Waste Disposal For Nuclear Power Plants

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Disposal of High-level Waste from Nuclear Power Plants in Denmark 1978
The Chemistry of Nuclear Fuel Waste Disposal Donald R. Wiles 2002 This volume carefully describes the nature of radioactivity and of nuclear power and discusses in detail the management of radioactive waste by the multi-barrier system, but also takes an unusual approach to assessing the risks. Using knowledge of the chemical properties of the various radionuclides in spent fuel, this book follows each of the important radionuclides as it travels through the many barriers placed in its path. It turns out that only two radionuclides are able to reach the biosphere, and they arrive at the earth's surface only after many thousands of years. A careful analysis of the critical points of the disposal plant emphasizes site rejection criteria and other stages at which particular care must be taken, demonstrating how dangers can be anticipated and putting to rest the fear of nuclear fuel waste and its geological burial.
Nuclear Waste Ylenia E. Farrugia 2011 Management of civilian radioactive waste has posed difficult issues for Congress since the beginning of the nuclear power industry in the 1950s. Federal policy is based on the premise that nuclear waste can be disposed of safely, but proposed storage and disposal facilities have frequently been challenged on safety, health, and environmental grounds. Although civilian radioactive waste encompasses a wide range of materials, most of the current debate focuses on highly radioactive spent fuel from nuclear power plants. The Nuclear Waste Policy Act of 1982 requires the DOE to dispose of the waste in a geologic repository at Yucca Mountain in Nevada. This book examines the key attributes, challenges, alternatives, and costs of the Yucca Mountain repository, and the liability issues of nuclear waste disposal.
Nuclear Waste Management in a Globalised World Urban Strandberg 2013-09-13 High-level nuclear waste (HLW) is a controversial and risky issue. For the next 100 years, the HLW will be subject to policy decisions and value assessments. Physically safe, technologically stable, and socio-economically sustainable HLW-management will top the agenda. That must be accomplished in a society whose segments are both stable and in a rapid state of flux, under the influence of global as well as national factors, private interests as well as the vagaries of national politics. Among the challenges to be faced is how to codify responsibilities of nuclear industry, governments and international organisations, and any adopted management policy must attain legitimacy at the local, national, regional and global levels. All such considerations raise questions about the practical and theoretical knowledge. This special issue book will address these questions by exploring HLW-management in Canada, France, Germany, India, Sweden, the UK and the USA. Special emphasis will be placed on highlighting national context, current trends and uncertainties, with relevance to a socially sustainable contemporary and future HLW-management.
Nuclear Power Costs: Waste disposal United States. Congress. House. Committee on Government Operations. Environment, Energy, and Natural Resources Subcommittee 1977
Nuclear Waste Piero Risoluti 2013-06-29 Foreword Over the past decades, Piero Risoluti has built up an intimate knowl edge of the nuclear industry - in particular of nuclear waste man agement. In this book, his scientific understanding is apparent - for example in his comprehensive but readily understandable descrip tions of waste conditioning and disposal. Moreover, he has also been directly involved in the wider societal and political debates in the nuclear area - especially in his Italian homeland. What shines through in these pages is.his frustration at the lack of progress in im plementing disposal concepts that are judged by many to be very safe and his unfaltering drive to improve this situation. To provoke debate, the book is very deliberately written in a po larising, black and white style that can easily be labelled as "politi cally incorrect" - a characterisation that Piero will probably agree with and be amused by. Criticism is directed equally at "loud mouthed and incompetent anti-nuclear environmentalists", the "nu clear Byzantium" of the international nuclear establishment, the "in tellectual narcissism" of those nuclear experts that dare to admit the importance of societal issues, and the tendency of politicians to "in definite procrastination". These are not words chosen to avoid open confrontation of opposing views.
Social and Economic Aspects of Radioactive Waste Disposal National Research Council 1984-02-01 To complement the growing body of knowledge on the physical aspects of radioactive waste disposal, this new report identifies the ;ITsocioeconomic and institutional;IT policy issues that must be addressed in implementing the Nuclear Waste Policy Act. Site location, transportation modes, disposal schedules, regulatory systems, and the effects of these systems on the people living near the sites and along the transportation routes are addressed.
Management of Radioactive Waste from Nuclear Power Plants 1994 The nuclear power industry, which accounts for about 20% of the total electricity supply, is a vital part of the nation's energy resource. While it generates approximately one-third of the commercial low-level radioactive waste produced in the country, it has achieved one of the most successful examples in waste minimization. On the other hand, progress on development of new disposal facilities by the state compacts is currently stalled. The milestones have been repeatedly postponed, and the various Acts passed by Congress on nuclear waste disposal have not accomplished what they were intended to do. With dwindling access to waste disposal sites and with escalating disposal costs, the power plant utilities are forced to store wastes onsite as an interim measure. However, such temporary measures are not a permanent solution. A national will is sorely needed to break out of the current impasse.
Nuclear Power Plant Waste Disposal Jack I. F. Davis 1957
Existing Nuclear Sites Can be Used for New Powerplants and Nuclear Waste Storage United States. General Accounting Office 1980
Radioactive Waste Disposal from Nuclear Power Plants Raymond O. Bagley 1979
Civilian Nuclear Waste Disposal Mark Holt 2012-10-07
Challenges of Nuclear Waste Governance Achim Brunnengräber 2018-03-17 This is volume two of a comparative analysis of nuclear waste governance and public participation in decision-making regarding the storage and siting of high-level radioactive waste and spent fuel in different countries. The contributors examine both the historical and current approaches countries have taken to address the wicked challenge of nuclear waste governance. The analyses discuss the regulations, technology choices, safety criteria, costs and financing issues, compensation schemes, institutional structures, and approaches to public participation found in each country.
Improvements of Radioactive Waste Management at WWER Nuclear Power Plants 2006 The focus of this report is on the low and intermediate level radioactive wastes generated and managed during the normal operating life of WWER nuclear power plants. It identifies mechanisms for reducing the generation and disposal volumes of radioactive waste at WWER reactors, and compares the waste management approaches of western PWR and WWER reactors to identify reasons why PWRs currently have lower waste generation, storage and disposal volumes. Examining historical trends in plant design and waste management approaches, it seeks to identify those changes which contribute most significantly to today's differences between PWRs and WWERs in generation and disposal volumes. The report determines the role of waste storage in promoting implementation of improved or advanced waste minimization technologies and approaches, and proposes recommendations for improving WWER waste minimization.--Publisher's description.
Minimization of Radioactive Waste from Nuclear Power Plants and the Back End of the Nuclear Fuel Cycle International Atomic Energy Agency 1995 Waste management at the back end of the nuclear fuel cycle comprises the various activities involved in the handling of the spent fuel once it has left the reactor. The purpose of the minimization of radioactive waste is threefold: (a) to reduce the risks of radiation exposure of technical personnel as well as of the public; (b) to reduce contamination of the environment; and (c) to reduce overall costs by reducing the repository space required for final waste disposal. Waste minimization has become a major part of waste management policies.
Radioactive Waste 1996
Nuclear Waste Governance Achim Brunnengräber 2015-02-19 This volume examines the national plans that ten Euratom countries plus Switzerland and the United States are developing to address high-level radioactive waste storage and disposal. The chapters, which were written by 23 international experts, outline European and national regulations, technology choices, safety criteria, monitoring systems, compensation schemes, institutional structures, and approaches to public involvement. Key stakeholders, their values and interests are introduced, the responsibilities and authority of different actors considered, decision-making processes are analyzed as well as the factors influencing different national policy choices. The views and expectations of different communities regarding participatory decision making and compensation and the steps that have been or are being taken to promote dialogue and constructive problem-solving are also considered.
Nuclear Waste Disposal Warren S. Melfort 2003 The disposal of nuclear waste is becoming a major concern. Many nuclear power plants around the world are nearing the end of their operating lives. This is particularly true in the United States where most nuclear power plants are approaching the end of the operational time period allowed in their licenses. The disposal of radioactive waste from nuclear power plants and nuclear missiles is as politically intense an issue as the plants and missiles themselves. Yet the three issues have remained curiously separate in spite of their close physical ties. Few debates on nuclear power or nuclear weapons discuss the problems of waste disposal should the power plant or missile be decommissioned. Few debates on nuclear waste disposal discuss the opportunities to close nuclear power plants or get rid of nuclear weapons a disposal site would afford. Nuclear waste can be generally classified a either "low level" radioactive waste or "high level" radioactive waste. Low level nuclear waste usually includes material used to handle the highly radioactive parts of nuclear reactors (i.e. cooling water pipes and radiation suits) and waste from medical procedures involving radioactive treatments or x-rays. Low level waste is comparatively easy to dispose of. The level of radioactivity and the half life of the radioactive isotopes in low level waste is relatively small. Storing the waste for a period of 10 to 50 years will allow most of the radioactive isotopes in low level waste to decay, at which point the waste can be disposed of as normal refuse. High level radioactive waste is generally material from the core of the nuclear reactor or nuclear weapon. This waste includes uranium, plutonium, and other highly radioactive elements made during fission. Most of the radioactive isotopes in high level waste emit large amounts of radiation and have extremely long half-lives (some longer than 100,000 years) creating long time periods before the waste will settle to safe levels of radioactivity. This new book explores the issues pertaining, either directly or indirectly, to nuclear waste disposal.
Nuclear Energy, Nuclear Waste Anne Galperin 1992 Discusses nuclear power and how the positive benefits of nuclear energy are balanced against the problem of disposing of radioactive wastes.
Nuclear Power Plant Decomissioning and Radioactive Waste Disposal 2000
Disposal of High-level Waste from Nuclear Power Plants in Denmark Elkraft 1978
Disposal of High-level Waste from Nuclear Power Plants in Denmark 1978
Civilian Nuclear Waste Disposal Congressional Research Service 2017-11-13 Management of civilian radioactive waste has posed difficult issues for Congress since the beginning of the nuclear power industry in the 1950s. Federal policy is based on the premise that nuclear waste can be disposed of safely, but proposed storage and disposal facilities have frequently been challenged on safety, health, and environmental grounds. Although civilian radioactive waste encompasses a wide range of materials, most of the current debate focuses on highly radioactive spent fuel from nuclear power plants. The United States currently has no disposal facility for spent nuclear fuel. The Nuclear Waste Policy Act of 1982 (NWPA) calls for disposal of spent nuclear fuel in a deep geologic repository. NWPA established the Office of Civilian Radioactive Waste Management (OCRWM) in the Department of Energy (DOE) to develop such a repository, which would be licensed by the Nuclear Regulatory Commission (NRC). Amendments to NWPA in 1987 restricted DOE's repository site studies to Yucca Mountain in Nevada. DOE submitted a license application for the proposed Yucca Mountain repository to NRC on June 3, 2008. The State of Nevada strongly opposes the Yucca Mountain project, citing excessive water infiltration, earthquakes, volcanoes, human intrusion, and other technical issues. Licensing and design work for the proposed Yucca Mountain repository was halted under the Obama Administration, which cited continued opposition from Nevada. However, the Trump Administration included funds to restart Yucca Mountain licensing in its FY2018 budget submission to Congress on March 16, 2017. The House-passed omnibus appropriations bill for FY2018 (H.R. 3354, H.Rept. 115-230) includes the Administration's proposed funding for Yucca Mountain. However, the FY2018 Energy and Water Development Appropriations bill approved by the Senate Appropriations Committee (S. 1609, S.Rept. 115-132) would provide no funding. Although no funding has been appropriated for Yucca Mountain activities since FY2010, a federal appeals court on August 13, 2013, ordered NRC to continue the licensing process with previously appropriated funds. The NRC staff completed its safety evaluation report on Yucca Mountain on January 29, 2015, concluding that the repository would meet NRC standards after specific additional actions were taken, such as acquisition of land and water rights. After halting the Yucca Mountain project, the Obama Administration established the Blue Ribbon Commission on America's Nuclear Future to develop an alternative nuclear waste policy. The commission issued its final report on January 26, 2012, recommending a "consent based" process for siting nuclear waste storage and disposal facilities. After OCRWM was dismantled, responsibility for implementing the Obama Administration's nuclear waste policy was given to DOE's Office of Nuclear Energy (NE). In January 2013, NE issued a nuclear waste strategy based on the Blue Ribbon Commission recommendations. The strategy called for a pilot interim storage facility for spent fuel from closed nuclear reactors to open by 2021 and a larger storage facility to open by 2025. A site for a permanent underground waste repository would be selected by 2026, and the repository would open by 2048. DOE issued a draft consent-based nuclear waste siting process on January 12, 2017. A bill to provide the necessary land controls for the planned Yucca Mountain repository (H.R. 3053) was ordered reported by the House Committee on Energy and Commerce on June 28, 2017. As amended by the committee, the bill would authorize DOE to store commercial waste from nuclear power plants at a nonfederal interim storage facility. It would also increase the capacity limit on the Yucca Mountain repository from 70,000 to 110,000 metric tons, in comparison with the 76,500 metric tons currently stored at U.S. nuclear plants, and provide mandatory funding for specific stages of repository development.
Crs Report for Congress Mark Holt 2013-10 Management of civilian radioactive waste has posed difficult issues for Congress since the beginning of the nuclear power industry in the 1950s. Although federal policy is based on the premise that nuclear waste can be disposed of safely, new storage and disposal facilities for all types of radioactive waste have frequently been delayed or blocked by concerns about safety, health, and the environment. Civilian radioactive waste ranges from the highly radioactive spent fuel from nuclear power plants to the far-less-radioactive uranium mill tailings that result from the processing of uranium ore. Most of the debate over civilian waste disposal focuses on spent fuel and on "low level" waste from nuclear power plants, medical institutions, civilian research facilities, and industry. The Nuclear Waste Policy Act of 1982 (NWPA) calls for disposal of spent nuclear fuel in a repository in a deep geologic formation that is unlikely to be disturbed for thousands of years. NWPA established an office in the Department of Energy (DOE) to develop such a repository and required the program's civilian costs to be covered by a fee on nuclear-generated electricity, paid into the Nuclear Waste Fund. Amendments to NWPA in 1987 restricted DOE's repository site studies to Yucca ...
Nuclear Waste Disposal Mark Holt 2010-02 Contents: (1) Proposals for a New Direction; (2) Baseline: Current Waste Program Projections; (3) Options for Halting or Delaying Yucca Mountain: Withdraw License Application; Reduce Appropriations; Key Policy Appointments; Waste Program Review; (4) Consequences of a Yucca Mountain Policy Shift: Federal Liabilities for Disposal Delays; Licensing Complications for New Power Reactors; Environmental Cleanup Penalties; Long-Term Risk; (5) Nuclear Waste Policy: Options; Institutional Changes; Extended On-Site Storage; Federal Central Interim Storage; Private Central Storage; Spent Fuel Reprocessing and Recycling; Non-Repository Options; New Repository Site; (6) Concluding Discussion.
The International Politics of Nuclear Waste Andrew Blowers 1991-04-01 Looking at the politics of nuclear waste, this book examines the subject from an international standpoint. Other works by the author Andrew Blowers include "The Limits of Power" and "Something in the Air", and he has been co-editor on books such as "Nuclear Power in Crisis".
Waste Disposal 1968
Radioactive Waste Christian Streffer 2011-11-16 Radioactive waste (above all highly radioactive wastes from nuclear installations) caused by research, medicine and technology must be disposed of safely. However both the strategies disputed for the disposal of radioactive waste as well as concrete proposals for choosing a location for final waste disposal are highly debatable. An appropriate disposal must conform to both complex, technical requirements and fulfill the radio-biological conditions to appropriately protect man and nature. Ethical, legal and social conditions must also be considered. An interdisciplinary team from various, relevant fields compiled the current status-quo and developed criteria and strategies, which on the one hand meet the requirements of optimal warning and prevention of risk for present and future generations, and additionally on the other hand meet the needs of what current society agrees what is expected to be allowed. This study can be understood as an advanced and continuing contribution to the corresponding scientific specialized debates, due to its interdisciplinary treatment. At the same time it serves as a fundamentally informing contribution to public and political debates, offering an easily comprehensible executive summary and precise content recommendations.
Radioactive Waste DIANE Publishing Company 2004 Review states' efforts to implement the Low-Level Rad. Waste Policy Act of 1980. This act requires states to provide for the disposal of the low-level rad. waste that is generated commercially within their borders. Thousands of businesses, medical facilities, and universities and over 100 nuclear power plants produce waste materials contaminated with rad'y. States plan to develop 11 new disposal facilities. These planned facilities are the result of efforts by states to implement Fed. legislation that makes them responsible for developing new disposal facilities.
The Regulatory Framework for the Storage and Disposal of Radioactive Waste in the Member States of the European Community Associated Nuclear Services 1988-03-31
The Dilemma of Siting a High-Level Nuclear Waste Repository D. Easterling 2013-12-01 This book explores siting dilemmas - situations in which an "authority" (e.g., Congress, a consortium of utilities) deems it in the best interest of society to build a facility such as an incinerator, but opponents living near the proposed site thwart the plan. Facility developers typically attribute local opposition to selfishness or radically inaccurate views of the risks posed by the facility. We examine the validity of these conclusions by looking in depth at the psychological response that arises when residents are faced with the prospect of living near waste disposal facilities. The particular siting dilemma considered in this book is the problem of how to "dispose" of the high-level nuclear wastes accumulating at nuclear power plants in the United States. These wastes, in the form of "spent" fuel rods, will emit dangerous levels of radioactivity for thousands of years - anywhere between 10,000 and 100,000 years, depending on the margin of safety one adopts. The current proposal is to encase the spent fuel in corrosion-resistant canisters and then to bury these canisters deep underground in a geologic repository. The two of us became involved with the high-level waste issue in 1986 as part of an interdisciplinary research team hired by the State of Nevada. The charge of this team was to estimate the socioeconomic impacts that would accompany a repository if it were built at Yucca Mountain, approximately 100 miles northwest of Las Vegas.
Waste Heat Disposal from Nuclear Power Plants National Ocean Survey 1973
Decision-making and Radioactive Waste Disposal Andrew Newman 2015-11-19 The International Atomic Energy Agency estimates that nuclear power generation facilities produce about 200,000 cubic meters of low and intermediate-level waste each year. Vital medical procedures, industrial processes and basic science research also produce significant quantities of waste. All of this waste must be shielded from the population for extended periods of time. Finding suitable locations for disposal facilities is beset by two main problems: community responses to siting proposals are generally antagonistic and, as a result, governments have tended to be reactive in their policy-making. Decision-making and Radioactive Waste Disposal explores these issues utilizing a linear narrative case study approach that critically examines key stakeholder interactions in order to explain how siting decisions for low level waste disposal are made. Five countries are featured: the US, Australia, Spain, South Korea and Switzerland. This book seeks to establish an understanding of the political, economic, environmental, legal and social dimensions of siting across those countries. This valuable resource fills a gap in the literature and provides recommendations for future disposal facility siting efforts. The book will be of interest to students and scholars of environmental law, justice, management, politics, energy and security policy as well as decision-makers in government and industry.
Bibliography on Nuclear Reactor Fuel Reprocessing and Waste Disposal: Surveys (General) T. F. Connolly 1960
International Low Level Waste Disposal Practices and Facilities 2011 The safe management of nuclear waste arising from nuclear activities is an issue of great importance for the protection of human health and the environment now and in the future. The primary goal of this report is to identify the current situation and practices being utilized across the globe to manage and store low and intermediate level radioactive waste. The countries included in this report were selected based on their nuclear power capabilities and involvement in the nuclear fuel cycle. This report highlights the nuclear waste management laws and regulations, current disposal practices, and future plans for facilities of the selected international nuclear countries. For each country presented, background information and the history of nuclear facilities are also summarized to frame the country's nuclear activities and set stage for the management practices employed. The production of nuclear energy, including all the steps in the nuclear fuel cycle, results in the generation of radioactive waste. However, radioactive waste may also be generated by other activities such as medical, laboratory, research institution, or industrial use of radioisotopes and sealed radiation sources, defense and weapons programs, and processing (mostly large scale) of mineral ores or other materials containing naturally occurring radionuclides. Radioactive waste also arises from intervention activities, which are necessary after accidents or to remediate areas affected by past practices. The radioactive waste generated arises in a wide range of physical, chemical, and radiological forms. It may be solid, liquid, or gaseous. Levels of activity concentration can vary from extremely high, such as levels associated with spent fuel and residues from fuel reprocessing, to very low, for instance those associated with radioisotope applications. Equally broad is the spectrum of half-lives of the radionuclides contained in the waste. These differences result in an equally wide variety of options for the management of radioactive waste. There is a variety of alternatives for processing waste and for short term or long term storage prior to disposal. Likewise, there are various alternatives currently in use across the globe for the safe disposal of waste, ranging from near surface to geological disposal, depending on the specific classification of the waste. At present, there appears to be a clear and unequivocal understanding that each country is ethically and legally responsible for its own wastes, in accordance with the provisions of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. Therefore the default position is that all nuclear wastes will be disposed of in each of the 40 or so countries concerned with nuclear power generation or part of the fuel cycle. To illustrate the global distribution of radioactive waste now and in the near future, Table 1 provides the regional breakdown, based on the UN classification of the world in regions illustrated in Figure 1, of nuclear power reactors in operation and under construction worldwide. In summary, 31 countries operate 433 plants, with a total capacity of more than 365 gigawatts of electrical energy (GW[e]). A further 65 units, totaling nearly 63 GW(e), are under construction across 15 of these nations. In addition, 65 countries are expressing new interest in, considering, or actively planning for nuclear power to help address growing energy demands to fuel economic growth and development, climate change concerns, and volatile fossil fuel prices. Of these 65 new countries, 21 are in Asia and the Pacific region, 21 are from the Africa region, 12 are in Europe (mostly Eastern Europe), and 11 in Central and South America. However, 31 of these 65 are not currently planning to build reactors, and 17 of those 31 have grids of less than 5 GW, which is said to be too small to accommodate most of the reactor designs available. For the remaining 34 countries actively planning reactors, as of September 2010: 14 indicate a strong intention to precede with introduction of nuclear power; 7 are preparing but haven't made a final decision, 10 have made a decision and are preparing infrastructure, 2 have ordered a new nuclear power plant, and 1 has a plant under construction. In all countries interested in pursuing nuclear power, it is necessary for the governments to create an environment for investment and advancement of nuclear power, including development of a professional and independent regulatory framework and regime, knowledge and refinement of skills in nuclear safety and control, definition of policies on nuclear waste management and decommissioning, and participation in international non-proliferation measures. Specifically related to radioactive waste management, nuclear facilities and industries that utilize radioactive material work to well-established safety standards for the management of their waste.
Nuclear Back-end and Transmutation Technology for Waste Disposal Ken Nakajima 2014-11-05 This book covers essential aspects of transmutation technologies, highlighting especially the advances in Japan. The accident at the Fukushima Daiichi Nuclear Power Plant (NPP) has caused us to focus attention on a large amount of spent nuclear fuels stored in NPPs. In addition, public anxiety regarding the treatment and disposal of high-level radioactive wastes that require long-term control is growing. The Japanese policy on the back-end of the nuclear fuel cycle is still unpredictable in the aftermath of the accident. Therefore, research and development for enhancing the safety of various processes involved in nuclear energy production are being actively pursued worldwide. In particular, nuclear transmutation technology has been drawing significant attention after the accident. This publication is timely with the following highlights: 1) Development of accelerator-driven systems (ADSs), which is a brand-new reactor concept for transmutation of highly radioactive wastes; 2) Nuclear reactor systems from the point of view of the nuclear fuel cycle. How to reduce nuclear wastes or how to treat them including the debris from TEPCO’s Fukushima nuclear power stations is discussed; and 3) Environmental radioactivity, radioactive waste treatment and geological disposal policy. State-of-the-art technologies for overall back-end issues of the nuclear fuel cycle as well as the technologies of transmutation are presented here. The chapter authors are actively involved in the development of ADSs and transmutation-related technologies. The future of the back-end issues in Japan is very uncertain after the accident at the Fukushima Daiichi NPP and this book provides an opportunity for readers to consider the future direction of those issues.
Nuclear Waste Disposal Iraphne Childs 1985
Radioactive Waste Management and Contaminated Site Clean-Up William E Lee 2013-10-31 Radioactive waste management and contaminated site clean-up reviews radioactive waste management processes, technologies, and international experiences. Part one explores the fundamentals of radioactive waste including sources, characterisation, and processing strategies. International safety standards, risk assessment of radioactive wastes and remediation of contaminated sites and irradiated nuclear fuel management are also reviewed. Part two highlights the current international situation across Africa, Asia, Europe, and North America. The experience in Japan, with a specific chapter on Fukushima, is also covered. Finally, part three explores the clean-up of sites contaminated by weapons programmes including the USA and former USSR. Radioactive waste management and contaminated site clean-up is a comprehensive resource for professionals, researchers, scientists and academics in radioactive waste management, governmental and other regulatory bodies and the nuclear power industry. Explores the fundamentals of radioactive waste including sources, characterisation, and processing strategies Reviews international safety standards, risk assessment of radioactive wastes and remediation of contaminated sites and irradiated nuclear fuel management Highlights the current international situation across Africa, Asia, Europe, and North America specifically including a chapter on the experience in Fukushima, Japan
Nuclear Waste Disposal Crisis David A. Lochbaum 1996 Looking at what to do with spent fuel and high-level radioactive waste generated by nuclear power plants, this book reveals why spent fuel reprocessing failed in the USA, why spent fuel disposal isn't feasible under the current approach, and why spent fuel interim storage faces an imminent crisis.
Improvements of Radioactive Waste Management at WWER Nuclear Power Plants International Atomic Energy Agency 2006 Focuses on the low and intermediate level radioactive wastes generated and managed during the normal operating life of WWER nuclear power plants. This report identifies mechanisms for reducing the generation and disposal volumes of radioactive waste at WWER reactors, and compares the waste management approaches of Western PWR and WWER reactors.