

# **Alternative Applications of Atomic Vapor Laser Isotope Separation Technology**

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A Report Prepared by the  
Committee on Alternative Applications of Atomic  
Vapor Laser Isotope Separation Technology  
Energy Engineering Board  
Commission on Engineering and Technical Systems  
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## Preface

The purpose of this study was to identify and evaluate possible alternative applications for the atomic vapor laser isotope separation (AVLIS) technology for uranium enrichment and plutonium purification developed at Lawrence Livermore National Laboratory (LLNL) and to recommend steps needed for further development of the most promising applications (see Appendix B for Statement of Task). This report provides a brief summary of the technology and subsystems that have resulted from the major development program at LLNL.

The committee considered many suggested applications, some of which have been recommended for further study or development. Recommendations also include mechanisms to enhance the effective utilization of existing facilities and the timely transfer of technologies to U.S. industry. For those unfamiliar with AVLIS technologies, it is hoped that this report will also provide a useful starting point for considering other possibilities.

C. Bradley Moore, *Chairman*  
Committee on Alternative Applications of Atomic  
Vapor Laser Isotope Separation Technology

## Appendix C

### ORGANIZATIONS INVITED TO EXAMINE THE AVLIS PROCESS

Advanced Nuclear Fuels Corporation  
Bellevue, Washington

Advanced Refractories Technologies  
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Advanced Technology Applications  
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