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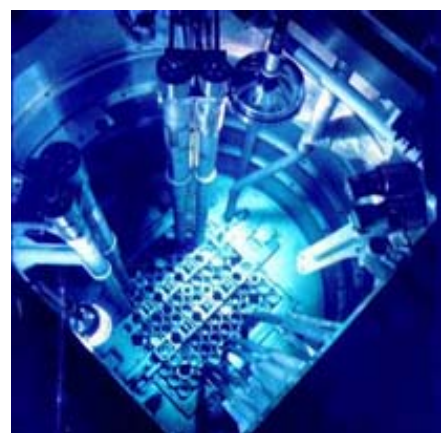
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The **Reduced Enrichment for Research and Test Reactors (RERTR) Program** was initiated by the United States Department of Energy in 1978 with the mission of developing the technologies necessary to convert research and test reactors from the use of fuels and targets containing highly-enriched uranium (HEU, = or > 20% U-235) to the use of fuels and targets containing low enriched uranium (LEU, < 20% U-235). This mission is consistent with the United States nonproliferation policy goal of minimizing and eventually eliminating the use of highly-enriched uranium in civil programs worldwide.

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Low enriched uranium fuels for research and test reactors



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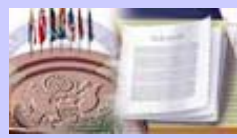
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**DOCUMENTS**



[SPENT FUEL ACCEPTANCE POLICY](#)

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**Abstracts and Available Papers Presented  
at the 1997 International RERTR Meeting**

The 1997 International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR) was sponsored by the Argonne National Laboratory and was held in Jackson Hole, Wyoming, U.S. A. on 5-10 October 1997. The abstracts and available papers that were presented at this meeting are provided below. An (A) after the title of a paper indicates that only the abstract is currently available. An (A,P) after the title indicates that both the abstract and the paper are available for downloading.

### National Programs

- [Status and Progress of the RERTR Program](#) (A,P)  
A. Travelli, Argonne National Laboratory
- [The United States Spent Fuel Acceptance Policy - A Year in Review](#) (A,P)  
D.G. Huizenga, United States Department of Energy
- [The Russian RERTR Program Works Status](#) (A,P)  
V.G. Aden, B.A. Gabaraev, E. F. Kartashev and V.A. Lukichev, Research and Development Institute of Power Engineering Russia, Moscow

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### Fuel Development, Testing and Evaluation

- [Design and Fabrication of High Density Uranium Dispersion Fuels](#) (A)  
C. L. Trybus, T. C. Wiencek, M. K. Meyer, D. J. McGann and C. R. Clark, Argonne National Laboratory, USA
- [LEU Fuel Development at CERCA Status as of October 1997 - Preliminary Developments OF MTR Plates with UMo Fuel](#) (A)  
JP. Durand, Y. Lavastre, M. Grasse, CERCA, France

- [Fuel Element Production at BWX Technologies](#) (A)  
Brett Pace, BWX Technologies, Inc. USA
- [Designing a New Generation Fuel Element for Different Purpose Water Reactors](#) (A)  
A. Vatulin, V. Lysenko, A. Savchenko, ARSRIIM, Russia
- [An Investigation on Fuel Meats Extruded with Atomized U-10wt%Mo Powder for Uranium High-Density Dispersion Fuel](#) (A)  
Chang-Kyu Kim, Ki-Hwan Kim, Jong-Man Park, Don-Bae Lee, Dong-Seong Sohn, KAERI, Korea
- [RERTR Fuel Fabrication Glovebox and Facility Development at ANL-West](#) (A)  
C. R. Clark, P. A. Hansen, J. D. Lawrence and M. K. Meyer, ANL-W, USA
- [Selection and Microstructures of High Density Uranium Alloys](#) (A)  
M. K. Meyer, C. L. Trybus, G. L. Hofman, S. M. Frank and T. C. Wiencek, ANL, USA
- [Characterization of U-Nb-Zr Dispersion Fuel Prepared by Centrifugal Atomization Process](#) (A)  
J. M. Park, K. H. Kim, H. D. Park, D. S. Sohn and C. K. Kim, KAERI, USA
- [Reaction of Unirradiated High-Density Fuel with Aluminum](#) (A)  
T. C. Wiencek, M. K. Meyer, I. G. Prokofiev and D. D. Keiser, ANL, USA
- [Analysis of the Swelling Behavior of U-Alloys](#) (A)  
J. Rest, G. L. Hofman, and K. L. Coffey, ANL, USA  
I. Konovalov and A. Maslov, Bochvar Institute, Russia
- [Study of Diffusion Bonding in 6061 Aluminum and Development of Future High-Density Fuels Fabrication](#) (A)  
I. G. Prokofiev, T. C. Wiencek, and D. J. McGann, ANL, USA
- [Thermal Compatibility of  \$U\_3Si\_2\$  Fuels Prepared with Centrifugally Atomized Power](#) (A)  
K. H. Kim, D. B. Lee, J. M. Park, H. D. Park and C. K. Kim, KAERI, USA
- [First Results of  \$U\_3Si\_2\$  Production and its Relevance in the Power Scale-up of IPEN Research Reactor IEA-R1m](#) (A)  
A. Saliba-Silva, J. A. B. Souza, E. U. C. Frajndlich, J. A. Perrotta, M. Durazzo, Cidade Universitaria, Brazil
- [\$U\_3Si\_2\$  Fuel Development at the Chilean Commission for Nuclear Energy](#) (A)  
H. Contreras, J. Marin, J. Lisboa, J. C. Chavez, L. Olivares, Chilean Commission for Nuclear

Energy, Chile

- [Unification of Fuel Elements for Research Reactors](#) (A)  
A. V. Vatulyn, Y. A. Stetskyi, I. V. Dobrikova, VNIINM, Russia
  - [Irradiation Testing of High-Density Uranium Alloy Dispersion Fuels](#) (A)  
S. L. Hayes, C. L. Trybus and M. K. Meyer, ANL, USA
  - [Hypothetic Approaches to Fuel Test under RERTR Program in the MIR Reactor](#) (A)  
V. A. Kuprienko, V. A. Starkov, O. S. Benderskaya and A. P. Malkov, SSCRIAR, Russia
  - [In-Pile Behaviour of UKAEA Produced Silicide Fuel Elements at the HFR Petten](#) (A)  
P. Cartwright, UKAEA, UK  
J. Markgraf, JRC, Netherlands  
F. J. Wijtsma, ECN, Netherlands
  - [Post-Irradiation Examination of Al-61 wt% U<sub>3</sub>Si Fuel Rods from the NRU Reactor](#) (A)  
D. F. Sears and N. Wang, AECL, Canada
  - [Tests of Experimental Fuel Elements by the Method of Nuclear-Thermal Pulse Loadings in "HYDRA" Reactor](#) (A)  
O. V. Nastoyashchaya, Yu. M. Lebedev, A. M. Chechurov, V. Ye. Khvostionov, Kurchatov Institute, Russia
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## Safety Tests and Evaluations

- [A Comparison of the RELAP5/MOD3 and PARET/ANL Codes with Experimental Transient Data from the SPERT-IV D-12/25 Series](#) (A,P)  
W.L. Woodruff, N.A. Hanan and J.E. Matos, Argonne National Laboratory, USA
  - [Evaluation of Reactor Kinetic Parameters Without the Need for Perturbation Codes](#) (A,P)  
M. M. Bretscher, Argonne National Laboratory, USA
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## Core Conversion Studies

- [The HOR Core Conversion Program Development and Licensing Experiences](#) (A,P)  
J. W. de Vries, H. P. M. Gibcus and P. F. A. de Leege, Interfaculty Reactor Institute, The

Netherlands

- [Conversion of the IAN-R1 Reactor from MTR HEU Fuel to TRIGA LEU Fuel](#) (A)  
J. A. Sarta, F. Luis, A. Castiblanco, INEA, Colombia  
J. Razvi, GA, USA
- [Increasing the Neutron Flux after Reduction of the Core Size of the FRG-1](#) (A)  
P. Schreiner, W. Krull, GKSS, Germany  
N. A. Hanan and J. R. Deen, ANL, USA
- [Calculation of Mixed HEU-LEU Cores for the HOR Research Reactor with the SCALE Code System](#) (A,P)  
P. F. A. de Leege, H. P. M. Gibcus, J. E. Hoogenboom, and J. W. de Vries, Delft University of Technology, the Netherlands
- [The First HEU/LEU -Mixed-Core of BER II](#) (A)  
C. O. Fisher, K. Haas, and H. Krohn, Hahn-Meitner-Institute, Germany
- [The First Critical Experiment with a New Type of Fuel Assemblies IRT-3M on the Training Reactor VR-1](#) (A)  
K. Matejka, L. Sklenka, Czech Technical University in Prague, Czech Republic
- [Progress Report on HEU-LEU Core Conversion of the TRIGA -14 MW Reactor from INR-Pitesti](#) (A)  
C. Toma, M. Ciocanescu, R. Dobrin, and M. Parvan, Institute for Nuclear Research, Romania
- [The Assessment of Variations in the MIGR Reactor Design Parameters with Decreasing Nuclear Fuel Enrichment down to 20%](#) (A)  
N. V. Arkhangelsky, Minatom of Russia  
N. V. Gorin, VNIITF, Snezhinsk, Russia  
A. P. Vasilyev, RDIPE, Moscow, Russia  
V. A. Pavshook, A. S. Kaminsky, V. Palvanov, Kurchatov Institute, Moscow, Russia
- [A Neutronic Feasibility Study for LEU Conversion of the High Flux Beam Reactor \(HFBR\)](#) (A,P)  
R. B. Pond, N. A. Hanan and J.E. Matos, Argonne National Laboratory, USA
- [A Neutronic Feasibility Study for LEU Conversion of the Brookhaven Medical Research Reactor](#) (A,P)  
N.A. Hanan, R. B. Pond and J.E. Matos, Argonne National Laboratory, USA

- [A Neutronic Feasibility Study for LEU Conversion of the High Flux Isotope Reactor \(HFIR\)](#) (A,P)  
S. C. Mo and J. E. Matos, Argonne National Laboratory, USA
  - [Fuel Conversion of JRR-4 from HEU to LEU](#) (A)  
H. Ichikawa and T. Nakajima, Japan Atomic Energy Research Institute, Japan
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## **New LEU Reactors**

- [The Jules Horowitz Reactor A new test reactor for fuels and materials](#) (A)  
A. Ballagny CEA, France
  - [The 10 MW Multipurpose TRIGA Reactor at Ongkharak Nuclear Research Center, Thailand](#) (A)  
B. E. Thurgood, J. Razvi, W. L. Whitemore, General Atomics, USA  
K. Bhadrakom, OAEP, Thailand
  - [Fluxes at Experimental Facilities in HEU and LEU Designs for the FRM-II](#) (A,P)  
N.A. Hanan and J.E. Matos, Argonne National Laboratory, USA
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## **Mo-99 Production From LEU Fission**

- [Studies of the Opportunity to Convert the "ARGUS-90" Research Reactor with 90% Fuel Enrichment in U-235 to Low-Enriched Fuel \(~20%\)](#) (A)  
V. Ye. Khvostionov, V. A. Pavshook, V. M. Talyzin, Kurchatov Institute, Russia
- [Progress in Chemical Processing of LEU Targets for <sup>99</sup>Mo Production -- 1997](#) (A,P)  
G. F. Vandegrift, C. Conner, J. Sedlet, and D. G. Wygmans, Argonne National Laboratory, USA  
D. Wu, University of Illinois at Urbana-Champaign, USA  
F. Iskander and S. Landsberger, University of Texas, USA
- [Dissolution of Low-Enriched UO<sub>2</sub>/Al Dispersion Plates in Alkaline Peroxide Solution](#) (A,P)  
C. Conner, S. Aase, D. G. Wybmans, and G. F. Vandegrift, Argonne National Laboratory, USA  
D. Wu and S. Landsberger, University of Illinois at Urbana-Champaign, USA

- [Electroplating Fission-Recoil Barriers onto LEU-Metal Foils for <sup>99</sup>Mo-Production Targets](#) (A,P)  
J. A. Smaga, J. Sedlet, C. Conner, M. W. Liberatore, D. E. Walker, D. G. Wygmans, and G. F. Vandergrift,  
Argonne National Laboratory, USA
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## Spent Fuel Management

- [Status of Implementation of the Foreign Research Reactor Spent Nuclear Fuel Return Program](#) (A)  
W. Clark, DOE, USA
- [Receipt Capabilities for Foreign Research Reactor Spent Fuel at the Savannah River Sites](#) (A)  
W. Clark, DOE, USA
- [Current Trends in Nuclear Material Transportation](#) (A,P)  
N. Ravenscroft and F. Oshinowo, Edlow International Co. USA
- [DOE's Foreign Research Reactor Transportation Service Contract: Perspective and Experience](#) (A)  
J. Patterson, NAC International, USA
- [Experience in the International Shipment of Spent Research Reactor Fuel](#) (A)  
T. Schmidt, Nuclear Cargo and Service GmbH, Germany
- [KUR Spent Fuel Handling](#) (A)  
K. Kanda, Kyoto University, Japan
- [Transport of Spent Nuclear Fuel from the High Flux Beam Reactor](#) (A,P)  
M. Holland, DOE, J. Carelli, BNL and T. Shelton, NAC International, USA
- [Security Preparation for Receipt of FRR SNF at the INEEL](#) (A,P)  
R. Dahlquist, Lockheed Martin Idaho Technologies Co., USA
- [Status of the TRIGA Shipments to the INEEL from Asia](#) (A,P)  
M. Tyacke and W. George, LMITCO, USA  
J. Patterson, NAC International, USA  
A. Petrasek and R. Stump, DOE, USA
- [Status of the TRIGA Shipment to the INEEL from Europe](#) (A,P)



M. Tyacke, LMITCO, USA  
J. Patterson, NAC International, USA  
A. Petrasek and R. Stump, DOE, USA

- [Assessment Results of the Indonesian TRIGA SNF to be shipped to INEEL](#) (A,P)  
K. M. Wendt, J. Jefmoff and A. K. Robb, Lockheed Martin Idaho Technologies Co.  
IR. Syarip and Teuku Alfa, BATAN, Indonesia
  - [Assessment Results of the South Korea TRIGA SNF to be Shipped to the INEEL](#) (A)  
C. M. Cole, LMITCO, USA
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## Fuel Cycle

- [Research Reactor Fuel Cycle: Front- and Back-End](#) (A)  
G. Gruber, NUKEM, Germany
- [Reprocessing Ability of High Density Fuels for Research and Test Reactors](#) (A)  
A. Gay and M. Belieres, COGEMA, France
- [A Win-Win Framework](#) (A)  
A. J. Kuperman and P. L. Leventhal, NCI, USA
- [20 Years of RERTR - Where We Are and Where to Go?](#) (A)  
W. Krull and W. Jager GKSS, Germany

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