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Publicações Oferecidas



IAEA Human Health Reports



Status of Computed Tomography Dosimetry for Wide Cone Beam Scanners

IAEA Human Health Reports 5

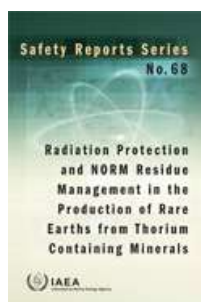
Subject Classification: 0103-Medical physics (including dosimetry)

STI/PUB/1528(ISBN:978-92-0-120610-7)39 pp.;27 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCDD/Publications/PDF/Pub1528_web.pdf

Safety Reports Series



Radiation Protection and NORM Residue Management in the Production of Rare Earths from Thorium containing Minerals

Safety Reports Series 68

Subject Classification: 0611-Radioactive waste management

STI/PUB/1512(ISBN:978-92-0-115710-2)259 pp.;

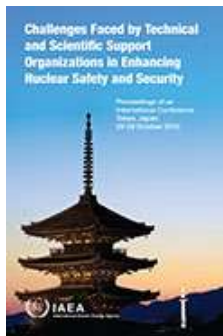
Date Published: 2011

http://www-pub.iaea.org/MTCDD/Publications/PDF/Pub1512_web.pdf

DESCRIPTION

This Safety Report is a compilation of detailed information on the processes and materials involved in the production of rare earths from thorium-containing minerals and on the radiological considerations that need to be taken into account by the regulatory body when determining the nature and extent of radiation protection measures. It has been developed as part of the IAEA's programme on the application of its safety standards in the field of radiation, transport and waste safety.

Proceedings Series - International Atomic Energy Agency



Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety and Security

Proceedings of an International Conference, Tokyo, Japan, 25-29 October 2010

Proceedings Series - International Atomic Energy Agency

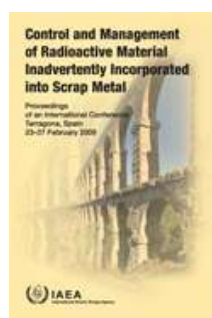
Agency Subject Classification: 0600-Nuclear and Radiological Safety STI/PUB/1519 (ISBN:978-92-0-118810-6) 214 pp.;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1519_Web.pdf

DESCRIPTION

By providing the necessary scientific expertise and support to the authorities, the regulators and the public, technical and scientific support organizations (TSOs) play an important role in developing and maintaining nuclear safety and security systems in States. This conference, held in Tokyo as a follow-up of the 2007 TSO conference, focused on international cooperation and networking among TSOs to enhance nuclear safety and security, especially in terms of their role in the regulatory framework, including capacity building in those countries considering embarking on nuclear power programmes. The conference objectives were to develop a common understanding of the responsibilities, needs and opportunities of TSOs and to further promote international cooperation and networking among them. These proceedings include a summary, the opening speeches, the invited papers, and the conclusions and summary of the conference by the President. The accompanying CD-ROM contains the unedited contributed papers, the presentations that were submitted with some of the invited papers and papers exhibited at the poster session.



Control and Management of Radioactive Material Inadvertently Incorporated into Scrap Metal

Proceedings of an International Conference Tarragona, Spain 23-27 February 2009

Proceedings Series - International Atomic Energy Agency

Subject Classification: 0611-Radioactive waste management

STI/PUB/1502 (ISBN:978-92-0-114910-7) 393 pp.; 39 figures;

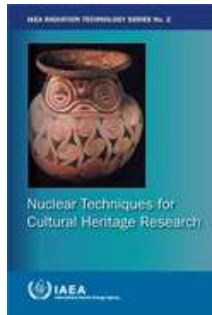
Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1502_web.pdf

DESCRIPTION

Metal recycling has become an important industrial activity in all countries. It is seen as being socially and environmentally beneficial, because it conserves natural ore resources and saves energy. However, radioactive material may become associated with scrap metal inadvertently and, if it is melted, can cause health and economic problems as well as public acceptance issues for scrap metal. This publication is the proceedings of a conference organized by the Spanish Nuclear Safety Council (CSN) in cooperation with the IAEA with the aim of sharing experiences and contributing towards the resolution of problems caused by the inadvertent presence of radioactive material in scrap metal. Conclusions and recommendations were developed concerning the current situation and the future in dealing with the problems identified.

IAEA Radiation Technology Series



Nuclear Techniques for Cultural Heritage Research

IAEA Radiation Technology Series 2

Subject Classification: 0300-Nuclear Measurements, Techniques and Instrumentation

STI/PUB/1501(ISBN:978-92-0-114510-9)205 pp.;72 figures

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/p1501_web.pdf

DESCRIPTION

This publication highlights the role of nuclear techniques for cultural heritage research. As cultural heritage objects are frequently unique and non-replaceable, non-destructive techniques are mandatory and, hence, nuclear techniques have a high potential to be applied to study these valuable objects. The target readers of this publication are scientists and professionals involved in development and application of nuclear techniques, experts in the field of restoration, conservation and classification of artefacts, as well as museum curators and archaeologists. Students in these various fields may also find this book valuable.

IAEA Safety Standards Series



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

IAEA Safety Standards Series SSG-19

Subject Classification: 0605-Radiation sources and accelerators

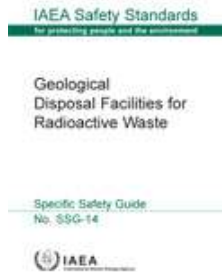
STI/PUB/1510(ISBN:978-92-0-115610-5)100 pp.;0 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1510_web.pdf

DESCRIPTION

DESCRIPTION This Safety Guide is intended to provide recommendations on the establishment of a national strategy for regaining control over orphan radioactive sources and 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. Contents: 1. Introduction; 2. Assessing the problem; 3. Developing the national strategy; 4. Implementing the national strategy; Appendix I: Format and content of a national strategy document; Appendix II: Searching for sources; Annex I: Causes of loss of control over radioactive sources; Annex II: Common problems and possible solutions identified during national strategy missions.



Geological Disposal Facilities for Radioactive Waste

IAEA Safety Standards Series SSG-14

Subject Classification: 0608-Waste repositories STI/PUB/1483 (ISBN: 978-92-0-111510-2) 104 pp.; 2 figures;

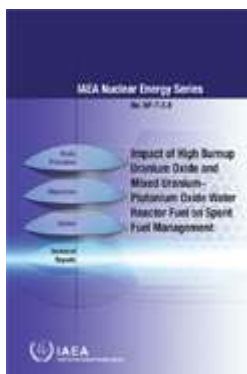
Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1483_web.pdf

DESCRIPTION

DESCRIPTION This Safety Guide provides guidance on prevailing good practices for meeting, and demonstrating compliance with, the Safety Requirements on Disposal of Radioactive Waste in a systematic and comprehensive manner. It covers aspects related to siting, design, construction, operation and closure, including the safety case, its supporting safety assessments and the regulatory process. The publication addresses both operational and long term safety of geological disposal facilities for wastes that pose a hazard for at least several thousand years. Contents: 1. Introduction; 2. Overview of geological disposal and its implementation; 3. Legal and organizational infrastructure; 4. Safety approach; 5. The safety case and safety assessment; 6. Elements in a stepwise approach to the development of a geological disposal facility; Appendix I: Siting of geological disposal facilities; Appendix II: Post-closure safety assessment.

IAEA Nuclear Energy Series



Impact of High Burnup Uranium Oxide and Mixed Uranium-Plutonium Oxide Water Reactor Fuel on Spent Fuel Management

IAEA Nuclear Energy Series NF-T-3.8

Subject Classification: 0803-Spent fuel management

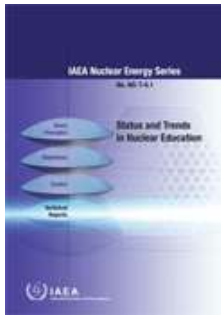
STI/PUB/1490 (ISBN: 978-92-0-114310-5) 84 pp.; 46 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1490_web.pdf

DESCRIPTION

This publication examines the many aspects of the increased use of high burnup uranium oxide (UOX) and mixed oxide (MOX) fuel and its potential impact on spent fuel management as well as on the whole nuclear industry. It discusses reactor types, with emphasis on light water reactor (LWR) and heavy water reactor (HWR) technology, considers the current state of UOX and MOX worldwide, provides information on the various fuel and cladding types and spent fuel management components, and elaborates on the characteristics of spent fuel related to higher burnup UOX and MOX fuels, followed by a detailed analysis. The publication also identifies areas for future research and development.



Status and Trends in Nuclear Education

IAEA Nuclear Energy Series NG-T-6.1

Subject Classification: 0705-Qualification and training of personnel

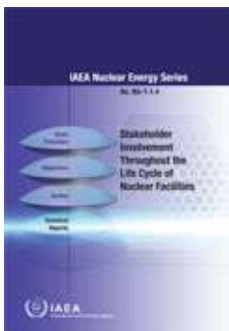
STI/PUB/1475(ISBN:978-92-0-109010-2)226 pp.;47 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/P1475_web.pdf

DESCRIPTION

The development of policies and strategies in nuclear education plays an essential role with regard to facilitating sustainable education and training in nuclear science and technology. This publication supports the development of such policies and strategies. In its first part it provides a general overview of activities regarding nuclear knowledge management, nuclear education, and national and regional needs and expectations. The second part presents detailed country reports on the status of nuclear education in Member States. These country reports also address partnerships between educational institutions and the nuclear industry, as well as cooperation with government and research organizations. Best practices in nuclear education and recommendations are consolidated in an introductory chapter, which could be useful for easy benchmarking, improvements and formulating strategies



Stakeholder Involvement Throughout the Life Cycle of Nuclear Facilities

IAEA Nuclear Energy Series NG-T-1.4

Subject Classification: 0701-Nuclear power planning and economics

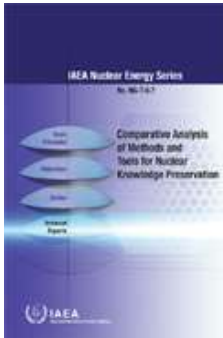
STI/PUB/1520(ISBN:978-92-0-117110-8)27 pp.;1 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1520_web.pdf

DESCRIPTION

Involving interested parties in every stage of the life cycle of nuclear facilities is essential to enhance mutual trust on issues related to nuclear energy production. Beyond the groups traditionally involved in the decision making process, such as the nuclear industry, scientific bodies and relevant national and local governmental institutions, the concept of stakeholders also includes the media, the public, local communities and non-governmental organizations. Often questioning former communication practices, the information and participation of stakeholders now relies on a number of relatively new principles. While acknowledging the existence of different national approaches, this publication proposes a route to effective stakeholder involvement throughout the main phases of the life cycle of nuclear facilities (i.e. construction, operation, radioactive waste management, decommissioning) and the use of up-to-date methods to implement stakeholder involvement programmes.



Comparative Analysis of Methods and Tools for Nuclear Knowledge Preservation

IAEA Nuclear Energy Series NG-T-6.7

Subject Classification: 0705-Qualification and training of personnel/STI/PUB/1494(ISBN:978-92-0-113610-7)102 pp.;17 figures;32.00 Euro;

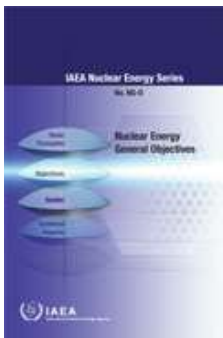
Language: English

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1494_web.pdf

DESCRIPTION

DESCRIPTION This publication draws on the results of a coordinated research project (CRP) on comparative analysis of methods and tools for knowledge preservation in nuclear organizations. The CRP was initiated by the IAEA in order to enhance the capacity of Member States to maintain and preserve the information and knowledge resources related to the peaceful uses of nuclear energy. The project participants explored methods and tools used to capture, interpret, analyse and disseminate data and information, as well as the knowledge ultimately derived from them. Furthermore, a survey tool on the current status of knowledge preservation in nuclear and supporting organizations was developed. The analysis of the survey served as a basis for the recommendations and conclusions on good practices in knowledge preservation.



Nuclear Energy General Objectives

IAEA Nuclear Energy Series NG-O

Subject Classification: 0700-Nuclear power

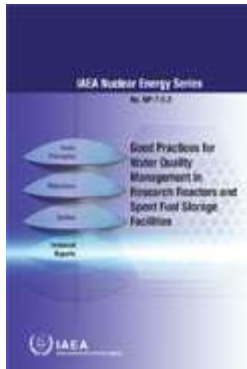
STI/PUB/1523(ISBN:978-92-0-116810-8)25 pp.;0 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1523_web.pdf

DESCRIPTION

DESCRIPTION This publication describes what must be considered and achieved to satisfy the IAEA Nuclear Energy Basic Principles (NE-BP) in the area of general nuclear issues, which include the following: energy systems analysis and development of strategies for nuclear energy, economics, infrastructure, management systems, human resources, and knowledge management. The objectives were developed through collaboration with and advice from participants and Member States in multiple technical meetings, committee meetings and conventions.



Good Practices for Water Quality Management in Research Reactors and Spent Fuel Storage Facilities

IAEA Nuclear Energy Series NP-T-5.2

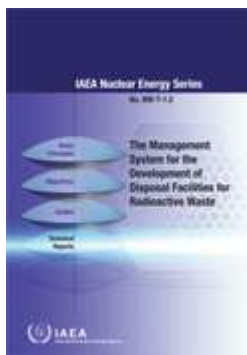
Subject Classification: 0700-Nuclear powerSTI/PUB/1492(ISBN:978-92-0-112810-2)136 pp.;75 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1492_web.pdf

DESCRIPTION

DESCRIPTIONExcellent water quality in research reactors and spent fuel wet storage facilities is essential to prevent degradation of research reactor components and aluminium clad fuel elements, and to achieve optimum storage performance. A lot of information is available in the open literature on this subject, but no comprehensive document addressing the rationale of water quality management in research reactors has been published so far. This publication is intended to fill this gap by providing a comprehensive catalogue of good practices for management of water quality. It is intended to assist research reactor managers and operators in implementing water quality programmes in their facilities. Once implemented, such programmes will help to improve the performance of the reactor, provide natural life extension and minimize corrosion in both research reactor internals and spent fuel cladding in wet storage facilities, thus maintaining its integrity and safety until the spent fuel can be moved to a dry storage facility, is submitted for final disposal or reprocessing.



The Management System for the Development of Disposal Facilities for Radioactive Waste

IAEA Nuclear Energy Series NW-T-1.2

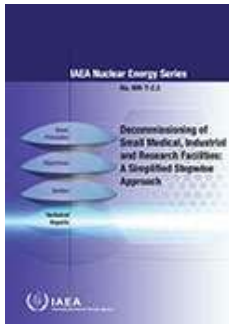
Subject Classification: 0804-Waste managementSTI/PUB/1496(ISBN:978-92-0-113810-1)34 pp.;4 figures;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/P1496_web.pdf

DESCRIPTION

This publication addresses management system requirements, planning, and establishment of management system procedures and methodologies relevant to the development (design/construction), operation and/or upgrading of disposal facilities. This basic information is useful in the planning and implementation of a comprehensive management programme for all activities and processes that take place during the life cycle of a repository, and can contribute to building public confidence and acceptance of disposal facilities. The publication complements the recent IAEA Safety Guide on the management system for the disposal of radioactive waste, expanding it to the design, construction and operational stages.



Decommissioning of Small Medical, Industrial and Research Facilities: A Simplified Stepwise Approach

IAEA Nuclear Energy Series NW-T-2.3

Subject Classification: 0804-Waste management

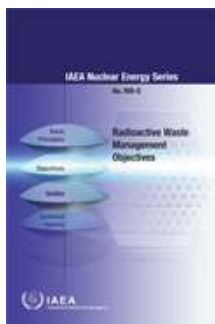
STI/PUB/1517(ISBN:978-92-0-116610-4)84 pp.;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1517_Web.pdf

DESCRIPTION

Zero-power reactors, radio-diagnostic and radiotherapy hospital departments or laboratories, as well as factories using radioactive material are often associated with the erroneous perception that their decommissioning is a trivial, low priority activity. This publication provides practical information, experience and assistance aimed at a broad spectrum of practitioners who are faced with decommissioning of such small nuclear facilities. Particular consideration is given to the financial and scientific resources, making efficient and effective decommissioning planning essential. It is written as a simplified, stepwise approach for guidance to nuclear operators and decommissioning implementers with little or no experience in decommissioning. An accompanying CD contains practical information in two Annexes, and is set out in the format of problems encountered, solution and analysis, and lessons learned.



Radioactive Waste Management Objectives

IAEA Nuclear Energy Series NW-O

Subject Classification: 0804-Waste management

STI/PUB/1521(ISBN:978-92-0-117010-1)18 pp.;

Date Published: 2011

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1521_web.pdf

DESCRIPTION

This publication sets out the objectives of radioactive waste management required in order to satisfy the IAEA Nuclear Energy Principles (NE-BP). They are intended to provide a framework for the design of programmes regarding radioactive waste management technology and a basis for the development of guidelines on radioactive waste management, decommissioning and environmental remediation.

Theses

Mestrado



Estudo Comparativo de Detectores de HPGe, NaI(Tl), CdZnTe para aplicações em segurança e para resposta a ameaças Nucleares e Radiológicas

Luís Miguel Cabeça Marques

Dissertação apresentada na Faculdade de Ciências da Universidade de Lisboa para obtenção do grau de Mestre em Engenharia Física

Orientador: Doutor Pedro Vaz

Co-Orientador: Doutor José Marques