Research Reactor Ageing Management, Modernization and Refurbishment

IAEA TECDOC Series No. 1748

Complementing IAEA Safety Standards Series No. SSG-10, which provides recommendations for ageing management of research reactor systems, structures

and components important to safety, this publication illustrates the experiences of research reactor owners and operators in implementing these best practices in programme design, failure response and analysis, fuel conversion, modernization and decommissioning, among other topics of operations and maintenance. It further promulgates these practices to aid research reactor managers and operators in the achievement of improved safety, efficient management and effective planning at all stages of reactor lifetime. The publication collects 23 contributions from technical meeting participants, representing 20 IAEA Member States. Included among its themes are lifetime management of reactor systems, structures and components; ageing programme design; analysis of component degradation and failure; and programme administration.

(2014) • ISBN 978-92-0-107814-8 • IAEA-TECDOC-1748 • €18.00

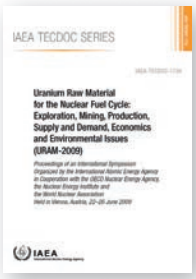
Techno-economic Comparison of Geological Disposal of Carbon Dioxide and Radioactive Waste

IAEA TECDOC Series No. 1758

This publication presents results of an IAEA coordinated research project and demonstrates that there are ample opportunities to learn from comparisons between the geological disposal of carbon dioxide and radioactive waste, and to derive insights that will assist scientists and experts involved in research and development as well as policymakers responsible for national energy strategies and international climate policies.

(2014) • ISBN 978-92-0-110114-3 • IAEA-TECDOC-1758 • €18.00

URANIUM ORE PROCESSING



Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2009)

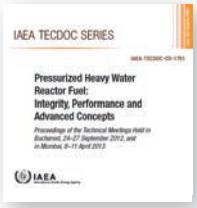
Proceedings of an International Symposium held in Vienna, Austria, 22–26 June 2009

IAEA TECDOC Series No. 1739

This is the proceedings of an IAEA symposium to analyse uranium supply–demand scenarios and to present and discuss new developments in uranium geology, exploration, mining and processing, as well as in environmental requirements for uranium operations and site decommissioning. Within their sessions the meeting participants covered six basic themes: uranium markets and economics; social licensing in the uranium production cycle; uranium exploration and geology; uranium mining and processing; environmental and regulatory issues; and human resources development. The publication includes 27 papers presented in oral sessions, a report of the panel discussion, and 25 papers presented as posters (on CD-ROM).

(2014) • ISBN 978-92-0-105014-4 • IAEA-TECDOC-1739 • €18.00

FUEL FABRICATION AND PERFORMANCE

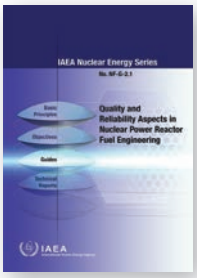


Pressurized Heavy Water Reactor Fuel: Integrity, Performance and Advanced Concepts

IAEA TECDOC Series No. 1751

This publication is the proceedings of two technical meetings held in 2012 and 2013 on fuel integrity, performances and advanced fuels for pressurized heavy water reactors (PHWRs). The objective of these meetings was to update the information on the performances of PHWR fuels, the status and trends in the use of advanced fuels in PHWRs and the technical readiness for the deployment of such fuel cycles in these types of reactors.

(2014) • ISBN 978-92-0-158414-4 • IAEA-TECDOC-CD-1751 • €18.00



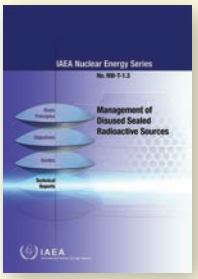
Quality and Reliability Aspects in Nuclear Power Reactor Fuel Engineering

IAEA Nuclear Energy Series No. NF-G-2.1

In order to decrease costs and increase competitiveness, nuclear utilities use more challenging operational conditions, longer fuel cycles and higher burnups, which require modifications in fuel designs and materials. Different aspects of quality assurance and control, as well as analysis of fuel performance have been considered in a number of specialized publications. The present publication provides a concise but comprehensive overview of all interconnected quality and reliability issues in fuel fabrication, design and operation. It jointly tackles technical, safety and organizational aspects, and contains examples of state of the art developments and good practices of coordinated work of fuel designers, vendors and reactor operators.

(130 pp., 43 figs; 2015) • ISBN 978-92-0-103114-3 • STI/PUB/1656 • €40.00

WASTE MANAGEMENT

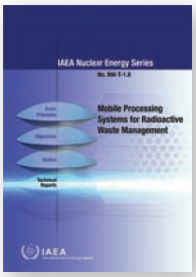


Management of Disused Sealed Radioactive Sources

IAEA Nuclear Energy Series No. NW-T-1.3

This publication summarizes the reviewed information distributed in previous IAEA publications and provides an up to date, overall picture of the management of disused sealed radioactive sources (DSRSs) based upon the current status and trends in this field. It incorporates the most recent experience in source management, including newly developed techniques used for DSRS conditioning and storage. Problems encountered and lessons learned are also highlighted in the publication in order to help avoid the mistakes commonly made in the past in managing disused sources.

(165 pp., 102 figs; 2014) • ISBN 978-92-0-103214-0 • STI/PUB/1657 • €46.00

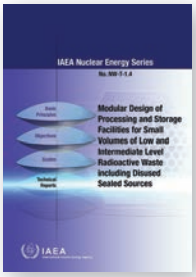


Mobile Processing Systems for Radioactive Waste Management

IAEA Nuclear Energy Series No. NW-T-1.8

In recent years, mobile systems have increasingly been deployed for the processing of different types of radioactive waste. Such systems offer flexibility in selection and application of the optimum technology for a specific waste stream by bringing the process to the point where the waste is generated, with the additional benefit that there can be equipment sharing among multiple generating sites. This publication provides the basic information on utilization of mobile systems for waste processing and introduces a methodology for the assessment required to determine the viability of mobile systems for specific applications. In addition, it informs the reader on the accurate assessment of mobile systems that employ one or more technologies. The target audience is professionals involved in the planning, selection, design, deployment and regulation of radioactive waste processing facilities.

(106 pp., 41 figs; 2014) • ISBN 978-92-0-141010-8 • STI/PUB/1621 • €38.00



Modular Design of Processing and Storage Facilities for Small Volumes of Low and Intermediate Level Radioactive Waste including Disused Sealed Sources

IAEA Nuclear Energy Series No. NW-T-1.4

A number of IAEA Member States generate relatively small quantities of radioactive waste and/or disused sealed sources in research or in the application of nuclear techniques in medicine and industry. This publication presents a modular approach to the design of waste processing and storage facilities to address the needs of such Member States with a cost effective and flexible solution that allows easy adjustment to changing needs in terms of capacity and variety of waste streams. The key feature of the publication is the provision of practical guidance to enable the users to determine their waste processing and storage requirements, specify those requirements to allow the procurement of the appropriate processing and storage modules and install and eventually operate those modules.

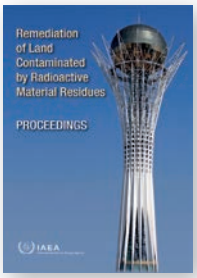
(182 pp., 79 figs; 2014) • ISBN 978-92-0-145110-1 • STI/PUB/1628 • €55.00

Planning and Design Considerations for Geological Repository Programmes of Radioactive Waste

IAEA TECDOC Series No. 1755

Disposal in a geological repository is the generally accepted solution for the long term management of high level and/or long lived radioactive wastes, in line with the general principles defined in the IAEA Safety Fundamentals. This publication presents practical information on the way a geological repository programme for radioactive waste could be defined and planned, with special attention to all aspects having an impact on the timing. Country specific examples for repository development phases are provided, based on actual experiences from Member States.

(2014) • ISBN 978-92-0-109914-3 • IAEA-TECDOC-1755 • €18.00



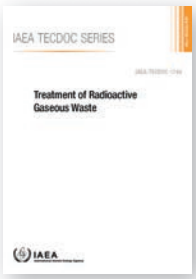
Remediation of Land Contaminated by Radioactive Material Residues

Proceedings of an International Conference held in Astana, Kazakhstan, 18–22 May 2009

Proceedings Series

This publication presents the proceedings of an international conference on remediation of radioactive contaminated sites with a particular focus on the States of Central Asia. The conference provided a forum for all parties involved in remediation of such sites to gather and exchange ideas, review progress and new developments, compare technologies and methods, and thus disseminate information and experience. The key topical issues identified and discussed by the participants included regulatory and safety regimes, innovative and mature technologies, life cycle planning, technical experience exchange, stakeholder issues, and international cooperation and support. A series of case studies are presented to provide an overview of environmental remediation activities in different parts of the world. The publication summarizes the present status, and outlines future trends in environmental remediation technologies and methods, and identifies possible areas for improvement.

(66 pp.; 2014) • ISBN 978-92-0-142310-8 • STI/PUB/1612 • €75.00



Treatment of Radioactive Gaseous Waste

IAEA TECDOC Series No. 1744

This publication focuses on the treatment of radioactive gaseous waste streams arising from the operations in fuel fabrication facilities, nuclear power plants, fuel reprocessing facilities and waste processing facilities. It provides the user with an overview of the requirements for the management of radioactive gaseous waste, information on the need to characterize waste streams, considerations for the selection of treatment technology, as well as discussions on the available technologies for gaseous emission control. Although the publication does not present specific design solutions to off-gas treatment issues as each application is unique, it aims to provide a firm basis upon which the design engineer can develop a solution tailored to his/her application, design requirements, and regulatory drivers. The CD-ROM attached to this publication addresses the most important aspects of gaseous radioactive waste streams and their management in connection with the operation of nuclear fuel cycle facilities.

**(2014) • ISBN 978-92-0-106314-4 •
IAEA-TECDOC-1744 • €18.00**

PLASMA PHYSICS AND NUCLEAR FUSION

Atomic and Plasma–Material Interaction Data for Fusion Vol. 16

Atomic and Plasma–Material Interaction Data for Fusion

This publication, arising from a Coordinated Research Project on Atomic and Molecular Data for Plasma Modelling, provides information on new data relevant to the edge region of plasmas in nuclear fusion energy devices. In this region, molecules and molecular ions are formed and react with electrons and with each other, and fusion plasma modelling requires cross-sections and rate coefficients for such processes. This volume describes new data and data compilations for atomic and molecular processes that occur in edge plasma and provides data in forms that can be used in plasma modelling codes.

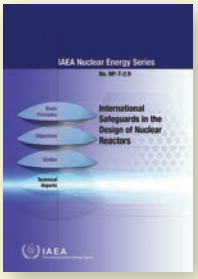
(190 pp., 134 figs; 2014) • ISBN 978-92-0-131510-6 • STI/PUB/023/APID/16 • €40.00

International Safeguards in the Design of Fuel Fabrication Plants

IAEA Nuclear Energy Series No. NF-T-4.7

This publication is the third in a series from the IAEA that provides guidance on the early consideration of safeguards requirements in the design and construction of nuclear facilities. It is principally intended for designers and operators of nuclear fuel fabrication facilities; however, vendors, State authorities and investors may also benefit from the information provided. This guidance is introductory rather than comprehensive; more detailed information on IAEA safeguards implementation can be found in the Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols (IAEA Services Series No. 21, December 2014) and other publications in that series. This document expands upon the general considerations addressed in International Safeguards in Nuclear Facility Design and Construction (Nuclear Energy Series No. NP-T-2.8, April 2013).

(Forthcoming 2015) • ISBN 978-92-0-103315-4 • STI/PUB/1699 • €30.00



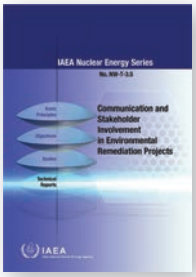
International Safeguards in the Design of Nuclear Reactors

IAEA Nuclear Energy Series No. NP-T-2.9

This publication is the second in a series from the IAEA that provide guidance on the inclusion of safeguards in nuclear facility design and construction. It is principally intended for designers and operators of nuclear reactor facilities; however, vendors, national authorities and financial backers can also benefit from the information provided. It is introductory rather than comprehensive in nature, complementing the Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols, IAEA Services Series No. 21, and other publications in that series. The publication complements the general considerations addressed in International Safeguards in Nuclear Facility Design and Construction, Nuclear Energy Series No. NP-T-2.8.

(50 pp., 17 figs; 2014) • ISBN 978-92-0-106514-8 • STI/PUB/1669 • €30.00

ENVIRONMENT

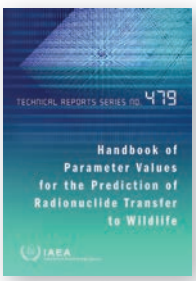


Communication and Stakeholder Involvement in Environmental Remediation Projects

IAEA Nuclear Energy Series No. NW-T-3.5

This publication has been developed with the aim of translating the complex technical terminology and approaches embodied in the planning and implementation of environmental remediation programmes into a more accessible language. The objective is to help environmental remediation implementers and regulators engage and sustain dialogue with different stakeholders while developing a decision making process regarding the implementation of environmental remediation programmes. The publication deals with the technical and non-technical dimensions of environmental remediation and makes available experiences on how to proceed with communication and stakeholder engagement in environmental remediation programmes.

(43 pp.; 2014) • ISBN 978-92-0-145210-8 • STI/PUB/1629 • €28.00



Handbook of Parameter Values for the Prediction of Radionuclide Transfer to Wildlife

Technical Reports Series No. 479

This handbook provides generic parameter values for estimating the transfer of radionuclides from environmental media to wildlife for the purpose of assessing potential radiation exposure under equilibrium conditions. These data are intended for use where site specific data are either not available or not required, and to parameterize generic assessment models. They are based on a comprehensive review of the available literature, including many Russian language publications that have not previously been available in English. The publication addresses the limitations of the parameter values and the applicability of data. Some general background information on the assessment of potential impacts of radioactive releases on wildlife is also included. It complements the existing handbook in the same IAEA series with parameters to assess the radiological impact to humans.

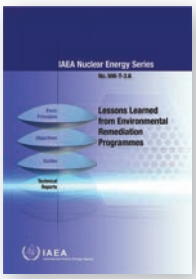
(211 pp.; 2014) • ISBN 978-92-0-100714-8 • STI/DOC/010/479 • €55.00

INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Environmental Impact from Depletion of Resources

IAEA Nuclear Energy Series No. NG-T-3.13

INPRO is an international project to help ensure that nuclear energy is available to contribute in a sustainable manner to meeting the energy needs of the twenty-first century. A basic principle of INPRO in the area of environmental impact from depletion of resources is that a nuclear energy system will be capable of contributing to the energy needs in the twenty-first century while making efficient use of non-renewable resources needed for construction, operation and decommissioning. Recognizing that a national nuclear energy programme in a given country may be based both on indigenous resources and resources purchased from abroad, this publication provides background materials and summarizes the results of international global resource availability studies that could contribute to the corresponding national assessments.

(Forthcoming 2015) • ISBN 978-92-0-103415-1 • STI/PUB/1700 • €33.00

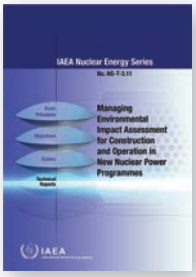


Lessons Learned from Environmental Remediation Programmes

IAEA Nuclear Energy Series No. NW-T-3.6

Environmental remediation, in the context of legacy sites, is being carried out in IAEA Member States at different paces. There is already significant experience and expertise present from around the world as nuclear and associated facilities are closed and move through the decommissioning and environmental remediation phases. Methodological approaches and remediation technologies have been developed to deal with different remediation situations and subsequently adapted to site specific conditions. They have also been further fine-tuned as they have been rolled out either on relatively small or large scale projects. This publication is intended to capture part of this experience and make it available to IAEA Member States, so that they can benefit from the existing knowledge when planning and implementing their remediation programmes.

(51 pp.; 2014) • ISBN 978-92-0-145310-5 • STI/PUB/1630 • €27.00



Managing Environmental Impact Assessment for Construction and Operation in New Nuclear Power Programmes

IAEA Nuclear Energy Series No. NG-T-3.11

This publication provides a holistic approach to environmental protection in new nuclear power programmes. It describes the environmental impact assessment (EIA) process, the subsequent utilization of the EIA, and the necessary infrastructure for such processes. The presumption is that a Member State embarking on such a programme already has an environmental regulatory framework in place, which may not be developed for nuclear power but instead for industrial projects; therefore the emphasis is on the environmental aspects that are unique to a nuclear power plant project. The publication is addressed to senior managers, project managers or coordinators and technical specialists of government authorities and agencies, including the regulatory body, operating organizations and supporting industries and other organizations involved in environmental issues.

(47 pp., 8 figs; 2014) • ISBN 978-92-0-144810-1 • STI/PUB/1625 • €29.00

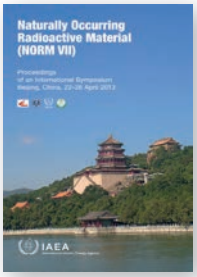
Modelling of Biota Dose Effects: Report of Working Group 6 Biota Dose Effects Modelling of EMRAS II Topical Heading Reference Approaches for Biota Dose Assessment

Environmental Modelling for Radiation Safety (EMRAS II) Programme

IAEA TECDOC Series No. 1737

The consideration of radiological protection of the environment during the licensing of nuclear facilities is a requirement formulated in the IAEA International Basic Safety Standards. Within this context the effect of ionizing radiation to flora and fauna is a key topic. This publication documents various important contributions to this area. A large number of dose effect studies were analysed statistically, and the database was used to elaborate dose response relationships to flora and fauna made in a unique ecosystem containing ^{238}U-series radionuclides and other metals/metalloids in lakes that received uranium effluents for several decades. Substantial progress was made in considering radiation effects in the presence of other contaminants. Advances were also achieved in modelling effects to populations of wildlife by improving the models that link effects from individuals to populations.

(2014) • ISBN 978-92-0-101114-5 • IAEA-TECDOC-1737 • €18.00



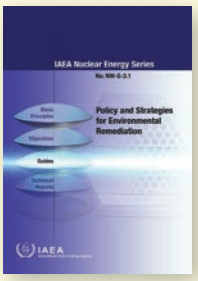
Naturally Occurring Radioactive Material (NORM VII)

Proceedings of an International Symposium held in Beijing, China 22–26 April 2013

Proceedings Series

This publication is the proceedings of the Seventh International Symposium on Naturally Occurring Radioactive Material (NORM), which was organized in cooperation with the IAEA as part of its programme to promote application of the safety standards to natural sources of radiation and to disseminate information to Member States. NORM VII provided an opportunity to review the many developments that had taken place over the past three years since the previous symposium in this series. This period was characterized by ongoing activities to revise international standards on radiation protection and safety and the further implementation of these standards in many countries. The proceedings contain 48 oral presentations and four rapporteur reports, as well as a summary that concludes with the main findings of the symposium. Text versions of 19 poster presentations are provided on the attached CD-ROM.

(686 pp., 112 figs; 2015) • ISBN 978-92-0-104014-5 • STI/PUB/1664 • €95.00

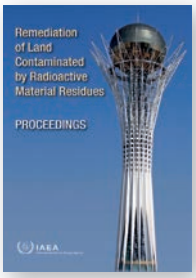


Policy and Strategies for Environmental Remediation

IAEA Nuclear Energy Series No. NW-G-3.1

To assure the safe, technically optimal and cost effective management of remediation situations, appropriate policies and strategies are required. This publication describes the goals, time scales, efforts necessary for implementation, cost allocation and the different interests of concerned parties with regard to environmental remediation works. It clarifies the differences between a policy and a strategy, and provides advice to Member States on the typical composition and formulation of such documents. Along with previously published IAEA safety publications on environmental remediation, this publication will help national authorities to recognize the necessity for including environmental remediation as a required component in the planning and execution of nuclear related initiatives. Recent events have shown that the existence of an established policy and strategies on environmental remediation prior to nuclear and/or radiological accidents can be of fundamental importance, as it will among other things facilitate the dialogue to be established with different affected parties.

(32 pp.; 2015) • ISBN 978-92-0-103314-7 • STI/PUB/1658 • €20.00



Remediation of Land Contaminated by Radioactive Material Residues

Proceedings of an International Conference held in Astana, Kazakhstan, 18–22 May 2009

Proceedings Series

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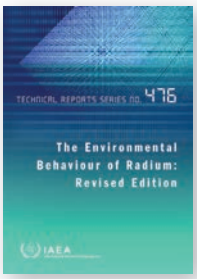
(66 pp.; 2014) • ISBN 978-92-0-142310-8 • STI/PUB/1612 • €75.00

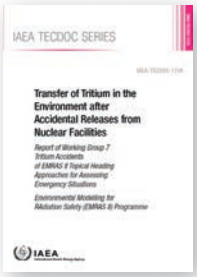


The Environmental Behaviour of Radium: Revised Edition

Technical Reports Series No. 476

This publication aims to provide IAEA Member States with information for use in the radiological assessment of accidental releases and routine discharges of radium in the environment. It covers radium behaviour in the terrestrial, freshwater and marine environments. The information presented is relevant to the transfer of radionuclides through food chains to both humans and non-human biota. The corresponding remedial options and regulating aspects are also within the scope of this publication. Additionally, applications of radium isotopes to environmental issues are discussed in order to alert readers to studies that use radium isotopes as tracers of environmental processes. The information could also serve as a basis for remediation planning and identification of optimal remediation strategies in areas contaminated by radium.

(267 pp., 39 figs; 2014) • ISBN 978-92-0-143310-7 • STI/DOC/010/476 • €52.00



Transfer of Tritium in the Environment after Accidental Releases from Nuclear Facilities

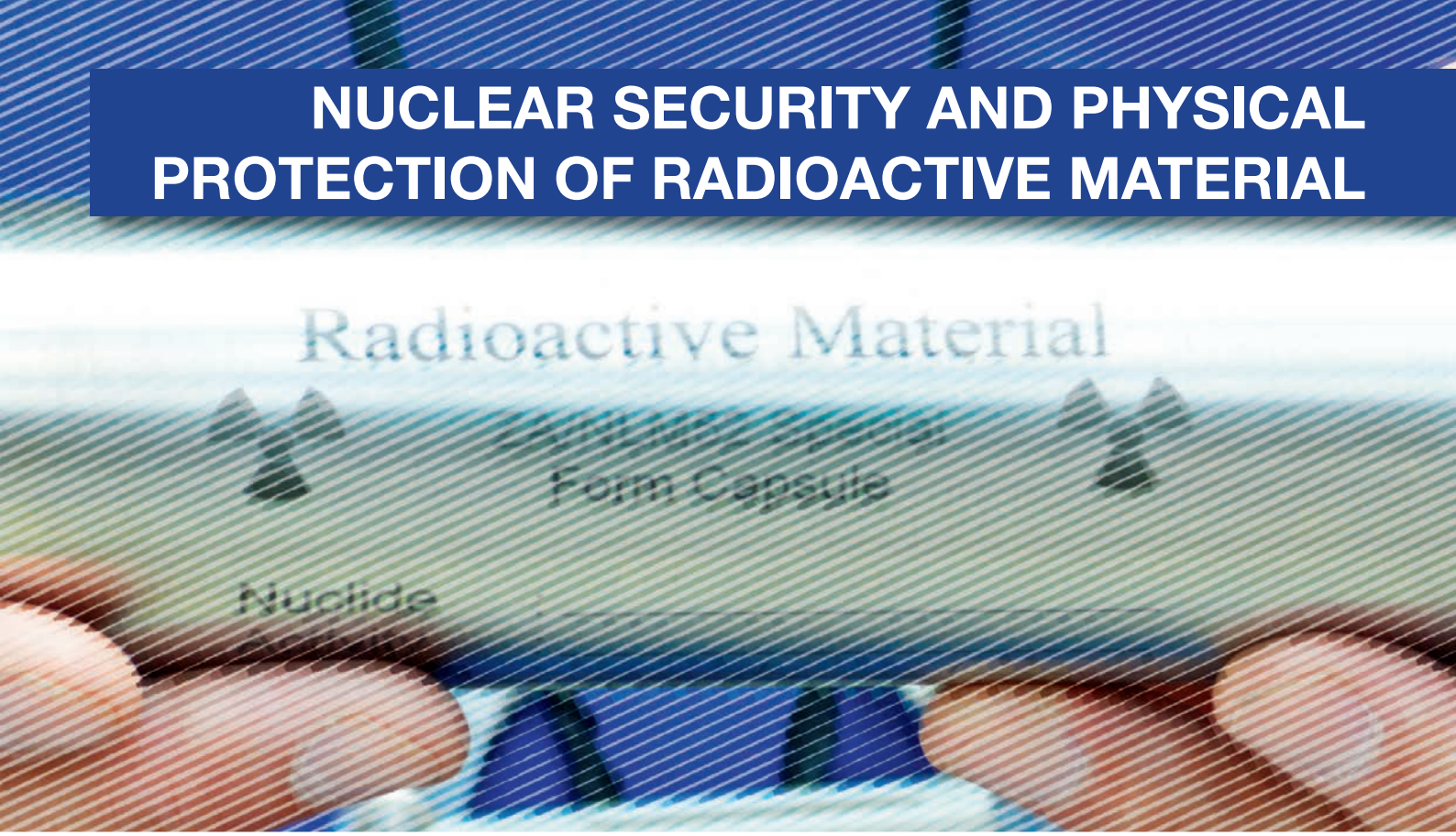
Report of Working Group 7 Tritium Accidents of EMRAS II Topical Heading Approaches for Assessing Emergency Situations Environmental Modelling for Radiation Safety (EMRAS II) Programme

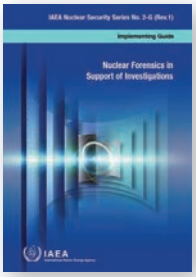
IAEA TECDOC Series No. 1738

This publication presents the work and activities undertaken by Working Group 7 (WG7) of the IAEA's EMRAS II Programme and considers the conclusions drawn during EMRAS Phase I, 2003–2007. The working group members tested and compared environmental transfer models to be applied after short term releases of tritium from nuclear power plants in order to estimate exposures through inhalation of contaminated air and the ingestion of contaminated food. The main goal was to develop a harmonized, robust model for practical applications. The publication delineates all relevant processes as well as the analyses and evaluated models for the environmental transfer of tritium, and identifies sources of and quantifies model uncertainties. The present status and needs are summarized and further fields of activity are identified to improve the reliability and the application of models to assess tritium behaviour and the resulting radiological impacts to people and the environment.

(2014) • ISBN 978-92-0-102814-3 • IAEA-TECDOC-1738 • €18.00

NUCLEAR SECURITY AND PHYSICAL PROTECTION OF RADIOACTIVE MATERIAL



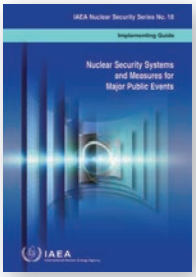


Nuclear Forensics in Support of Investigations

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

This publication is a revision of IAEA Nuclear Security Series No. 2. Since then, 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.

(Forthcoming 2015) • ISBN 978-92-0-102115-1 • STI/PUB/1687 • €38.00

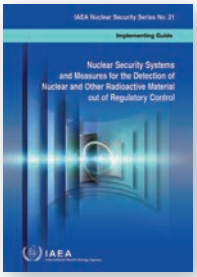


Nuclear Security Systems and Measures for Major Public Events

IAEA Nuclear Security Series No. 18

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.

English Edition (56 pp., 14 figs; 2012) • ISBN 978-92-0-127010-8 • STI/PUB/1546 • €30.00
Russian Edition (67 pp., 14 figs; 2014) • ISBN 978-92-0-401414-3 • STI/PUB/1546 • €30.00

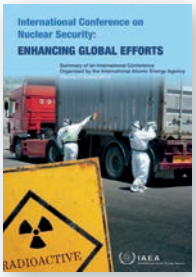


Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material out of Regulatory Control

IAEA Nuclear Security Series No. 21

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 composed 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.

English Edition (60 pp., 3 figs; 2013) • ISBN 978-92-0-142910-0 • STI/PUB/1613 • €30.00
Russian Edition (Forthcoming 2015) • ISBN 978-92-0-409514-2 • STI/PUB/1613 • €30.00



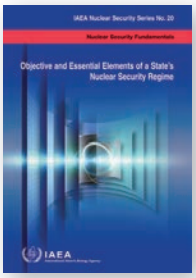
Nuclear Security: Enhancing Global Efforts

Proceedings of an International Conference held in Vienna, Austria, 1–5 July 2013

Proceedings Series

This publication presents the proceedings of an international conference on nuclear security, which was convened at the IAEA's headquarters in Vienna, the first such conference to include ministerial level participation. The conference adopted a ministerial declaration and provided a forum where experiences and lessons learned could be discussed. Ideas were exchanged to identify emerging trends and to consider medium and long term objectives for international nuclear security efforts, as well as to inform the development of the IAEA's Nuclear Security Plan 2014–2017. The President's summary highlights the main conclusions and key issues, drawing on the reports from the sessions. The conference attracted more than 1300 registered participants from 125 Member States, 34 of which were represented at ministerial level, and 21 intergovernmental and non-governmental organizations.

(119 pp.; 2014) • ISBN 978-92-0-101514-3 • STI/PUB/1643 • €90.00



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

IAEA Nuclear Security Series No. 20

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
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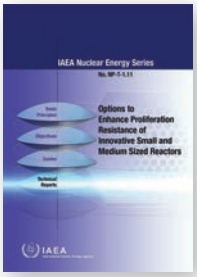


Options to Enhance Proliferation Resistance of Innovative Small and Medium Sized Reactors

IAEA Nuclear Energy Series No. NP-T-1.11

This publication addresses specific considerations for proliferation resistance and safeguards for small and medium sized reactors (SMRs). It describes the framework analysis through comparing and harmonizing the Generation IV International Forum and the International Project on Innovative Nuclear Reactors and Fuel Cycles methodologies, defines the proliferation resistance assessment and safeguards by design approach and presents the current implementation of proliferation resistance measures in innovative SMRs. The appendices include information on the example of a procedure to support a facility's analysis of the safeguarding situation in support of safeguards by design, and a template listing required proliferation resistance related design information. An overview of SMR design and development activities and State perspectives is given in the annexes.

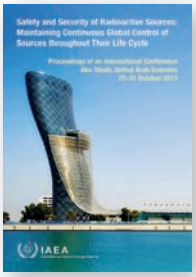
(63 pp., 2 figs; 2014) • ISBN 978-92-0-145510-9 • STI/PUB/1632 • €28.00

Radiological Crime Scene Management

IAEA Nuclear Security Series No. 22-G

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.

(93 pp., 25 figs; 2014) • ISBN 978-92-0-108714-0 • STI/PUB/1672 • €48.00



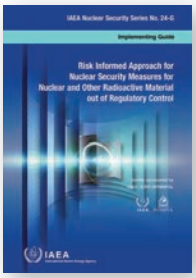
Safety and Security of Radioactive Sources: Maintaining Continuous Global Control of Sources throughout their Life Cycle

Proceedings of an International Conference held in Abu Dhabi, United Arab Emirates, 27–31 October 2013

Proceedings Series

The IAEA works with its Member States to help them ensure the safety and security of radioactive sources. The purpose of this conference was to review current success and challenges in ensuring the safety and security of radioactive sources and to identify means to maintain the highest level of safety and security throughout their life cycle, from manufacture to disposal. These proceedings contain the opening addresses, the invited and contributed papers presented during the sessions, and summaries of the discussions. The accompanying CD-ROM contains the presentations of most of the papers presented orally, as well as the complete text of the printed volume. The CD-ROM also contains the national reports on implementation of the Code of Conduct submitted to the conference by States, as per the formalized process established in 2006.

(783 pp., 134 figs; 2015) • ISBN 978-92-0-105214-8 • STI/PUB/1667 • €90.00

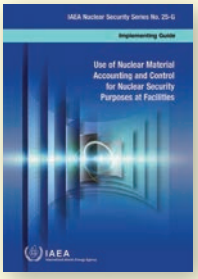


Risk Informed Approach for Nuclear Security Measures for Nuclear and Other Radioactive Material out of Regulatory Control

IAEA Nuclear Security Series No. 24-G

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



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

IAEA Nuclear Security Series No. 25-G

Nuclear material accounting and control (NMAC) works in a complementary fashion with the international safeguards programme and physical protection systems to help prevent, deter or detect the unauthorized acquisition and use of nuclear materials. These three methodologies are employed by Member States to defend against external threats, internal threats and both State actors and non-State actors. This publication offers guidance for implementing NMAC measures for nuclear security at the nuclear facility level. It focuses on measures to mitigate the risk posed by insider threats and describes elements of a programme that can be implemented at a nuclear facility in coordination with the physical protection system for the purpose of deterring and detecting unauthorized removal of nuclear material.

(63 pp.; 2015) • ISBN 978-92-0-101915-8 • STI/PUB/1685 • €30.00

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IAEA Human Health Series No. 21	Assessment of Iron Bioavailability in Humans Using Stable Iron Isotope Techniques	E	978-92-0-126510-4	STI/PUB/1544	2012	26.00
IAEA TECDOC Series No. 1639/ Rev. 1	Assessment of Nuclear Energy Systems Based on a Closed Nuclear Fuel Cycle with Fast Reactors	E	978-92-0-134710-7	IAEA-TECDOC-1639/Rev. 1	2012	18.00
Atomic and Plasma–Material Interaction Data for Fusion 15	Atomic and Plasma–Material Interaction Data for Fusion Vol. 15	E	978-92-0-131410-9	STI/PUB/023/ APID/15	2012	40.00
Atomic and Plasma–Material Interaction Data for Fusion 16	Atomic and Plasma–Material Interaction Data for Fusion Vol. 16	E	978-92-0-131510-6	STI/PUB/023/ APID/16	2014	40.00
IAEA TECDOC Series No. 1754	Benchmark Analyses of Sodium Natural Convection in the Upper Plenum of the Monju Reactor Vessel	E	978-92-0-109614-2	IAEA-TECDOC-1754	2014	18.00
IAEA TECDOC Series No. 1742	Benchmark Analyses on the Control Rod Withdrawal Tests Performed during the PHÉNIX End-of-Life Experiments	E	978-92-0-105314-5	IAEA-TECDOC-1742	2014	18.00
IAEA TECDOC Series No. 1703	Benchmark Analyses on the Natural Circulation Test Performed during the PHENIX End-of-life Experiments	E	978-92-0-139610-5	IAEA-TECDOC-1703	2013	18.00
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IAEA Human Health Series No. 22	Body Composition Assessment from Birth to Two Years of Age	E	978-92-0-127710-7	STI/PUB/1550	2013	36.00
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Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
IAEA TECDOC Series No. 1718	Characterization of Swelling Clays as Components of the Engineered Barrier System for Geological Repositories	E	978-92-0-112410-4	IAEA-TECDOC-1718	2013	18.00
IAEA Safety Standards Series No. SSG-13	Chemistry Programme for Water Cooled Nuclear Power Plants Specific Safety Guide	R	978-92-0-400914-9	STI/PUB/1469	2014	25.00
IAEA Safety Standards Series No. GSG-1	Classification of Radioactive Waste General Safety Guide	R	978-92-0-403514-8	STI/PUB/1419	2014	24.00
IAEA Nuclear Security Series No. 6	Combating Illicit Trafficking in Nuclear and Other Radioactive Material	C	978-92-0-526710-4	STI/PUB/1309	2012	40.00
IAEA TECDOC Series No. 1715	Commercial Products and Services of Research Reactors	E	978-92-0-143610-8	IAEA-TECDOC-1715	2013	18.00
IAEA Safety Standards Series No. SSG-28	Commissioning for Nuclear Power Plants Specific Safety Guide	E	978-92-0-140110-6	STI/PUB/1595	2014	40.00
IAEA Nuclear Energy Series No. NW-T-3.5	Communication and Stakeholder Involvement in Environmental Remediation Projects	E	978-92-0-145210-8	STI/PUB/1629	2014	28.00
IAEA TECDOC Series No. 1688	Comparison of Heavy Water Reactor Thermalhydraulic Code Predictions with Small Break LOCA Experimental Data	E	978-92-0-133710-8	IAEA-TECDOC-1688	2012	18.00
IAEA TECDOC Series No. 1743	Compendium of Neutron Beam Facilities for High Precision Nuclear Data Measurements	E	978-92-0-106614-5	IAEA-TECDOC-1743	2014	18.00
IAEA Nuclear Security Series No. 17	Computer Security at Nuclear Facilities	C	978-92-0-536110-9	STI/PUB/1527	2012	33.00
IAEA Nuclear Security Series No. 17	Computer Security at Nuclear Facilities	R	978-92-0-435510-9	STI/PUB/1527	2012	33.00
IAEA Nuclear Security Series No. 17	Computer Security at Nuclear Facilities	A	978-92-0-642210-6	STI/PUB/1527	2013	33.00
IAEA Nuclear Security Series No. 17	Computer Security at Nuclear Facilities	F	978-92-0-237010-4	STI/PUB/1527	2013	33.00
IAEA Nuclear Security Series No. 17	Computer Security at Nuclear Facilities	S	978-92-0-337310-4	STI/PUB/1527	2013	33.00
IAEA Safety Standards Series No. NS-G-2.14	Conduct of Operations at Nuclear Power Plants Safety Guide	S	978-92-0-329710-3	STI/PUB/1339	2012	19.00
IAEA Safety Standards Series No. SSG-17	Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries Specific Safety Guide	E	978-92-0-115510-8	STI/PUB/1509	2012	31.00
IAEA Safety Standards Series No. SSG-17	Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries Specific Safety Guide	S	978-92-0-344010-3	STI/PUB/1509	2013	31.00
IAEA Safety Standards Series No. SSG-17	Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries Specific Safety Guide	A	978-92-0-606914-1	STI/PUB/1509	2014	31.00

Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
IAEA Safety Standards Series No. SSG-17	Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries Specific Safety Guide	F	978-92-0-209114-6	STI/PUB/1509	2014	31.00
IAEA Nuclear Energy Series No. NW-T-2.4	Cost Estimation for Research Reactor Decommissioning	E	978-92-0-140210-3	STI/PUB/1596	2014	22.00
	Country Nuclear Power Profiles - 2012 Edition	E	978-92-0-184510-8	IAEA-CNPP/2012/ CD	2012	95.00
	Country Nuclear Power Profiles - 2013 Edition	E	978-92-0-162010-1	IAEA-CNPP/2013/ CD	2013	95.00
	Country Nuclear Power Profiles - 2014 Edition	E	978-92-0-158514-1	IAEA-CNPP/2014/ CD	2014	95.00
IAEA Safety Standards Series No. GSG-2	Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency General Safety Guide	A	978-92-0-629410-9	STI/PUB/1467	2012	41.00
IAEA Safety Standards Series No. GSG-2	Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency General Safety Guide	F	978-92-0-224210-4	STI/PUB/1467	2012	41.00
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IAEA Safety Standards Series No. GSG-2	Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency General Safety Guide	S	978-92-0-336310-5	STI/PUB/1467	2013	41.00
IAEA Safety Standards Series No. SSG-27	Criticality Safety in the Handling of Fissile Material Specific Safety Guide	E	978-92-0-140010-9	STI/PUB/1594	2014	40.00
IAEA Radioisotopes and Radiopharmaceuticals Series No. 3	Cyclotron Produced Radionuclides: Guidance on Facility Design and Production of [^{18}F] Fluorodeoxyglucose (FDG)	E	978-92-0-117310-2	STI/PUB/1515	2012	55.00
IAEA Radioisotopes and Radiopharmaceuticals Series No. 4	Cyclotron Produced Radionuclides: Operation and Maintenance of Gas and Liquid Targets	E	978-92-0-130710-1	STI/PUB/1563	2012	35.00
IAEA Safety Standards Series No. GSR Part 6	Decommissioning of Facilities General Safety Requirements	E	978-92-0-102614-9	STI/PUB/1652	2014	25.00
IAEA TECDOC Series No. 1699	Dense Magnetized Plasmas	E	978-92-0-139110-0	IAEA-TECDOC-1699	2013	18.00
IAEA Nuclear Energy Series No. NP-T-1.9	Design Features and Operating Experience of Experimental Fast Reactors	E	978-92-0-136410-4	STI/PUB/1585	2013	23.00
IAEA Radiation Technology Reports No. 2	Design, Development and Optimization of a Low Cost System for Digital Industrial Radiology	E	978-92-0-129310-7	STI/PUB/1561	2013	40.00
IAEA TECDOC Series No. 1689	Design, Manufacturing and Irradiation Behaviour of Fast Reactor Fuel	E	978-92-0-186510-6	IAEA-TECDOC-CD-1689	2013	18.00
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Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
IAEA TECDOC Series No. 1759	Determining the Suitability of Materials for Disposal at Sea under the London Convention 1972 and London Protocol 1996: A Radiological Assessment Procedure	E	978-92-0-100215-0	IAEA-TECDOC-1759	2015	18.00
IAEA Safety Standards Series No. SSG-2	Deterministic Safety Analysis for Nuclear Power Plants Specific Safety Guide	S	978-92-0-333010-7	STI/PUB/1428	2012	23.00
IAEA Safety Standards Series No. SSG-2	Deterministic Safety Analysis for Nuclear Power Plants Specific Safety Guide	R	978-92-0-401814-1	STI/PUB/1428	2014	23.00
IAEA Safety Standards Series No. SSG-3	Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants Specific Safety Guide	R	978-92-0-406014-0	STI/PUB/1430	2014	35.00
IAEA Safety Standards Series No. SSG-4	Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants Specific Safety Guide	R	978-92-0-404614-4	STI/PUB/1443	2014	22.00
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IAEA Radiation Technology Reports No. 3	Development of Novel Adsorbents and Membranes by Radiation Induced Grafting for Selective Separation in Environmental and Industrial Applications	E	978-92-0-134010-8	STI/PUB/1572	2012	18.00
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IAEA Nuclear Security Series No. 10	Development, Use and Maintenance of the Design Basis Threat	C	978-92-0-523510-3	STI/PUB/1386	2012	18.00
IAEA Nuclear Security Series No. 10	Development, Use and Maintenance of the Design Basis Threat	F	978-92-0-232810-5	STI/PUB/1386	2012	18.00
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IAEA Nuclear Energy Series No. NP-T-2.6	Efficient Water Management in Water Cooled Reactors	E	978-92-0-132610-2	STI/PUB/1569	2012	34.00

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IAEA Nuclear Energy Series No. NG-T-3.8	Electric Grid Reliability and Interface with Nuclear Power Plants	E	978-92-0-126110-6	STI/PUB/1542	2012	32.00
Reference Data Series No. 1	Energy, Electricity and Nuclear Power Estimates for the Period up to 2050 2012 Edition	E	978-92-0-133510-4	IAEA-RDS-1/32	2012	16.00
Reference Data Series No. 1	Energy, Electricity and Nuclear Power Estimates for the Period up to 2050 2013 Edition	E	978-92-0-111910-0	IAEA-RDS-1/33	2013	18.00
Reference Data Series No. 1	Energy, Electricity and Nuclear Power Estimates for the Period up to 2050 2014 Edition	E	978-92-0-108014-1	IAEA-RDS-1/34	2014	18.00
IAEA Nuclear Security Series No. 4	Engineering Safety Aspects of the Protection of Nuclear Power Plants Against Sabotage	C	978-92-0-523310-9	STI/PUB/1271	2012	30.00
IAEA TECDOC Series No. 1678	Environmental Modelling for Radiation Safety (EMRAS) — A Summary Report of the Results of the EMRAS Programme (2003-2007)	E	978-92-0-129810-2	IAEA-TECDOC-1678	2012	18.00
IAEA TECDOC Series No. 1719	Environmental Sensitivity in Nuclear Emergencies in Rural and Semi-natural Environments: Report of Working Group 8 Environmental Sensitivity of EMRAS II Topical Heading Approaches for Assessing Emergency Situations	E	978-92-0-112610-8	IAEA-TECDOC-1719	2013	18.00
IAEA TECDOC Series No. 1734	Establishing a National Nuclear Security Support Centre	E	978-92-0-100414-7	IAEA-TECDOC-1734	2014	18.00
IAEA Nuclear Security Series No. 19	Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme	E	978-92-0-138010-4	STI/PUB/1591	2013	29.00
IAEA Safety Standards Series No. SSG-16	Establishing the Safety Infrastructure for a Nuclear Power Programme Specific Safety Guide	E	978-92-0-115310-4	STI/PUB/1507	2012	40.00
IAEA Safety Standards Series No. SSG-16	Establishing the Safety Infrastructure for a Nuclear Power Programme Specific Safety Guide	R	978-92-0-405614-3	STI/PUB/1507	2015	40.00
IAEA TECDOC Series No. 1733	Evaluation of Advanced Thermohydraulic System Codes for Design and Safety Analysis of Integral Type Reactors	E	978-92-0-100314-0	IAEA-TECDOC-1733	2013	18.00
IAEA TECDOC Series No. 1694	Evaluation of High Temperature Gas Cooled Reactor Performance: Benchmark Analysis Related to the PBMR-400, PBMM, GT-MHR, HTR-10 and the ASTRA Critical Facility	E	978-92-0-137610-7	IAEA-TECDOC-1694	2013	32.00
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IAEA Nuclear Energy Series No. NW-T-2.7	Experiences and Lessons Learned Worldwide in the Cleanup and Decommissioning of Nuclear Facilities in the Aftermath of Accidents	E	978-92-0-101214-2	STI/PUB/1644	2014	31.00

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IAEA TECDOC Series No. 1686	Experiences and Trends of Manufacturing Technology of Advanced Nuclear Fuels	E	978-92-0-132710-9	IAEA-TECDOC-1686	2012	18.00
Proceedings Series	Fast Reactors and Related Fuel Cycles: Challenges and Opportunities (FR09) Proceedings of an International Conference held in Kyoto, Japan, 7–11 December 2009	E	978-92-0-102410-7	STI/PUB/1444	2012	98.00
Proceedings Series	Fast Reactors and Related Fuel Cycles: Safe Technologies and Sustainable Scenarios (FR13) Proceedings of an International Conference held in Paris, France, 4–7 March 2013 (2 volumes)	E	978-92-0-104114-2	STI/PUB/1665	2015	98.00
Technical Reports Series No. 478	Feasibility of Producing Molybdenum-99 on a Small Scale Using Fission of Low Enriched Uranium or Neutron Activation of Natural Molybdenum	E	978-92-0-114713-4	STI/DOC/010/478	2015	44.00
IAEA Nuclear Energy Series No. NP-T-1.14	Framework for Assessing Dynamic Nuclear Energy Systems for Sustainability : Final Report of the INPRO Collaborative Project GAINS	E	978-92-0-140410-7	STI/PUB/1598	2013	40.00
IAEA TECDOC Series No. 1709	Fuel Behaviour and Modelling under Severe Transient and Loss of Coolant Accident (LOCA) Conditions	E	978-92-0-192410-0	IAEA-TECDOC-CD-1709	2013	18.00
IAEA TECDOC Series No. 1687	Fuel Modelling at Extended Burnup (FUMEX-II)	E	978-92-0-133810-5	IAEA-TECDOC-1687	2012	18.00
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IAEA TECDOC Series No. 1741	Guidelines for Using Fallout Radionuclides to Assess Erosion and Effectiveness of Soil Conservation Strategies.	E	978-92-0-105414-2	IAEA-TECDOC-1741	2014	18.00
IAEA TECDOC Series No. 1741	Guidelines for Using Fallout Radionuclides to Assess Erosion and Effectiveness of Soil Conservation Strategies.	E	978-92-0-155814-5	IAEA-TECDOC-CD-1741	2014	18.00
Technical Reports Series No. 479	Handbook of Parameter Values for the Prediction of Radionuclide Transfer to Wildlife	E	978-92-0-100714-8	STI/DOC/010/479	2014	55.00
	Handbook on Nuclear Law: Implementing Legislation	S	978-92-0-314710-1	STI/PUB/1456	2012	90.00

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IAEA TECDOC Series No. 1746	Heat Transfer Behaviour and Thermohydraulics Code Testing for Supercritical Water Cooled Reactors (SCWRs)	E	978-92-0-107614-4	IAEA-TECDOC-1746	2014	18.00
IAEA TECDOC Series No. 1693	Hot Cell Post-irradiation Examination and Poolside Inspection of Nuclear Fuel - Proceedings of the IAEA-HOTLAB Technical Meeting held in Smolenice, Slovakia, 23-27 May 2011	E	978-92-0-191210-7	IAEA-TECDOC-CD-1693	2013	18.00
Proceedings Series	Human Resource Development for Introducing and Expanding Nuclear Power Programmes: Summary of an International Conference, Abu Dhabi, United Arab Emirates, 14–18 March 2010	E	978-92-0-134410-6	STI/PUB/1574	2012	40.00
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IAEA Human Health Series No. 30	Implementation of High Dose Rate Brachytherapy in Limited Resource Settings	E	978-92-0-107214-6	STI/PUB/1670	2015	45.00
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IAEA TECDOC Series No. 1683	Improved and Harmonized Quality Control for Expanded Tsetse Production, Sterilization and Field Application	E	978-92-0-130110-9	IAEA-TECDOC-1683	2012	18.00
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IAEA TECDOC Series No. 1684	INPRO Collaborative Project: Proliferation Resistance: Acquisition/Diversion Pathway Analysis (PRADA)	E	978-92-0-130310-3	IAEA-TECDOC-1684	2012	18.00
IAEA Nuclear Energy Series No. NG-T-4.4	INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Economics	E	978-92-0-102714-6	STI/PUB/1653	2014	40.00
IAEA Nuclear Energy Series No. NG-T-3.12	INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Infrastructure - INPRO Manual	E	978-92-0-106214-7	STI/PUB/1668	2014	33.00
IAEA TECDOC Series No. 1526	Inspection of Radiation Sources and Regulatory Enforcement (Supplement to IAEA Safety Standards Series No. GS-G-1.5)	F	978-92-0-235010-6	IAEA-TECDOC-1526	2012	18.00

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IAEA TECDOC Series No. 1706	Instrumentation for Digital Nuclear Spectroscopy	E	978-92-0-141310-9	IAEA-TECDOC-1706	2013	18.00
IAEA TECDOC Series No. 1708	Integrated Approach to Dense Magnetized Plasmas Applications in Nuclear Fusion Technology	E	978-92-0-142810-3	IAEA-TECDOC-1708	2013	18.00
IAEA TECDOC Series No. 1669	Integration of Nuclear Spectrometry Methods as a New Approach to Material Research	E	978-92-0-121310-5	IAEA-TECDOC-1669	2012	18.00
IAEA Nuclear Energy Series No. NP-T-2.8	International Safeguards in Nuclear Facility Design and Construction	E	978-92-0-140610-1	STI/PUB/1600	2013	19.00
IAEA Nuclear Energy Series No. NP-T-2.9	International Safeguards in the Design of Nuclear Reactors	E	978-92-0-106514-8	STI/PUB/1669	2014	30.00
IAEA Human Health Series No. 12	Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Saliva Samples by Fourier Transform Infrared Spectrometry	F	978-92-0-214513-9	STI/PUB/1450	2013	37.00
IAEA Human Health Series No. 12	Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Saliva Samples by Fourier Transform Infrared Spectrometry	S	978-92-0-314013-3	STI/PUB/1450	2013	37.00
IAEA Human Health Series No. 13	Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Urine Samples by Isotope Ratio Mass Spectrometry	F	978-92-0-214113-1	STI/PUB/1451	2013	36.00
IAEA Human Health Series No. 13	Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Urine Samples by Isotope Ratio Mass Spectrometry	S	978-92-0-313913-7	STI/PUB/1451	2013	36.00
IAEA Nuclear Energy Series No. NG-T-3.9	Invitation and Evaluation of Bids for Nuclear Power Plants	E	978-92-0-116710-1	STI/PUB/1536	2012	24.00
	Isotope Methods for Dating Old Groundwater	E	978-92-0-137210-9	STI/PUB/1587	2013	70.00
Proceedings Series	Isotopes in Hydrology, Marine Ecosystems and Climate Change Studies -Proceedings of the International Symposium held in Monaco, 27 March – 1 April 2011 (2 volumes)	E	978-92-0-135610-9	STI/PUB/1580	2013	90.00
Proceedings Series	Justification of Medical Exposure in Diagnostic Imaging Proceedings of an International Workshop held in Brussels, Belgium, 2–4 September 2009	E	978-92-0-121110-1	STI/PUB/1532	2012	40.00
IAEA Safety Standards Series No. GSG-5	Justification of Practices, Including Non-medical Human Imaging General Safety Guide	E	978-92-0-102414-5	STI/PUB/1650	2014	32.00
IAEA TECDOC Series No. 1675	Knowledge Management for Nuclear Research and Development Organizations	E	978-92-0-125510-5	IAEA-TECDOC-1675	2012	18.00
IAEA Nuclear Energy Series No. NG-T-3.5	Legal and Institutional Issues of Transportable Nuclear Power Plants: A Preliminary Study	E	978-92-0-144710-4	STI/PUB/1624	2013	33.00
IAEA Nuclear Energy Series No. NW-T-3.6	Lessons Learned from Environmental Remediation Programmes	E	978-92-0-145310-5	STI/PUB/1630	2014	27.00
	Library of Recommended Actinide Decay Data, 2011	E	978-92-0-143910-9	STI/PUB/1618	2013	60.00

Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
INSAG Series No. 26	Licensing the First Nuclear Power Plant	E	978-92-0-134210-2	STI/PUB/1573	2012	25.00
IAEA Nuclear Energy Series No. NP-T-1.6	Liquid Metal Coolants for Fast Reactors Cooled by Sodium, Lead and Lead-Bismuth Eutectic	E	978-92-0-131810-7	STI/PUB/1567	2012	25.00
Safety Reports Series No. 73	Low Level Event and Near Miss Process for Nuclear Power Plants: Best Practices	E	978-92-0-126610-1	STI/PUB/1545	2012	30.00
Proceedings Series	Management and Storage of Research Reactor Spent Nuclear Fuel : Proceedings of a Technical Meeting held in Thurso, United Kingdom, 19–22 October 2009	E	978-92-0-138210-8	STI/PUB/1592	2013	49.00
IAEA Human Health Reports No. 6	Management of Cervical Cancer: Strategies for Limited-resource Centres - A Guide for Radiation Oncologists	E	978-92-0-128810-3	STI/PUB/1556	2013	18.00
IAEA TECDOC Series No. 1714	Management of Discharge of Low Level Liquid Radioactive Waste Generated in Medical, Educational, Research and Industrial Facilities	E	978-92-0-143510-1	IAEA-TECDOC-1714	2013	18.00
IAEA Nuclear Energy Series No. NW-T-1.3	Management of Disused Sealed Radioactive Sources	E	978-92-0-103214-0	STI/PUB/1657	2014	46.00
IAEA TECDOC Series No. 1712	Management of NORM Residues	E	978-92-0-142710-6	IAEA-TECDOC-1712	2013	18.00
INSAG Series No. 13	Management of Operational Safety in Nuclear Power Plants	R	978-92-0-401215-6	STI/PUB/1083	2015	14.50
Proceedings Series	Management of Spent Fuel from Nuclear Power Reactors Proceedings of an International Conference held in Vienna, Austria, 31 May–4 June 2010	E	978-92-0-103714-5	STI/PUB/1661	2015	40.00
Safety Reports Series No. 70	Management System Standards: Comparison between IAEA GS-R-3 and ASME NQA-1-2008 and NQA-1a-2009 Addenda	E	978-92-0-120810-1	STI/PUB/1530	2012	29.00
Safety Reports Series No. 69	Management System Standards: Comparison between IAEA GS-R-3 and ISO 9001:2008	E	978-92-0-120710-4	STI/PUB/1529	2012	29.00
IAEA Nuclear Energy Series No. NG-T-3.11	Managing Environmental Impact Assessment for Construction and Operation in New Nuclear Power Programmes	E	978-92-0-144810-1	STI/PUB/1625	2014	29.00
IAEA Nuclear Energy Series No. NG-T-2.7	Managing Human Performance to Improve Nuclear Facility Operation	E	978-92-0-144610-7	STI/PUB/1623	2014	18.00
IAEA Nuclear Energy Series No. NG-T-1.1	Managing Organizational Change in Nuclear Organizations	E	978-92-0-140910-2	STI/PUB/1603	2014	45.00
Safety Reports Series No. 79	Managing Regulatory Body Competence	E	978-92-0-113413-4	STI/PUB/1635	2014	44.00
IAEA Nuclear Energy Series No. NG-T-3.7	Managing Siting Activities for Nuclear Power Plants	E	978-92-0-131610-3	STI/PUB/1565	2012	32.00
Technical Reports Series No. 474	Measurement and Calculation of Radon Releases from NORM Residues	E	978-92-0-142610-9	STI/DOC/010/474	2013	34.00

Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
IAEA TECDOC Series No. 1757	Methodology for the Systematic Assessment of the Regulatory Competence Needs (SARCoN) for Regulatory Bodies of Nuclear Installations	E	978-92-0-110514-1	IAEA-TECDOC-1757	2014	18.00
IAEA Nuclear Energy Series No. NG-G-3.1 (Rev. 1)	Milestones in the Development of a National Infrastructure for Nuclear Power	E	978-92-0-104715-1	STI/PUB/1704	2015	40.00
IAEA Nuclear Energy Series No. NW-T-1.8	Mobile Processing Systems for Radioactive Waste Management	E	978-92-0-141010-8	STI/PUB/1621	2014	38.00
IAEA TECDOC Series No. 1732	Model Regulations for the Use of Radiation Sources and for the Management of the Associated Radioactive Waste	E	978-92-0-115613-6	IAEA-TECDOC-1732	2013	18.00
IAEA TECDOC Series No. 1732	Model Regulations for the Use of Radiation Sources and for the Management of the Associated Radioactive Waste	S	978-92-0-300915-7	IAEA-TECDOC-1732	2015	18.00
IAEA TECDOC Series No. 1737	Modelling of Biota Dose Effects: Report of Working Group 6 Biota Dose Effects Modelling of EMRAS II Topical Heading Reference Approaches for Biota Dose Assessment, Environmental Modelling for Radiation Safety (EMRAS II) Programme	E	978-92-0-101114-5	IAEA-TECDOC-1737	2014	18.00
IAEA TECDOC Series No. 1672	Modelling of Transport of Radioactive Substances in the Primary Circuit of Water Cooled Reactors	E	978-92-0-126010-9	IAEA-TECDOC-1672	2012	18.00
IAEA Nuclear Energy Series No. NW-T-1.4	Modular Design of Processing and Storage Facilities for Small Volumes of Low and Intermediate Level Radioactive Waste including Disused Sealed Sources	E	978-92-0-145110-1	STI/PUB/1628	2014	55.00
IAEA Safety Standards Series No. SSG-31	Monitoring and Surveillance of Radioactive Waste Disposal Facilities Specific Safety Guide	E	978-92-0-115513-9	STI/PUB/1640	2014	40.00
Safety Reports Series No. 67	Monitoring for Compliance with Exemption and Clearance Levels	E	978-92-0-115810-9	STI/PUB/1511	2012	45.00
Safety Reports Series No. 72	Monitoring for Compliance with Remediation Criteria for Sites	E	978-92-0-127910-1	STI/PUB/1551	2012	40.00
IAEA Nuclear Security Series No. 3	Monitoring for Radioactive Material in International Mail Transported by Public Postal Operators	C	978-92-0-523210-2	STI/PUB/1242	2012	23.00
IAEA TECDOC Series No. 1673	Monitoring Isotopes in Rivers: Creation of the Global Network of Isotopes in Rivers (GNIR)	E	978-92-0-126810-5	IAEA-TECDOC-1673	2012	18.00
IAEA Safety Standards Series No. SSG-19	National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources Specific Safety Guide	A	978-92-0-636210-5	STI/PUB/1510	2012	35.00
IAEA Safety Standards Series No. SSG-19	National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources Specific Safety Guide	S	978-92-0-337110-0	STI/PUB/1510	2013	35.00
IAEA Safety Standards Series No. SSG-19	National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources Specific Safety Guide	F	978-92-0-210314-6	STI/PUB/1510	2015	35.00

Series & No.	Title	Language	ISBN	OldSymbol	Published	PriceEuro
IAEA TECDOC Series No. 1677	Natural Circulation Phenomena and Modelling for Advanced Water Cooled Reactors	E	978-92-0-127410-6	IAEA-TECDOC-1677	2012	18.00
Proceedings Series	Naturally Occurring Radioactive Material (NORM VII) Proceedings of an International Symposium held in Beijing, China 22–26 April 2013	E	978-92-0-104014-5	STI/PUB/1664	2015	95.00
IAEA Safety Standards Series No. SSG-29	Near Surface Disposal Facilities for Radioactive Waste Specific Safety Guide	E	978-92-0-114313-6	STI/PUB/1637	2014	36.00
IAEA Radiation Technology Reports No. 1	Neutron Generators for Analytical Purposes	E	978-92-0-125110-7	STI/PUB/1535	2012	41.00
IAEA TECDOC Series No. 1681	Neutron Transmutation Doping of Silicon at Research Reactors	E	978-92-0-130010-2	IAEA-TECDOC-1681	2012	18.00
IAEA TECDOC Series No. 1753	New Technologies for Seawater Desalination Using Nuclear Energy	E	978-92-0-100115-3	IAEA-TECDOC-1753	2015	18.00
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IAEA Nuclear Security Series No. 2	Nuclear Forensics Support	C	978-92-0-526910-8	STI/PUB/1241	2012	26.00
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Reference Data Series No. 2	Nuclear Power Reactors in the World 2012 Edition	E	978-92-0-132310-1	IAEA-RDS-2/32	2012	12.00
Reference Data Series No. 2	Nuclear Power Reactors in the World 2013 Edition	E	978-92-0-144110-2	IAEA-RDS-2/33	2013	15.00
Reference Data Series No. 2	Nuclear Power Reactors in the World 2014 Edition	E	978-92-0-104914-8	IAEA-RDS-2/34	2014	15.00
Reference Data Series No. 2	Nuclear Power Reactors in the World 2015 Edition	E	978-92-0-104915-5	IAEA-RDS-2/35	2015	15.00
IAEA Nuclear Energy Series No. NP-T-1.10	Nuclear Reactor Technology Assessment for Near Term Deployment	E	978-92-0-140310-0	STI/PUB/1597	2013	30.00
INSAG Series No. 22	Nuclear Safety Infrastructure for a National Nuclear Power Programme Supported by the IAEA Fundamental Safety Principles	R	978-92-0-406714-9	STI/PUB/1350	2014	20.00

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IAEA Nuclear Security Series No. 7	Nuclear Security Culture	A	978-92-0-623810-3	STI/PUB/1347	2012	30.00
IAEA Nuclear Security Series No. 7	Nuclear Security Culture	C	978-92-0-526410-3	STI/PUB/1347	2012	30.00
IAEA Nuclear Security Series No. 15	Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control	A	978-92-0-635210-6	STI/PUB/1488	2012	23.00
IAEA Nuclear Security Series No. 15	Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control	C	978-92-0-522910-2	STI/PUB/1488	2012	23.00
IAEA Nuclear Security Series No. 15	Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control	F	978-92-0-223710-0	STI/PUB/1488	2012	23.00
IAEA Nuclear Security Series No. 15	Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control	S	978-92-0-324410-7	STI/PUB/1488	2012	23.00
IAEA Nuclear Security Series No. 13	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)	C	978-92-0-526210-9	STI/PUB/1481	2012	28.00
IAEA Nuclear Security Series No. 13	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)	F	978-92-0-222110-9	STI/PUB/1481	2012	28.00
IAEA Nuclear Security Series No. 13	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)	S	978-92-0-324610-1	STI/PUB/1481	2012	28.00
IAEA Nuclear Security Series No. 14	Nuclear Security Recommendations on Radioactive Material and Associated Facilities	C	978-92-0-524010-7	STI/PUB/1487	2012	22.00
IAEA Nuclear Security Series No. 14	Nuclear Security Recommendations on Radioactive Material and Associated Facilities	F	978-92-0-222410-0	STI/PUB/1487	2012	22.00
IAEA Nuclear Security Series No. 14	Nuclear Security Recommendations on Radioactive Material and Associated Facilities	S	978-92-0-325010-8	STI/PUB/1487	2012	22.00
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IAEA Nuclear Security Series No. 18	Nuclear Security Systems and Measures for Major Public Events	R	978-92-0-401414-3	STI/PUB/1546	2014	30.00
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Proceedings Series	Nuclear Security: Enhancing Global Efforts Proceedings of an International Conference held in Vienna, Austria, 1–5 July 2013	E	978-92-0-101514-3	STI/PUB/1643	2014	90.00
IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	E	978-92-0-137810-1	STI/PUB/1590	2013	20.00
IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	A	978-92-0-606114-5	STI/PUB/1590	2014	20.00

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IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	C	978-92-0-505514-5	STI/PUB/1590	2014	20.00
IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	F	978-92-0-205714-2	STI/PUB/1590	2014	20.00
IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	R	978-92-0-404814-8	STI/PUB/1590	2014	20.00
IAEA Nuclear Security Series No. 20	Objective and Essential Elements of a State's Nuclear Security Regime	S	978-92-0-307014-0	STI/PUB/1590	2014	20.00
IAEA TECDOC Series No. 1762	Operating Experience from Events Reported to the IAEA Incident Reporting System for Research Reactors	E	978-92-0-100615-8	IAEA-TECDOC-1762	2015	18.00
	Operating Experience with Nuclear Power Stations in Member States in 2011 2012 Edition (CD-ROM)	E	978-92-0-183610-6	STI/PUB/1571	2012	55.00
	Operating Experience with Nuclear Power Stations in Member States in 2012 2013 Edition (CD-ROM)	E	978-92-0-194310-1	STI/PUB/1620	2013	65.00
	Operating Experience with Nuclear Power Stations in Member States in 2013 2014 Edition (CD-ROM)	E	978-92-0-157314-8	STI/PUB/1671	2014	75.00
IAEA TECDOC Series No. 1720	Operation and Licensing of Mixed Cores in Water Cooled Reactors	E	978-92-0-113213-0	IAEA-TECDOC-1720	2013	18.00
IAEA TECDOC Series No. 1721	Optimizing Productivity of Food Crop Genotypes in Low Nutrient Soils	E	978-92-0-165313-0	IAEA-TECDOC-CD-1721	2013	18.00
IAEA TECDOC Series No. 1721	Optimizing Productivity of Food Crop Genotypes in Low Nutrient Soils	E	978-92-0-113113-3	IAEA-TECDOC-1721	2014	18.00
IAEA Nuclear Energy Series No. NW-T-1.24	Options for Management of Spent Fuel and Radioactive Waste for Countries Developing New Nuclear Power Programmes	E	978-92-0-140710-8	STI/PUB/1601	2013	23.00
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IAEA TECDOC Series No. 1704	Pathways to Energy from Inertial Fusion: An Integrated Approach	E	978-92-0-139710-2	IAEA-TECDOC-1704	2013	18.00
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IAEA TECDOC Series No. 1761	Performance Analysis Review of Thorium TRISO Coated Particles during Manufacture, Irradiation and Accident Condition Heating Tests	E	978-92-0-100715-5	IAEA-TECDOC-1761	2015	18.00
IAEA TECDOC Series No. 1698	Performance Assessment of Passive Gaseous Provisions (PGAP)	E	978-92-0-139010-3	IAEA-TECDOC-1698	2013	18.00
IAEA Safety Standards Series No. SSG-25	Periodic Safety Review for Nuclear Power Plants Specific Safety Guide	E	978-92-0-137410-3	STI/PUB/1588	2013	37.00

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IAEA Human Health Series No. 27	PET/CT Atlas on Quality Control and Image Artefacts	E	978-92-0-101014-8	STI/PUB/1642	2014	60.00
IAEA TECDOC Series No. 1755	Planning and Design Considerations for Geological Repository Programmes of Radioactive Waste	E	978-92-0-109914-3	IAEA-TECDOC-1755	2014	18.00
IAEA TECDOC Series No. 1586	Planning and Execution of Knowledge Management Assist Missions for Nuclear Organizations	R	978-92-0-431910-1	IAEA-TECDOC-1586	2012	18.00
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IAEA Nuclear Energy Series No. NW-G-2.1	Policies and Strategies for the Decommissioning of Nuclear and Radiological Facilities	E	978-92-0-116910-5	STI/PUB/1525	2012	24.00
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IAEA Nuclear Security Series No. 8	Preventive and Protective Measures Against Insider Threats	F	978-92-0-236710-4	STI/PUB/1359	2013	20.00
IAEA TECDOC Series No. 1713	Proceedings of the 5th International Conference on the Frontiers of Plasma Physics and Technology	E	978-92-0-193410-9	IAEA-TECDOC-CD-1713	2013	18.00
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IAEA TECDOC Series No. 1752	Progress in Methodologies for the Assessment of Passive Safety System Reliability in Advanced Reactors	E	978-92-0-108614-3	IAEA-TECDOC-1752	2014	18.00
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IAEA Nuclear Energy Series No. NP-T-2.7	Project Management in Nuclear Power Plant Construction: Guidelines and Experience	E	978-92-0-122210-7	STI/PUB/1537	2012	42.00
IAEA Safety Standards Series No. SSG-32	Protection of the Public against Exposure Indoors due to Radon and Other Natural Sources of Radiation Specific Safety Guide	E	978-92-0-102514-2	STI/PUB/1651	2015	45.00
IAEA Nuclear Energy Series No. NF-G-2.1	Quality and Reliability Aspects in Nuclear Power Reactor Fuel Engineering	E	978-92-0-103114-3	STI/PUB/1656	2015	40.00
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Safety Reports Series No. 76	Radiation Protection and NORM Residue Management in the Titanium Dioxide and Related Industries	E	978-92-0-132110-7	STI/PUB/1568	2012	32.00
IAEA Safety Standards Series No. GSR Part 3	Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards General Safety Requirements	E	978-92-0-135310-8	STI/PUB/1578	2014	68.00
Safety Reports Series No. 71	Radiation Protection in Paediatric Radiology	E	978-92-0-125710-9	STI/PUB/1543	2013	38.00
IAEA Safety Standards Series No. SSG-11	Radiation Safety in Industrial Radiography Specific Safety Guide	A	978-92-0-633110-1	STI/PUB/1466	2012	33.00
IAEA Safety Standards Series No. SSG-11	Radiation Safety in Industrial Radiography Specific Safety Guide	F	978-92-0-236610-7	STI/PUB/1466	2013	33.00
IAEA Safety Standards Series No. SSG-11	Radiation Safety in Industrial Radiography Specific Safety Guide	S	978-92-0-338710-1	STI/PUB/1466	2014	33.00
	Radiocronologia de Sedimentos Costeros Utilizando 210Pb: Modelos, Validacion y Aplicaciones	S	978-92-0-325210-2	STI/PUB/1538	2012	45.00
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IAEA Human Health Reports No. 2	Radiotherapy in Palliative Cancer Care: Development and Implementation	E	978-92-0-109009-6	STI/PUB/1388	2012	16.00
IAEA Radiation Technology Series No. 5	Radiotracer Generators for Industrial Applications	E	978-92-0-135410-5	STI/PUB/1579	2013	34.00
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IAEA Safety Standards Series No. SSR-6	Regulations for the Safe Transport of Radioactive Material - 2012 Edition Specific Safety Requirements	A	978-92-0-638410-7	STI/PUB/1570	2013	44.00
IAEA Safety Standards Series No. SSR-6	Regulations for the Safe Transport of Radioactive Material - 2012 Edition Specific Safety Requirements	C	978-92-0-538110-7	STI/PUB/1570	2013	44.00
IAEA Safety Standards Series No. SSR-6	Regulations for the Safe Transport of Radioactive Material - 2012 Edition Specific Safety Requirements	F	978-92-0-238910-6	STI/PUB/1570	2013	44.00
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