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Foreword

The START Treaty will not limit long-range, nuclear-armed sea-launched cruise missiles (SLCMs). Instead, the United States and the Soviet Union said they would make “politically binding” unilateral declarations of the numbers they intended to deploy.


Since the treaty was negotiated, the United States and Russia both, by reciprocal, nonbinding agreement, have removed their nuclear SLCMs from service. In a context of several thousand strategic nuclear weapons remaining on each side, the question of verifying this mutual restraint did not seem significant. Even in the context of 3,000 to 3,500 such weapons now promised as ceilings for START II, the possibility of a few tens, or even hundreds, of clandestine nuclear SLCMs may not be alarming, *especially with the end of U.S.-Soviet rivalry.*

On the other hand, if in the future the international community seeks to reduce deeply the numbers of all types of strategic nuclear weapons, SLCMs will probably have to be brought within an explicit arms control regime. This would be more the case if additional nuclear nations were to acquire long-range SLCMs.

Beginning with a hypothetical arms control regime for nuclear SLCMs, this Report examines in detail ways in which compliance with such a regime might be monitored. Surveying the life-cycle of SLCMs from development testing through deployment and storage, the assessment identifies the ‘indicators’ by which the missiles might be tracked and accounted for. It also assesses the paths of evasion that a determined cheater might take to avoid the proposed monitoring measures.

This document is the unclassified summary of a classified OTA report that was essentially completed in July 1991 and which has undergone minor updating since. The July report was the third product of an OTA assessment, requested by the Senate Foreign Relations and House Foreign Affairs Committees, centering on the technologies and techniques of monitoring the START Treaty. The first, classified, report of this assessment, *Verification Technologies: Measures for Monitoring Compliance with the START Treaty*, focuses on the START treaty and was delivered in the summer of 1990 (an unclassified summary of that report is available from OTA); the second, *Verification Technologies: Managing Research and Development for Cooperative Arms Control Monitoring Measures*, addressing the management of U.S. verification research and development, was published in May 1991; a fourth report, *Verification Technologies: Cooperative Aerial Surveillance in International Agreements*, was published in July 1991.

In preparing this report, OTA sought the assistance of many individuals and organizations (see “Acknowledgments’). We very much appreciate their contributions. As with all OTA reports, the content remains the sole responsibility of OTA and does not necessarily represent the view of our advisors or reviewers.



JOHN H. GIBBONS
Director

Start Verification Advisory Panel

Rodney Nichols
Chief Executive Officer
New York Academy of Sciences

James R. BlackWell
Director, International Security
Meridian Corporation

Ashton Carter
Director
Center for Science and International Affairs
Harvard University

Sidney Drell
Stanford Linear Accelerator Center

Richard Garwin
IBM Fellow
Thomas J. Watson Research Center

James Goodby
Consultant

Andrew Goodpaster
USA (retired)
Chairman, The Atlantic Council

Sidney Graybeal
Chief Scientist
SAIC

Roger Hagengruber
Vice President for Exploratory Systems
Sandia National Laboratories

William R. Harris
The Rand Corporation

Bobby Inman
SAIC

Michael Krepon
President
Henry L. Stimson Center

Stephen Lukasik
Vice President & Chief Scientist
TRW Space and Defense Sector

Raymond McCrory
Consultant

Ernest Mettenet
Consultant

Stephen Meyer
Professor
MIT

William E. Odom, USA (Ret.)
Director of National Security Studies
Hudson Institute

George Rueckert
Meridian Corporation

Albert D. Wheelon
Consultant

Charles Zraket
Trustee
The MITRE Corporation

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this background paper. OTA assumes full responsibility for the background paper and the accuracy of its contents.

OTA Project Staff—Technologies for Verifying a Strategic Arms Reduction Treaty

Lionel S. Johns, *Assistant Director, OTA
Energy, Materials, and International Security Division*

Akin Shaw, *International Security and Commerce Program Manager*

Thomas Karas, *Project Director*

Arthur Charo

Brian McCue

Christopher Waychoff

Administrative Staff

Jacqueline Robinson-Boykin, *Office Administrator*

Louise Staley, *Administrative Secretary*

Contractor

Madeline Gross

Acknowledgements

OTA gratefully acknowledges the assistance of individuals in the following organizations for their help in supplying information or in reviewing drafts of this report (the contents of the report, of course, remain the responsibility of OTA):

Arms Control and Disarmament Agency
Defense Intelligence Agency
Department of Energy, Office of Arms Control
Lawrence Livermore National Laboratory
Los Alamos National Laboratory
M.I.T., Center for International Studies
Office of the Chief of Naval Operations
Pacific-Sierra Research Corporation
Sandia National Laboratories