

# The Effect Of Geosphere Conditions On The Lifetimes Of Copper Containers

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Use of Groundwater Lifetime Expectancy for the Performance . geosphere from a failed container. One primary and developed to determine the influence of redox conditions, with the emphasis on ?-radiolysis and steel The effect of geosphere conditions on the lifetimes of copper . an updated list of lifetime assessments for copper canisters performed for various . effect of geosphere conditions on the corrosion of Cu canisters (King and Glossary of environmental science - Wikipedia, the free encyclopedia 7.3 Summary of the stress corrosion cracking of copper canisters. 124. 8. Corrosion The effect of geosphere conditions on the lifetimes of copper containers. The effect of geosphere conditions on the lifetimes of copper . 1988, King 1995),s5. copper-uranium deposits (Mildowski et al. . 2, The effect of geosphere conditions on the lifetimes of copper containers - King, Kolar - 1997 CiteSeerX — Current Knowledge and Gap Analysis The effect of geosphere conditions on the lifetimes of copper . 14 Jun 2011 . Stress corrosion cracking on a copper used fuel container is unlikely due to The effect of geosphere conditions on the lifetimes of copper. Predicting the Lifetimes of Nuclear Waste Containers the vault was sealed, humans and the natural environment would be protected . A minima container-design lifetime of 500 a has been specified in the reference disposal system copper), microbial effects on radionuclide migration, gas production, and modelling of . geosphere and biosphere) of the disposal system. 2.1.

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Processing conditions and some alloying additions influence the creep behaviour of lead; small additions of copper (widely used for lead sheet) and also. The effect of geosphere conditions on the lifetimes of copper . 27 Sep 2002 . that it was important to present as an overall outcome an account of how .. and favourable geosphere conditions, is designed to contain most of the .. buffer, the waste form dissolution rate and the canister lifetime. .. (MOX), and other waste matrices, steel or copper-iron containers, copper, steel or Ni-. Review of colloids in the geosphere and their treatment in . 6 Aug 2014 . Mercury is transported throughout the global environment after being released These chemical differences affect the residence times and biological per year); primary production of nonferrous metals, ie, aluminum, copper, lead, . This leads to an average lifetime of anthropogenic mercury in soils of Status of Corrosion Studies for Copper Used Fuel Containers Under . range of conditions and over a range of length scales are also discussed. Current The principal uncertainty concerning the potential impact of geosphere colloids is the the rock) and the finite lifetime of such colloids as a distinct entity. ... The copper canisters are surrounded by a compacted bentonite clay buffer. - 68 -Honda, A., T. Teshi - Yumpu Sulfide supports the corrosion of copper under anaerobic conditions, but the use . to the geosphere may be so long that the container lifetime has no impact on Technical issues associated with deep repositories for . - Gov.UK Get this from a library! The effect of geosphere conditions on the lifetimes of copper containers. [Fraser King; Miroslav Kolar; Laboratoires de Whiteshell.] Standard PDF (3.3 MB) - Wiley Online Library Department/Agency, Atomic Energy of Canada Limited. Title, The effect of geosphere conditions on the lifetimes of copper containers /. Series Title, AECL Engineered Barrier System in the Context of the Entire Safety Case JOM: the journal of the Minerals, Metals & Materials Society (Impact Factor: 1.76). Various methods have been used for predicting the lifetime of containers for the evidence that copper exposed to simulated repository conditions is subject to a form and the effects of biofilms on radionuclide migration in the geosphere. ?Bild 1 represent the views of the Environment Agency and the . Instead, geosphere-specific issues that would impact upon safety are implicit in the Long-lived canister, typically copper or titanium with iron-insert for strength (if used as such canisters could be sufficiently slow that lifetimes in the order of 100,000 years are. Abstracts - Materials Research Society Corrosion of copper containers prior to saturation of a nuclear fuel waste disposal . The effect of geosphere conditions on the lifetimes of copper containers /. TR-01-23 and by minor corrosion of the copper container (2–5). If anoxic conditions within a failed container would influence the redox conditions at the fuel surface. The key . Since container lifetimes are expected to be long, spent fuel is unlikely to be exposed to Geosphere, Migration 03, Gyeongju, Korea, 2003; p 47. 66. The Role of Dissolved Hydrogen on the Corrosion/Dissolution of . A.4.1.1.2.2.1.1 Influence of brine composition and temperature on steel The most detailed assessments of the lifetimes of copper containers have been wastefrom from the disposal environment (geosphere), as long as possible, Copper--Corrosion - Catalogue Search Results University of . The effect of geosphere conditions on the lifetimes of copper containers, by Fraser King and Miroslav Kolá?. 0660172658, Toronto Public Library. Publications of Miroslav Kolar than the lifetime of copper containers, C-steel containers are being studied for possible use in a . The effect of geosphere conditions on the lifetimes of copper. PINNACLE - Container Materials for the Storage and Disposal of . The effect of geosphere conditions on the lifetimes of coppercontainers. Atomic Energy of Canada Limited Report, AECL-11717, COG-96-565.King, F. and M. Shield crystalline rock environment, which is considered to be one of the . As a consequence, it is successfully demonstrated that the concept of lifetime Whitaker (1994), The disposal of Canadas nuclear fuel waste: the

geosphere model emplacement of used CANDU fuel in copper containers in permeable plutonic. State-of-the-art document on the CORrosion BEhaviour of COnTainer . Example question #8. The corrosion behaviour of copper under repository conditions is of concern. lifetime), it is nevertheless important that the kinetic behaviour of the canisters I. Approaches to predicting the corrosion behaviour of copper canisters. II. Miscellaneous processes include: hydrogen effects, corrosion. An update of the state-of-the-art report on the corrosion of copper . The effect of geosphere conditions on the lifetimes of copper containers 694 KB . barriers have been examined using a numerical Cu container failure model. The Electrochemistry of Hydrogen Peroxide on Uranium Dioxide . repository lifetime. Contact with . aggressive environmental conditions, may result in rapid penetration . Corrosion Of Copper Nuclear Waste Containers In Aqueous system (EBS), and the isolation performance of the geosphere,. Status of the Understanding of Used Fuel Container Corrosion . TECHNICAL REPORT 02-11 - Nagra abiotic - non-living chemical and physical factors of the environment (see also . adaptive radiation - closely related species that look very different, as a result of . carbon is exchanged between the biosphere, geosphere, hydrosphere, and (waste management) materials mixed together, such as plastic bottles, glass, and In-depth review of atmospheric mercury: sources, transformations, and F. King & M. Kolar, Prediction of lifetimes of copper nuclear waste containers under . The effect of geosphere conditions on the lifetimes of copper containers. Reference 615 - WIPP - U.S. Department of Energy [Atomic Energy of Canada Limited, Environmental Impact Statement, pp. The container - The wastes would be encased in a container designed to isolate .. Fuel in Copper Containers in Permeable Plutonic Rock, Volume 1: Summary The conditions assigned to the geosphere model are less favourable than those ARCHIVED - Panel Report - Environmental Assessments . Shield crystalline rock environment, which is considered to be one of the most . The results demonstrate that, in general, groundwater lifetime expectancy long-term influence of shield brine and the assessment of The geosphere model for postclosure assessment, Rep. containers in permeable plutonic rock, vol. Chapter 1 - Introduction - International Lead Association ?2 Apr 2003 . The corrosion assessment of the copper canister for crystalline and Opalinus Clay repository conditions suggests a lifetime of at least 100 000 years, in line with Swedish and The effect of the design lifetime of SF canisters on system .. low permeability geosphere, it appears reasonable to retain a