

ADDITIONAL REFERENCES ON DECOMMISSIONING LESSONS LEARNED

TITLE	AUTHOR(S)	ABSTRACT/SUMMARY	PUB. YEAR	AVAILABILITY
<p>NUREG/CR-3587</p> <p>Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors</p>	<p>LaGuardia, T.S., and Risley, J.F. for the U.S. Nuclear Regulatory Commission</p>	<p>This report provides practical recommendations to facilitate decommissioning operations while considering the implementation effects on plant design, operations, present technology, safety and costs in all phases of power plant life.</p>	<p>1986</p>	<p>To request copies of this report, please click here:</p>
<p>TR-106148</p> <p>Shoreham Decommissioning: Project Summary And Lessons Learned</p>	<p>Electric Power Research Institute</p>	<p>This report is a summary of utility experience in decommissioning the Shoreham BWR. This report includes experience gained and lessons learned in adapting to the evolving site release criteria.</p>	<p>1996</p>	<p>Topical Report available through http://www.epri.com</p>
<p>TR-107916</p> <p>Trojan PWR Decommissioning: Large Component Removal Project</p>	<p>Electric Power Research Institute</p>	<p>This report describes the removal and disposal of the steam generators and pressurizer from the Trojan nuclear power plant, carried out in 1996 as the first phase of Trojan decommissioning.</p>	<p>1997</p>	<p>Topical Report available through http://www.epri.com</p>
<p>TR-107917-V1</p> <p>Yankee Rowe Decommissioning Experience Record: Volume 1</p>	<p>Electric Power Research Institute</p>	<p>This report describes the decommissioning of Yankee Rowe. It covers most of the work completed by September 1997.</p>	<p>1997</p>	<p>Topical Report available through http://www.epri.com</p>
<p>TR-107917-V2</p> <p>Yankee Rowe Decommissioning Experience Record</p>	<p>Electric Power Research Institute</p>	<p>This report describes the decommissioning of Yankee Rowe. It updates Volume 1 and completes the majority of the experience record, covering all those items that do not have</p>	<p>1998</p>	<p>Topical Report available through http://www.epri.com</p>

		outstanding actions.		
TR-107979 Fort St. Vrain Decommissioning: Final Site Radiation Survey-Summary Report and Lessons Learned	Electric Power Research Institute	This report describes the final step in the process of decommissioning the Fort St. Vrain nuclear power plant. It formed the legal basis for the termination of the nuclear license, which occurred in 1997.	1998	Topical Report available through http://www.epri.com
TR-110006 Proceedings: First EPRI/NEI Decommissioning Workshop	Electric Power Research Institute	This workshop, held in San Antonio in December 1997, provided a forum for utility representatives and selected vendors to exchange information related to decommissioning.	1998	Topical Report available through http://www.epri.com
TR-111596 Proceedings: Concrete Decontamination Technology Workshop	Electric Power Research Institute	This workshop, held in Greenfield, Massachusetts in September 1998, provided a forum for utility representatives to demonstrate and exchange information about concrete decontamination techniques.	1998	Topical Report available through http://www.epri.com
Decommissioning Successes at Rocky Flats Environmental Technology Site.	Crawford, A.C., Hughes, F.P, Trice, K.D. , Wolf, H.C., Wheeler, M.	This paper discusses some of the successes and challenges during the decommissioning and decontamination of Building 779, a cluster of 13 buildings located at the Rocky Flats Environmental Technology Site.	1999	Available through proceedings from the American Nuclear Society Winter Meeting – November 1999 For further information on this paper, or to order a copy, please click here
Decommissioning cost recovery in the United States: Lessons learned from Connecticut Yankee Nuclear Power Plant	Joosten, J.	The international audience at the 7 th . International Conference on Nuclear Engineering is already familiar with the roles of the owner and the NRC in ensuring the technical and safety performance goals of nuclear plant decommissioning. This paper	1999	Available through proceedings of the 7 th . International Conference on Nuclear Engineering. in Tokyo, Japan – April 1999

		addresses the role of the economic regulator since the pursuit of technical and safety goals must necessarily carry with them -a price tag- and owners must be concerned with the recovery of those costs. The Connecticut Yankee case thus provides valuable insights into the role of economic regulation on decommissioning strategy.		
TR-110234 Decommissioning Waste Reduction Guide	Electric Power Research Institute	This manual describes approaches to reduce the volume and costs of low-level radioactive waste arising from decommissioning activities. The guide spells out the similarities and differences between operating and decommissioned sites, and identifies when specific approaches are more cost-effective.	1999	Topical Report available through http://www.epri.com
TR-111025 Proceedings: 1998 EPRI/NEI Decommissioning Workshop	Electric Power Research Institute	This workshop held in December 1998 in Monterey, CA provided a forum for utility representatives and selected vendors to exchange information related to decommissioning of nuclear power plants.	1999	Topical Report available through http://www.epri.com
TR-111277 Embedded Pipe, Tank and Fuel Pool Cleaning/Remediation Technology	Electric Power Research Institute	A workshop on methods of dealing with radioactive pipes embedded in concrete, tank cleaning and fuel pool cleaning was held in February 1999. The proceedings provide a reference document on the current status of the technology.	1999	Topical Report available through http://www.epri.com

<p>TR-112092</p> <p>Evaluation of the Decontamination of the Reactor Coolant Systems at Maine Yankee and Connecticut Yankee</p>	<p>Electric Power Research Institute</p>	<p>This report describes the different processes used for the decontamination of the reactor coolant systems at Maine Yankee and Connecticut Yankee, as well as the resultant lessons learned.</p>	<p>1999</p>	<p>Topical Report available through http://www.epri.com</p>
<p>Existing facilities and past practices: Lessons Learned</p>	<p>Huizenga, D., Tonkay, D. (U.S. DOE), Owens, K.</p>	<p>This paper discusses the experience of the U.S. DOE in terms of the lessons learned from operating radioactive waste management facilities and from undertaking intervention or remedial action, and from decision making in an international context. Overarching safety principles are discussed, including integrating safety into all work practices and minimizing the generation of waste.</p>	<p>2000</p>	<p>Available through proceedings of the International Conference on Safety of Radioactive Waste Management in Cordoba, Spain – March 2000</p> <p>For further information on this paper, or to order a copy, please click here</p>
<p>TR-1000908</p> <p>Remediation of Embedded Piping</p>	<p>Electric Power Research Institute</p>	<p>This report discusses some methods for dealing with embedded pipe, including removal and in-situ decontamination will be documented, based on experiences and lessons learned at Trojan plant.</p>	<p>2000</p>	<p>Topical Report available through http://www.epri.com</p>

TR-1000920 Trojan Nuclear Power Plant Reactor Vessel and Internals Removal: Trojan Nuclear Plant Decommissioning Experience	Electric Power Research Institute	This report discusses the background and support activities associated with removing the Trojan reactor vessel, as well as the reactor vessel internal components. Additionally, this report contains the lessons learned from the project.	2000	Topical Report available through http://www.epri.com
TR-1000093 Decommissioning Planning - Oyster Creek Experience	Electric Power Research Institute	This report chronicles the process of preparing GPU Nuclear's Oyster Creek Nuclear Generating Station for early retirement. This summary of the Oyster Creek experience has great relevance to the nuclear industry, as future decommissioning projects will benefit from the comprehensive pre-planning work performed there.	2000	Topical Report available through http://www.epri.com
TR-1000951 Embedded Pipe Dose Calculation Method	Electric Power Research Institute	This report evaluates measurement techniques for determining activities on internal surfaces of embedded pipes, and scaling factors for all nuclide concentrations.	2000	Topical Report available through http://www.epri.com
TR-1000884 Technology Demonstration Experience Reports	Electric Power Research Institute	This document reports on field demonstrations of concrete decontamination technologies, large bore pipe decontamination using grit blasting, GammaCam gamma ray imaging system and large tank and vessel dismantlement.	2000	Topical Report available through http://www.epri.com
TR-1000006	Electric Power Research	A workshop on the management and disposal of low-level	2000	Topical Report available through http://www.epri.com

Decommissioning Waste Management Workshop Proceedings	Institute	radioactive waste at decommissioned plants was held. This workshop addressed all aspects of waste processing. The proceedings are designed to provide a useful reference document on utility experiences.		
TR-1001238 Plant Engineering Management Workshop Proceedings	Electric Power Research Institute	A workshop on plant reconfiguration management (drawing control, technical specification changes, reclassification of systems) and the transition from operating plant procedures to decommissioning procedures was held at Millstone in October 2000.	2000	Topical Report available through http://www.epri.com
TR-1003029 Decommissioning: Reactor Pressure Vessel Internals Segmentation	Electric Power Research Institute	This report documents the results obtained to date at Connecticut Yankee, Maine Yankee, San Onofre, Big Rock Point and facilities abroad and discusses the lessons learned at each site. Recommendations for improving efficiency and reducing personnel exposure levels at future decommissioning sites are provided.	2001	Topical Report available through http://www.epri.com
TR-1003026 Decontamination of Reactor Systems and Contaminated Components for Disposal or Refurbishment	Electric Power Research Institute	This report documents activities in U.S. and elsewhere to decontaminate components from nuclear facilities for recycling, reuse or disposal. This includes pumps, steam generators, and contaminated equipment from other nuclear activities.	2001	Topical Report available through http://www.epri.com

<p>TR-1003027</p> <p>Interim Storage of Greater than Class C Low Level Waste</p>	<p>Electric Power Research Institute</p>	<p>Describes utility experiences for addressing Greater Than Class C (GTCC) wastes, including lessons learned and challenges dealt with in the storage of GTCC waste.</p>	<p>2001</p>	<p>Topical Report available through http://www.epri.com</p>
<p>Cost Estimating for Decommissioning of a Plutonium Facility- Lessons Learned From The Rocky Flats Building 771 Project</p>	<p>Stevens, J.L., Titus, R., Sanford, P.C.</p>	<p>This paper provides a brief overview of the replanning process during decommissioning activities at Rocky Flats, a detailed reexamination of the life-cycle decommissioning effort for the site and for the major individual facilities, and provides lessons learned on cost tracking in the decommissioning environment.</p>	<p>2002</p>	<p>Available through proceedings from the Waste Management Conference – February 2002</p> <p>For further information on this paper, or to order a copy, please click here</p>
<p>An Approach Towards Minimization of Sample Analysis Costs for Mixed Radionuclides Using MARSSIM For A Final Status Survey</p>	<p>Nardi, A.J. and Wayne, D.V.</p>	<p>Once a set of Derived Concentration Guidelines Levels (DCGL) are established, it is possible to optimize a sample analysis protocol based on the relative importance of each radionuclide to the anticipated final dose calculation. In some cases the radionuclides identified during characterization will include a complex mixture of easy and hard-to-detect radionuclides including alpha emitters. The approach developed considers the percentage contribution of each radionuclide to the dose estimate. Key surrogate radionuclides are developed based on characterization data, and utilized to define a sample analysis protocol. This paper describes, in</p>	<p>2002</p>	<p>Available through proceedings from the 35th. Mid-Year Topical Meeting of the Health Physics Society – February 2002</p> <p>For further information on this paper, or to order a copy, please click here</p>

		detail, the approach used in the development of the sample analysis protocol using a realistic mix of radionuclides that illustrate the range of problems that might be encountered.		
Utilization of the MARSSIM Approach to Deep excavations and Backfill Areas	Vogel, W.D. and Nardi, A.J	In some instances the remediation effort will involve the excavation of burials that were previously authorized by regulation. In such cases, the resulting excavation may involve the removal of overburden material prior to the excavation of the removal of the horizon of contaminated material. Because the overburden material is potentially contaminated, a survey protocol is described that utilizes both process control surveys during the excavation phase and MARRSIM based surveys during the backfill phase. Although the end condition would be a volumetric condition that does not conform to the primary assumption of surface contamination upon which the MARSSIM document is based, the described approach provides a statistically based survey program that meets the intent of the MARSSIM document. This paper provides a detailed discussion of the survey protocol that meets the needs of such a remediation project.	2002	Available through proceedings from the 35 th . Mid-Year Topical Meeting of the Health Physics Society – February 2002 For further information on this paper, or to order a copy, please click here
Decommissioning	Dorr, K.A.,	This paper presents a discussion	2002	Available through proceedings from the Waste

Challenges at the Rocky Flats Environmental Technology Site	Hoover, J.	of the demolition of the Building 788 cluster at the Rocky Flats Environmental Technology Site in Golden, Colorado. Topics covered include the methods employed for Project Planning, Regulatory Compliance, Waste Management, Hazard Identification, Radiological Controls, Risk Management, Field Implementation and Cost Schedule Control, Lessons Learned and Project Closeout.		Management Conference – February 2002 For further information on this paper, or to order a copy, please click here
TR-1003424 Technology Site Cooling and Cleanup System Experience at Decommissioned Plants	Electric Power Research Institute	This report summarizes design and operating experience of decommissioning-specific spent fuel pool cooling and cleanup systems.	2002	Topical Report available through http://www.epri.com
TR-1007312 Proceedings from EPRI International Low Level Waste Conference	Electric Power Research Institute	This conference, held in June 2002, covered all aspects of radioactive waste management and disposal. It included a session on decommissioned plant activities for the first time.	2002	Topical Report available through http://www.epri.com
TR-1003196 Guideline for Preparing the Radiological Aspects of a License Termination Plan	Electric Power Research Institute	An umbrella guideline document, which will be a roadmap of the nuclear plant license termination process, will provide general guidance related to initial characterization, dose modeling, site remediation and the final site survey.	2002	Topical Report available through http://www.epri.com
TR-1003426 Summary of Utility	Electric Power Research Institute	This report provides an overview of the regulatory requirements for the development and submittal of	2002	Topical Report available through http://www.epri.com

License Termination Documents and Lessons Learned		a nuclear power reactor License Termination Plan (LTP). It summarizes results and lessons learned from the LTPs submitted to the U.S. NRC from Connecticut Yankee, Maine Yankee, Saxton, Trojan and Yankee Rowe.		
TR-112871 Site Characterization Workshop	Electric Power Research Institute	The proceedings of the second EPRI workshop on site characterization, hosted by Big Rock Point plant in October 2001, will be published.	2002	Topical Report available through http://www.epri.com
TR-1008018 Enhanced SAFSTOR Characterization Project	Electric Power Research Institute	A study on enhanced SAFSTOR (greater than 60 years) will include evaluation of the economic benefits of delaying segmentation to take advantage of radioactive decay.	2003	Topical Report available through http://www.epri.com
TR-1008924 2003 NEI/EPRI Decommissioning Forum	Electric Power Research Institute	The NEI/EPRI Decommissioning Forum provides a comprehensive overview of the challenges facing the industry in the completion of the nuclear power plant life cycle. This report presents the proceedings of the NEI/EPRI 2003 Decommissioning Forum, which focused on license termination, material clearance values, funding and final site release requirements.	2003	Topical Report available through http://www.epri.com
Briefing to the Commissioners of the U.S. Nuclear Regulatory Commission	Culberson, D.	This presentation discusses some of the accomplishments of the Fuel Cycle Facilities Forum, as well as issues of importance to fuel cycle facilities.	2004	For more information about this presentation, please click here
Radiological Impact on Chemical Waste	Woodard, R.C., Conant, J.F.	Areas under remediation often contain both radiological and	2004	Available through proceedings from the Waste Management Conference – February 2004

Remediation (Or is it the other way around?)		<p>chemical contamination that can frustrate otherwise simple cleanup efforts. This paper describes a case situation of this type and shares the various options and solutions available to the owner.</p> <p>Given the lack of explicit regulatory volumetric radiological release criteria for soil, and the lack of chemical mobility or threat to the public or workers, the option of doing nothing for the time being is concluded to be the most viable path.</p>		For further information on this paper, or to order a copy, please click here
TR-1009410 Capturing Historical Knowledge for Decommissioning of Nuclear Power Plants	Electric Power Research Institute	Summary of Historical Site Assessments at Eight Decommissioning Plants. This report describes approaches utilized and experience gained in the development of early characterization activities by a number of nuclear power plants undergoing decommissioning. In particular, the report provides experience and lessons of performing the Historical Site Assessment or HSA.	2004	Topical Report available through http://www.epri.com
Trials and Tribulations of Decommissioning a Large Thorium Lantern Mantle Production Facility	Conley, T. A.	This presentation discusses some of the challenges that the State of Kansas faced during a major decommissioning project.	2004	This presentation can be accessed here
The Consequence of Inadequate Source Term Abstraction to Establish Soil DCGLs – A Case History	Nardi, A.J.	The development of site specific Derived Concentration Guideline Levels (DCGLs) has become a common approach for planning the decommissioning of complex	2004	Available through proceedings from the 49 th . Annual Meeting of the Health Physics Society – July 2004 For further information on this paper, or to order

		<p>sites. Upon completion of decommissioning, MARSSIM provides guidance on the method to interpret the final status survey data to demonstrate that the established DCGLs have been met. The presumption in this approach is that the source term abstraction used to develop the original DCGLs is consistent with the as-left conditions of the site. This paper presents a case history where it was discovered that the DCGLs were developed based upon an inadequate source term abstraction and reviews the potential impact of utilizing such DCGLs.</p>		<p>a copy, please click here</p>
<p>TR-1009411</p> <p>Decommissioning License Termination Plan Documents and Lessons Learned</p>	<p>Electric Power Research Institute</p>	<p>Update on 2002 Utility Guideline on License Termination Issues, Dose Modeling, Characterization and Final Site Survey documents, covering license termination plans approved in 2003 and other open issues.</p>	<p>2004</p>	<p>Topical Report available through http://www.epri.com</p>
<p>TR-1009409</p> <p>Proceedings: Decommissioning — License Termination Plans and Final Site Release Workshop</p>	<p>Electric Power Research Institute</p>	<p>This report presents the proceedings of an EPRI workshop dealing with the subject of decommissioning license termination and final site release. The workshop was the ninth in a series designed to aid utility personnel in assessing technologies for decommissioning nuclear power plants. It focused on specific aspects of license termination activities and final site</p>	<p>2004</p>	<p>Topical Report available through http://www.epri.com</p>

		release as they relate to nuclear plant decommissioning. The information presented will help utilities control decommissioning costs by selecting the best practices and technologies.		
TR-1009571 Application of Non-Nuclear Robotics to Nuclear Industry Decommissioning	Electric Power Research Institute	This report documents the use of robotic technology at Connecticut Yankee for debris cleanup.	2004	Topical Report available through http://www.epri.com
TR-1009830 Second EPRI International Decommissioning Workshop at Bristol	Electric Power Research Institute	This report presents the proceedings of an international EPRI workshop on decommissioning and radioactive waste management. The workshop focused on a wide range of decommissioning topics, including general approaches, technical developments and project experiences. The information presented will assist individual utilities in their decommissioning projects, and has the potential to reduce decommissioning costs.	2004	Topical Report available through http://www.epri.com
Nevada Test Site Decontamination and Decommissioning Program History, Regulatory Framework, and Lessons Learned	Kruzic, Michael, Morris, Patrick	Decontamination and Decommissioning (D&D) of radiologically and/or chemically contaminated facilities at the Nevada Test Site (NTS) are the responsibility of the Environmental Restoration (ER) Project. Facilities identified for D&D are listed in the Federal Facilities Agreement and Consent	2005	Available through proceedings from the American Nuclear Society Annual Meeting – August 2005 For further information on this paper, or to order a copy, please click here

		Order (FFACO) and closed under the Resource Conservation and Recovery Act process. This paper discusses the NTS D&D program, including facilities history, D&D regulatory framework, and valuable lessons learned.		
Practical Solutions to Difficult Decommissioning Issues-Lessons Learned	U.S. NRC	This paper discusses seven of the innovative approaches used by both licensees and the NRC staff to resolve difficult decommissioning issues, such that they may be used by other licensees and staff in the future. Based on these and other experiences, the NRC has identified a number of generic lessons learned from the NRC perspective, four of which will be discussed in the paper.	2005	Available via NRC's ADAMS system-Accession Number ML051510046
Decommissioning Lessons Learned for NRC – Licensed Materials Site	Lux, J., Conant, J.	As members of the Fuel Cycle Facilities Forum (FCFF), the authors have met on a regular basis with other licensees and the NRC staff to discuss decommissioning topics and issues. Licensees have discussed potential resolutions, as well as the benefits and drawbacks associated with them. This paper offers lessons learned by the authors from direct experience at their sites, as well as the experiences of other licensees, as shared in the FCFF meetings.	2005	Available through proceedings from the American Nuclear Society Winter Meeting – November 2005 For further information on this paper, or to order a copy, please click here
Decommissioning Lessons Learned	Lux, J.	This presentation discusses some lessons learned from practical	2005	Information on this presentation can be found here

		experiences during the decommissioning of two Kerr McGee Corporation sites.		
TR-1011734 Maine Yankee Decommissioning – Experience Report	Electric Power Research Institute	<p>One of the key objectives of the EPRI Decommissioning Technology Program is to capture the experience and lessons learned from the plants currently in decommissioning. This report provides detailed information on the decommissioning of the Maine Yankee Nuclear Plant that will be of value to future U.S. and international decommissioning projects. The report covers the following areas:</p> <ul style="list-style-type: none"> • Pre-shutdown actions and analyses • Transition activities from operations to decommissioning • Use of Decommissioning Operations Contractors • Fuel Storage Options • Regulatory and Stakeholder interaction • Specific Technologies (Segmentation and Explosive Demolition) • Site closure issues 	2005	Topical Report available through http://www.epri.com
Tc-99 and Transuranic Contamination of Enriched Uranium; Impact Considerations for the Decommissioning of a	Nardi, A.J.	The decommissioning of complex sites that processed enriched uranium, will involve investigating and accounting for the presence of contaminants such as ⁹⁹ Tc, and some transuranics	2005	Available through proceedings from the Topical Meeting of the American Nuclear Society on Decommissioning, Decontamination, and Reutilization – August 2005 For further information on this paper, or to order

Fuel Fabrication Facility		(²⁴¹ Am, ²³⁷ Np and ²³⁹ Pu). This paper, based on an active Westinghouse decommissioning project, presents a discussion of the anticipated impact of these contaminants on the decommissioning criteria for the facility.		a copy, please click here
TR-1011733 Decommissioning: San Onofre Unit 1 Reactor Vessel Internals Segmentation	Electric Power Research Institute	This report details Southern California Edison program to capture the experience of earlier projects. Additionally, it covers the major planning and testing initiatives undertaken to correct difficulties experienced in the earlier projects. These measures resulted in a highly successful segmentation project.	2005	Topical Report available through http://www.epri.com
Decommissioning Waste Materials Containing SNM at Low Concentrations, A Risk Assessment and Analysis of The Need for Regulatory Changes	Nardi, A.J.	The decommissioning of complex sites that processed Special Nuclear Material (SNM), specifically enriched uranium, will normally involve the generation and packaging of large volumes of waste materials that requires on-site processing and possibly shipment for off-site disposal. Even at low concentrations, the total mass quantity of enriched uranium can be substantial. This paper, based on an active Westinghouse decommissioning project, presents a discussion of the anticipated waste streams and the associated contained mass of enriched uranium. A comparison is made with the regulatory	2005	Available through proceedings of the 38 th . Mid-Year Topical Meeting of the Health Physics Society – February 2005 For further information on this paper, or to order a copy, please click here

		requirements that would be invoked and the resulting implications for the licensee.		
TR-1011730 Groundwater Monitoring Guidance for Nuclear Power Plants	Electric Power Research Institute	This guidance is directed to operators of both operating and decommissioning plants and draws from the experience with groundwater monitoring programs conducted at three nuclear power reactor sites. Two of these reactor sites are being decommissioned and the third is an operating site that had identified spent fuel pool leakage into the aquifer.	2005	Topical Report available through http://www.epri.com
TR-1011735 A Practical Guide for the Performance of Combined Risk Assessment at Nuclear Power Plant Decommissioning Sites	Electric Power Research Institute	This report will explain the use of radionuclide slope factors as the vehicle needed to normalize contaminant cancer risk by providing specific examples related to the nuclear industry. Lessons learned from current decommissioning sites employing these relatively new methods will be solicited and summarized in the document.. The report will explore, the bases and applications of the various toxicity factor tables (Risk-Based Concentration, Reference Doses, Cancer Slope Factors) that are used to compare fixed levels of risk for radiological and non-radiological chemicals/substances. The report will also discuss the summation of both radiological and non radiological comparative risk assessment values for complying	2005	Topical Report available through http://www.epri.com

		with remediation site combined risk thresholds, using site specific examples.		
TR-1011732 Proceedings of the 2004 Decommissioning Workshop LTP Workshop at Connecticut Yankee	Electric Power Research Institute	This workshop focused on specific aspects of license termination activities and final site release as they relate to decommissioning. The information presented will update utilities on developments and experience related to license termination and final site release activities. This information can play a significant role in controlling costs in the final stages of a decommissioning project.	2005	Topical Report available through http://www.epri.com
Decommissioning Lessons Learned at Fuel Cycle Facilities	Culberson, D.	This presentation discusses examples of lessons learned, as well as issues of importance to the fuel cycle community.	2005	Available via NRC's ADAMS system-Accession Number ML060470082
Improving Scanning Detection Capabilities Using Gamma Spectral Techniques	Bland, J.S., Doan, J., and Gaul, W.	While the standard gross gamma walkover survey can identify elevated levels in comparison to a reference area, the results of the survey can be misleading due to spatial variations in background radiation levels that occur within a survey area, mainly attributable to varying levels of naturally occurring radioactive materials (NORM). Using gamma spectral analysis techniques (detectors and instrumentation), specific gamma energies or regions of interest, corresponding to the photopeaks for the radionuclides of concern, can be more effectively evaluated. This technique improves the	2006	Available through proceedings from the Annual Meeting of the Health Physics Society – June 2006 For further information on this paper, or to order a copy, please click here

		<p>detection capability in the presence of varying ambient background levels by specifically targeting only those gamma energies associated with the radionuclide(s) of concern. This study demonstrated the ability to improve detection capability, especially for conditions where the gross gamma levels were elevated solely due to naturally occurring radioactive materials.</p>		
<p>List of Decommissioning Lessons Learned in Support of the Development of a Standard Review Plan for New Reactor Licensing</p>	<p>U.S. NRC</p>	<p>This is a memorandum that provides high-level lessons learned that will serve as a guidance to comply with the requirements in 10 CFR 20.1406.</p>	<p>2006</p>	<p>Available via NRC's ADAMS system-Accession Number ML062620355</p>
<p>Information Notice 2006-13: Ground-Water Contamination Due to Undetected Leakage of Radioactive Water</p>	<p>U.S. NRC</p>	<p>This document provides information on recent events related to undetected leakage of radioactive water into the groundwater at several facilities, and discusses important points resulting from NRC reviews to-date on these events.</p>	<p>2006</p>	<p>For access to this document, please click here</p>
<p>Characterization Methodology and In-Process Measurements for the Decommissioning of Land Areas at Fuel Cycle Facilities in Oklahoma</p>	<p>Lux, J.</p>	<p>Characterization of soils for decommissioning must consider both the distribution of licensed material over small areas (25 – 100 m²) and the decommissioning process. Uniform distribution of licensed material over small areas enables characterization data to be used to delineate and quantify</p>	<p>2006</p>	<p>Available through proceedings of the IAEA International Conference on Lessons learned from Decommissioning of Nuclear Facilities and the Safe Termination of Nuclear Activities – December 2006</p> <p>For further information on this paper, or to order a copy, please click here</p>

		<p>material exceeding decommissioning criteria. Lack of uniform distribution, particularly in conjunction with in-process identification of additional material exceeding decommissioning criteria, prevents the use of characterization data to delineate and quantify material exceeding decommissioning criteria.</p> <p>Finally, post-excavation segregation of material not exceeding decommissioning criteria can dramatically reduce the volume of material which must be treated or removed for disposal.</p>		
Presentations on Decommissioning Lessons Learned at the 174th. meeting of the Advisory Committee on Nuclear Waste	Boeing, L., Bushart, S. Lux, J., Conley, T.A.	Representatives from the Argonne National Laboratory, EPRI, Fuel Cycle Facilities Forum, and the Organization of Agreement States shared decommissioning experiences and lessons learned.	2006	Available via NRC's ADAMS system-Accession Number ML071240165
TR-1013511 Connecticut Yankee Decommissioning Experience Report 2006	Electric Power Research Institute	This report provides information about the decommissioning of the Connecticut Yankee plant.	2006	Topical Report available through http://www.epri.com
TR-1013166 Proceedings: 2005 EPRI Topical Workshop – Groundwater Contamination Assessment and License	Electric Power Research Institute	This groundwater workshop focused on groundwater monitoring at both operating and decommissioning nuclear plant sites. This workshop presented the latest information on groundwater assessments, including the tools, strategies, technology and	2006	Topical Report available through http://www.epri.com

Termination Activities		experiences.		
Decommissioning Lessons Learned	Electric Power Research Institute	This report documents decommissioning issues and lessons learned from reactor decommissioning. It also references selected technical reports that expand on the lessons learned.	2007	Available via NRC's ADAMS system-Accession Number ML071270349
A Review and Verification Of the Isotopic Distribution of Enriched Uranium and The Impact On Decommissioning Considerations	Nardi, A.J. and Conant, J.F.	This paper presents information on the expected isotopic distribution of uranium over the full range of enrichments based on published public information of the specific activity of enriched uranium. The resulting activity distribution curves are verified by comparison against measured sample media data obtained at two different sites undergoing decommissioning. Verification of the activity distributions curves allows one to utilize gamma spectroscopy measurements for ^{235}U to predict the concentration of ^{234}U and total uranium. The activity distribution data is further used to evaluate the impact of varying enrichments on decommissioning criteria (DCGLs) for soils, groundwater, building surfaces. The significance of available ^{236}U data is also discussed.	2007	Available through proceedings of the Mid-Year Topical Meeting of the Health Physics Society – January 2007 For further information on this paper, or to order a copy, please click here
Preservation and Implementation of Decommissioning Lessons Learned in the	U.S. NRC	This paper discusses the approach used by the Agency to capture and preserve decommissioning lessons learned. It also illustrates	2007	Available via NRC's ADAMS system-Accession Number ML071170008

United States Nuclear Regulatory Commission		examples of decommissioning lessons learned, and how the Agency plans to implement the information.		
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