REPORT DOCUMENTATION PAGE

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<td>(661) 275-5015</td>
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Standard Form 298 (Rev. 8-98)
MEMORANDUM FOR PRS (In-House Publication)

FROM: PROI (STINFO) 05 Nov 2001

Paul Jones, et al., "Evaluation of Monopropellants for Reusable Launch Vehicles" (Abstract only)

AIAA Joint Propulsion Conference (Statement A)
(07-10 July 2002) (Deadline: 06 November 2001)

1. This request has been reviewed by the Foreign Disclosure Office for: a.) appropriateness of distribution statement, b.) military/national critical technology, c.) export controls or distribution restrictions, d.) appropriateness for release to a foreign nation, and e.) technical sensitivity and/or economic sensitivity. Comments:

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Signature ___________________________ Date ______________

2. This request has been reviewed by the Public Affairs Office for: a.) appropriateness for public release and/or b) possible higher headquarters review. Comments:

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3. This request has been reviewed by the STINFO for: a.) changes if approved as amended, b) appropriateness of references, if applicable; and c.) format and completion of meeting clearance form if required Comments:

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4. This request has been reviewed by PR for: a.) technical accuracy, b.) appropriateness for audience, c.) appropriateness of distribution statement, d.) technical sensitivity and economic sensitivity, e.) military/national critical technology, and f.) data rights and patentability Comments:

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APPROVED/APPROVED AS AMENDED/DISAPPROVED

PHILIP A. KESSEL Date
Technical Advisor
Space and Missile Propulsion Division
Title: Evaluation of Monopropellants for Reusable Launch Vehicles

Authors: Paul F. Jones, Tom W. Hawkins, Adam J. Brand, Milton B. McKay
Air Force Research Laboratory
Edwards AFB, CA

Stephen L. Rodgers, Don Bai
NASA MSFC
Huntsville, AL

Ismail Ismail
ERC, Inc.
Edwards AFB, CA

Abstract:

Previously, the Air Force has been investigating high performance salt-based, liquid monopropellants for low thrust spacecraft applications. The focus of this effort has been on finding a reduced toxicity monopropellant with a predicted density performance impulse greater than 50% over hydrazine. During this same period of time, NASA has been investigating reusable launch vehicle (RLV) concepts and has considered using monopropellants in this application. Anticipating a possible RLV payoff, NASA and the Air Force are working on a trade study to gauge the potential applicability of the salt-based monopropellants in booster applications. This study will include a performance comparison of salt-based monopropellants; a list of minimum safety, hazard, and physical property requirements based on operational and logistical support environments for an RLV.

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited