

Previously Completed Knowledge Management Reports from the NRC's Yucca Mountain Review Activities

The staff of the U.S. Nuclear Regulatory Commission (NRC) produced the following knowledge management reports as part of the orderly closure of Yucca Mountain review activities during fiscal year 2011. All of these reports are publically available in the Agencywide Documents Access and Management System (ADAMS) at the accession numbers given.

Regional Geologic Framework

Synthesis Report for Yucca Mountain Region Tectonic Models (ML103500198)

Stratigraphic Analysis and Regional Correlation of Oligocene and Early Miocene Strata in the Yucca Mountain Area (ML112140240)

Fission Track Constraints on Exhumation and Extensional Faulting in Southwest Nevada and Eastern California, U.S.A. (ML112630153)

Spectroscopic Analysis of Tephra as a Site Characterization Tool (ML112500246)

Preclosure Safety Assessment

Quantifying Low Probability Human Failure Events (ML112720213)

Response of Reinforced Concrete Structures to Aircraft Crash Impact (ML112690136)

Effects of Tilted and Faulted Strata on Seismic Ground Motion (ML112720207)

Seismic Effects on Soil-Structure Interactions (ML112580204)

Postclosure Performance Assessment

History and Value of Uncertainty and Sensitivity Analyses at the Nuclear Regulatory Commission and Center for Nuclear Waste Regulatory Analyses (ML112720123)

Postclosure Performance of Engineered Barriers

Assessment of Probability of Localized Corrosion of Alloy 22 Waste Package Material (ML112580219)

An Electrochemical Study on Passivation of Alloy 22 in Chloride-Containing Solutions With and Without Sulfur (ML112660508)

In-Crevice Chemistry Model Development for Nickel-Based Alloys and Analysis of Model Results in View of Literature Information (ML112640376)

Quantitative Characterization of Alloy 22 Crevice Corrosion Damage Profiles (ML092660562)

Corrosion of Alloy 22 Induced by Dust Deliquescence Brines (ML110730489)

Corrosion of Alloy 22 and Titanium Alloys under Seepage Water Dripping Condition (ML112450427)

Electrochemical Behavior and Passivity of Titanium Grades 7 and 29 under Immersion Conditions (ML112700443)

Corrosion of Borated Stainless Steel in Water and Humid Air (ML112490365)

Corrosion of Stainless Steel Type 316L in a Seepage Water Dripping Environment (ML112490377)

Corrosion of Simfuel in Aerated Carbonate Solution Containing Calcium and Silicate (ML112520488)

Climate and Hydrology

Stochastic Precipitation Simulation for Future Climate Conditions (ML112720217)

Summary of Groundwater Flow Models of the Death Valley Regional Aquifer System and Yucca Mountain Area (ML112660339)

Thermal-Mechanical Behavior of Natural Barriers

Analysis of Spatial Variability of Rock-Mass Quality and Thermal-Mechanical Effects in Geologic Disposal of High-Level Nuclear Waste (ML112660328)

Bench-Scale Tests of a Yucca Mountain Heated Drift Environment (ML112660404)

An Experimental Investigation of Single Fracture Flow Behavior under Normal and Shear Loads (ML112690142)

Field and Laboratory Experiment to Estimate Bulking Factor for a Lithophysal Tuff, Fran Ridge, Yucca Mountain, Nevada (ML112660359)

Radionuclide Transport

Radionuclide Sorption Technical Assistance Activities at the Center for Nuclear Waste Regulatory Analyses (ML112490545)

The Role of Matrix Diffusion as a Retardation and Attenuation Process at Yucca Mountain and Other Geologic Environments (ML110820367)

Radionuclide Mobility at the Nopal I Natural Analog (ML112720140)

Effects of Disruptive Events

Review of Numerical Analyses for Magma Drift Interaction at the Proposed Yucca Mountain Repository (ML112660492)

Interactions between Magma and Waste Containers (ML112450439)

Numerical and Experimental Study of In-Drift Heat and Mass Transfer Processes (ML112590142)

Airborne Particle Resuspension and Inhalation Radiological Dose Estimation Following Volcanic Events (ML112450435)

Public Outreach and General Topics

Evolution of NRC and Public Attitudes Regarding Public Outreach (ML112710515)

Lessons Learned from Public Outreach Meetings (ML112730025)

Bibliography of Technical Contributions to the Yucca Mountain Program by the Center for Nuclear Waste Regulatory Analyses, 1988–2011 (ML112720384)

Knowledge Captured from Using SharePoint to Support Program or Project Execution (ML110530163)

The Center for Nuclear Waste Regulatory Analyses (CNWRA®) Perspective on Prelicensing Interactions and Information Gathering (ML112640297)