

Karla R. Elam

List of Publications

1989

K. J. Riggle and J. W. Roddy, *A Preliminary Assessment of Selected Atmospheric Dispersion, Food-Chain Transport, and Dose-to-Man Computer Codes for Use by the DOE Office of Civilian Radioactive Waste Management*, ORNL-TM/10915, Martin Marietta Energy Systems, Inc., Oak Ridge National Laboratory, February 1989.

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K. J. Riggle, *Environmental Monitoring for Uranium and Neptunium at Yucca Mountain*, @ presented at International High-Level Radioactive Waste Management Conference, Las Vegas, Nevada, April, 1992.

K. J. Riggle, T. Lynde-Kernell, and E. O. Schlemper, "Synthesis and X-Ray Structures of Ni(II) Complexes of 1-(2-Pyridinyl)Ethanone Oxime," *Journal of Coordination Chemistry*, Vol. 25, 117-125, 1992.

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C. W. Forsberg and K. R. Elam, *Direct Conversion of Surplus Fissile Materials, Spent Nuclear Fuel, and Other Materials to High-Level-Waste Glass*, ORNL/MD/LTR-8, Oak Ridge National Laboratory, January 1995.

C. W. Forsberg, K. R. Elam, and W. J. Reich, *New Glass Material Oxidation and Dissolution System Facility*, ORNL/MD/LTR-11, Martin Marietta Energy Systems, Inc., Oak Ridge National Laboratory, February, 1995.

C. W. Forsberg, K. R. Elam, and W. J. Reich, *New Glass Material Oxidation and Dissolution System Facility: Direct Conversion of Surplus Fissile Materials, Spent Nuclear Fuel, and Other Materials to High-Level-Waste Glass*, ORNL/MD/LTR-13, Martin Marietta Energy Systems, Inc., Oak Ridge National Laboratory, March 1995.

K. R. Elam and W. J. Reich, *Determination of the Theoretical Feasibility for the Transmutation of Europium Isotopes from High Flux Isotope Reactor Control Cylinders*, ORNL/ER-340, Lockheed Martin Energy Research, Inc., Oak Ridge National Laboratory, September 1995.

C. W. Forsberg, et. al., *Direct Vitrification of Plutonium-Containing Materials (PCMs) with the Glass Material Oxidation and Dissolution System (GMODS)*, ORNL-6825, Oak Ridge National Laboratory, October 1995.

C. W. Forsberg, E. C. Beahm, G. W. Parker, J. Rudolph, K. R. Elam, and J. J. Ferrada, *AConversion of Plutonium Scrap and Residue to Borosilicate Glass Using the GMODS Process,@ presented at Plutonium Stabilization and Immobilization Workshop*, Washington, D.C., December 1995.

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C. W. Forsberg, E. C. Beahm, G. W. Parker, and K. R. Elam, *AConversion of Plutonium-Containing Materials into Borosilicate Glass Using the Glass Material Oxidation and Dissolution System,@presented at American Institute of Chemical Engineers Spring Annual Meeting*, New Orleans, Louisiana, February 1996. *Waste Management*, 1996, **Vol. 16(7)**, pp. 615-623.

K. R. Elam, M. J. Haire, W. C. Jordan, and T. L. Dahl, Sr., *ACriticality Sensitivity Analysis of Uranium Deposits in Large Diameter Piping,@presented at ANS Annual Meeting*, Reno, Nevada, June 1996. *Trans. Am. Nucl. Soc.*, **Vol. 74**, 207-208, 1996.

M. J. Haire, K. R. Elam, and W. C. Jordan, *Nuclear Criticality Safety Analyses of a Uranium Deposit in the K-29 Building at the Oak Ridge K-25 Site, Oak Ridge, Tennessee*, Oak Ridge K-25 Site, K/ER-310, July 1996.

M. J. Haire, K. R. Elam, W. C. Jordan, and T. L. Dahl, Sr., *ANuclear Criticality Safety Modeling of an LEU Deposit,@presented at the Embedded Topical Meeting, AWorldwide Experience-DD&R, What Does it Mean,@American Nuclear Society/European Nuclear Society 1996 International Conference and Embedded Topical Meetings*, Washington, D.C., November 1996.

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K. R. Elam, C. W. Forsberg, C. M. Hopper, and R. Q. Wright, *Isotopic Dilution Requirements for ^{233}U Criticality Safety in Processing and Disposal Facilities*, ORNL/TM-13524, Lockheed Martin Energy Research Corp., Oak Ridge National Laboratory, 1997.

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C. M. Hopper and K. R. Elam, *Proposed Outline for Guidance Documentation Emplacement Criticality Guidance for Low-Level Waste Disposal*, ORNL/M-6637, U.S. Nuclear Regulatory Commission, Oak Ridge National Laboratory, January 1999. Task 4 Milestone.

C. M. Hopper, K. R. Elam, C. V. Parks, and J. J. Lichtenwalter, "Bounding Values for Low-Level-Waste Transport Exemptions and Disposal," pp. 438-446 in *Proceedings of ICNC'99, Sixth International Conference on Nuclear Criticality Safety*, Vol. I, Palais des Congrès, Versailles, FRANCE, September 20-24, 1999. Poster Presentation. [Paper]

C. W. Forsberg, K. R. Elam, and C. M. Hopper, Repository Criticality Control for ^{233}U Using Depleted Uranium, *American Nuclear Society 1999 Winter Meeting*, Long Beach, California, November 14-18, 1999. *Trans. Am. Nucl. Soc.*, **81**, 166-167 (1999).

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T. E. Valentine, K. R. Elam, and C. M. Hopper, *Joint Report of Foreign Travel to St. Petersburg, Moscow, and Obninsk, Russia, June 23-July 1, 2000*, ORNL/FTR-XA 119334, July 26, 2000.

B. L. Broadhead, C. M. Hopper, K. R. Elam, B. T. Rearden, and R. L. Childs, Criticality Safety Applications of S/U Validation Methods, *Proc. of ANS/ENS 2000 International Winter Meeting and Embedded Topical Meetings*, November 12-16, 2000, Washington, D.C. *Trans. Am. Nucl. Soc.* **83**, 107-113, 2000.

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K. R. Elam and B. T. Rearden, "Use of Sensitivity and Uncertainty Analysis to Select Benchmark Experiments for the Validation of Computer Codes and Data," *Nucl. Sci. and Eng.* **145**, 196-212 (2003).

B. T. Rearden, C. M. Hopper, K. R. Elam, B. L. Broadhead, and P. B. Fox, Prototypic Applications of Sensitivity and Uncertainty Analysis for Experiment Needs, *Proc. of ANS/ENS 2000 International Winter Meeting and Embedded Topical Meetings*, November 12-16, 2000, Washington, D.C. *Trans. Am. Nucl. Soc.* **83**, 103-107, 2000.

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K. E. Elam, C. M. Hopper, C. V. Parks, and T. E. Harris, *Emplacement Guidance for Criticality Safety in Low-Level-Waste Disposal*, ORNL/TM-13765, UT-Battelle, LLC, Oak Ridge National Laboratory, June 2001.

D. F. Hollenbach, L. M. Petrie, P. B. Fox, and K. R. Elam, ASSCALE 5: New Cross-Section Processing Features and Capabilities, @ in *Proc. of 2001 ANS Embedded Topical Meeting on Practical Implementation of Nuclear Criticality Safety*, November 11B15, 2001, Reno, NV.

K. R. Elam (Evaluator), *Water-Reflected ^{233}U Uranyl Nitrate Solutions in Simple Geometry*, NEA/NSC/DOC/(95)03/V. Volume V, U233-SOL-THERM-005, to be published by Nuclear Energy Agency, Paris, FRANCE.

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B. T. Rearden and K. R. Elam, *Investigations and Recommendations on the Use of Existing Experiments in Criticality Safety Analysis of Nuclear Fuel Cycle Facilities for Weapons-Grade Plutonium*, ORNL/TM-2001/262, UT-Battelle, LLC, Oak Ridge National Laboratory, June 2002.

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