

Subpart B—Records Management and Preservation Considerations for Designing and Implementing Electronic Information Systems

§ 1236.10 What records management controls must agencies establish for records in electronic information systems?

The following types of records management controls are needed to ensure that Federal records in electronic information systems can provide adequate and proper documentation of agency business for as long as the information is needed. Agencies must incorporate controls into the electronic information system or integrate them into a recordkeeping system that is external to the information system itself (see § 1236.20 of this part).

(a) *Reliability*: Controls to ensure a full and accurate representation of the transactions, activities or facts to which they attest and can be depended upon in the course of subsequent transactions or activities.

(b) *Authenticity*: Controls to protect against unauthorized addition, deletion, alteration, use, and concealment.

(c) *Integrity*: Controls, such as audit trails, to ensure records are complete and unaltered.

(d) *Usability*: Mechanisms to ensure records can be located, retrieved, presented, and interpreted.

(e) *Content*: Mechanisms to preserve the information contained within the record itself that was produced by the creator of the record;

(f) *Context*: Mechanisms to implement cross-references to related records that show the organizational, functional, and operational circumstances about the record, which will vary depending upon the business, legal, and regulatory requirements of the business activity; and

(g) *Structure*: controls to ensure the maintenance of the physical and logical format of the records and the relationships between the data elements.

§ 1236.12 What other records management and preservation considerations must be incorporated into the design, development, and implementation of electronic information systems?

As part of the capital planning and systems development life cycle processes, agencies must ensure:

(a) That records management controls (see § 1236.10) are planned and implemented in the system;

(b) That all records in the system will be retrievable and usable for as long as needed to conduct agency business (i.e., for their NARA-approved retention period). Where the records will need to be retained beyond the planned life of the system, agencies must plan and budget for the migration of records and their associated metadata to new storage media or formats in order to avoid loss due to media decay or technology obsolescence. (See § 1236.14.)

(c) The transfer of permanent records to NARA in accordance with part 1235 of this subchapter.

(d) Provision of a standard interchange format (e.g., ASCII or XML) when needed to permit the exchange of electronic documents between offices using different software or operating systems.

§ 1236.14 What must agencies do to protect records against technological obsolescence?

Agencies must design and implement migration strategies to counteract hardware and software dependencies of electronic records whenever the records must be maintained and used beyond the life of the information system in which the records are originally created or captured. To successfully protect records against technological obsolescence, agencies must:

(a) Determine if the NARA-approved retention period for the records will be longer than the life of the system where they are currently stored. If so, plan for the migration of the records to a new system before the current system is retired.

(b) Carry out upgrades of hardware and software in such a way as to retain the functionality and integrity of the

electronic records created in them. Retention of record functionality and integrity requires:

(1) Retaining the records in a usable format until their authorized disposition date. Where migration includes conversion of records, ensure that the authorized disposition of the records can be implemented after conversion;

(2) Any necessary conversion of storage media to provide compatibility with current hardware and software; and

(3) Maintaining a link between records and their metadata through conversion or migration, including capture of all relevant associated metadata at the point of migration (for both the records and the migration process).

(c) Ensure that migration strategies address non-active electronic records that are stored off-line.

Subpart C—Additional Requirements for Electronic Records

§ 1236.20 What are appropriate recordkeeping systems for electronic records?

(a) *General.* Agencies must use electronic or paper recordkeeping systems or a combination of those systems, depending on their business needs, for managing their records. Transitory e-mail may be managed as specified in § 1236.22(c).

(b) *Electronic recordkeeping.* Recordkeeping functionality may be built into the electronic information system or records can be transferred to an electronic recordkeeping repository, such as a DoD-5015.2 STD-certified product. The following functionalities are necessary for electronic recordkeeping:

(1) *Declare records.* Assign unique identifiers to records.

(2) *Capture records.* Import records from other sources, manually enter records into the system, or link records to other systems.

(3) *Organize records.* Associate with an approved records schedule and disposition instruction.

(4) *Maintain records security.* Prevent the unauthorized access, modification, or deletion of declared records, and en-

sure that appropriate audit trails are in place to track use of the records.

(5) *Manage access and retrieval.* Establish the appropriate rights for users to access the records and facilitate the search and retrieval of records.

(6) *Preserve records.* Ensure that all records in the system are retrievable and usable for as long as needed to conduct agency business and to meet NARA-approved dispositions. Agencies must develop procedures to enable the migration of records and their associated metadata to new storage media or formats in order to avoid loss due to media decay or technology obsolescence.

(7) *Execute disposition.* Identify and effect the transfer of permanent records to NARA based on approved records schedules. Identify and delete temporary records that are eligible for disposal. Apply records hold or freeze on disposition when required.

(c) *Backup systems.* System and file backup processes and media do not provide the appropriate recordkeeping functionalities and must not be used as the agency electronic recordkeeping system.

§ 1236.22 What are the additional requirements for managing electronic mail records?

(a) Agencies must issue instructions to staff on the following retention and management requirements for electronic mail records:

(1) The names of sender and all addressee(s) and date the message was sent must be preserved for each electronic mail record in order for the context of the message to be understood. The agency may determine that other metadata is needed to meet agency business needs, e.g., receipt information.

(2) Attachments to electronic mail messages that are an integral part of the record must be preserved as part of the electronic mail record or linked to the electronic mail record with other related records.

(3) If the electronic mail system identifies users by codes or nicknames or identifies addressees only by the name of a distribution list, retain the intelligent or full names on directories or