




**INFORMATION TECHNOLOGY**  
LAWRENCE BERKELEY NATIONAL LABORATORY

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## Managing Electronic Records at Lawrence Berkeley National Laboratory

### Current Situation

At Berkeley Lab, [records](#) are being created and stored **solely** in electronic formats within electronic information and business systems as well as on servers and even desktops. Records generated, received, and maintained in an electronic format are not excluded from records management requirements.

Electronic records, generated through the use of computer-based applications, or captured through scanning or imaging, that have long-term retentions present a particularly unique challenge if the Laboratory is to remain in compliance with the Department of Energy's records program.

### Requirements

The Contractors Requirement Document of the [DOE Records Management Order 243.1B](#) (see page 15) requires that Berkeley Lab manage electronic records according to Code of Federal Regulations (CFR) 36 [Part 1236, Electronic Records Management](#). The requirements include:

1. Integrate records management and preservation considerations into the design, development, enhancement, and implementation of electronic information systems.
2. Agencies must incorporate controls into the electronic information system or integrate them into a recordkeeping system that is external to the information system itself.
3. 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.
4. 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.
5. 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.
6. Email messages must be maintained according to Subpart C § 1236.22.
7. Agencies must maintain inventories of electronic information systems and review the systems periodically for conformance to established agency procedures, standards, and policies.
8. Agencies that manage unstructured electronic records electronically must ensure that the records are filed in a recordkeeping system.

### Information Systems

As an "electronic recordkeeping repository, such as a DoD-5015.2 STD-certified product " has not currently been implemented at Berkeley Lab and outputting to paper or microfilm may not be feasible, the creators and maintainers of records need to ensure that Laboratory electronic records are managed throughout their life cycle in accordance with approved records schedules. Records management should be considered when planning for the acquisition of a new system or a significant upgrade to an existing system:

- Identify information systems that contain or provide access to Laboratory records.
- When planning for a new information system or an upgrade to an existing system, determine whether the system will contain or provide access to Laboratory records.
- [Contact](#) the Archives and Records Office (ARO) to determine the correct records retention schedule which establishes how long the records must be kept.
- The information systems owner(s), in consultation with Berkeley Lab IT's Business Systems Department, should develop a [schedule to migrate records](#) to new hardware, software, or other media to ensure that records will be accessible, retrievable, readable, and preserved throughout their retention period.

- The following are some factors to consider when developing a migration plan and schedule:
  - The frequency with which the records will need to be accessed. Inactive records that will be accessed infrequently may be migrated to less accessible media, such as digital tape or microfilm, for archival preservation.
  - The media on which the records will be stored; the hardware software, and/or equipment that will be required to access the records; and the cost-effectiveness of continuously upgrading them.
  - Transferring records to a platform-independent, non-proprietary format, as a cost-effective alternative to continuously upgrading system hardware and software.
  - The volume of records that may be generated over the life of the system, and their required retention period and how these factors will affect the cost-effectiveness of the various options for migrating them.
  - The frequency with which records will need to be migrated to ensure their preservation.
  - How migrated record information will be authenticated to ensure that the information does not change and that the original records are not altered.
  - Implement the migration plan and update as appropriate in response to changes in technology and other factors.

### Local Repositories

Without a Laboratory-wide electronic records management application, electronic records received, created and maintained in local repositories (such as workstation desktop filing systems or network servers), should be output to paper and filed in existing paper-based recordkeeping systems, or output to microfilm. If this is not feasible, there are steps that the individual employee can take in the interim to help better protect these records:

- **Declare a record**
  - When electronic documents (Microsoft Word files, spreadsheets, Microsoft PowerPoint slides, database reports) are finalized, submitted, used in a transaction, or otherwise meet the definition of a [record](#), employees need to identify that document as a record.
- **Save records to the network**
  - Save electronic records with standardized titles that are meaningful and use corporate language and business terminology.
  - Include details such as the author and subject of the document, version number, date, type of document, etc.
  - Save electronic records to your network directory (which is regularly backed up). Only maintain electronic [documents](#) on your workstation.
- **Directory structures**
  - Set up file directories (on the workstation and network) that mirror the employee's business functions and activities, or the relevant records retention [schedule](#).
  - File records documenting similar functions/activities together.
- **Retention and preservation**
  - Retention must be in compliance with the Department of Energy and National Archives records retention [schedules](#) in effect at LBNL ([contact](#) ARO for guidance).
  - Ensure that the records are maintained as long as the records [schedule\(s\)](#) require.

Given the limitations of workstations and network servers, the above steps only provide interim protection for electronic records maintained in local repositories until the records can either be output to paper or microfilm, or deposited in a Laboratory-wide electronic records management application.

### Resources

- DOE Order 243.1B Records Management Program, [Contractors Requirement Document](#)
- NARA Code of Federal Regulations - 36 CFR Subchapter B - Records Management, [Part 1236 - Electronic Records Management](#)
- [Oakridge National Laboratory, Records Management Implementation Guide for Long-Term Storage and Migration of Electronic Records](#)
- SLAC National Accelerator Laboratory Archives and History Office--[Electronic Records Archiving](#)

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