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OMB 0851-0027

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**PATENT**

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FORM PTO-1619B

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U.S. Department of Commerce  
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PATENT

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Patent Application Number(s)

10/387,688

Patent Number(s)

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PATENT

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Rev. 07/7/03

10/387,688

DOE Docket No.  
S-100,591

## CONFIRMATORY LICENSE

Application for : TRAVELING-WAVE THERMOACOUSTIC ENGINES WITH INTERNAL  
COMBUSTION AND ASSOCIATED METHODS  
Inventor(s) : Nathan T. Weiland, Ben T. Zinn, Gregory W. Swift  
Serial No. : 10/387,688  
Filing Date : 3/13/2003  
U.S. Patent :  
Issue Date :  
Contract No. : W-7405-ENG-36  
Contractor : THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

The invention identified above is a "Subject Invention" under the above-numbered contract. A copy of the provisions of the above-numbered contract effective October 1, 1997, governing patent rights in the Subject Invention at the time the invention was made, has been submitted to the U.S. Department of Energy.

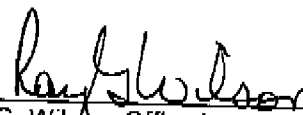
The contractor hereby confirms that under the provisions of the above-numbered contract governing patent rights, it has granted to the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the Subject Invention throughout the world. This license applies to the invention in the above-identified patent application and any and all divisions or continuations thereof and any resulting patent or reissue patent which may be granted thereon.

It is understood and agreed that this document does not preclude the Government from asserting rights under the provisions of said contract or any other agreement between the Government and the Contractor, or any other rights of the Government with respect to the above-identified invention.

The Contract hereby grants the Government an irrevocable power to inspect and make copies of the above-identified application.

Signed October 27, 2003

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Ray G. Wilson, Office Leader  
Laboratory Counsel/ Intellectual Property