

NSTISSI No. 4010

17 June 1993

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NATIONAL
SECURITY
TELECOMMUNICATIONS
AND
INFORMATION
SYSTEMS
SECURITY

KEYING MATERIAL MANAGEMENT

Approved for Release by NSA on 09-25-2024, FOIA Case # 51573

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NATIONAL SECURITY
TELECOMMUNICATIONS
AND INFORMATION
SYSTEMS SECURITY**NATIONAL MANAGER****FOREWORD**

1. National Security Telecommunications and Information Systems Security Instruction (NSTISSI) No. 4010, "Keying Material Management," prescribes keying material management principles to all U.S. Government departments and agencies to assist in managing requirements for keying material. This document addresses the forecasting of keying material requirements, the review of keying material usage, the delegation of keying material production, and identifies authorized keying material lead times, stock levels, contingency, and reserve keying material.

2. This instruction supersedes NACSI No. 2002A, dated 26 September 1983. The principal purpose for this revision is to update the document to present-day policy to achieve resource efficiency through the requirements, forecasting, and review processes.

3. Representatives of the National Security Telecommunications and Information Systems Security Committee (NSTISSC) may obtain additional copies of this instruction from:

Executive Secretariat
National Security Telecommunications and
Information Systems Security Committee
National Security Agency
Fort George G. Meade, MD 20755-6000

4. U.S. Government contractors are to contact their appropriate government agency or Contracting Officer Representative regarding distribution of this document.

/s/
J. M. McCONNELL
Vice Admiral, U.S. Navy

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KEYING MATERIAL MANAGEMENT

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SECTION I - PURPOSE

1. This instruction prescribes standards and requirements for the efficient and secure management of keying material. It provides guidance for planning the forecasting of keying material requirements, the annual review of keying material requirements, and the delegation of keying material production. It also defines authorized keying material lead times and stock levels, contingency and reserve keying material, and keying material usage review.

2. All departments and agencies have a role to play in achieving a minimum of waste, expense, or unnecessary effort in the ordering, storage, and usage of keying material required to support cryptographic operations for protecting U.S. national security information and telecommunications systems. Therefore, implementation of this instruction rests with the chiefs of the military services and the heads of the federal departments and agencies.

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SECTION II - APPLICABILITY

3. This instruction is applicable to U. S. Government departments and agencies that use, store, produce, or account for keying material. The provisions of this NSTISSI do not apply to electronically generated key or to communications security (COMSEC) aids, such as call sign and frequency systems or Communications-Electronics Operating Instructions. The Director, National Security Agency (DIRNSA) may grant exceptions to this instruction on a case-by-case basis.

SECTION III - REFERENCES

4. This instruction refers to the following publications:

a. NACSI 4005, "Safeguarding and Control of COMSEC Material," dated 12 October 1979.

b. National Security Directive 42, dated 5 July 1990.

c. NSTISSI No. 3014, "Management of Off-line Cryptosystems," dated 1 February 1991.

d. NSTISSI No. 4006, "Controlling Authorities for COMSEC Material," dated 2 December 1991.

e. NSTISSI No. 4009, "National Information Systems Security (INFOSEC) Glossary," dated 5 June 1992.

f. NSTISSP No. 4, "National Policy On Electronic Keying," dated 16 November 1992.

SECTION IV - DEFINITIONS

5. The definitions in NSTISSI No. 4009 apply to this instruction. The following definitions are also applicable for purposes of this instruction:

a. Regularly Superseded Keying Material. Keying material which is superseded on a regular, established schedule.

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b. Irregularly Superseded Keying Material. Keying material used on an "as needed" basis, rather than during a specified period of time.

c. Keying Material Review. Periodic review of keying material usage by the controlling authority to determine the suitability of the keying material for the cryptonet structure and membership, the adequacy of key to meet operational and security requirements, and a revalidation of quantitative requirements.

SECTION V - GENERAL

6. 

SECTION VI - FORECASTS

7. Annually, NSA forecasts the future requirements for keying material in each media produced. Starting with the current year, and projecting six years, the forecast forms a basis for planning workload, manning, needed capability, and material stock. The forecast is based on customer consultations, closures, new systems planned for fielding, systems being phased out, and general resources philosophy.

SECTION VII - REQUIREMENTS

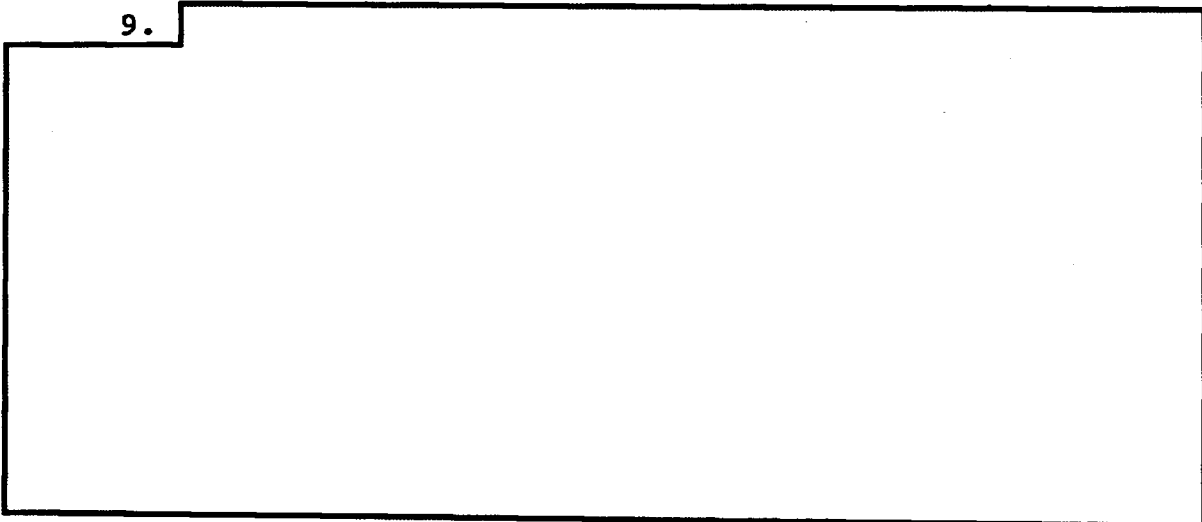
8. Keying material requirements must be efficiently managed to meet operational requirements without unduly burdening the production, storage, and distribution systems. While controlling authorities retain the

(b) (3)-18 USC 798
(b) (3)-P.L. 86-36

responsibilities of ensuring keying material suitability, cryptonet structure, adequacy of key to meet requirements, and revalidation of quantitative keying material requirements, the departments, agencies, and military services are encouraged to designate other management organizations within their jurisdiction to deal with the management of keying material on a more comprehensive basis. NSTISSI No. 3014 and NSTISSI No. 4006 identify and provide guidance on the nature and extent of the responsibilities and prerogatives relating to the management of keying material requirements. Standing requirements for manual, paper-based systems must give way to the technology and operational efficiency inherent in available secure voice and secure data communications systems. To comply with NSTISSP No. 4, departments, agencies, and the military services shall establish and implement programs with the objective of eliminating their dependence on paper-based/non-electronic keying methods.

SECTION VIII - DELEGATED PRODUCTION OF KEYING MATERIAL

9.



10. Requests for authority to produce keying material should have a justification clearly establishing why such authority is in the interest of the government, the technical processes involved, the security safeguards to be employed and enforced, the classification/sensitivity of the keying material, special handling and safeguarding (if

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appropriate), and the designated use of the key, e.g., test, demonstration, operations, training, etc. NACSI 4005 provides guidance and the minimum national standards required for safeguarding and control of COMSEC material.

11. Under circumstances where it may be advantageous to delegate key production, the DIRNSA approval will be in writing, and will include, as appropriate, additional specific detailed technical and security requirements to be followed by the producing agency.

12. Each year, at the DIRNSA's request, departments and agencies must report the quantities of keying material generated or produced at facilities under their jurisdiction (including contractual) during the preceding fiscal year. The information gathered by this report is used by DIRNSA to prepare the Annual Status Report of Production of Delegated COMSEC Material (RCS-NSA-961).

SECTION IX - KEYING MATERIAL STOCK LEAD TIME

13. Departments and agencies shall maintain sufficient inventory of keying material to provide users with an uninterrupted supply. Timing of the request for keying material should ensure that the keying material is not produced too far in advance of its operational need date. Similarly, overproduction of key contributes to the creation of excess stocks that burden the accounting, production, distribution, and storage facilities at all levels.

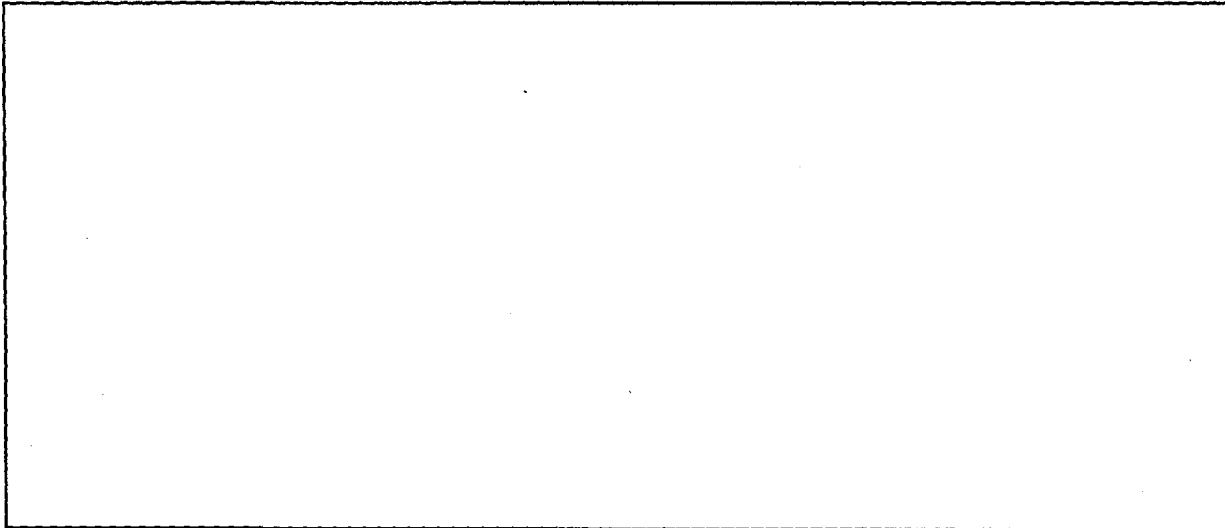
14. As an aid in efficient scheduling of production to maintain appropriate lead times for keying materials, the DIRNSA shall occasionally request an inventory report of material on-hand at logistic facilities and/or at user levels. Reports would identify regularly and irregularly superseded, contingency, and reserve keying material. Such reports are entitled "Inventory Report of Keying Material" (RCS-NSA-718).



SECTION X - CONTINGENCY KEYING MATERIAL

16. NSA-produced contingency keying material is stored by the originator of the requirement for later activation when a contingency event occurs or the contingency plan goes into effect. A contingency keying material "package" normally provides a supply adequate for six months. Controlling authorities are responsible for reviewing and reducing, when appropriate, the quantity of contingency keying material.

17. Alternatively, contingency keying material nomenclature can be assigned and entered into the system by NSA, but will not be produced or distributed until the contingency is activated. In this case, prior arrangements for rapid production and distribution must be part of the contingency plan, and must have been coordinated with NSA by the controlling authority.



19. When keying material is repeatedly ordered and not operationally used, consideration should be given to establishing the requirement as contingency keying material. NSTISSI No. 4006 provides guidance.

(b) (3) - 18 USC 798
(b) (3) - P.L. 86-36

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SECTION XI - RESERVE KEYING MATERIAL

20. Reserve keying material is normally held in storage only at logistic facilities to satisfy unplanned or unpredictable requirements.

SECTION XII - KEYING MATERIAL USAGE

21. Controlling authorities are required to manage the operational use of keying material assigned to the cryptonet. Departments, agencies, and the military services are required to develop control/management systems to assist controlling authorities and ensure that the keying material ordered reflects actual requirements, and is procured only in the quantity required and in an appropriate format. When keying material is continually superseded and destroyed without being used, the using element and controlling authority are required to initiate corrective action through appropriate management levels to reduce, suspend, or cancel requirements of unneeded keying material.

22. To aid in the elimination of overproduction, users must maintain accurate and current records identifying whether the keying material being destroyed was ever used. Departments, agencies, and the military services shall develop control systems to measure and take action to eliminate wasted keying material.

SECTION XIII - ANNUAL REVIEW OF KEYING MATERIAL MANAGEMENT

23. Controlling authorities are responsible for conducting an annual keying material review (or more often if appropriate). A current record of keying material usage and nonusage is required for the review process described below. Annual reviews are conducted without regard to whether the keying material supports a manual system or machine cryptosystem, whether used on-line or off-line, or whether the keying material is superseded regularly or irregularly. Annual reviews also include contingency keying material. NSTISSI No. 3014 and NSTISSI No. 4006 provide review guidance and standards.

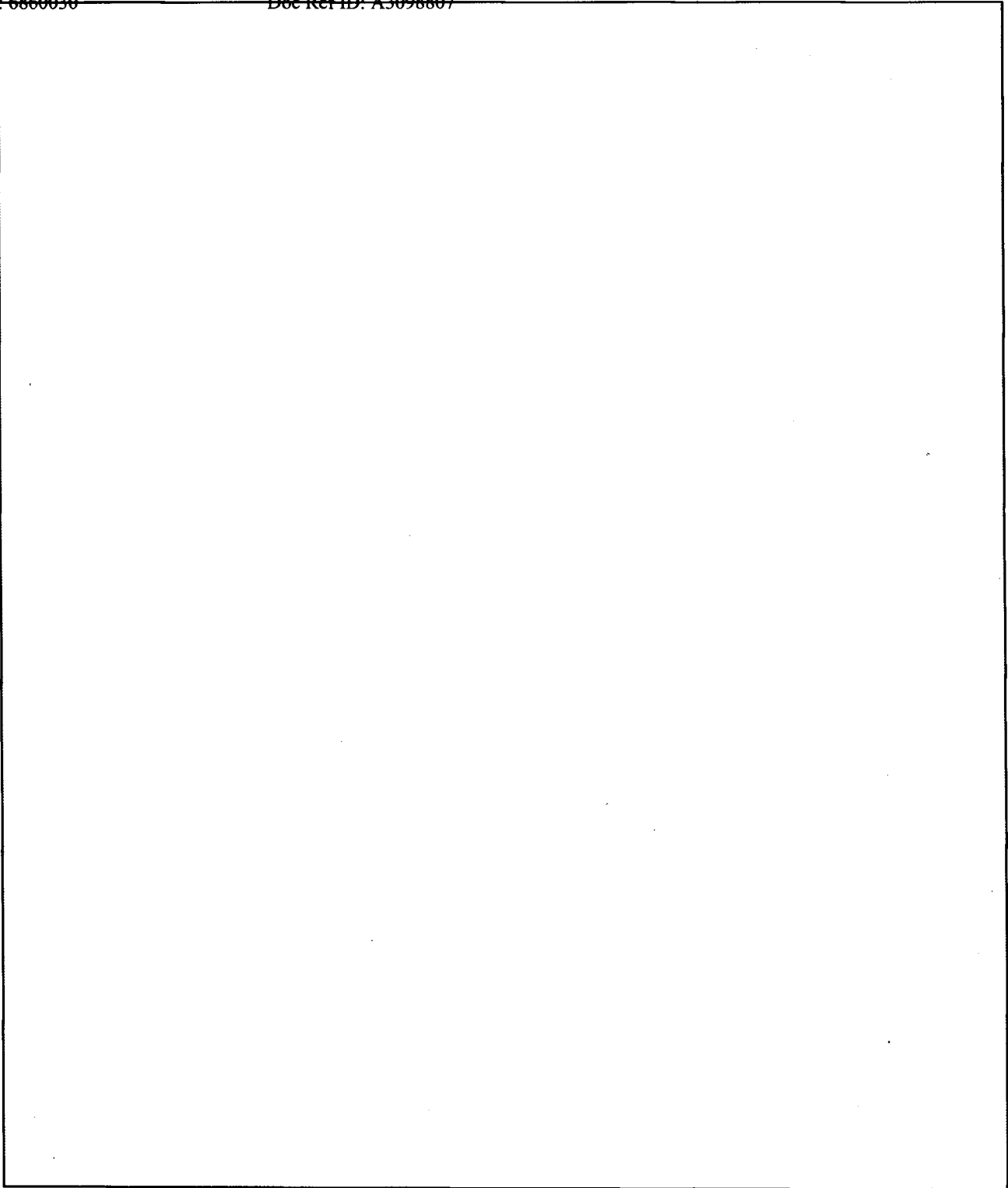
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The annual review is conducted to ensure that keying material is:

- a. operationally necessary
- b. efficiently utilized
- c. appropriate for the information it protects
- d. produced only in the quantity required, and
- e. in the appropriate format.

Encl:

Annex - Recommended Holdings
of Keying Material



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(b) (3) -18 USC 798
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