

Chapter 1 : Martin O'Donnell - NFDC

decommissioning and demolition next > prev decommissioning and demolition the windscale advanced gas cooled reactor decommissioning project.

Frequently Asked Questions What is a web browser? Web browsers are software programs that allow you to search for information on the Web. Click on this link to find out which browser you are currently using: Why do I need to update my browser? Duke Energy recommends the following browser versions to ensure continued secure use of Duke-energy. How do I upgrade my browser? From the list of web browsers , click the browser you wish to upgrade. Should you require assistance with the upgrade, please refer to your browsers website for troubleshooting tips. Unfortunately, Duke Energy will not be able to assist you with your personal browser upgrade. What can I do? Here is a screenshot of the Advanced tab in Internet Explorer. What do I do if my operating system is not compatible? Some older machines have older operating systems that may not be compatible with newer browsers. If you are unable to upgrade your browser due to your operating system, you will need to visit your operating system providers website for information and support. What is an operating system? Examples of mobile operating systems for phones and tablets include Android, iOS, Fire, and Blackberry. Please visit the website for your operating system for details on upgrading and troubleshooting. The following link is a free diagnostic tool to help you identify your operating system. You can pay by phone for a fee by calling the General Customer Service contact numbers provided above. You can report your outage by texting OUT to You can also report your outage by calling the Report an Electric Outage contact numbers provided above.

Chapter 2 : Unsupported Browser - Duke Energy

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Example of decommissioning work underway. The reactor pressure vessel being transported away from the site for burial. Nuclear decommissioning is the process whereby a nuclear facility is dismantled to the point that it no longer requires measures for radiation protection. The presence of radioactive material necessitates processes that are potentially occupationally hazardous, expensive, time-intensive, and present environmental risks that must be addressed to ensure radioactive materials are either transported elsewhere for storage or stored on-site in a safe manner. It includes clean-up of radioactive materials and progressive demolition of the facility. Once a facility is fully decommissioned, no radiological danger should persist. The costs of decommissioning are generally spread over the lifetime of a facility and saved in a decommissioning fund. Decommissioning may proceed all the way to "greenfield" status. Definition Nuclear decommissioning is the administrative and technical process whereby a nuclear facility such as a nuclear power plant NPP, a research reactor, an isotope production plant, a particle accelerator, or uranium mine is dismantled to the point that it no longer requires measures for radiation protection. The progressive demolition of buildings and removal of radioactive material is potentially occupationally hazardous, expensive, time-intensive, and presents environmental risks that must be addressed to ensure radioactive materials are either transported elsewhere for storage or stored on-site in a safe manner. Once a facility is decommissioned no radioactive danger persists and it can be released from regulatory control. Final dismantling or decontamination activities begin within a few months or years, and depending on the facility, it could take five years or more. The nuclear facility is placed into a safe storage configuration during this time. The size of the area where the radioactive material is located is generally minimized and the facility is encased in a long-lived material such as concrete, with the aim of preventing a release of radioactive material. As part of the licensing procedure, various documents, reports and expert opinions have to be written and delivered to the competent authority, e. A precondition for granting such a licence is an opinion by the European Commission according to Article 37 of the Euratom Treaty. Article 37 obliges every Member State of the European Union to communicate certain data relating to the release of radioactive substances to the Commission. This information must reveal whether and if so what radiological impacts decommissioning "planned disposal and accidental release" will have on the environment, i. Cost In the United States, the NRC recommends that the costs of decommissioning should be spread over the lifetime of a facility and saved in a decommissioning fund. Despite the huge investments in securing the dismantlement, radioactive elements such as plutonium, caesium and cobalt leaked out into the surrounding lake. New methods for decommissioning have been developed in order to minimize the usual high decommissioning costs. One of these methods is in situ decommissioning ISD, meaning that the reactor is entombed instead of dismantled. This method was implemented at the U. In many countries either the funds do not appear sufficient to cover decommissioning and in other countries decommissioning funds are used for other activities, putting decommissioning at risk, and distorting competition with parties who do not have such funds available. Nuclear Regulatory Commission has located apparent decommissioning funding assurance shortfalls and requested 18 power plants to address that issue. The goals of international collaboration in nuclear decommissioning are to reduce decommissioning costs and improve worker safety. All eight reactors are visible; two units have been shut down. A wide range of nuclear facilities have been decommissioned so far. The number of decommissioned nuclear reactors out of the List of nuclear reactors is small. As of , nuclear reactors were shut-off, in several early and intermediate stages cold shut-down, defueling, SAFSTOR, internal demolition, but only 17 have been taken to fully "greenfield status". More recently, construction and demolition companies in the UK have also begun to develop nuclear decommissioning services. Due to the radioactivity in the reactor structure specially with high neutron -flux, decommissioning takes place in stages. As of , most nuclear plants operating in the United States were designed for a life of about 30-40 years[28]

and are licensed to operate for 40 years by the US Nuclear Regulatory Commission.

Chapter 3 : Nuclear decommissioning | Revolv

An account of the dismantling of nuclear installations by plasma arc cutting is given by the authors in this conference paper. These research and development tests of the plasma arc tool are relative to its use under variable.

The behaviour of both full and model scale bridges under static loading is described. The pattern of acoustic activity in relation to load- deformation response is investigated. Some general characteristics of behaviour are identified. The implication for the use of an acoustic signature in the integrity assessment of masonry arch bridges are considered. Proceedings of the 2nd International Conference of: The role and relative value of a number of NDT techniques are outlined --specifically acoustic techniques. In particular, nitra-sonic and sonic techniques are reviewed. The method of quantifying data from these techniques is discussed. Case studies are given of a masonry arch bridge which was decommissioned and also concrete bridge piers which were decommissioned. The paper also outlines some recent research projects of the authors related to corrosion-induced cracking. The topic covered include principles of AE analysis, field and laboratory investigations of AE monitoring of structures made up of metals, fiber-reinforced plastic composites, concretes, and soils. Acoustic emission investigation and signal discrimination in steel highway bridge application Dissertation Abstracts international, Vol. It was discovered that acoustic emission signals characteristics of the steel types used in highway bridges are similar although the signals vary according to the thickness of the material. It was also discovered that the corrosion surface enhances the intensity of the signal, but the palm layer does not have a significant effect on the attenuation of the acoustic emission signals. Feasibility study on non-destructive methods for fatigue crack detection in steel bridge members British Journal of Non-Destructive Testing, Vol. The limits of detection have been compared and a relationship has been established between the actual size of the cracks and their estimated size in each case. The optimal process conditions have been defined for control techniques. A review of acoustic emission in civil engineering with emphasis on concrete Journal of Acoustic Emission, Vol. Because of the demand for failure prediction and diagnostic inspection of such civil structures as bridges, dams, tunnels, slopes and embankments, AE studies are now increasing steadily as one of nondestructive evaluation techniques. Following an early history in concrete engineering, the state-of-the-art on AE behavior of rock, soil and concrete is reviewed, with an emphasis on concrete technology, especially those AE studies in Japan. Acoustic emission detection and monitoring of highway bridge components Dissertation Abstracts International, Vol. In this study, research characterizing the parameters of cracks versus noise was conducted. A total of 18 beams made of A steel including welded, rolled and coverplated beams, were monitored. Half of the beams were exposed to severe atmospheric environments to investigate the effect of rusting on the AE signals. Also, a total of twelve small specimens made from the same material were monitored for comparison to the coverplated beams. As a result of this study, a statistical range of variation of the AE parameters at various stages of crack growth has been established. This range can be used as a reference for bridge inspection. A model for predicting the stage of crack growth versus AE parameters has been discussed, and a systematic inspection procedure by AE has been recommended. Ultrasonic testing of bridge pins and hanger straps Materials Evaluation, Vol. These tests are used to detect and locate cracks or excessive wear in the pins and cracks in the hanger straps. A sample pin, used as a calibration standard, is first constructed using bridge design details and material specifications, and then compared to pins under test conditions. Estimation by ultrasonic examination of the growth of fatigue cracks in partial penetration butt welds Welding in the World, Vol. The detection system consists of two stages: An NDT method was Recommended.

Chapter 4 : Nuclear Decommissioning: Decommission nuclear facilities - World Nuclear Association

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Chapter 5 : Trojan Nuclear Power Plant - Wikipedia

Decommissioning and demolition proceedings of the second International Conference on Decommissioning Offshore, Onshore Demolition and Nuclear Works, held April, , University of Manchester Institute of Science and Technology.

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Industrial Decommissioning and Demolition. We are a trusted decommissioning and plant demolition partner, having completed innumerable total and partial demolition projects and commercial removals at operating and fully retired facilities for industrial and manufacturing clients.

Chapter 7 : Formats and Editions of Decommissioning and demolition : proceedings [calendrierdelascience

Decommissioning & Demolition Safe execution is our highest priority on our large-scale decommissioning and demolition (D&D) projects. We have performed D&D projects at some of the most complex sites in the nation including Rocky Mountain Arsenal, Los Alamos National Laboratory, and Rocky Flats Environmental Technology site.

Chapter 8 : Nuclear decommissioning - Wikipedia

Decommissioning and Demolition Decontamination and Decommissioning of Spaces Before demolition can begin, Project Managers need to ensure that project spaces have been cleared of all potentially hazardous materials.

Chapter 9 : Demolition and Decommissioning - Tervita

Understanding how a structure is built is vital to safely disassembling it. Our decommissioning experts have decades of both construction and demolition experience and are fully conversant with the exact sequencing that yields optimal results.