RECORDS MANAGEMENT IN THE EPA

RECORDS MANAGEMENT IN EPA

AN OVERVIEW FOR REGIONAL MANAGERS

1989

M

OIRM - RECORDS MANAGEMENT

SEMINAR SLIDES

RECORDS MANAGEMENT IN THE EPA

RECORDS MANAGEMENT IN EPA

AN OVERVIEW FOR REGIONAL MANAGERS

1989

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OIRM - RECORDS MANAGEMENT

PURPOSE OF OVERVIEW

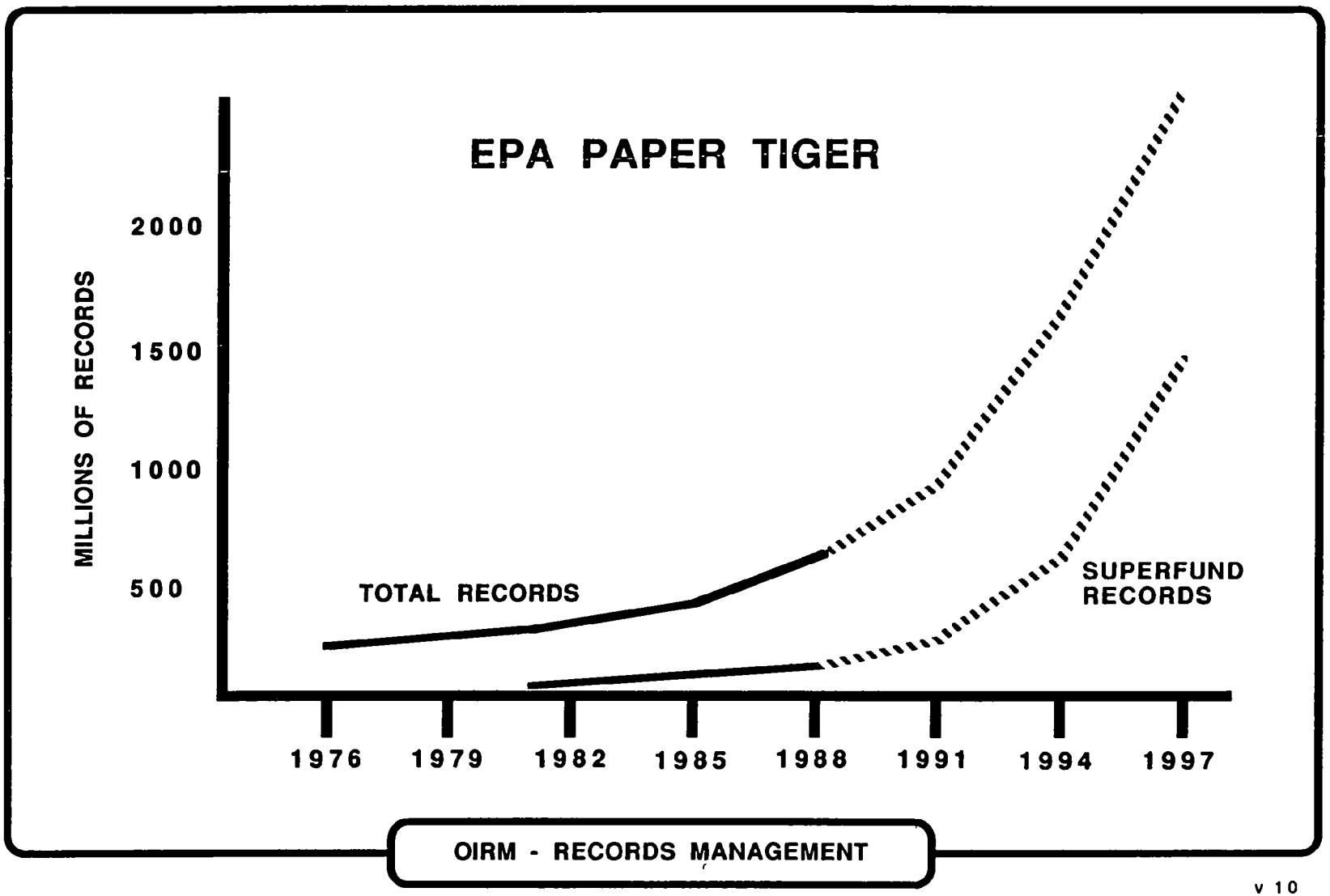
- Clarify the EPA's basic records management goals and definitions
- Expand your understanding of the records management life cycle
- Answer your questions

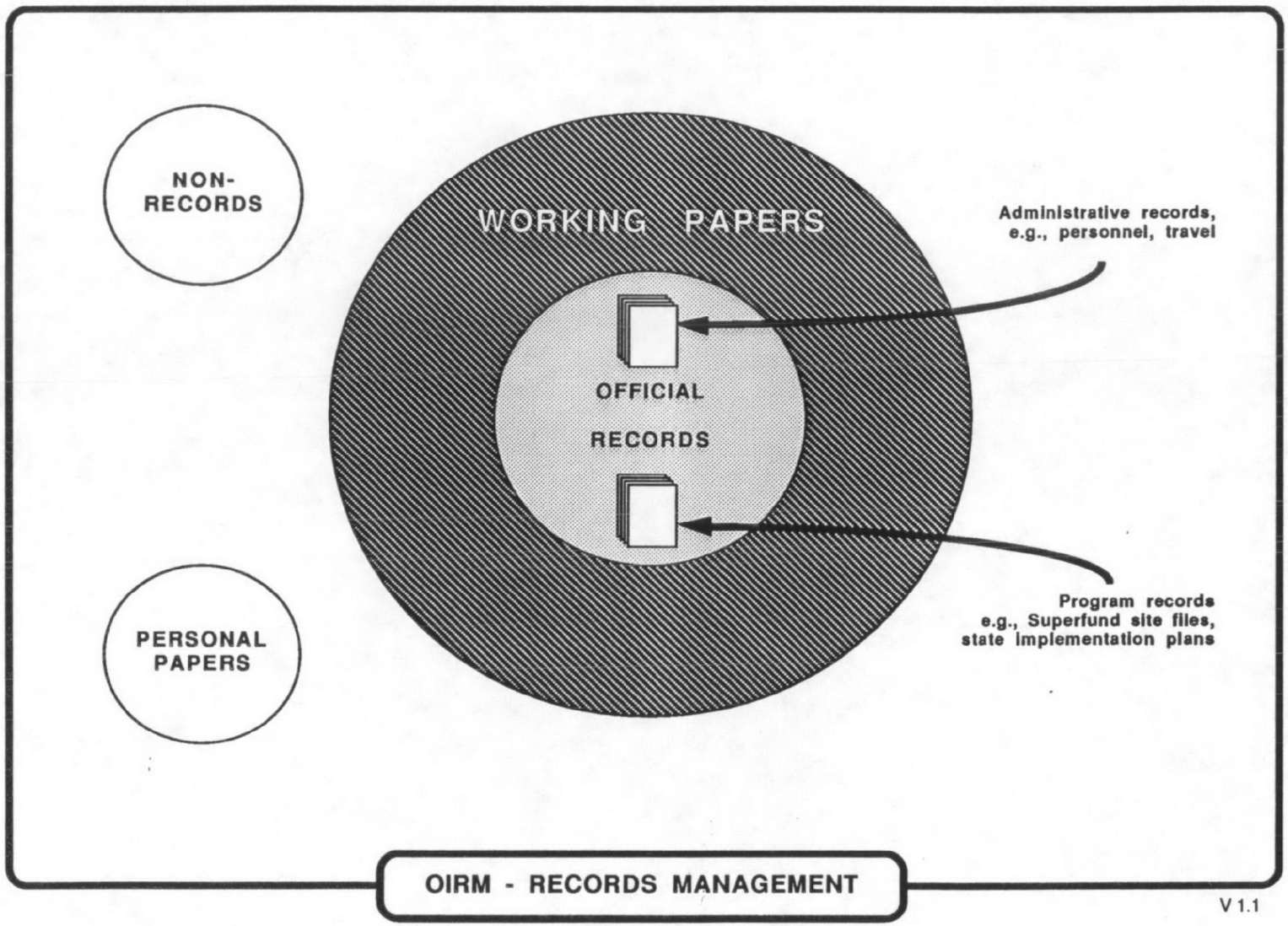
EPA'S BASIC PROGRAM

- TWO-FOLD GOAL OF INTEGRITY AND ACCESS
- CONGRESSIONAL MANDATE WITH NARA (44 U.S.C.)
- ESTABLISHED BODY OF EPA POLICY
  - 1977 Delegation of Authority to Field
  - 1985 Records Management Manual
  - 1987 IRM Policy Manual
  - 1988 EPA Notice

UNIQUE EPA REQUIREMENTS

- ENVIRONMENTAL LITIGATION REQUIRES DOCUMENTS, NOT JUST DATA
- LONG ACTIVE LIFE
- ACCESS BY PUBLIC
- SIGNIFICANT ANNUAL GROWTH


EPA PAPER TIGER
MILLIONS OF RECORDS
2000
1500
1000
500
TOTAL RECORDS
SUPERFUND RECORDS
1976
1979
1982
1985
1988
1991
1994
1997
OIRM - RECORDS MANAGEMENT


NON-
RECORDS
WORKING PAPERS
Administrative records,
e.g., personnel, travel
OFFICIAL
RECORDS
PERSONAL
PAPERS
Program records
e.g., Superfund site files,
state implementation plans
OIRM - RECORDS MANAGEMENT
V 1.1

NARA'S DEFINITION OF A RECORD

Recorded information of continuing administrative, fiscal, legal, historical, or informational value, including published materials, papers, maps, photographs, microfilm, audiovisual, machine-readable materials (ADP tapes/disks/optical disks) or other documentary material, regardless of physical form or characteristics, made or received by the agency that evidences organization, functions, policies, decisions, procedures, operations, or other activities.

OIRM GUIDANCE ON RECORDS

A record is any information, recorded on any medium which may have enduring value, be it for present operational or future historical purposes.

OFFICIAL RECORD

ANY FINAL PRODUCT RELATED TO

ADMINISTRATION, ENFORCEMENT OR REGULATION

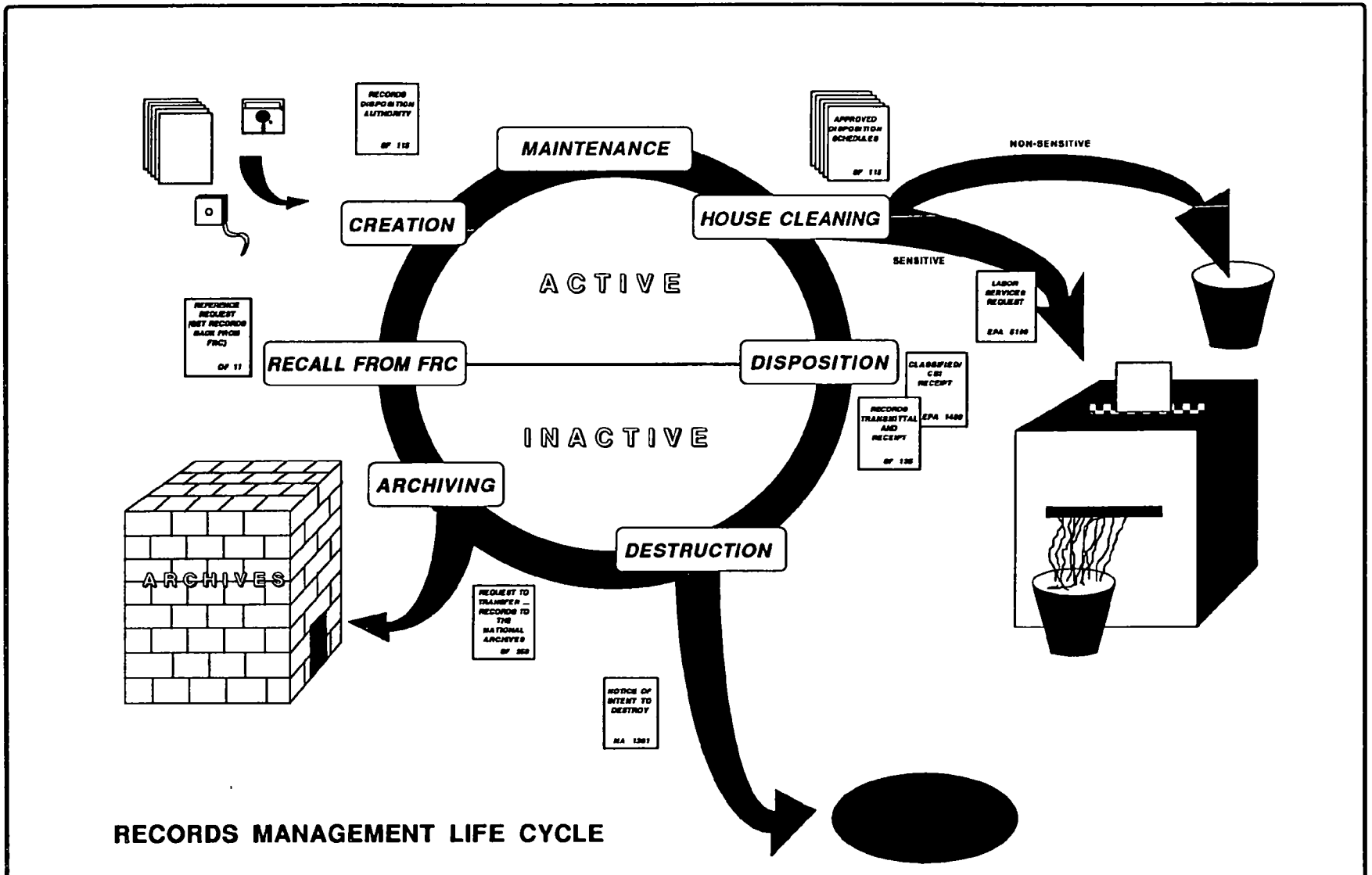
AND ALL DOCUMENTATION THAT

SHOWS THE DECISION TRAIL

PERSONAL PAPERS

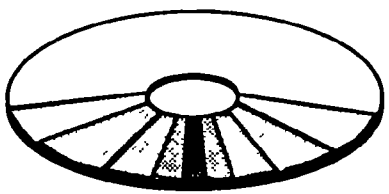
Personal papers are papers of a private or non-official character which ordinarily pertain only to an individual's affairs and will not affect the conduct of Agency business. Examples:

- **Papers accumulated by an official before assuming office**
- **Materials pertinent solely to an individual's private affairs e.g., outside business pursuits or private political associations**
- **Diaries, journals or other personal notes not prepared for transacting government business**
- **Convenience copies of official records kept for personal use**

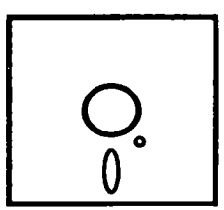


OIRM - RECORDS MANAGEMENT

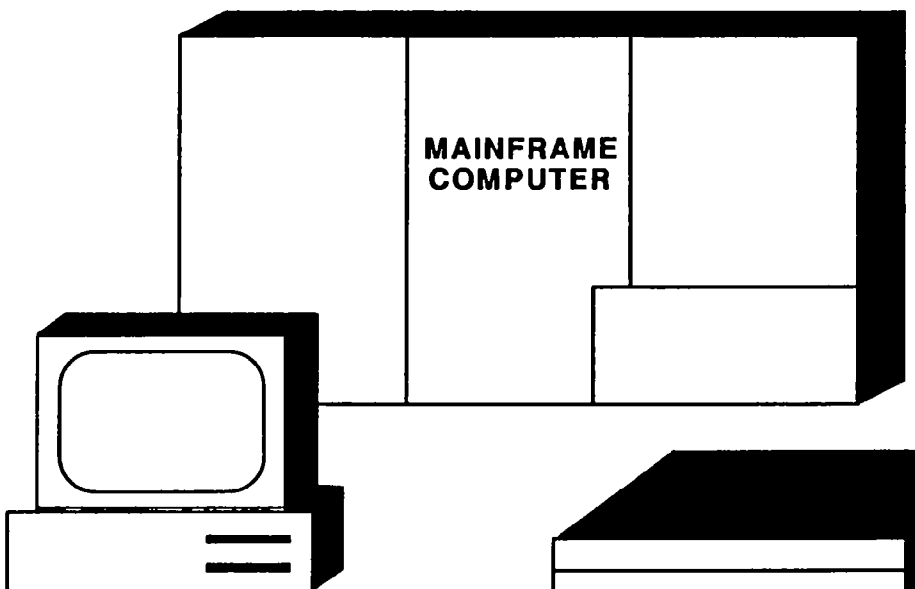
ELECTRONIC RECORDKEEPING



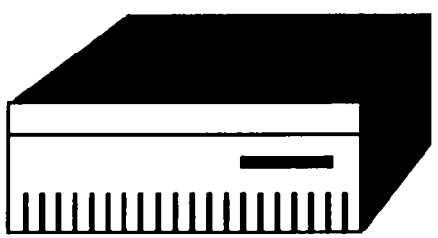
OPTICAL DISK



FLOPPY DISK



PERSONAL
COMPUTER



HARD DISK

ROLE OF TECHNOLOGY

- MEET NEEDS THAT OBTAIN FROM FREQUENT USE OF LARGE SETS OF DOCUMENTS
- POTENTIAL APPLICATIONS FOR EPA'S BASIC WORK
  - LITIGATION SUPPORT FOR ENFORCEMENT AND COST RECOVERY
  - REGISTRATION AND INVENTORY OF CHEMICALS
  - ADMINISTRATIVE PROCESSING
  - FACILITATE PUBLIC ACCESS
- FIRST STEPS ARE ORGANIZING RECORDS AND EVALUATING THE NEEDS AND ALTERNATIVES TO MEET THEM

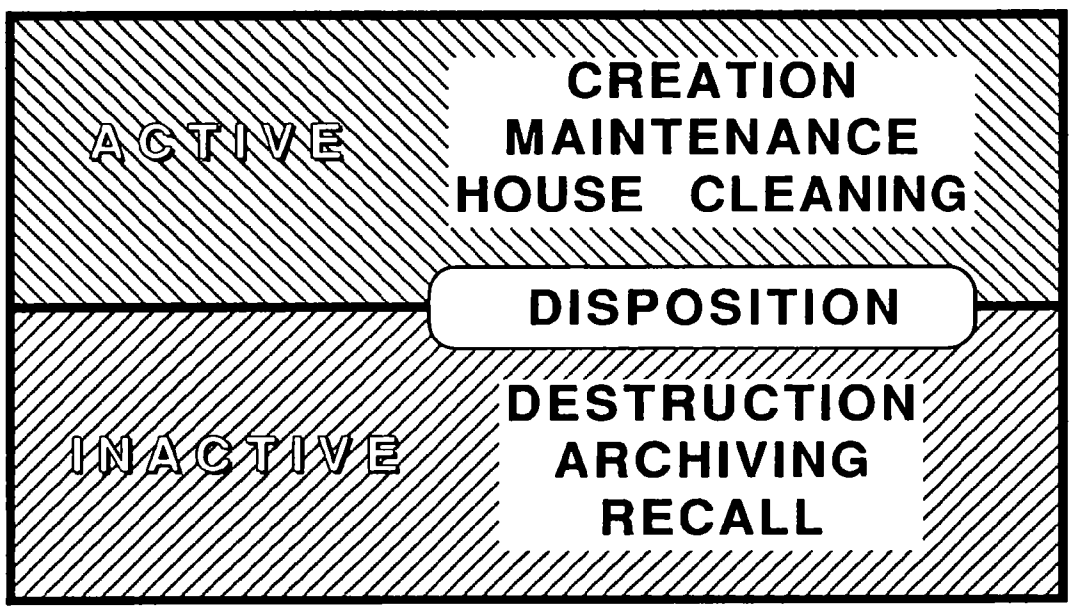
TECHNOLOGIES FOR RECORDS MANAGEMENT

- MICROFORM
  - ROLL
  - JACKET
  - MICROFICHE
  - CARTRIDGE SYSTEMS
  - APERTURE CARD
  - COMPUTER OUTPUT TO MICROFILM(COM)
- OPTICAL DISK
  - CD-ROM
  - WORM
  - UPDATEABLE

FACTORS FOR SELECTING TECHNOLOGIES

	PAPER	MICRO FILM ROLL/CART.	FLOPPY DISK 5 1/4 INCH	OPTICAL DISK 5 1/4 INCH
STORAGE CAPACITY	LIMITED BY SPACE	2,250 DOCUMENTS PER ROLL	1,250 PAGES DBL SPACED	250,000 PAGES DBL SPACED
MEDIUM LONGEVITY	50 - 500 YRS.	5 - 500 YRS	5 - 10 YRS	10 - 30 YRS
ACCESS SPEED	MINUTES	LESS THAN 1 MINUTE	LESS THAN 30 SECS	LESS THAN 15 SECS
COST TO DUPLICATE 100,000 DOCUMENTS	$5,000	$675	$200	$150

SEVEN PHASES OF THE RECORDS MANAGEMENT LIFE CYCLE



POLICY/
OFFICIAL RECORDS

EPA

NOTICE

Classification No.: 88-1	**Addressee**
Approval Date: 9/12/88	

Safeguarding and Disposition of Official Records

As we near the end of another Administration, I would like to call attention to EPA policy relating to the disposition of official Agency records, extra reference copies (non-record material) and personal papers. EPA policies contained in the IRM Policy Manual, Chapter 10, and the Records Management Manual are based on the provisions of 44 United States Code (U.S. Code), Chapter 31, 36 Code of Federal Regulations, 1220, and 41 Code of Federal Regulations (CFR), 201-22.

All EPA employees should become familiar with the policies in these manuals and the EPA Records Control Schedules to protect official records in their areas from unauthorized removal and premature destruction. EPA personnel should also be aware of provisions in 18 U.S. Code 2071 which describe penalties for the willful and unlawful destruction, removal from file and private use of official records.

Official records may be disposed of only in accordance with the provisions of the EPA Records Control Schedules. The Schedules contain authorized retention periods and instructions for the disposition of official Agency records which have been approved by the U.S. Archivist, National Archives and Records Administration.

Originator
EPA Form 1315-11 (5-88) Information Management and Services Division/Office of Information Resources Management

To ensure the safeguarding and disposition of official records, employees should refer to Attachment A which describes official records, extra copies of documents preserved for convenience and personal papers. Extra copies of documents are commonly regarded as nonrecord materials. Although these materials cannot be considered as personal papers, a Government official may accumulate for convenience of reference extra copies of papers and other materials which he or she has drafted, reviewed or otherwise acted upon. Government officials may be permitted to retain these extra copies, provided that retention would not (1) diminish the official records of the Agency; (2) violate confidentiality required by national security, privacy or other interests provided by law; or (3) exceed normal administrative economies.

Many Government officials maintain in their offices papers pertaining to their personal affairs. Regulations contained in 36 CFR 1220.20 require that papers pertaining to an individual's personal affairs be clearly designated as nonofficial. These records must also be filed separately from the official records of the Agency.

Questions relating to the safeguarding or disposition of Agency records should be directed to your local Records Management Officer or the Agency Records Management Officer (382-5911).

Attachment

Charles L. Grizzle
Assistant Administrator for
Administration and Resources
Management

Attachment A

Official Records

Official records are made or received in the conduct of Agency business. They relate directly to the functions of an office and they document those functions. They consist of recorded information of continuing administrative, fiscal, legal, historical or informational value, including published materials, papers, maps, photographs, microfilm, audiovisual, optical disks, electronic records (computer tapes, disks, floppy diskettes) or other documentary material, regardless of physical form or characteristics, made or received by the Agency that evidences the organization, functions, policies, decisions, procedures, operations or other activities of the Government.

Extra Reference Copy (Non-record Material)

Extra copies of documents maintained for convenience of reference are commonly regarded as non-record materials and are disposable without complying with the provisions of the EPA Records Control Schedules.

Personal Papers

Personal papers are papers of a private or non-official character which ordinarily pertain only to an individual's personal affairs and will not affect the conduct of Agency business. Examples include:

- Papers accumulated by an official before assuming office
- Materials pertaining solely to an individual's private affairs, such as outside business pursuits or private political associations
- Diaries, journals or other personal notes which are not prepared for transacting Government business.

DISPOSITION SCHEDULE

(20.)

Agency Copy

REQUEST FOR RECORDS DISPOSITION AUTHORITY

(See Instructions on reverse)

LEAVE BLANK

JOB NO. N1-412-86-2

DATE RECEIVED 7-28-86

1 GENERAL SERVICES ADMINISTRATION
NATIONAL ARCHIVES AND RECORDS SERVICE, WASHINGTON, DC 20408

NOTIFICATION TO AGENCY

In accordance with the provisions of 44 U.S.C. 3303a the disposal request, including amendments, is approved except for items that may be marked "disposition not approved" or "withdrawn" in column 10. If no records are proposed for disposal, the signature of the Archivist is not required.

2 FROM (Agency or establishment)
Environmental Protection Agency

3 MAJOR SUBDIVISION
(Agencywide)

4 MINOR SUBDIVISION

5 NAME OF PERSON WITH WHOM TO CONFER	6 TELEPHONE EXT	DATE	ARCHIVIST OF THE UNITED STATES
Harold Webster Thomas Tasker	382-5912 382-5911	12-31-86	Frank G. Burke

7 CERTIFICATE OF AGENCY REPRESENTATIVE

I hereby certify that I am authorized to act for this agency in matters pertaining to the disposal of the agency's records that the records proposed for disposal in this Request of 8 page(s) are not now needed for the business of this agency or will not be needed after the retention periods specified, and that written concurrence from the General Accounting Office, if required under the provisions of Title 8 of the GAO Manual for Guidance of Federal Agencies, is attached.

A GAO concurrence ☐ is attached, or ☒ is unnecessary

8 DATE	C. SIGNATURE OF AGENCY REPRESENTATIVE	D. TITLE
7/24/86	Thomas Tasker	Agency Records Management Officer

7. ITEM NO.	8 DESCRIPTION OF ITEM *(With Inclusive Dates or Retention Periods)*	9 GRS OR SUPERSEDED JOB CITATION	10 ACTION TAKEN *(NARS USE ONLY)*
1 - 17	The Office Management Records Control Schedule is being revised to incorporate some items common to all EPA offices. These items include schedules of daily activities, files dealing with the Privacy Act and Freedom of Information Act and Office Administrative Files. Attached is a copy of the revised Office Management Records Control Schedule.	Appendix B Schedule 22	

(61 F.)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
OFFICE MANAGEMENT RECORDS	AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	Office Administrative Files. Records accumulated by individual offices that relate to the internal administration or housekeeping activities of the office rather than the functions for which the office exists. In general, these records relate to the office organization, staffing, procedures and communications; the expenditure of funds, including budget papers, and the use of office space and utilities. They may include copies of internal activity and workload reports (including work progress, statistical and narrative reports which are prepared in the office and forwarded to higher levels) and other materials that do not serve as official documentation of the programs of the office. Note: This schedule item is not applicable to the record copies of organizational charts, functional statements and related records that document the essential organization, staffing and procedures of EPA.	Retention: See Disposition. Disposition: Destroy when 2 years old or when no longer needed, whichever is sooner.
2.	Schedules of Daily Activities. Consist of calendars, appointment books, schedules, logs, diaries and other records documenting meetings, appointments, telephone calls, trips, visits and other activities of Federal employees while serving in an official capacity. Materials determined to be "personal records" are not covered by this item.	
	a. Records containing substantive information relating to the official activities of high level officials, the substance of which has not been incorporated into memoranda, reports, correspondence or other records included in the official files. (High level officials include the Administrator, Deputy Administrator, Assistant Administrators, Associate Administrators, Regional Administrators, Laboratory Directors, Office Directors, Staff Directors and Staff Assistant to the aforementioned officials such as special assistants, confidential assistants and administrative assistants.)	Retention: See Disposition. Disposition: Break file when official leaves office, then offer records to National Archives. If the offer is not accepted, destroy the records 6 years after the offer is rejected.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
OFFICE MANAGEMENT RECORDS	AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	b. Records of other than high level Federal employees as defined in "a" above containing substantive information relating to official activities, the substance of which has not been incorporated into official files.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office for 2 years, then destroy.
	c. Routine materials containing no substantive information regarding the daily activities of other than high level officials as defined in "a" above and records of all Federal employees containing substantive information, the substance of which has been incorporated into official files.	Retention: See Disposition. Disposition: Destroy when no longer needed.
3.	Privacy Act Requests Files. Files created in response to requests from individuals to gain access to their records or to any information in the records pertaining to them, as provided for under 5 U.S.C. 552a(d)(1). Includes original request, copy of reply and all related supporting documents, which may include a copy of the records requested but does not contain the official file of records requested.	
	a. Granting access to all the requested records.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office for 2 years, then destroy.
	b. Responding to requests for nonexistent records, to requestors who provide inadequate descriptions and to those who fail to pay agency reproduction fees.	
	(1) Requests not appealed.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office for 2 years, then destroy.
	(2) Requests appealed.	Retention: See Disposition. Disposition: Dispose of in accordance with the approved disposition instructions for related subject individual's record or 3 years after final adjudication by courts, whichever is later.

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ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	c. Denying access to all or part of the records requested.	
	(1) Requests not appealed.	Retention: Retain 5 years. Disposition: Break file at end of year. Keep in office for 5 years, then destroy.
	(2) Requests appealed.	Retention: See Disposition. Disposition: Dispose of in accordance with the approved disposition instructions for related subject individual's record or 3 years after final adjudication by courts, whichever is later.
4.	Privacy Act Amendment Case Files. Includes records relating to an individual's request to amend a record pertaining to that individual as provided for under 5 U.S.C. 552a(d)(2), to the individual's request for a review of the Agency's refusal of the individual's request to amend a record as provided for under 552a (d)(3) and to any civil action brought by the individual against EPA as provided under 5 U.S.C. 552a(g).	
	a. Requests to amend agreed to by EPA. Includes individual's requests to amend and/or review refusal to amend, copies of replies and related materials.	Petention: See Disposition. Disposition: Dispose of in accordance with the approved disposition instructions for the related subject individual's record or 4 years after agreement to amend, whichever is later.
	b. Requests to amend refused by EPA. Includes individual's request to amend and to review refusal to amend, copies of replies, statement of disagreement, justification for refusal to amend a record and related materials.	Retention: See Disposition. Disposition: Dispose of in accordance with the approved disposition instructions for the related subject individual's record, 4 years after final determination or 3 years after final adjudication by courts, whichever is later.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
OFFICE MANAGEMENT RECORDS	AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
5.	Privacy Act Accounting of Disclosure Files. Files maintained under the provisions of 5 U.S.C. 552a(2) for an accurate accounting of the date, nature and purpose of each disclosure of a record to any person or to another agency, including forms for showing the subject individual's name, requestor's name and address, purpose and date of disclosure and proof of subject individual's consent when applicable.	Retention: See Disposition. Disposition: Dispose of in accordance with the approved disposition instructions for the related subject individual's records or 5 years after the disclosure for which the accountability was made, whichever is later.
6.	Privacy Act Control Files. Includes records maintained for control purposes in responding to requests, including logs, registers and similar records listing date, nature of request and name and address of requestor.	
	a. Log, Register or Listings.	Retention: Retain 5 years. Disposition: Break files at end of year. Keep in office for 5 years, then destroy.
	b. Other Files.	Retention: See Dispositon. Disposition: Destroy 5 years after final action by EPA or final adjudication by courts, whichever is later.
7.	Freedom of Information Act (FOIA) Request File. Includes copies of incoming requests for information under the Freedom of Information Act, copies of the replies and copies of any intra-agency memoranda concerning the request. Files contain correspondence and supporting document but does not include copy of the document requested.	

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE OFFICE MANAGEMENT RECORDS	COVERAGE OF SCHEDULE AGENCYWIDE	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	a. Granting access to all the requested records.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office for 2 years, then destroy.
	b. Responding to requests for nonexistent records; to requestors who provide inadequate descriptions and to those who fail to pay agency reproduction fees.	
	(1) Request not appealed.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office for 2 years, then destroy.
	(2) Request appealed.	Retention: See Disposition. Disposition: Destroy 4 years after final determination by agency or 3 years after final adjudication by courts, whichever is later. (See Appendix C, Schedule 4, Item 4).
	c. Other Copies.	Retention: Retain 1 year. Disposition: Break file at end of year. Keep in office for 1 year, then destroy.
8.	FOIA Control Files. Includes logbooks and other records used for control purposes which show the receipt date, date of reply, office of referral, payment receipt, nature and purpose of request, name and address of requestor and other processing information concerning FOIA requests.	
	a. Logbooks, registers or listing.	Retention: Retain 5 years. Disposition: Break file at end of year. Keep in office for 5 years, then destroy.
	b. Other Files.	Retention: See Disposition. Disposition: Destroy 5 years after final action or after final adjudication by courts, whichever is later.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: OFFICE MANAGEMENT RECORDS

COVERAGE OF SCHEDULE: AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
9.	Reading or Chron Files. Includes unofficial copies of all correspondence and memoranda prepared by an office, filed chronologically and kept for convenient office reference. (Reference copies only.)	Retention: Retain current plus 1 year. Disposition: Keep in office current plus 1 additional year, then destroy.
10.	Travel Expense Files. Includes reference copies of travel records used to account for employees while on travel status, and to request reimbursement or balance due on travel funds authorized. Records consist of travel authorization record, travel advance applications, transportation requests, travel voucher copies, reimbursement claim copies, copies of hotel, meal, and other expense receipts and related correspondence. (Reference copies only.)	Retention: Retain 2 years. Disposition: Break file each year. Keep in office for 2 years, then destroy.
11.	Personnel Reference Files. Includes reference copies of personnel records maintained at the supervisory level. Records consist of copies of personal qualifications statements, position descriptions, personnel action forms, performance evaluations, and other related records (Reference copies only.)	Retention: Retain until separation or termination of employment. Disposition: Keep in office until separation or termination of employment, then destroy.
12.	Employee Training Files. Includes reference copies of employee training records, maintained at the supervisory level. Records consist of training request, authorization, and record forms, nomination forms, interagency training agreement forms, and other related correspondence and records. (Reference copies only.)	Retention: Retain current plus 1 year. Disposition: Keep in office current plus 1 additional year, then destroy.
13.	Requests/Requisitions for Supplies or Services. Includes reference copies of requests for office services or supplies, printing, etc. Records consist of procurement requests/requisition forms, requests for duplicating or printing, building/labor services, machine requests, and other related records. (Reference copies only.)	Retention: Retain current plus 1 year. Disposition: Keep in office current plus 1 additional year, then destroy.
14.	Office Equipment Service Contracts File. Includes reference copies of service agreements for office equipment maintenance, or other contractual agreements for office services. (Reference copies only.)	Retention: Retain until obsolete or superseded. Disposition: Keep in office until obsolete or superseded by new agreement, then destroy.

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RECORDS MANAGEMENT MANUAL

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: OFFICE MANAGEMENT RECORDS

COVERAGE OF SCHEDULE: AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
15	EPA Directives. Includes copies of all issuances of the Agency directives systems, used by operating personnel as a reference to Agency policies and procedures. Includes all orders, manuals, notices, and other official issuances. (Reference copies only.)	Retention: Retain until obsolete or superseded. Disposition: Keep current in office until obsolete or superseded, then destory.
16	Timekeeper's Records. Includes records maintained by timekeepers at the supervisory level to account for employees' time for pay and other purposes. Records consist of copies of Time and Attendance Reports and copies of all supporting report forms, including logs used to make original entries of hours worked and leave expended. (Reference copies only.)	Retention: Retain current plus 1 additional year. Disposition: Keep in office current plus 1 additional year, then destroy.
17	Application for Employment -- Persons Not Hired. Includes personal qualifications statement, interview records, and other records used in recruitment and selection of persons considered for employment. (Reference copies only.)	Retention: Retain 2 years. Disposition: Keep in office for 2 years, then destroy providing all equal employment opportunity requirements have been met.

U.S. ENVIRONMENTAL PROTECTION AGENCY--RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS

COVERAGE OF SCHEDULE: AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	Program Management File. Records relating to development, management, and evaluation of assistance agreements.	
	a. Policy and regulations which establish and implement operational procedures for the administration of assistance agreements.	Retention: Permanent. Disposition: Break file when material has been superseded or cancelled. Keep in office 2 years, then transfer to the FRC. Keep in FRC 10 years, then offer to the National Archives.
	b. General administrative correspondence pertaining to normal day-to-day activities of the Grants Administration Division.	Retention: Retain 2 years. Disposition: Break file at end of 1 year. Keep in office 2 years and then destroy.
	c. Inquiries Files.	
	(1) Congressional.	Retention: Retain 2 years. Disposition: Break files at end of 1 year. Keep in office 2 years and then destroy.
	(2) Controlled.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office 2 years and then destroy.
	(3) Uncontrolled.	Retention: Retain 1 year. Disposition: Break file at end of year. Keep in office 1 additional year, then destroy.
2.	Administrative Reports and Data Relating to Assistance Agreements.	Retention: Retain 4 years. Disposition: Break file at end of year. Keep in office 1 year, then transfer to the FRC. Destroy when 4 years old.

EPA Form 1340-7 (2-88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS	COVERAGE OF SCHEDULE AGENCYWIDE	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
3.	Regulations, Standards, and Guidelines. Contains information relating to the development of rules and regulations used for the management and processing of assistance agreements. Records consist of drafts of proposed regulations and guidelines, internal comments, journal articles and other supporting literature, proposed rules, response to proposals, EPA press releases, newspaper clippings, etc.	Retention: Permanent. Disposition: Break file upon final publication in the Federal Register. Keep in office 1 year, then transfer to the FRC. Keep in FRC 15 years, then offer to the National Archives in 5 year blocks.
4.	Deviation Requests. Includes requests for deviation from established assistance policies and procedures submitted by award officials.	Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 4 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file at end of year. Keep in office 1 year, then transfer to the FRC. Destroy when 4 years old. c. Microform Copy (Working Copy). Destroy when no longer needed.
5.	Assistance Agreement Files. Includes records that document all significant actions and decisions having to do with the application and resulting agreement. Consist of application phase, preaward review, funding decision, award documentation, active projects, non-compliance/disputes, closeout of completed agreements/projects and audit. a. EPA Assisted Activities (Research, Demonstration, Training, Fellowship, Investigation, Surveys, or Studies, etc). Agreements administered by Headquarters Grants Operations Branch or by Regional Office by specific program delegation.	Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 4 years.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS	AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	b. Continuing Environmental Program Support Agreements. Agreements administered by Regional Offices.	Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 4 years old. c. Other Microform Copies. Destroy when no longer needed. PAPER RECORD SYSTEM Retention: Retain 4 years. Disposition: Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 4 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 4 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 4 years old. c. Other Microform Copies. Destroy when no longer needed.

EPA Form 1340-7 (2 88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS	AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	c. Waste Water Construction Grant Agreements. Agreements administered by Regional Offices/States.	PAPER RECORD SYSTEM Retention: Retain 20 years. Disposition: Break file following physical and administrative completion immediately after closeout of the agreement, then transfer to the FRC. Destroy when 20 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion of microform has been completed. b. Microform Copy (Official Record Copy). Retain 20 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file following physical and administrative completion immediately after closeout of the agreement, then transfer to the FRC. Destroy when 20 years old. c. Other Microform Copies. Destroy when no longer needed.

EPA Form 1340-7 (2-88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS	COVERAGE OF SCHEDULE AGENCYWIDE	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	d. Superfund Remedial Planning and Implementation Agreements. Agreements administered by Regional Offices.	PAPER RECORD SYSTEM Retention: Retain 20 years after completion of all cost-recovery litigation. Disposition: Break file immediately after close-out of the agreement, then transfer to the FRC. Destroy when 20 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 20 years after completion of all cost-recovery litigation. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 20 years old. c. Other Microform Copies. Destroy when no longer needed.
6.	Interagency Agreements File. Record copies of agreements with other Federal, State, and local government agencies providing for program assistance or support or other sharing of agency resources and services. Includes copy of agreement, commitment notice, transmittal, and justification and cost estimate. May also include scope of work, correspondence, and other supporting papers.	Retention: Retain 6 years. Disposition: Break file upon termination of agreement. Keep in office 1 year, then transfer to the FRC. Destroy when 6 years old.

TITLE OF SCHEDULE: ASSISTANCE AND INTERAGENCY AGREEMENT RECORDS

COVERAGE OF SCHEDULE: AGENCYWIDE

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
7.	Recipient/Contractor Debarment and Suspension Records. Documents relating to investigations of contractors and recipients for debarment or suspension from contracting with or receiving assistance from the Federal Government. Includes copies of Inspector General reports, attorney recommendations for actions, notifications to respondents, respondents' submissions, hearing transcripts, briefs and motions, final determinations, and settlement agreements for debarment and suspension cases per 48 CFR Subpart 9.4 and 40 CFR Part 32, and other related documents.	
	a. Case File.	Retention: Retain 6 years and 3 months. Disposition: Break file after case is closed, period of debarment or voluntary exclusion is completed or all provisions of the settlement agreement have been completed, whichever is last. Keep in office 3 months, then transfer to the FRC. Destroy when 6 years and 3 months old.
	b. Other Records.	Retention: See disposition below. Disposition: Destroy when no longer needed for reference.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: REGIONAL ADMINISTRATOR AND STAFF OFFICES

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	Regional Administrator's Program Development File. Contains information related to the development of Regional environmental programs and policies. Records consist of reports on Regional environmental projects, surveys, special studies, position papers, legislation, enforcement actions, and other program documents related to water, air, pesticide, toxic, and hazardous materials, enforcement, and environmental services programs. Records used by Regional Administrator in policy evaluation and program planning.	Retention: Permanent. Disposition: Break file at end of year. Keep in office for 3 years, then transfer to the FRC. Keep in FRC for 10 years, then offer to the Regional Archives.
2.	Regional Administrator's Correspondence File. Contains copies of all program documents that the Regional Administrator is required to sign and approve. File arranged by program division, then chronologically. Also includes copies of correspondence originated by the Regional Administrator himself.	Retention: Retain 5 years. Disposition: Break file at end of each year. Keep in office current plus 1 additional year, then transfer to the FRC. Destroy when 5 years old.
3.	Regional Administrator and Deputy Administrator's Program Management File. Contains information used in the internal administration and management of the Regional environmental programs. Records consist of internal budget documents, personnel planning records, program reports and statistics, delegations of authority, and other related records.	Retention: Retain 10 years. Disposition: Break file at end of year. Keep in office 2 years, then transfer to the FRC. Destroy when 10 years old.
4.	Continuing Environmental Program Support Agreements Administered by Regional Offices. Agreements administered by Regional Offices.	Retention: Retain 4 years. Disposition: Break file immediately after close-out of the agreements, then transfer to the FRC. Destroy when 4 years old.
5.	Public Affairs News Releases File. Contains copies of all news releases from the Regional Office.	Retention: Permanent. Disposition: Break file at end of each year. Keep in office 3 years, then transfer to the FRC. Keep in FRC for 10 years, then offer to the Regional Archives.

EPA Form 1340-7 (2 68)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
REGIONAL ADMINISTRATOR AND STAFF OFFICES	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
6.	Public Affairs Program Reference File. Contains records used in the public information activities of the Regional Office. Records consist of biographical information on EPA officials, documents on program activities sent from the program divisions, reports on major program and policy developments, and other records used in formulating news releases.	Retention: Retain 3 years. Disposition: Break file at end of each year. Keep in office 3 years, then destroy.
7.	Congressional Inquiries File. Contains copies of congressional correspondence received and referred to the program offices for reply. Includes copies of response.	Retention: Retain 5 years. Disposition: Break file at end of Congressional session. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
8.	Regional Program Planning File. Contains records used in organizational planning and management studies and surveys related to the Regional Office. Records consist of management surveys, organizational and functional statements, program planning monthly and quarterly status reports, resources management surveys and reports, and other related records.	Retention: Retain 3 years. Disposition: Break file at end of each year. Keep in office 3 years, then destroy.
9.	Environmental Impact Statement Preparation File. Contains information related to the in-house preparation of environmental impact statements by the Regional Office staff. Also, includes those statements prepared by consultants for EPA. Records consist of manuscript drafts of statements, notices of intent, correspondence with citizens groups, news clips, comments on the draft made by all interested parties, transmittal letters, manuscript for final statement, and comments on final statement. May also include copies of environmental assessments, special studies, and other supplementary material created in the course of statement preparation.	Retention: Permanent. Disposition: Break file upon preparation of final statement and record of decision. Keep in office 4 years, then transfer to the FRC. Keep in FRC for 10 years, then offer to the Regional Archives.
10.	Environmental Impact Statement Coordination File. Contains documents used in review and coordination of Regional Office comments on projects that may impact on the environment. Project categories include transportation, urban renewal, water resources, energy development, and Federal land use plans. Includes copies of printed draft statement and printed final and correspondence. May also include news clips or other materials relating to the environmental impact statement.	Retention: Permanent. Disposition: Break file upon preparation of final statement. Keep in office 5 years or until completion of project, whichever is earlier, then transfer to the FRC. Keep in FRC for 20 years, then offer to the Regional Archives.

EPA Form 1340-7 (2 88)

TITLE OF SCHEDULE
REGIONAL ADMINISTRATOR AND STAFF OFFICES

COVERAGE OF SCHEDULE
REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
11.	Section X/404 Public Notices File. Contains information concerning the potential environmental impact of proposed projects. Projects involve disposal of fill material or dredged material into the waters of the U.S. as well as dredging and structure done in water declared navigable by Corps of Engineers. Records consist of a copy of Notice, a description of the project plans, EPA evaluation on the environmental impact of the proposed project, and EPA comments, recommendation, or denial of the project.	Retention: Retain 5 years. Disposition: Break file upon completion of review and comments. Keep in office for 5 years, then destroy.
12.	Federal Facilities Monitoring File. Contains information used to monitor the environmental controls in use at installations and facilities operated by the Federal Government, including military installations. Monitoring includes both air and water program areas. Records consist of correspondence with the facilities, survey reports showing inventory of pollution control equipment in use at the facilities, nature and location of pollution discharge, and other factors.	Retention: Retain 5 years. Disposition: Break file each year. Keep in office 5 years, then destroy.
13.	Federal Facilities NPDES Permit Working File. Contains information used in granting permits to Federal facilities permitting them to discharge pollutants into the water. Permits issued under the National Pollution Discharge Elimination System (NPDES). Records consist of permit application, correspondence with Corps of Engineers and applicant, copy of public notice, summary report and permit copy.	Retention: Destroy upon expiration and reissuance of permit. Disposition: Break file upon issuance of permit. Keep in office until expiration of permit, then destroy.
14.	Freedom of Information Response File. Includes copies of incoming requests for information under the Freedom of Information Act, copies of replies, and copies of any interagency memoranda concerning the request. Note: This file does not contain the Program's official record of information being requested.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office current plus 1 additional year. Destroy when 2 years old.
15.	Speeches by Regional Administrator, Deputy Regional Administrator, or Staff. Speeches prepared for delivery at civic functions and professional conferences and meetings.	Retention: a. Record Copy. Permanent. b. Information Copies. Retain 1 year.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
REGIONAL ADMINISTRATOR AND STAFF OFFICES	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		Disposition: a. Record Copy. Break file after presentation. Keep in office 5 years, then transfer to the FRC. Keep in FRC for 5 years, then offer to the National Archives when 10 years old. b. Information Copies. Destroy when 1 year old or sooner if no longer needed.

EPA Form 1340-7 (2-88)

RECORDS MANAGEMENT MANUAL

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	State Implementation Plans File. Record copies of plans developed by each State for the attainment and maintenance of national ambient air quality standards, as required by Section 110 of the Clean Air Act, as amended. Plans approved by Regional offices. Records consist of plan and amendments, public and industry comments, public hearing documents, compliance schedules, status reports, transportation control documents, Section 307 lawsuit documents, contracts, program reports, and other related records.	PAPER RECORD SYSTEM Retention: Permanent. Disposition: Break file as plans are revised or superseded. Keep in office 1 year, then transfer to the FRC. Keep in FRC 20 years, then offer to the Regional Archives. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Permanent. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Offer to NARA when 20 years old silver halide microfilm plus one silver, diazo, or vesicular duplicate. Transfer certified microfilm in cubic foot blocks to FRC pending offer to NARA. c. Other Microform Copies. Destroy when no longer needed.
2.	Continuing Environmental Program Support Agreements. Agreements administered by Regional Offices.	PAPER RECORD SYSTEM Retention: Retain 4 years. Disposition: Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 4 years old.

EPA Form 1340-7 (2 88)

TITLE OF SCHEDULE
AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE
REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 4 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file immediately after closeout of the agreement, then transfer to the FRC. Destroy when 4 years old. c. Other Microform Copies. Destroy when no longer needed.
3.	Environmental Impact Statement Review and Comment File. Contains information related to the potential impact of proposed projects on the environment. Used by all air and hazardous materials programs to prepare EPA comments on the projects. Records consist of manuscript work papers used as input to printed draft and final statement, and other related records.	Retention: Retain 5 years. Disposition: Break file upon preparation of final statement. Keep in office 1 year, then transfer to FRC. Destroy when 5 years old.
4.	Air Quality Modeling Printouts. Printouts showing ambient air quality data collected at air pollution monitoring stations. Used as planning models to determine necessary changes in State Implementation Plans or air quality regulations.	Retention: Retain 5 years. Disposition: Break file upon completion of modeling study. Keep in office 5 years, then destroy.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE

AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE

REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
5.	Safety Analysis Reports. Consist of nuclear plant construction and process design reports received from NRC and DOE and reviewed and approved by EPA. Reports consist of preliminary or initial report, changes to report, and final report.	Retention: a. Initial Report and Changes. Retain until receipt of final report. b. Final Report. See Disposition below. Disposition: a. Initial Report and Changes. Destroy upon receipt of final report. b. Final Report. Keep in office until superseded, then destroy.
6.	Technical Program Reference File. Contains information on nuclear facilities and regulations. Used for reference. Records consist of printed technical documents, work papers, and other reference materials concerning nuclear power plants and facilities.	Retention: As below. Disposition: Review in office every 2 years, retaining files with continuing reference value and disposing of other materials.
7.	Pesticide Producing Establishments Registration File. Contains records used to register companies that manufacture pesticides, as required by Section 7 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Records consist of applications for registration, reports submitted by pesticide producing establishments, certified mail receipts, and related correspondence.	Retention: Retain 10 years. Disposition: Break file upon termination of registration. Keep in office for 3 years, then transfer to the FRC. Destroy when 10 years old.
8.	Pesticide Producing Establishments Printouts. Computer printout reports showing pesticide establishments data transferred from producers annual reports. Reports show data concerning the kind and amount of pesticides being manufactured by the establishments.	Retention: Retain 1 year. Disposition: Keep in office 1 year after superseded by annual update, then destroy.
9.	Pesticides Compliance File. Contains information used to determine compliance of pesticide products with regulations. Records consist of collection reports submitted from field inspectors, notice of inspection, receipt for sample, report of analysis, copy of sample label, copy of accepted label, history of official sample, and acceptance letters.	Retention: Retain 5 years. Disposition: Break file at end of year. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.

EPA Form 1340 7 (2 88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
10.	Pesticides Investigation Case File. Contains information concerning the alleged misuse or accidental uses of pesticides. Incidents of accident and misuse are investigated by pesticides staff and referred to legal staff for legal action if necessary. Records consist of pesticide accident report or report of investigation, gross analytical diagnosis, hospital report and supporting papers, correspondence, and other related records.	Retention: Retain 5 years. Disposition: Break file upon closing of case. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
11.	Pesticide Chemicals Reference File. Contains information concerning the chemical properties and composition of pesticide products. Used for reference. Includes technical data on the pesticides, testing methods, and other related materials.	Retention: As below. Disposition: Review in office every 2 years, retaining files with continuing reference value and disposing of other materials.
12.	Pesticides State Agency Reference File. Contains information concerning pesticides programs operated by State agencies, universities, agricultural extension services, and other agencies. Records consist of correspondence, copies of legislation, annual reports, technical documents, and other related records.	Retention: Retain 5 years. Disposition: Break file at end of year. Keep in office 5 years, then destroy.
13.	Transportation Control Plans Working File. Contains information used in developing plans to achieve national ambient air quality standards through a reduction of vehicle miles of travel. Transportation Control Plans are incorporated in the State Implementation Plans. Records consist of systems planning information, work programs, studies, employer incentive plans, strategy papers, copies of emission standards, and other related records.	Retention: Retain 7 years. Disposition: Break file upon completion of plans. Keep in office 3 years, then transfer to the FRC. Destroy when 7 years old.
14.	Section 109(j) Consistency Reports File. Includes annual reports used in determining the consistency of long-range transportation plans with State Implementation Plans, as required by Section 109(j) of the Federal Aid Highway Act. Records consist of consistency reports, correspondence, staff comments, and revised reports.	Retention: Retain 10 years. Disposition: Break file upon completion of review and comments. Keep in office 5 years, then transfer to the FRC. Destroy when 10 years old.
15.	Energy Coordination Program Reference File. Contains information relative to the development and implementation of Federal energy legislation and programs. Records consist of copies of legislation, fuel availability data, news articles, correspondence, technical documents, and other related records.	Retention: Retain 10 years. Disposition: Break file every 5 years. Keep in office 5 years, then transfer to the FRC. Destroy when 10 years old.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE AIR AND HAZARDOUS WASTE PROGRAM RECORDS	COVERAGE OF SCHEDULE REGIONAL OFFICES	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
16.	Special Studies File. Documents relating to the development of special studies for all air and hazardous materials programs. Includes studies and surveys done in-house as well as those done on contract. Records consist of contractor and grantee proposals, procurement requests, task orders, bid evaluation, award notices, payment records, progress reports, and project work papers.	Retention: Retain 7 years. Disposition: Break file upon completion of study. Keep in office 1 year, then transfer to the FRC. Destroy when 7 years old.
17.	Final Reports Resulting from Special Studies. Includes printed final reports of special studies and surveys for all air and hazardous materials programs.	Retention: a. Record Copy. Permanent. b. Information Copies. Retain 2 years. Disposition: a. Record Copy. Break file upon completion of study. Keep in office 1 year, then transfer to the FRC for 20 years, then offer to the Regional Archives. b. Information Copies. Destroy when 2 years old or sooner if no longer needed for reference.
18.	Program Management Files. Contains records pertaining to policy and program development of all air, pesticide and toxic, and hazardous materials programs. Records consist of correspondence and reports relative to policy and programs, interagency activity, research, manpower planning, and other related materials.	Retention: Retain 10 years. Disposition: Break file at end of 2 years. Keep in office 2 years, then transfer to the FRC. Destroy when 10 years old.
19.	State Hazardous Waste Program File. Includes records that document a State operated hazardous waste program. Records consist of application requests to operate the State program in lieu of the Federal program (background and supporting documentation), review and evaluation of State application, authorization to State, evaluation and oversight of State program and related correspondence between EPA and the State, cooperative arrangement between State and EPA where authorization has not been given to a State, monitoring of grant expenditures by State, guidance to State on Federal financial requirements, and advice to State to add or delete a hazardous waste from the list of hazardous wastes.	Retention: Retain 5 years. Disposition: Break file when program is discontinued. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
20.	Hazardous Waste Technical Material. Contains technical material relating to hazardous wastes, standards for generators, transporters, and owners/operators of treatment, storage, and disposal facilities, which are used in technical evaluations. Records consist of technical reference publications, manuals, and other technical materials.	Retention: Retain until superseded. Disposition: Break file when superseded. Keep in office 1 year, then destroy.
21.	RCRA Training Material. Contains records used by Regional personnel to conduct training programs for State personnel. Records consist of instructional materials, participant rosters, manuals, and other training aids and materials.	Retention: Retain until superseded. Disposition: Break file when material is superseded. Keep in office 1 year, then destroy.
22.	State Solid Waste Management Plans. Includes records that document a State Solid Waste Management Plan for closing existing or upgrading open dumps. Records consist of a copy of the proposed State Solid Waste Management Plan, review and evaluation of plan, correspondence between the State and EPA, public notice announcing receipt of plan, public comments, public notice announcing approval of plan, copy of approved plan, and other related records.	Retention: Retain 5 years. Disposition: Break file when State program is discontinued. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
23.	Hazardous Site File. a. Contains documentation of policy and decision made by Headquarters and Regional personnel concerning the cleanup of uncontrolled hazardous waste sites. Records include correspondence between the Region and Headquarters and other Federal agencies, priority list for cleanup of hazardous waste sites, reports, approval of design and engineering of waste containment/remedial system, requests from Region for additional money to continue cleanup operations, and other related records. Includes index (paper and microform).	PAPER RECORD SYSTEM Retention: Permanent. Disposition: Break file upon completion of all cost-recovery litigation. Keep in office 2 years, then transfer to the FRC. Offer in 5 year blocks to NARA when 20 years old.

EPA Form 1340 7 (2 88)

TITLE OF SCHEDULE
AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE
REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy. Permanent. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy. Break file upon completion of all cost-recovery litigation. Keep in office 2 years, then transfer to the FRC. When 20 years old, offer to NARA in 5 year blocks. c. Other Microform Copies. Destroy when no longer needed.
	b. Contains documentation and information concerning the remedial investigations and feasibility studies of uncontrolled hazardous waste (Superfund) sites. Records include contractor notebooks of field observations, calculations, maps, photographs, drawings, supporting documentation, draft and final reports used in the investigation and choice of a remedial action at a Superfund site. Includes indexes (paper and microform).	PAPER RECORD SYSTEM Retention: Permanent. Disposition: Break file upon completion of all cost-recovery litigation. Keep in office 2 years, then transfer to the FRC. Offer in 5 year blocks when 20 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy. Permanent.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		Disposition: a. Paper Records that have been microfilmed. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy. Break file upon completion of all cost-recovery litigation. Keep in office 2 years, then transfer to the FRC. When 20 years old, offer to NARA in 5 year blocks. c. Other Microform Copies. Destroy when no longer needed. d. Paper records that have not been microfilmed. Permanent. Keep in office 2 years, then transfer to FRC. Offer to NARA in 5 year blocks when 20 years old.
24.	Cooperative Agreements. Contains records used in the development of a cooperative agreement between EPA and a State to take action to cleanup an uncontrolled hazardous waste site pursuant to Section 104(C)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act. Records consist of application for assistance, State plan for responding to hazardous waste incident, correspondence between the State and EPA concerning the agreement, evaluation of application, copy of approved agreement, claims submitted by State for reimbursement, audit of State claims, reports, and other related records.	Retention: Retain 20 years after completion of all cost-recovery litigation. Disposition: Break file upon completion of all cost-recovery litigation. Keep in office 4 years, then transfer to the FRC. Destroy when 20 years old.
25.	Priority List for Cleanup of Hazardous Waste Sites. Contains records used to develop a priority list of uncontrolled hazardous waste sites that pose an imminent threat to the public health or welfare or environment. Records consist of State list of priorities, correspondence documenting coordination between EPA and the State regarding ranking of sites, documentation of verification by Region that documentation supporting the site scores exists in State or Regional files, Regional list of priorities, copy of worksheet for each facility scored by the Region/State, summary document for each site describing the site conditions or problems, document that specifies the enforcement status for each candidate site, and other related records.	Retention: Retain 20 years after completion of all cost-recovery litigation. Disposition: Break file upon completion of all cost-recovery litigation. Keep in office 4 years, then transfer to the FRC. Destroy when 20 years old.

TITLE OF SCHEDULE: AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
26.	Claims. Contains records used to document the settlement of claims filed against the Fund under Section 112(a) of the Comprehensive Environmental Response, Compensation, and Liability Act. Records consist of the official claim, determination by the Agency that the claimant had been given preauthorization to respond to the hazardous waste incident, EPA's official notification to responsible parties of the claim, documentation of the attempts and arrangement to settle the claim between the responsible parties and the claimant, verification that the claimant did take the action to cleanup the hazardous waste incident, determination by the Agency that the claim is not a duplicate or fraudulent claim, documentation of claim submitted to Board of Arbitrators when claim cannot be settled, and a copy of the agreement of the final settlement of the claim.	Retention: Retain 5 years. Disposition: Break file upon settlement of claim/completion of cost-recovery actions. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
27.	Prevention of Significant Air Quality Deterioration (PSD) Non-applicability Files. Contains records that document the decisions relating to the PSD Non-applicability determination. Records consist of source data and request for non-applicability determination, related correspondence between State and EPA, technical evaluations and EPA determination.	PAPER RECORD SYSTEM Retention: Retain 5 years. Disposition: Break file upon issuance of non-applicability determination. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 5 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy.

TITLE OF SCHEDULE
AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE
REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
28.	Prevention of Significant Air Quality Deterioration (PSD) Permit Files. Contains records used in issuance of air pollution permits under the Prevention of Significant Air Quality Deterioration (PSD) Program. Permits issued to municipal, State, industrial and Federal air pollution permit; correspondence with applicant and State agency; technical support document; copy of the final determination; and copy of the final PSD permit with conditions. Also, includes copies of permit revisions, extensions, and other related records. Note: PSD files on sources which have been closed or which have not emitted pollutants for a period of five years may be retained if the potential for air pollutant emissions has not been eliminated, i.e., process equipment for facilities have not been dismantled or removed from the site.	b. Microform Copy (Official Record Copy). Break file upon issuance of non-applicability determination. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed. PAPER RECORD SYSTEM Retention: Retain 5 years. Disposition: Break file when facility ceases to be operable as permitted or is permanently shut down. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 5 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file when facility ceases to be operable as permitted or is permanently shut down. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed.

TITLE OF SCHEDULE

AIR AND HAZARDOUS WASTE PROGRAM RECORDS

COVERAGE OF SCHEDULE

REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
29.	State Prevention of Significant Air Quality Deterioration (PSD) Program Files. Contains records that document a State-operated PSD permitting program. Records consist of the permit application; State's technical evaluation, preliminary determination and recommendation to EPA; EPA comments, public notice, public comments; final PSD permit with conditions; and related documents.	PAPER RECORD SYSTEM Retention: Retain 5 years. Disposition: Break file when facility ceases to be operable as permitted or is permanently shut down. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 5 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness. b. Microform Copy (Official Record Copy). Break file when facility ceases to be operable as permitted or is permanently shut down. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed.
30.	Medical Records Containing Tissue Samples Data. Includes copy of death certificate, pathology laboratory results, autopsy reports, plutonium assay results for liver and lung tissues, consent form for the use of the tissues in the study, results of telephone interviews with persons who knew the deceased, and letters from the investigators to the physician, friends, and relatives of the deceased.	Retention: Retain 50 years. Disposition: Break file upon completion of study. Keep in office 1 year, then transfer to the FRC. Destroy when 50 years old.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: ENFORCEMENT RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	NPDES Permits File. Contains records used in issuance of pollution discharge permits under the National Pollution Discharge Elimination System (NPDES) program. Permits issued to municipal, industrial, agricultural, and Federal facility dischargers by EPA Regional Offices or authorized state agencies. Records consist of application for permit; correspondence with applicant, Corps of Engineers, and certifying agency; copy of public notices and comments; public hearing requests; copy of summary reports and permit rationale; and permit copy.	PAPER RECORD SYSTEM Retention: Retain 5 years. Disposition: Break file when facility ceases to operate or emit pollution. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain 5 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. b. Microform Copy (Official Record Copy). Break file when facility ceases to operate or emit pollution. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed.
2.	RCRA Permit File. Contains records used in the issuance or denial of a permit to an owner/operator of a facility that treats, stores, or disposes of hazardous wastes under the Resource Conservation and Recovery Act (RCRA) Program. Records consist of the notification form, application for permit (Parts A and B), background and supporting documentation, public notice (FR document) announcing receipt of application, comments and records of public meeting, tentative determination to issue/deny permit, statement of basis	PAPER RECORD SYSTEM Retention: Retain 5 years. Disposition: Break file when facility ceases to operate or emit pollution. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.

EPA Form 1340-7 (2 88)

TITLE OF SCHEDULE: ENFORCEMENT RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
	for minor facility or fact sheet for major facility, public notice (FR document) announcing FPA approval or denial of permit, comments and records of public hearing, copy of permit, exception reports, closure and post-closure actions, copy of inspection reports, compliance reports, manifests, delisting of hazardous waste(s), correspondence between EPA and the permittee, copy of liability insurance policy or document providing evidence of financial responsibility, records and documentation relating to changes during interim status, and other related records.	MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Break file when facility ceases to operate or emit pollution. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed.
3.	Notifications Excluding Treatment, Storage, or Disposal. Contains copy of notification, correspondence between the notifier and EPA, revised notification form, and other appropriate records.	Retention: Retain 3 years. Disposition: Break file when determination has been made that information is not needed. Keep in-office 3 years, then destroy.
4.	Compliance Files - All Pollution Sources. Contains records used to determine compliance with pollution regulations and to recommend legal enforcement actions if necessary. Specific documents vary from source to source and program to program, but generally include copies of compliance schedules, permit revisions, monitoring or compliance reports, applications for compliance schedules and requests for schedule waiver or modification. If source appears to be out of compliance, file will include letters requesting additional information from the source, technical evaluation reports by Regional Office, and recommendations for legal action against the source to enforce compliance.	PAPER RECORD SYSTEM Retention: Retain current plus 5 years. Disposition: Break file each year. Keep in office 5 years, then destroy. MICROGRAPHIC RECORD SYSTEM Retention: a. Paper Records. Retain until conversion to microform has been completed. b. Microform Copy (Official Record Copy). Retain current plus 5 years. Disposition: a. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE ENFORCEMENT RECORDS	COVERAGE OF SCHEDULE REGIONAL OFFICES	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		b. Microform Copy (Official Record Copy.) Break file when facility ceases to operate or emit pollution. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. c. Other Microform Copies. Destroy when no longer needed.
5.	Enforcement Action Case Files - All Pollution Programs. Includes all cases referred to Legal staff from all program offices for legal action against a pollution source or discharger. Document contents vary from program to program but generally includes records used to determine compliance (item 4 above) and in addition: memos or transcripts documenting informal meetings with officials of pollution sources, pre-consent order correspondence, briefing memos, final consent orders, and court documents including briefs, pleadings, judgment documents, and appellate documents.	PAPER RECORD SYSTEM Retention: a. No Legal Action Required. Retain 5 years. b. Routine Legal Actions. Retain 20 years. c. Landmark Cases. Permanent (EPA Administrator designates actions as landmark or precedent cases.) Disposition: a. No Legal Action Required. Break file after settlement or closing of case. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. b. Routine Legal Actions. Break file after settlement or closing of case. Keep in office 2 years, then transfer to the FRC. Destroy when 20 years old. c. Landmark Cases. Break file upon settlement or closing of case. Keep in office 5 years, then transfer to the FRC. Keep in FRC 15 years, then offer to the FRC. Keep in FRC 15 years, then offer to the Regional Archives. MICROGRAPHIC RECORD SYSTEM Retention: a. No Legal Action Required. 1. Paper Records. Retain until conversion to microform has been completed. 2. Microform Copy (Official Record Copy). Retain 5 years.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE ENFORCEMENT RECORDS	COVERAGE OF SCHEDULE REGIONAL OFFICES	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		b. Routine Legal Actions. 1. Paper Records. Retain until conversion to microform has been been completed. 2. Microform Copy (Official Record Copy). Retain 20 years. c. Landmark Cases. 1. Paper Records. Retain until conversion to microform has been completed. 2. Microform Copy (Official Record Copy). Permanent. Disposition: a. No Legal Action Required. 1. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. 2. Microform Copy (Official Record Copy). Break file after settlement or closing of case. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old. 3. Other Microform Copies. Destroy when no longer needed. b. Routine Legal Actions. 1. Paper Records. Keep in office until conversion to microform has been completed and microform has been verified for completeness, then destroy. 2. Microform Copy (Official Record Copy). Break file after settlement or closing of case. Keep in office 2 years, then transfer to the FRC. Destroy when 20 years old. 3. Other Microform Copies. Destroy when no longer needed.

EPA Form 1340-7 (2 88)

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		c. Landmark Cases. 1. Paper Records. Keep in office until conversion to microform has been completed and microform is verified for completeness, then destroy. 2. Microform Copy (Official Record Copy). Offer to NARA when 20 years old silver halide microfilm plus one silver, diazo, or vesicular duplicate. Transfer certified microfilm in cubic foot blocks to FRC pending offer to NARA. 3. Other Microform Copies. Destroy when no longer needed.
6.	Rapid Tax Amortization File. Contains records used to grant Federal tax deductions to facilities that have installed pollution control equipment and devices. Records consist of applications, state certifications, technical review by Regional Office, legal review by Regional Office, Federal certification, and related correspodence.	Retention: Retain 7 years. Disposition: Break file upon Federal certification. Keep in office 2 years, then transfer to the FRC. Destroy when 7 years old.
7.	Public Hearings File. Contains records used in conducting public hearings at which interested groups comment on proposed indirect sources regulations, compliance schedules, and transportation control regulations. Records consist of citizen and congressional inquiries, administrative documentation arranging the hearing, public notice of hearing, and copy of hearing transcript, RCRA permit, 404(c), NPES.	Retention: Permanent. Disposition: Break file upon completion of hearing. Keep in office until all required action items have been completed, then transfer to the FRC. Keep in FRC 10 years, then offer to the Regional Archives.
8.	Adjudicatory Hearings File. Contains records used in conducting hearings in which issues of fact concerning regulation enforcement are decided. Records consist of administrative documents arranging hearing, public notices of hearings, prehearing transcripts, Administitrative Law Judge judgment orders, transcript of hearing, all exhibits entered, and other related records.	Retention: Permanent. Disposition: Break file upon completion of hearing. Keep in office until all required action items have been completed, then transfer to the FRC. Keep in FRC 10 years, then offer to the Regional Archives.
9.	State Regulations File. Contains copies of State environmental regulations used for reference.	Retention: See Disposition below. Disposition: Destroy when no longer needed for reference.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: ENFORCEMENT RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
10.	State Implementation Plans File. Contains copies of State implementation plans and revisions to plans approved by legal staff.	Retention: See Disposition below. Disposition: Destroy when no longer needed.
11.	Compliance Schedules File. Contains copies of schedules, proposed Federal Register package and final promulgation. Schedules are approved by legal staff and used for reference.	Retention: Retain 5 years. Disposition: Break file upon approval of schedules. Keep in office 5 years, then destroy.
12.	Enforcement and Liability Records. Contains records used to document the liability and financial responsibility of an owner or operator of an uncontrolled hazardous waste site. Records consist of a copy of official notification from the owner/operator of a facility that the facility is in compliance with Section 107(k)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act; documentation of determination by the Agency that the owner/operator of a facility has or has not complied; copy of any Administrative action for judicial review; official notification from owner/operator that financial responsibility has been established consistent with the risks associated with the type of waste at the site; documented verification by EPA that the owner/operator has established appropriate financial responsibility; copy of notification to owner/operator of the facility for the need to adjust financial responsibility, demand letter, referral of case for filing of judicial action; and other related records.	Retention: Retain 20 years after completion of legal and cost-recovery actions. Disposition: Break file upon completion of all legal and cost-recovery actions. Keep in office 2 years, then transfer to the FRC. Destroy when 20 years old.
13.	Legal Reference File. Contains records used by legal staff for reference on legal programs, control strategies, hearing procedures, judicial review environmental legislation, and other reference materials.	Retention: See Disposition below. Disposition: Review in office every year retaining files with continuing reference value and disposing of other materials.
14.	Program Management File. Contains records pertaining to all phases of the development and mangaement of the Regional enforcement program, including permit administration, compliance determination, and legal enforcement actions. Records consist of correspondence and reports relative to policy and programs, manpower and budget, etc.	Retention: Retain 10 years. Disposition: Break file at end of 2 years. Keep in office 2 years, then transfer to the FRC. Destroy when 10 years old.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
ENFORCEMENT RECORDS	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
15.	Enforcement/Compliance Administrative Files. Includes correspondence with States on EPA policy, state implementation plan revisions and comments, state enforcement commitment, and results of State audits.	Retention: Retain 5 years. Disposition: Break file at end of year. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.

EPA Form 1340-7 (2 88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: ENVIRONMENTAL SERVICES PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	Stationary Source Compliance File. Includes stationary source inspection reports showing measurements of emissions, type of equipment installed, efficiency of control equipment operation, and other information used to determine compliance with air pollution regulations. Reports prepared by field inspectors and transmitted to enforcement program for possible legal action.	Retention: Retain 5 years. Disposition: Break file at end of each year. Keep in office 5 years, then destroy.
2.	State and Local Agency Monitoring File. Includes records used to monitor State and local air pollution programs. Records consist of quality assurance reports of State and local ambient monitoring networks, staff reviews and comments on Section 105 grant applications, and audit reports showing performance of the agencies.	Retention: Permanent. Disposition: Break file at end of each year. Keep in office 5 years, then transfer to the FRC. Keep in FRC 15 years, then offer to the Regional Archives.
3.	Citizen Complaints File. Includes copies of complaints and inquiries from citizens on various pollution problems and copies of replies.	Retention: Retain 3 years. Disposition: Break file at end of each year. Keep in office 3 years, then destroy.
4.	Standards and Regulations Review and Comment File. Includes copies of standards and regulations sent from Headquarters programs for review and comment by regional office.	Retention: Retain 2 years. Disposition: Break file upon completion of review and comment. Keep in office 2 years, then destroy.
5.	Oil and Hazardous Materials Facility Files. Includes records resulting from investigations of oil and other hazardous materials spills and records related to spill prevention program.	
	a. Spill Investigation and SPCC Compliance Inspection Reports. Records consist of spill reports and supporting papers showing case history of spills. Used in civil or criminal actions against spiller. Also, includes SPCC plan compliance inspection reports, time extension requests, and other related records.	Retention: Retain 5 years. Disposition: Break file at end of each year or upon termination of case, whichever is applicable. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
	b. SPCC Facility Plans. Records detailing spill prevention program of facilities, submitted to regional offices as required by regulations. Includes plans and amendments prescribed by the Regional Administrator.	Retention: Retain 5 years. Disposition: Break file upon completion of amendment implementation or end of year. Keep in office 5 years, then destroy.

EPA Form 1340-7 (2-88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
ENVIRONMENTAL SERVICES PROGRAM RECORDS	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
6.	NPDES Compliance Monitoring File. Includes inspection reports used to determine compliance with pollution discharge permits issued under the National Pollution Discharge Elimination System (NPDES). Reports forwarded to Enforcement program for legal action if necessary. Field offices maintain copy plus supporting papers including lab analysis records, field log books, calculation notes, permit information, and other records.	Retention: Retain current plus 10 years. Disposition: Break file each year. Keep in office 5 years, then transfer to the FRC. Destroy when 10 years old.
7.	RCRA Compliance Monitoring File. Includes inspection reports used to determine compliance with permits issued to facilities that treat, store, or dispose of hazardous wastes. Reports forwarded to Enforcement program for legal action if necessary. Field offices maintain report copy plus supporting papers including lab analysis records, field log books, calculation notes, permit information, and other records.	Retention: Retain current plus 5 years. Disposition: Break file each year. Keep in office 5 years, then destroy.
8.	Water Quality Stream File. Includes survey inspection reports on water quality of streams and rivers. Data is used to calculate effluent waste load allocations by water planning staff. Field offices maintain report copy plus supporting papers including lab analysis data, working papers, and other related records.	Retention: Retain 10 years. Disposition: Break file upon completion of survey report. Keep in office 10 years, then destroy.
9.	Special Studies File. Documents relating to the development of special studies for all environmental services programs. Includes studies and surveys done in-house as well as those done on contract. Records consist of contractor and grantee proposals, procurement requests, task orders, bid evaluation, award notices, payment records, progress reports, and project work papers.	Retention: Retain 5 years. Disposition: Break file upon completion of study. Keep in office 5 years, then destroy.
10.	Final Reports Resulting from Special Studies. Includes printed final reports of special studies and surveys for all environmental services programs.	Retention: a. Record Copy. Permanent. b. Information Copies. Retain 2 years.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: ENVIRONMENTAL SERVICES PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
		Disposition: a. Record Copy. Break file upon completion of study. Keep in office 1 year, then transfer to FRC. Keep in FRC 20 years, then offer to the Regional Archives. b. Information Copies. Destroy when 2 years old or sooner if no longer needed.
11.	Program Management Files. Contains records pertaining to policy and program development of all environmental services programs. Records consist of correspondence and reports relative to policy and programs, interagency activity, research, manpower planning, and other related materials.	Retention: Retain 10 years. Disposition: Break file at end of 2 years. Keep in office 1 year, then transfer to the FRC. Destroy when 10 years old.
12.	Natural Disaster Assistance File. Includes records conducting damage assessment surveys, as required by Presidential disaster declarations. Records consist of correspondence preliminary damage assessments, damage surveys, interim and final inspection reports, and other related records.	Retention: Retain 5 years. Disposition: Break file upon completion of final inspections for all applicants. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.

EPA Form 1340-7 (2-88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE: WATER PROGRAM RECORDS

COVERAGE OF SCHEDULE: REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
1.	Program Management File. Contains information relating to all phases of program management and planning for the water planning programs. Records include policy and procedure documents, legislative reference materials, program planning reports, budget materials, and other related records.	Retention: Retain 10 years. Disposition: Break file at end of 2 years. Keep in office 2 years, then transfer to the FRC. Destroy when 10 years old.
2.	Continuing Environmental Program Support Agreements and Waste Water Construction Grant Agreements Administered by Regional Offices. These types of agreements are covered by the Assistance Agreement Files Records Control Schedule in Appendix B, Schedule 4, item 2 b. and c. Note: this includes all agreements administered by your Program.	Retention: See Records Control Schedule No. 4 item b. and c. in Appendix B.
3.	Wild and Scenic Rivers Studies File. Contains documents used in making recommendations concerning classification of wild and scenic rivers. Records consist of studies of the rivers and reports recommending classification.	Retention: Permanent. Disposition: Break file upon completion of Regional study and classification. Keep in office 5 years, then transfer to the FRC. Keep in FRC 5 years, then offer to the Regional Archives.
4.	Section 102(b) Studies File. Contains documents relating to water quality storage in Federal reservoirs, under Section 102(b) of the Federal Water Pollution Control Act, as amended. Records used as basis for recommending water quality storage in Federal reservoir projects. Federal agencies include Corps of Engineers, Soil Conservation Service, Federal Power Commission. Records consist of technical reports and supporting data and related correspondence. Note: This program has been phased out.	Retention: Retain 20 years. Disposition: Break file upon completion of studies and recommendations. Keep in office 10 years, then transfer to the FRC. Destroy when 20 years old.
5.	Section 303(e) Basic Planning File. Contains records related to the development of river basin plans submitted by State planning agencies and reviewed and approved by the Regional offices under Section 303(3) of the Federal Water Pollution Control Act, as amended. Records consist of technical reports such as waste load allocations, recommendations for basin-wide abatement program, copies of final basin plans, and related correspondence.	Retention: Retain 7 years. Disposition: Break file when plans are revised or superseded. Keep in office 3 years, then transfer to the FRC. Destroy when 7 years old.

EPA Form 1340-7 (2 88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
WATER PROGRAM RECORDS	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
6.	Water Quality Standards and Regulations File. Contains records used to develop standards and regulations to implement provisions of water program legislation. Standards originated by both States and Federal government. Records consist of correspondence concerning promulgation of new standards and revision of existing ones and supporting documentation. May also include news clips, Federal Register tear sheets, and other related records.	Retention: Retain 7 years. Disposition: Break file upon promulgation of standard or regulation. Keep in office 2 years then transfer to the FRC. Destroy when 7 years old.
7.	Water Quality Modeling File. Contains documents pertaining to various water quality mathematical models that are used in basin planning.	
	a. Data Abstracts.	Retention: Retain 20 years. Disposition: Break file at end of year. Keep in office 20 years, then destroy.
	b. Correspondence. Includes correspondence related to the river model.	Retention: Retain 2 years. Disposition: Break file at end of year. Keep in office 2 years, then destroy.
8.	Nuclear Power Plant Thermal Pollution File. Contains information on proposed power plants. Used by Regional Office to prepare comments on the potential impact of the facility on water quality.	Retention: Retain 10 years. Disposition: Break file upon completion of review and comments. Keep in office 5 years, then transfer to the FRC. Destroy when 10 years old.
9.	Load Allocation Working Papers. Contains data showing the technical basis for assigning load allocations to dischargers. Used as supporting papers for Section 303(e) Basin Plans.	Retention: Retain 5 years. Disposition: Keep in office 5 years or until revised or updated, then destroy.
10.	Final State Water Quality Management Plans. Printed copies of State Water Quality Management Plans submitted by State planning agencies and reviewed and approved by Regional Offices. Includes plans formulated under the 303(e) Basin Planning Program and the 208 Areawide Planning Program.	Retention: Permanent. Disposition: Break file when plans are revised or superseded. Keep in office 3 years, then transfer to the FRC. Keep in FRC 10 years, then offer to the Regional Archives.

EPA Form 1340-7 (2 88)

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
WATER PROGRAM RECORDS	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
11.	Interagency Agreements/Cooperative Agreements File. Contains documents used in coordinating interagency activities in water planning programs. Records consist of interagency agreements, and procedures for coordination.	Retention: Retain 3 years. Disposition: Break file upon termination of agreements. Keep in office 3 years, then destroy.
12.	Water Programs Legislation File. Contains information used as reference to Federal water pollution legislation. Also, includes policy and procedures and other program materials on the implementation of the laws.	Retention: Retain 5 years. Disposition: Keep in office 5 years, then destroy.
13.	Yearly Allocation Ledgers on Contruction Grant Fund. Ledgers show credits and debits to all grant project accounts under PL 84-660 and PL 92-500.	
	a. Official Records.	Retention: Retain 7 years. Disposition: Break file as accounts are closed and audit exceptions are resolved. Keep in office 1 year, then transfer to the FRC. Destroy when 7 years old.
	b. Other Copies.	Retention: See Disposition below. Disposition: Destroy when no longer needed.
14.	State Water Supply Program Evaluation File. Evaluations of State drinking water programs prepared by Regional Offices. Contains evaluation reports listing program accomplishments and deficiencies, supporting documentation, correspondence and other related papers. Also, includes evaluation of drinking water laboratories operated by State agencies.	Retention: Retain 5 years. Disposition: Break file upon completion of evaluation. Keep in office 1 year then transfer to the FRC. Destroy when 5 years old.
15.	Special Studies File. Documents relating to the development of special studies of all water programs. Includes studies and surveys done in-house as well as those done on contract. Records consist of contractors and grantees proposals, procurement requests, task orders, bid evaluation, award notices, payment records, progress reports, and work papers.	Retention: Retain 3 years. Disposition: Break file upon completion of study. Keep in office 3 years, then destroy.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES		SCHED NO
TITLE OF SCHEDULE WATER PROGRAM RECORDS	COVERAGE OF SCHEDULE REGIONAL OFFICES	

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
16.	Special Studies - Final Reports. Consists of printed reports (final copies) on water program topics, prepared in-house or on contract.	Retention: a. Record Copy. Permanent. b. Information Copies. As determined by users' needs. Disposition: a. Record Copy. Break file upon completion of study. Keep in office 10 years, then transfer to the FRC. Keep in FRC for 10 years, then offer to the Regional Archives. b. Information Copies. Destroy when no longer needed.
17.	Water Supply Legal Work File. Contains records, related to input provided by water supply staff into Regional Office legal actions taken to insure compliance with rules, regulations, and guidelines. Records consist of memoranda, compliance reports, and supporting papers.	Retention: Retain 3 years. Disposition: Break file upon completion of legal action. Keep in office 3 years, then destroy.
18.	Interstate Carrier Program File. Contains information concerning water supply sources on inter-state carriers, such as buses, trains, airplanes, etc. Records consist of yearly reports showing water quality on the carriers, letters assigning water quality classification to the carriers, inspection reports of water supplies, and related records. Note: This Program has been phased out.	Retention: Retain 20 years. Disposition: Break file each year. Keep in office 3 years, then transfer to the FRC. Destroy when 20 years old.
19.	Inventory of State Water Supply. Reference copies of a data collection report showing the name and location of water supplies, type of treatment and laboratory control, and other information. Original report sent to Headquarters and used as input to final Water Supply Report.	Retention: Retain 1 year. Disposition: Break file upon verification by States. Keep in office 1 year, then destroy.

U.S. ENVIRONMENTAL PROTECTION AGENCY—RECORDS CONTROL SCHEDULES

SCHED NO

TITLE OF SCHEDULE	COVERAGE OF SCHEDULE
WATER PROGRAM RECORDS	REGIONAL OFFICES

ITEM NO	NAME AND DESCRIPTION OF RECORD/FILE	RETENTION PERIOD AND DISPOSITION
20.	Water Supply Program Reference File. Contains information related to various technical aspects of water supply program and used for reference. Includes such topics as contaminants, cross-connection control disease and epidemiology, pesticides and toxic materials, treatment methods, reference manuals, and other reference materials.	Retention: As determined by users' needs. Disposition: Review in office every 2 years, retaining files with continuing reference value and disposing of other materials.
21.	Water Supply Training File. Contains records used by Regional staff to conduct training programs for State water supply personnel. Records consist of instructional materials, applications, participant rosters, manuals, and other training aids and materials.	Retention: Retain 4 years. Disposition: Destroy when 4 years old or sooner if no longer used for reference.
22.	Underground Injection Control DI Files. Contains records used in the issuance of underground injection control permits under the Safe Drinking Water Act. Permits issued to individual well owners by EPA Regional Offices or authorized State agencies. Records consist of application, correspondence with applicant, copy of permit, well inspection reports, and related records.	
	a. Files for permits issued by EPA Regional Offices.	Retention: Permanent. Disposition: Retain in office 5 years after the well is closed, then transfer to the appropriate field branch of the National Archives.
	b. Files for permits issued by States.	Retention: Retain 5 years. Disposition: Break file upon expiration of permit. Keep in office 1 year, then transfer to the FRC. Destroy when 5 years old.
23.	Sole Source Aquifer Files. Contains information relating to the determination of sole source aquifers. Records consist of maps, positions for designation, summaries of public comments, newspaper clips, and clips from the Federal Register, etc., and information relating to the development and implementation of regulations.	Retention: Permanent. Disposition: Break file every 10 years and transfer to the FRC. Keep in FRC 15 years, then offer to the National Archives.

EPA TRANSMITTAL

ADDRESSEE

CLASSIFICATION NO.
2160 -- 1984 Edition

APPROVAL DATE
7/13/84

RECORDS MANAGEMENT MANUAL

1. PURPOSE. This transmittal provides a new version of the Records Management Manual.

2. EXPLANATION. The Records Management Manual was revised to provide current policy and procedures relating to the management of the Agency's records. The EPA Records Control Schedules contained in Appendices of the old Manual have been deleted and will be issued as a separate document. Chapter 4, Preservation of Vital Records for Emergency Use is being reserved and will be issued later.

3. FILING INSTRUCTIONS. Discard the old version of this Manual and file this edition in a three ring-binder.

Gary M. Katz, Director
Management and Organization Division

PLEASE NOTE: The Classification Number for the Records Management Manual has been changed to 2160.

ORIGINATOR Office of Information Resources Management

CHECKLIST OF EPA TRANSMITTALS

TITLE

When kept current, this checklist permits the user to see at a glance which transmittals have been filed.

SERIES			SERIES			SERIES		
NUMBER	DATE	INITIAL	NUMBER	DATE	INITIAL	NUMBER	DATE	INITIAL
1	12/12/88	BF						
2	12/12/88	BF						

EPA Form 1315-4 (Rev 7-73)

PREVIOUS EDITIONS ARE OBSOLETE.

CONTENTS OF CHAPTERS

CHAPTER TITLES	CHAPTER NUMBERS
OBJECTIVES AND RESPONSIBILITIES	1
REPORTING REQUIREMENT - RESERVED	2
DISPOSITION OF RECORDS - DESTRUCTION, RETIREMENT AND RETRIEVAL	3
PRESERVATION OF VITAL RECORDS FOR EMERGENCY USE	4
FILING EQUIPMENT AND SUPPLIES	5
MICROGRAPHIC MANAGEMENT - SOURCE DOCUMENT SYSTEMS	6
FILES MAINTENANCE	7
DOCUMENTATION AND PRESERVATION OF ELECTRONIC RECORDS	8

1 - OBJECTIVES & RESPONSIBILITIES

CHAPTER 1 - OBJECTIVES AND RESPONSIBILITIES

1. PURPOSE. This Manual prescribes objectives, responsibilities, and procedures for the conduct of the Agency's records/information management program.

2. SCOPE. This Manual applies Agencywide to both mission and administrative records.

3. LEGAL AUTHORITY. The statutory basis for the Agency records/information management program is contained in the Federal Records Act of 1950, as amended (44 U.S.C. 3101-3107). It provides that the head of each Federal agency will establish and maintain a continuing program for the economical and efficient management of the records of the Agency. The Act is implemented in Governmentwide regulations (41 Code of Federal Regulations 101) which in turn are implemented by this Manual.

4. REQUIREMENTS RELATING TO GOVERNMENT RECORDS. Records created or acquired by an official or employee of the Agency in the course of conducting Government business are the property of the United States Government. Persons who create or acquire custody or possession of official records by virtue of their positions as officials or employees do not necessarily attain a proprietary interest in such records. Official records are public records and belong to the Government rather than to the employee. The penalties for the willful and unlawful destruction; removal from files, and private use of official records are contained in 18 U.S.C. 2071. All EPA employees are responsible for reporting any actual or threatened unlawful loss or removal of official records to the Agency Records Management Officer, Information Management and Services Division.

5. DOCUMENTATION. The Agency will make and preserve records to provide adequate and proper documentation of the organization, functions, policy decisions, procedures, and essential transactions; and to protect the legal and financial rights of the Government and of persons directly affected by Agency activities. See Chapter 4 for specific information regarding vital records.

6. RECORDS DISPOSITION. As required by law, the official records of the Agency may not be destroyed without the prior approval of the National Archives and Records Service, GSA. This approval authority is provided in the form of EPA Records Control Schedules. These schedules list official records of the Agency (including many nonofficial records) and prescribe the periods of authorized retention. All EPA employees are responsible for insuring that records disposal actions agree with these schedules (see Chapter 3 for detailed instructions).

7. OBJECTIVES. The broad objective of records/information management is to maximize the value and benefits of the Agency's information resources while minimizing the cost of acquiring, maintaining, and disposing of these resources. Specifically, the Agency records/information management program provides for the establishment of active and continuing programs to:

a. Prevent the creation of unnecessary records in any media;

b. Promote the application of systems for the efficient organization, maintenance, and use of records to facilitate retrieval and use.

c. Control the retention and disposition of records to insure that records of continuing value are preserved but that valueless or noncurrent information is disposed of or transferred to storage in a timely manner.

d. Provide for the Agencywide management of all direct paper to microform systems (source document) to insure that the acquisition and use of these systems and equipment is technically feasible, cost-effective and administratively desirable.

e. Provide for the management of information storage equipment to insure that appropriate criteria justifying the management of such equipment are applied throughout the Agency.

f. Preserve and protect information that is vital to the essential functions of the Agency during a national emergency or that is essential to the legal rights and interests of individual citizens and the Government.

g. Provide for the Agencywide management of machine-readable and audiovisual records to insure that they are maintained and protected in accordance with 41 Code of Federal Regulations 101.

8. RECORDS/INFORMATION MANAGEMENT. Both the terms "records management" and "information management" are used in this Manual. Traditionally the term records management has been used to describe the management of the media on which information is recorded. Managers are now using the term "information management" to describe the processes necessary for the creation, use and disposal of information regardless of the media on which it is recorded. While the title of this Manual remains "Records Management", its objectives apply to many of the information management concepts.

9. VITAL RECORDS. Records vital to the continued operation of the Agency and records essential to the preservation of the legal rights and interests of employees and individual citizens, in wartime or disaster, are listed on the EPA Vital Records Protection Plan, Figure 4-2. Appropriate measures will be taken to protect these vital records, as described in the Plan. (See Chapter 4).

10. RESPONSIBILITIES.

a. Assistant Administrators, Inspector General, General Counsel, Associate Administrators, Regional Administrators, Laboratory Directors, and Staff Office Directors. These officials will provide for the implementation of the records/information management program within their respective areas. They will:

(1) Assure that the objectives of the EPA records management program are achieved:

(2) Designate individuals within their respective areas to act as local Records Management Officers and Vital Records Officers and forward the organizational titles, addresses, and telephone numbers of designees to the Director, Information Management and Services Division (PM-211A), Office of Information Resources Management. (These individuals should have appropriate status and sufficient time to devote to the program.)

(3) Assure that files custodians are designated within their area of responsibility (see Chapter 7).

(4) Assure that records control schedules are applied to the records in their area.

b. Director, Information Management and Services Division. This individual through a records management staff, will provide overall supervision and policy guidance in records management on an Agencywide basis.

c. Records Management Officers.

(1) The Agency Records Management Officer in the Information Management and Services Division, will:

(a) Develop policy, directives, and instructional materials governing the organization, maintenance, and disposition of all records, including machine-readable and audiovisual;

(b) Provide staff advice, guidance, assistance, and training in all aspects of the records/information management program:

(c) Coordinate program efforts and evaluate program effectiveness by making periodic surveys of information systems;

(d) Coordinate the review and approval of requests for source document micrographics systems, equipment, and services;

(e) Review and approve requisitions for information storage equipment at Headquarters.

(f) Plan and coordinate the EPA Vital Records Program; and

(g) Coordinate the retirement and retrieval of Headquarters records to the Federal Archives and Records Center.

(2) Local Records Management Officers at Headquarters will serve as coordinators of the records program in their areas.

(3) Records Management Officers in Regional offices and Laboratories, when designated, will assume responsibilities corresponding to those of the Agency Records Management Officer (see subparagraph c(1) above) in their areas.

11. DEFINITIONS. See Figure 1-1 for definitions of terms used in this Manual.

1. ACCESSION NUMBERS. Numbers assigned to each group of Agency records transferred to the Federal Records Center. They serve as the primary control for all actions affecting the records, e.g., location on shelving, retrieval, and disposition.

2. AGENCY RECORDS MANAGEMENT OFFICER. The title of the designated staff official whose responsibility is to plan, develop, and coordinate the Agency records management program.

3. ADMINISTRATIVE OR HOUSEKEEPING RECORDS. Records which reflect routine, transitory, internal administrative or housekeeping activities relating to subjects and functions common to all offices.

4. APPRAISAL OF RECORDS. The determination of value of records by the study of their relationship and contents.

5. AUDIOVISUAL RECORDS. Program and information motion pictures, still pictures, sound recordings, video recordings, and related documentation.

6. ALTERNATE SITES. Selected bases of operations to assure continuity of the Agency's functions during and immediately following a national emergency. The sites house the Agency's vital records.

7. ALTERNATE SITE REPRESENTATIVES. The title of designated personnel in the Agency alternate sites who are responsible for the maintenance and retrieval of Agency vital records.

8. CASE FILE. A case file is a folder or other file unit containing material relating to a specific action, transaction, event, person, place, project, or other subject.

9. CONFIDENTIAL BUSINESS INFORMATION. Confidential Business Information is any information in any form received by EPA from any person, firm, partnership, corporation, association, or local, state, or Federal agency, or foreign government, which contains trade secrets or commercial or financial information, and which has been claimed as confidential by the person submitting it and which has not been determined to be non-confidential under the procedures in 40 CFR Part 2.

10. FACILITATIVE RECORDS. Records which are used to process or forward an action.

11. FEDERAL ARCHIVES AND RECORDS CENTERS. Depositories established by the General Services Administration for the housing of noncurrent, inactive, or permanent records pending ultimate disposition in accordance with the Agency Record Control Schedules.

12. FILE BREAK. Cutoff point in a file usually based on a calendar or fiscal year date.

13. FILING EQUIPMENT. Any equipment used to provide storage for information: e.g. lateral, vertical, mechanized, and ADP.

14. FILES SERIES. An identifiable portion (or segment) of an organized file which can be described, handled, used, or disposed of as a whole; a complete file or part of a file which requires separate description because of variations in arrangements or subject content, retirement or disposal characteristics, significant volume, or peculiar physical form (such as maps, drawings, or other oversized files).

15. FILING SUPPLIES. Items such as folders, guides, cross-reference sheets, and charge-out cards.

16. INFORMATION MANAGEMENT. The proper utilization of resources necessary for the creation, acquisition, processing, storage, dissemination, and use of data. (It is not data (information) that is managed, but the processes necessary for its creation and use.)

17. INVENTORY OF RECORDS. A list itemizing each type of record and nonrecord material indicating description, quantity, and other pertinent data.

18. MACHINE-READABLE RECORDS. Records whose information has been transcribed onto a media, such as magnetic disks, drums, tapes, which is accessible by automatic data processing equipment.

19. MAINTENANCE OF RECORDS. The grouping, filing, storing and safeguarding of records.

20. MICROGRAPHICS. The science and technology of document and information microfilming and associated microform systems.

a. Microfilm. A high resolution film containing an image or images greatly reduced in size from the original which is recorded on the film.

b. Microfiche. A sheet of film containing multiple microimages in a grid pattern. It usually contains a heading or title which can be read without magnification.

c. Microform. Any form containing microimages.

d. Microimages. Information, such as a page of text or a drawing, too small to be read without magnification.

21. OFFICE OF RECORD. The office designated to maintain official files. Normally, it would be the office that created or received correspondence relating to its assigned functions.

22. PROGRAM RECORD. Records created, received, and maintained by an agency in the conduct of the mission functions for which it is responsible. The term is used in contrast with administrative, housekeeping, or facilitative records.

23. RECORD GROUP NUMBER. A number assigned by the National Archives and Records Service to each Agency for convenience in identifying records. Record Group Number 412 is assigned to EPA.

24. RECORDS. Recorded information of continuing administrative, fiscal, legal, historical, or informational value, including published materials, papers, maps, photographs, microfilm, audiovisual, machine-readable materials (ADP tapes/disks) or other documentary material, regardless of physical form or characteristics, made or received by the Agency that evidences organization, functions, policies, decisions, procedures, operations, or other activities of the Government.

a. Classified Records. Records designated as "Top Secret", "Secret", or "Confidential" which are restricted to processing or use by cleared individuals, and require special protection.

b. Current Records. Records or files presently in the physical custody or organizational units, the maintenance of which is required for the conduct of current work.

c. Nonrecord Material. Material of this nature includes blank forms, library materials and working papers of fleeting value such as drafts, worksheets, informal notes, slips, etc.

d. Official Record File. The complete documentation including all background material resulting from specific transactions, operations, or processes which are accumulated and maintained in files equipment. They may include any media such as film, microfilm, cards, papers, and magnetic tapes and disks.

e. Permanent Records. Records of continuing value which are considered to be so valuable or unique in documenting the history of the Agency or for informational content that they should be preserved "forever" as part of the National Archives of the United States.

f. Record Copy. The official file copy, either originated or received by any element of EPA, which documents an action relating specifically to the functions assigned operating elements in the Agency.

g. Semiactive and Inactive Records. Records worthy of preservation and which have long term permanent value will be retired from expensive office space and equipment to the area Federal Records Center for storing, servicing, and ultimate disposition in accordance with EPA records control schedules.

h. Temporary Records. Records created incidental to performance of the mission. They are "operational", "support", and "service" type records which are considered to be of temporary value to the Agency and will be destroyed at some time.

25. RECORDS CONTROL SCHEDULES. A list for systematic disposition of Agency records, including their retention, transfer, retirement or destruction, performed in accordance with approved disposition authority from the United States Archivist, National Archives and Records Services.

26. RECORDS MANAGEMENT. See Information Management.

27. RECORDS MANAGEMENT OFFICER. The title of designated staff officials whose responsibilities are to assist the operating Agency Records Management Officer by carrying out the policies of the records management program in their respective organizational units.

28. SUBJECT FILE. Subject files consist mainly of general correspondence and material related to programs and functions which are filed according to the subject of the topic. Subject filing is the process of arranging and filing records according to their general informational content.

29. VITAL RECORDS. Records which come within the following categories are vital records and are to be preserved under the provisions of Chapter 4.

a. Category A. Records containing information necessary to assure continuity of operation of the Agency in an emergency and affirm the powers and duties of the Agency in the resumption of operations after an emergency. These records will be maintained in a manner usable to other than the originators (paper copy preferably) at the alternate site.

b. Category B. Records containing information necessary to protect rights and interest of persons.

2 - REPORTING
REQUIREMENT

CHAPTER 2 - REPORTING REQUIREMENT - RESERVED

3 - DISPOSITION OF RECORDS

CHAPTER 3 - DISPOSITION OF RECORDS - DESTRUCTION, RETIREMENT, AND RETRIEVAL

Table of Contents

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose and Scope	1
Policy	2
Removal of Official Records	3
Benefits of Systematic Disposition/Retirement	4
Protection of Retired Records	5
Criteria for Retiring Records	6
Procedures for Retiring Records to Federal Records Center	7
Procedures for Retrieval of Retired Records	8

Figure 3-1. Records Transmittal and Receipt
Figure 3-2. Calculation of Volume of Records
Figure 3-3. Instructions for Assembling Records Storage Box
Figure 3-4. Instructions for Packing and Sealing Records Storage Box
Figure 3-5. Labor Services Request
Figure 3-6. Classified/Confidential Business Information Material Receipt
Figure 3-7. Reference Request - Federal Records Center

CHAPTER 3 - DISPOSITION OF RECORDS - DESTRUCTION, RETIREMENT, AND RETRIEVAL

1. PURPOSE. This Chapter provides guidance and procedures for (1) the destruction of records, (2) the retirement (transfer) of records to Federal Records Centers (FRC), and (3) retrieval of records from the FRC.

2. POLICY. Inactive records (whether mission or administrative) will not be maintained in costly office space. Inactive records will be disposed of at the Agency or transferred to a Federal Records Center in accordance with EPA Records Control Schedules. Records should not be maintained longer than six months after the time specified in the records control schedule.

3. REMOVAL OF OFFICIAL RECORDS. Official records of the Agency will only be removed from the Agency or disposed of in accordance with the provisions of the Agency's Records Control Schedules. (Copies of the Records Control Schedules may be obtained from your local Records Management Officer.)

4. BENEFITS OF SYSTEMATIC DISPOSITION/RETIREMENT. The Agency's records disposition program is designed to provide for (1) the removal from valuable office space of all records and nonrecord materials which are no longer essential for current operations, (2) the release of filing equipment for reuse, and (3) the protection of records that should be kept for long periods.

5. PROTECTION OF RETIRED RECORDS. Retired records of the Agency that contain sensitive material cannot be retrieved or reviewed by other than the retiring office without prior consent of the retiring office. The Federal Records Center (FRC) will enforce restrictions lawfully imposed by the Agency on the use of transferred records. In case of demonstrated need, and subject to any Agency restrictions on their use, the FRC will loan Agency records deposited with them to EPA employees for official use. Records subject to the Privacy Act of 1974 will not be disclosed by FRC personnel except under provisions of Agency rules. EPA records that contain confidential business information can only be accessed by the office retiring the records or by another organization that obtains written approval from the retiring office. Note: Arrangements for retrieving records, must be made in accordance with paragraph 8 of this Chapter.

6. CRITERIA FOR RETIRING RECORDS. The criteria listed below should be used in conjunction with the EPA Records Control Schedules in determining when to retire (transfer) inactive records to the Federal Records Center. Records to be transferred should:

a. Appear on an approved EPA Records Control Schedule; (If the records are not covered by EPA Records Control Schedules contact the local Records Management Officer.)

b. Not be needed to carry out current Agency operations;

c. Be referred to only occasionally in the normal course of business;

d. Not be eligible for destruction within three years of the date of receipt by the Records Center; or

e. Cost less to transfer than the cost to retain them in the Agency's space and equipment.

7. PROCEDURES FOR RETIRING RECORDS TO FEDERAL RECORDS CENTER.

a. Recording the Transfer. To facilitate the transfer and to expedite retrieval, list records on Standard Form 135 (SF 135), Records Transmittal and Receipt, and Standard Form 135 A, Continuation Sheet, in the manner which they are currently filed. This list will record the transfer and provide an inventory sufficiently detailed for future reference service. See SF 135, Figure 3-1, for locations of the following items:

(1) Agency Record Group Number. All Agency activities will use Record Group Number 412.

(2) Accession Number. Headquarters personnel will obtain Accession Numbers from the Agency Records Management Officer. Information will be required at the time the Accession Number is requested as to the number of boxes, date the records will be ready for transfer, and any special handling (CBI, etc.). Regional and field Records Management Officers will obtain

Accession Numbers by submitting SF 135 to the appropriate FRC in advance of shipments of the records. An Accession Number will be assigned by the FRC upon receipt of the shipment of records. A copy of the SF 135 with the Accession Number added will be returned to the originator. In the case of GAO site audit records, enter the Agency record group number when assigning the Accession Number but specify in item 6f of the SF 135 that these are GAO site audit records.

(3) Description of the Records. The description must include a general statement identifying the records being transferred. A listing of each file folder is not necessary. Usually only the first and last folder titles are necessary. The general statement must give the following information:

(a) Full identification of the office that created the records if not shown in item 3 of the form;

(b) Inclusive dates of the records, and a brief description of the type of records; such as grants, contracts, pesticide registration jackets, etc.

(c) The security classification of the records. Classified information must not be revealed on the SF 135 and SF 135A. All security classified documents should be reviewed for possible downgrading prior to the retirement; and

(d) Records subject to the Privacy Act of 1974 will be identified by a statement at the beginning of the description of the records which indicates that the records are subject to the Act and they may not be disclosed except in accordance with EPA rules and notices published in the Federal Register.

(4) Disposal Authority. EPA Records Control Schedules contain disposal authority.

b. Preparation and Distribution of the SF 135 and SF 135A. Prepare SF 135 in original and five copies when transferring records to FRC. The SF 135 must be distributed as follows:

(1) The original plus three copies must be forwarded to local Records Management Officer.

(2) Place the fifth copy in the front of the first box of each accession.

(3) The sixth copy should be kept by the retiring office until the Records Management Officer returns one copy which has been receipted by the Federal Records Center. This copy has the stack location number annotated on it which must be used in the retrieval of retired records.

c. Obtaining Record Boxes. Pack records to be transferred to Federal Records Centers (except small quantities of official personnel folders) in standard Federal Records Center boxes which may be obtained through the Federal Supply Service (see Figures 3-3 and 3-4). (Headquarters offices may obtain FRC boxes from the EPA Self Service Store). Before requesting boxes estimate the total number of cubic feet of records to be retired. One box holds one cubic foot of letter or legal size material. See Figure 3-2 for Table of Equivalents for Calculating Cubic Footage of Records.

d. Packing the Boxes. Pack the records in the boxes in an upright position to preclude movement or damage while in transit (see Figure 3-4). Make sure you pack the records in the same arrangement that they were filed. Avoid making shipments of less than one cubic foot. Do not pack records with widely different retention periods, or from more than one office, in the same box. When packing records that contain confidential business information wrap the records with heavy grade brown wrapping paper to ensure adequate protection of records during transfer to the FRC. After the records have been packed, fasten the top of the boxes with nylon tape placed lengthwise over the flaps and extending two inches down the side of the boxes.

e. Identifying the Box. With a black waterproof marker or crayon, write the accession number and carton number (cartons must be numbered in numerical sequence) on both ends of the box. Do not mark the security classification of the records on the outside of the box, or that the box contains confidential business information. See Figure 3-4 for an illustration of a box correctly identified.

f. Transfer of Headquarters Records from Originator's Office to EPA Storage Facility.

(1) Headquarters. The originator must prepare EPA Form 5100-2, Labor Services Request to have the records moved to Shipping and Receiving where they will be stored until pickup by the FRC. EPA Form 5100-2 is to be submitted with the SF 135 to the Agency Records Management Officer at Headquarters (see Figure 3-5). Note: Records containing confidential business information will remain with the Program until the day of pickup by the FRC. The records will be accompained by a staff member from the Records Management Staff who will remain with the records until they are officially received by personnel from the FRC.

(2) Regional and Field Offices. Personnel should follow procedures and guidance issued by the local Records Management Officer to have records picked up from their office. The local Records Management Officer should take action to insure the protection of records containing confidential business information until they are officially received by the FRC.

g. Shipping the Records.

(1) At Headquarters, the Agency Records Management Officer will arrange for pickup of Federal Records Center boxes when they are ready for shipment to the Washington National Records Center. Note: When records containing confidential business information are ready for shipment to WNRC, Shipping and Receiving must obtain a receipt (see Figure 3-6) from the WNRC when the boxes are picked up. A copy of the receipt is to be given to the Agency Records Management Officer.

(2) Regional and field offices located near Federal Records Centers may arrange for the FRC to pick up 50 boxes or more at the location listed on the previously forwarded SF 135 and SF 135A. The Agency may transport any number of boxes of records to the FRC as often as deemed necessary. The office shipping boxes with records containing confidential business information must obtain a receipt from the FRC when the boxes are picked up. A copy of the receipt is to be given to the local Records Management Officer.

(3) Regional and field offices located outside the Federal Records Center pickup area must ship their records according to volume, via United States Postal Service, commercial motor or rail freight. To obtain the lowest tariff rate for "old" records, Agency offices using commercial carriers should enter the following statement on the bill of lading or other shipping documents: "The agreed or declared value of this property is hereby specifically stated by the shipper as not to exceed 3 1/2 cents per pound." The office must make arrangements with the U. S. Postal Services or commercial motor carrier for the protection of the records that contain confidential business information during transit until they are received by the FRC. If records are shipped through the U. S. Postal Service, arrange to have the records shipped by registered mail, this will serve as an adequate receipt in lieu of EPA's receipt of Sensitive Material. The office shipping the boxes must obtain a receipt, Figure 3-6 when the boxes are picked up. A copy of the receipt is to be given to the local Records Management Officer.

8. PROCEDURES FOR RETRIEVAL OF RETIRED RECORDS

a. General. Federal Records Centers operate a reference service which provides for the retrieval of retired records.

b. Procedures:

(1) Employees can retrieve records from a FRC by completing Optional Form 11, Reference Request - Federal Records Centers. Only employees who have been authorized access to records containing confidential business information can retrieve these records from the FRC. If the request is not made by the originator, a copy of the authorization from the originator granting access to the records must be attached to the OF 11. The OF 11 must contain the Record Group Number, Accession Number, Box Number, and the name, number, or other identifying data of the records being requested. This information appears on the copy of the Standard Form 135 which should be on file in the office that created the records. In addition, the Records Center location number must be entered on the OF 11. Headquarters offices may obtain this number from the receipted copy of SF 135 returned by the Federal Records Center; regional and field offices may obtain it from the local Records Management Officer (see Figure 3-7, for an example of a completed OF 11). A separate form must be completed for each request for records.

(2) Requests to be expedited for some special reason (Freedom of Information and Congressional inquiries are examples), must be indicated on the form.

(3) Headquarters offices should submit the completed OF 11 to the Agency Records Management Officer; Regional and field offices to the local Records Management Officer. The form will then be forwarded to the Federal Records Center.

(4) Retrieved records may be returned to the Federal Records Center for refiling in a mailing envelope, addressed "Attention Reference Branch", with a routing slip attached indicating the accession number, box number, FRC location number and the notation "Return for Refile". The local Records Management Officer must be notified of the return so that the chargeout record may be cleared. Records containing confidential business information must be returned to the FRC in accordance with the procedures stated in paragraph 7.

Standard Form 135, Records Transmittal and Receipt

RECORDS TRANSMITTAL AND RECEIPT

Accession Branch
Washington National Records Center

(202) 782-5911
Records Management Officer

Negotiated Procurement Section Rm 735WT
Contracts Management Division (PM-214)

This block to be used by
Records Center Personnel

Records Management Staff (PM-2112)
U S Environmental Protection Agency
401 M Street, S W
Washington, D C 20460

RECORDS DATA

ACCESSION NUMBER			VOLUME(S)	AGENCY USE NUMBERS	SERIES DESCRIPTION		DISPOSAL AUTHORITY	DISPOSAL DATE	COMPLETED BY RECORDS CENTER	
FR	FY	NUMBER							LOCATION	
					Records created by organization shown in item 3 above. Inclusive dates of records are 1976-1978. These records consist of:					
412	84	0001	7	1 of 7	RFP WA76-B022	R	Appendix B Schedule: 5 Item 5.a.(1)	Oct. 89		
					RFP WA76-B020					
					RFP WA76-R483					
					RFP WA75-R025					
				2 of 7	RFP WA76-B019					
					RFP WA75-R489					
					RFP WA75-R025					
					RFP WA76-R483					
				3 of 7	RFP WA76-R142					
					RFP WA75-R528					
					NOTE RECORDS RESTRICTED TO PERSONS APPROVED BY OFFICIAL SHOWN IN ITEM 3 ABOVE					

135-104

Item 1 Enter the address of the Federal Records Center serving your area In Washington Washington National Records Center Suitland, Maryland

Item 2 Enter the name and title of the Records Management Officer whose address appears in block 5 Also include his/her telephone number

Item 3 Enter the name of the office that created the records Also enter the name and telephone number of the official responsible for them

Item 4 For Records Center Use Only

Item 5 The address shown in the sample above should always be used for records transferred from EPA Headquarters Regions, labs and other organizations not located in Washington should use the office address of the Records Management Officer serving their organization.

Item 6 (a) - (c) Headquarters personnel will obtain the accession number from the Agency Records Management Officer Regional and field personnel should obtain it through the local Records Management Officer who obtains it from the Federal Records Center

Item 6 (d) Enter the total number of boxes in the accession

Item 6 (e) Enter each box number adjacent to the list of its contents in item 6 (f).

Item 6 (f). At the top of the block enter the information shown in the sample shown above, along with the inclusive dates of the records. If the records are subject to the Privacy Act or contain confidential business information, so indicate. Then describe the contents of each box, using continuation sheet (SF 135-A) if necessary You may list the inclusive contents of each box (i e A-E or 100-500) if such a listing will permit retrieval. Otherwise, the complete box contents must be shown

Item 6 (g) Enter the restriction code if any For records containing CBI, Use "B" code).

Item 6 (h) Obtain schedule and item number from the applicable appendix in the EPA Records Management Manual

Item 6 (i) Compute the disposal date by the retention period authorized by the records control schedule

Copy Preparation and Distribution Prepare original and five copies Send original and three copies to your local Records Management Officer Place fifth copy in the first box of the accession Retain sixth copy until a receipted copy is returned to you for retention

For additional instructions see the reverse side of SF 135

Figure 3-1

FILING CABINETS:

One letter-size drawer = 1 1/2 cubic feet
One legal-size drawer = 2 cubic feet

FILING CASES:

One 3-by 5-inch case = 1 1/10 cubic foot
One 4-by 6-inch case = 1/4 cubic foot
One 5-by 8-inch case = 1/4 cubic foot

SHELF FILES:

Letter-size, 1 linear foot = 4/5 cubic foot
Legal-size, 1 linear foot = 1 cubic foot

TABULATING CARDS:

10,000 cards = 1 cubic foot

OUTSIZED EQUIPMENT:

Inside cubic measurement

MAGNETIC TAPE:

Seven reels = 1 cubic foot

MICROFILM:

100 16 mm reels (100 feet) = 1 cubic foot
50 35 mm reels (100 feet) = 1 cubic foot

MICROFICHE:

10,000 microfiche = 1 cubic foot

STILL PICTURES:

Negatives

2300 35 mm 6 exposures strips = 1 cubic foot
8640 2-by 2-inch mounted slides = 1 cubic foot
2184 4-by 5-inch film sheets = 1 cubic foot
5980 2 1/4-by 3 1/4-inch film sheets = 1 cubic foot

Prints

2350 8-by 10-inch glossies or contact sheets = 1 cubic foot
9400 4-by 5-inch glossies = 1 cubic foot

MOTION PICTURES:

Six 35 mm reals (1000 feet) = 1 cubic feet
11 16 mm reals (1200 feet) = 1 cubic foot
15 16 mm reals (800 feet) = 1 cubic foot
32 16 mm reals (400 feet) = 1 cubic foot

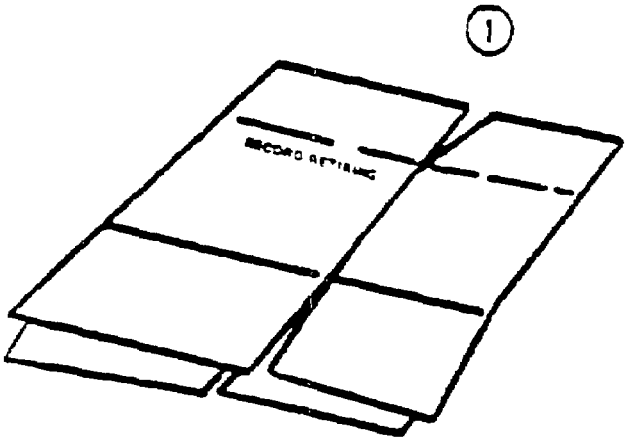
SOUND RECORDINGS:

76 16 inch disc recordings = 1 cubic foot
144 12 inch disc recordings = 1 cubic foot
48 7 inch audiotape reels = 1 cubic foot
16 10 inch audiotape reals = 1 cubic foot

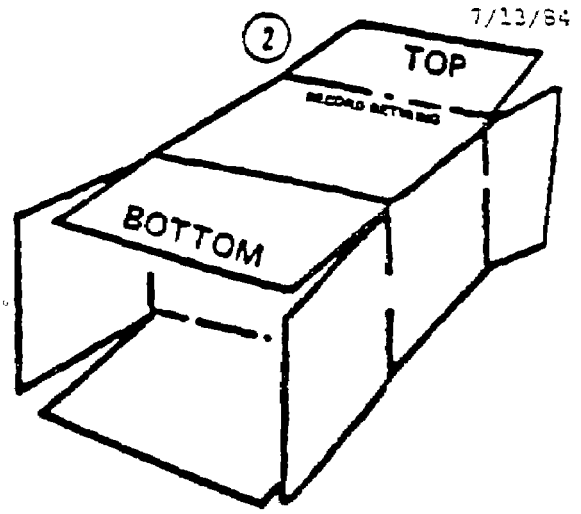
VIDEO RECORDINGS

Ten 3/4 inch cassettes = 1 cubic foot
Three 2 inch reels = 1 cubic foot
Nine 1 inch reels = 1 cubic foot
43 1/2 inch reels = 1 cubic foot

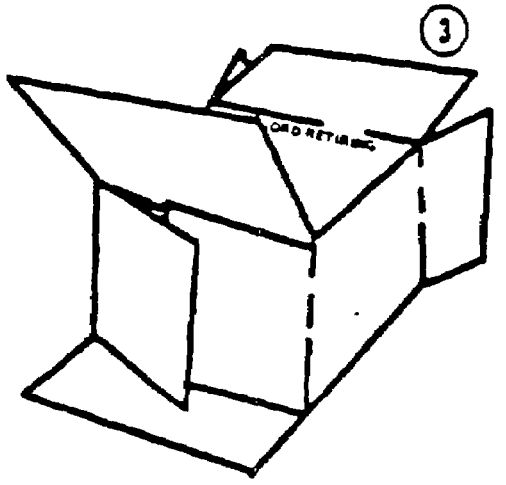
Figure 3-2



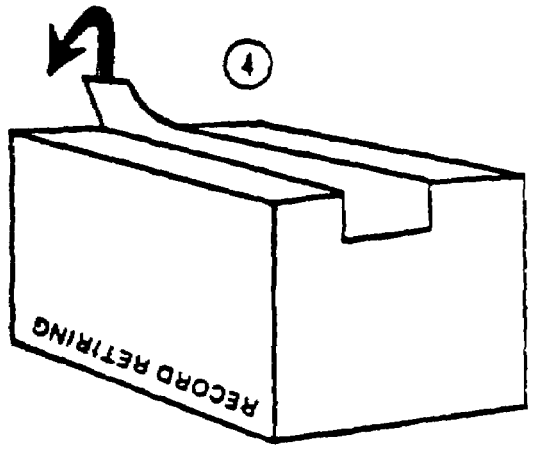
Unassembled Record Storage Box SN: 8115 00 290 3379,Size 15 X 12 X 10, cu. 1.04 (Obtain box through normal supply channels)



Records Storage Box - Open with bottom side up.

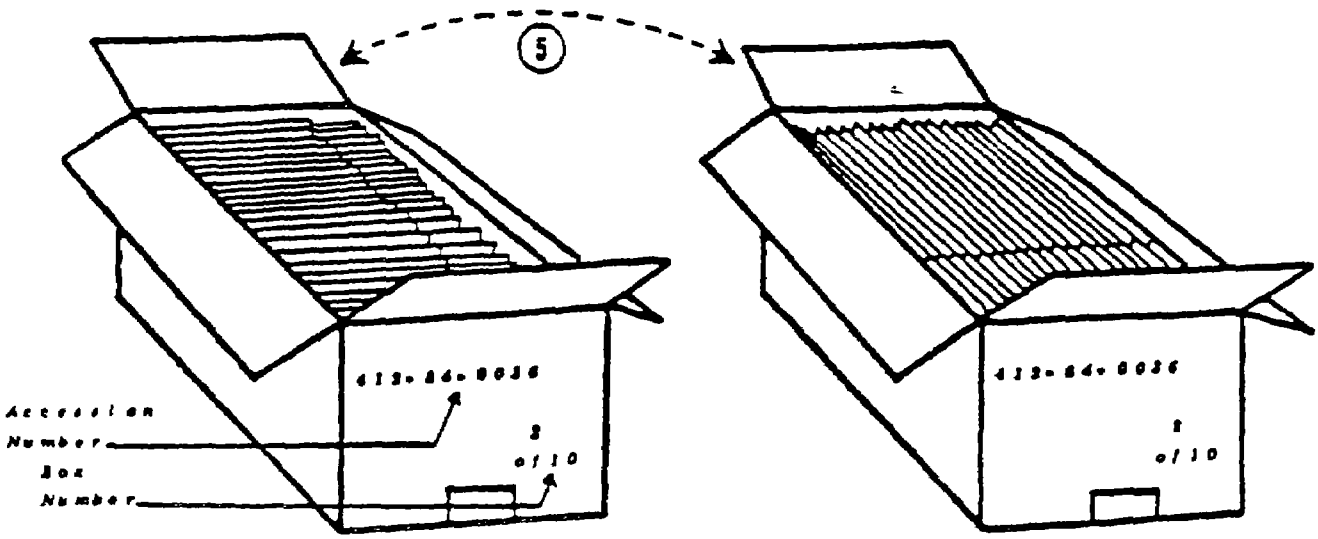


Assembling Records Storage Box - Fold in the four flaps as shown above.



Seal Bottom flaps of Records Storage Box by using nylon reinforced tape.

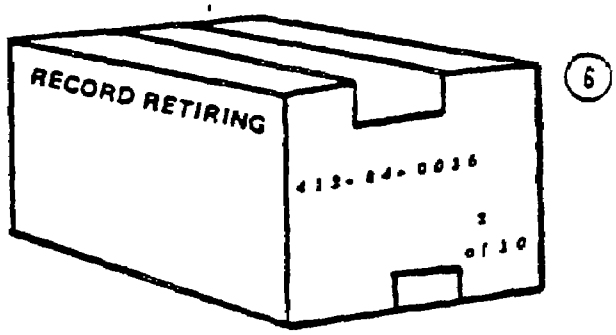
Figure 3-3



Packing Records Storage Box

Letter-Size Documents

Legal-Size Documents



Sealing Box (Fold down four top flaps and seal with nylon reinforced tape)

Figure 3-4

RECORDS MANAGEMENT

2160 1/13/84

LABOR SERVICES REQUEST

(NOTE Your Administrative Officer must sign this request where indicated before it can be processed.)

AGENCY I.D. NUMBER (Official use only)

NAME OF REQUESTOR	BUILDING	ROOM NO	TELEPHONE NO	MAIL CODE
Diane Smith	WSMW	1135	382-5111	A-101

OFFICE	DATE
Office of Regional Liaison	May 14, 1984

SERVICE REQUESTED

☒ PICK-UP ☐ DELIVERY ☐ MOVE *(Attach relocation worksheet)*

☐ OTHER *(Specify)*

COMPLETE DESCRIPTION OF LABOR SERVICES TO BE ACCOMPLISHED

Pick-up 14 Federal Records Center Boxes from Rm. 1135 WT Office of Regional Liaison (Diane Smith) and take to the EPA Warehouse (Shipping and Receiving). These records are for transfer to the Washington National Records Center, Suitland, Md.

ACCESSION NUMBER

412-84-0051 14 Boxes

APPROVAL SIGNATURES

PROGRAM ADMINISTRATIVE OFFICER	PROPERTY MANAGEMENT

FUND CERTIFICATION FOR MOVES

APPROPRIATION	DOCUMENT CONTROL NO	ACCOUNT NUMBER	OBJECT CLASS	DOLLAR AMOUNT
			2526	

I certify that funds are available.

SIGNATURE OF COMMITMENT CLERK

ACTION TAKEN

ACTION	DATE	TIME	ACTION	DATE	TIME
LABORERS DISPATCHED			ARRIVED ON JOB		
ABORERS RETURNED			JOB COMPLETED		

FOREMAN'S SIGNATURE	CUSTOMER'S SIGNATURE

EPA Hq Form 5100-2 (Rev. 12-80) PREVIOUS EDITION MAY BE USED

COPY DISTRIBUTION
Originator, submit three copies to Property Office, retain last copy for your records

Figure 3-5

EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CLASSIFIED/CONFIDENTIAL BUSINESS INFORMATION MATERIAL RECEIPT

EPA CONTROL NUMBER

DATE

(SIGN AND RETURN TO ADDRESS BELOW — RETAIN DUPLICATE COPY)

ADDRESSEE	RETURN TO:

DESCRIPTION (Avoid any identification which might necessitate classification of this receipt)

NUMBER OF ITEMS

I ACKNOWLEDGE RECEIPT OF MATERIAL DESCRIBED ABOVE

SIGNATURE	AGENCY	
TITLE		DATE RECEIVED

EPA Form 1480-13 (Rev 5-84)
Previous edition may be used until supply is exhausted

DISTRIBUTION
ORIGINAL . . . . Addressee
SECOND . . . . . Recipient
THIRD . . . . . Suspense File

Figure 3-6

RECORDS MANAGEMENT
Optional Form 11, Reference Request - Federal Records Center

REFERENCE REQUEST—FEDERAL RECORDS CENTERS | **NOTE: Use a separate form for each request.**

SECTION I—TO BE COMPLETED BY REQUESTING AGENCY

RECORD GROUP NO	ACCESSION NO	AGENCY BOX NUMBER	RECORDS CENTER LOCATION NUMBER
412	412-75-43	19 OF	Location: 14/28:49-5

DESCRIPTION OF RECORD(S) OR INFORMATION REQUESTED *(Include file number and title)*
File No. T 11-AP-08, University of California, Reverside

REMARKS
Please expedite. This request is to satisfy a Freedom of Information Act inquiry.

NATURE OF SERVICE

☐ FURNISH COPY OF RECORD(S) ONLY ☐ PERMANENT WITHDRAWAL ☒ TEMPORARY LOAN OF RECORD(S) ☐ REVIEW ☐ OTHER *(Specify)*

NAME OF REQUESTER	TELEPHONE NO ☐ FTS	DATE	RECEIPT OF RECORDS
John M. Doe	202-382-5944		

NAME AND ADDRESS OF AGENCY *(Include street address building room no and ZIP Code)*
Grants Administration Division (PM-216)
Room 3225, Waterside Mall
U.S. Environmental Protection Agency
401 M Street, S.W., Washington, D.C.
STOP 460
(In Washington D C area also include STOP number)

Requester please sign date and return this form for file item(s) listed above *ONLY* if the block to right has been checked by the Records Center ☐

SIGNATURE | DATE

SECTION II—FOR USE BY RECORDS CENTER

☐ RECORDS NOT IN CENTER CUSTODY ☐ RECORDS DESTROYED

☐ WRONG BOX NUMBER—PLEASE RECHECK

☐ ADDITIONAL INFORMATION REQUIRED TO IDENTIFY RECORDS REQUESTED

☐ MISSING *(Neither record(s) information nor charge card found in container(s) specified)*

☐ RECORDS PREVIOUSLY CHARGED OUT TO *(Name agency and date)*

REMARKS

DATE	SERVICE	TIME REQUIRED	SEARCHER IN TIME

SECTION III—TO BE COMPLETED BY REQUESTING AGENCY

TO
General Services Administration
Federal Records Center NARS
ATTN: Reference Branch
Suitland, Maryland STOP 386
(City) *(State)* *(Zip Code)*

NOTE In Washington, D C area send to STOP 386

5011-106 NSN 7540-00-682-6423 *PREVIOUS EDITION USABLE* OPTIONAL FORM 11 Prescribed by GSA FPMR (4 CFR 1

Figure 3-7

CHAPTER 4 - PRESERVATION OF VITAL RECORDS FOR EMERGENCY USE

TABLE OF CONTENTS

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose	1
Authority	2
Scope	3
Definitions	4
Purpose of the Vital Records Program	5
What is an Emergency	6
Alternate Site	7
Responsibilities	8
Procedures for Identifying Vital Records	9
Procedures for Transferring Vital Records to Alternate Sites	10
Retrieval of Vital Records	11

Figure 4-1. EPA Vital Records Protection Plan

Figure 4-2. Identifying Vital Records

Figure 4-3. Vital Records Transmittal

CHAPTER 4 - PRESERVATION OF VITAL RECORDS FOR EMERGENCY USE

1. PURPOSE. This Chapter of the Records Management Manual provides policy, guidance, and procedures for selecting and making EPA records vital to EPA's operation available at "alternate sites"--that is, sites where they would be accessible in an emergency. Also, see the EPA Facilities and Support Services Manual, Emergency Preparedness, 4860 for additional policy and guidance.

2. AUTHORITY. The provisions of this Chapter are based on 41 CFR 101-11.7.

3. SCOPE. The guidance and procedures contained in this Chapter apply Agency-wide.

4. DEFINITIONS. Chapter 1, Figure 1-1 of this Manual contains definitions for Vital Records, Alternate Site, Alternate Site Representative, and other terms used in this Chapter.

5. PURPOSE OF THE VITAL RECORDS PROGRAM. This program is designed to protect the Environmental Protection Agency's records/information which are necessary for the Agency to continue its key functions and activities in case of an emergency. If a fire, flood, or other disaster destroyed EPA records/information available in any of its operating locations it could mean:

a. Loss of valuable program records/information;

b. Complete or significant disruption of program operations;

c. Significant delay in resuming program operations.

It is therefore necessary that managers identify records vital to their program and assure the records are also available at an alternate site.

6. WHAT IS AN EMERGENCY? An emergency is a major disaster or enemy attack that would disrupt the normal and continuous operations of the Environmental Protection Agency. Examples of an emergency are:

a. Fires

b. Hurricanes/Tornadoes

c. Floods

d. Enemy Attacks

e. Earthquakes

7. ALTERNATE SITE. An alternate site is a selected base of operations that would assure continuity of EPA's functions during and immediately following an emergency. The alternate site is where EPA's vital records are stored. EPA will use the Federal Records Centers (FRC) to store some of its vital records. When this is the situation records will be transferred to the FRC in accordance with the Agency's records disposition schedules and do not need to be duplicated. Refer to Figure 4-1 for information on where records are to be sent and stored for emergency purposes. The location where records are to be stored is determined by the type of records, value of the records, and volume of records. The alternate sites are chosen by the EPA Emergency Preparedness Coordinator, and the location of the sites is classified information. Because of this only the EPA Emergency Preparedness Coordinator and the Vital Records Officers can send records to an alternate site.

8. RESPONSIBILITIES.

a. The EPA Emergency Preparedness Coordinator, Facilities and Support Services Division, Office of Administration, Office of Administration and Resources Management is responsible for overall administration of the Vital Records Program and shall:

(1) Oversee the procedures for vital records storage and protection, including the transmittal of vital records to the Alternate Site Represent.

(2) Participate with the EPA Records Management Officer to update the EPA Vital Records Protection Plan.

(3) Secure the appointment of Vital Records Officers and Alternate Site Representatives (see Records Management Manual, Chapter 1, subparagraph 10a (2)).

(4) Verify that a semiannual inventory of vital records stored at the alternate site is done by the Alternate Site Representative personnel.

(5) Conduct periodic reviews of sites where records are stored to document that vital records are maintained and readily available in case of an emergency.

b. The EPA Records Management Officer, Information Management and Services Division, OIRM, Office of Administration and Resources Management shall:

(1) Establish policy and procedures for transfer of the Agency's vital records to alternate sites.

(2) Assist EPA personnel in identifying and selecting vital records.

(3) Participate with the EPA Emergency Preparedness Coordinator to update the EPA Vital Records Protection Plan.

(4) Assist the Alternate Site Representatives in establishing file systems for vital records.

c. Senior Agency Managers (Assistant and Associate Administrators, Regional Administrators, the Inspector General, the General Counsel, Laboratory Directors, and Office Directors) shall:

(1) Designate individuals to act as Vital Records Officers for their program.

(2) Establish an effective Vital Records Program.

(3) Identify records that their program will need to continue its key functions in case of an emergency.

(4) Insure that the program's vital records are sent to an alternate site.

d. Vital Records Officers. The Vital Records Officers are the persons designated by each of the Assistant Administrators, the Inspector General, the General Counsel, Associate Administrators, Regional Administrators, Laboratory Directors, and Staff Office Directors to be responsible for their Vital Records Programs (see Records Management Manual, Chapter 1, subparagraph 10 a). Each Vital Records Officer shall:

(1) Identify all records in his or her program that meet the definition of "vital records" in Chapter 1, Figure 1-1, of this Manual.

(2) In accordance with the EPA Vital Records Protection Plan, Figure 4-1, forward vital records to the alternate site.

(3) Maintain a record of all vital records for his or her program that have been forwarded to the alternate site.

(4) Verify the semiannual inventory of vital records at the alternate site pertaining to his or her program.

(5) Review annually the Program's vital records to ensure that all vital records have been identified which meet the criteria specified in paragraph 9.

e. The Alternate Site Representative is designated by the Emergency Preparedness Coordinator and is located at the alternate site. The Alternate Site Representative shall:

(1) Receive vital records from the EPA Emergency Preparedness Coordinator or a Vital Records Officer.

(2) Process Vital Records Transmittal, EPA Form 1340-1.

(3) Maintain vital records at the alternate site on a current basis, by disposing of superseded material in accordance with the instructions specified on the Vital Records Transmittal, EPA Form 1340-1.

(4) Conduct a semiannual inventory of the vital records at the alternate site.

9. PROCESS FOR IDENTIFYING VITAL RECORDS. Vital records are records that are essential to the Agency in carrying out its functions in emergency and post-emergency situations, and in protecting the legal rights or interests of individuals and the Agency. The selection of records must include those of archival or research value as well as those that have no lasting value but would be valuable during and after an emergency. EPA records which are essential for EPA or State or local agencies to perform the functions described in the Facilities and Support Services Manual, EMR 1-05, Essential Functions must be included. They are summarized below (see EMR 1-05, Essential Functions for a detailed listing):

a. Ensure that plans for potable water supplies are available to meet needs in case of an emergency.

b. Provide guidance on what are acceptable levels of hazardous agents that might be or have been introduced into the environment.

c. Provide post-emergency reconnaissance support for water supply and sewage systems and information on the location and products/by products of facilities that generate hazardous waste, hazardous materials transport, storage, and disposal; or for location of hazardous waste sites.

d. Provide guidance on the levels of radioactivity at which protective actions must be taken.

The following guidelines are to be used when selecting vital records. In addition, Figure 4-2 contains information to aid in the selection of vital records.

1) General Management Records. These records include the statements of the Agency's mission in an emergency; plans and programs for carrying out this mission; statements of delegations of authority and of succession to command; information on the location of the vital records; information about Agency personnel, property, and activities sufficient to provide a basis for damage assessments and essential emergency functions, as well as policy directives, regulations, and forms.

(2) Program Records. In selecting program records (For example: Drinking Water Program - Drinking Water Additives, Inventory of Public Water Supplies, etc.), care must be exercised in determining what records are vital for continuity of the Program's mission in and after an emergency (For example: Records dealing with potable water, hazardous agents, etc.). If the emergency mission calls for continuation of a normal program, copies of records supporting the mission are vital.

(3) Personnel Records. Included in this category are lists of key personnel assigned to emergency duties, and rosters of Agency employees, including employees' skills that might be useful following an emergency.

(4) Fiscal Records. Included in this category are payroll and leave records of employees, employees' equity in the retirement fund, financial, and budget records necessary to determine amounts owed to, or payable by, the Agency. Also, grant and contract files containing information necessary to protect the interests of persons and the Government and to establish duties and responsibilities of EPA, the contractor, or the grantee are considered vital.

(5) Legal Rights and Interest Documents. Records concerning the legal rights and interests of individual citizens (For example: Records and information on social security, proof of ownership, citizenship, financial interests, legal proceedings and decisions, etc.), private organizations, and the Federal Government require protection in case of an emergency, but storage areas need not be located at or near an alternate site.

10. PROCEDURES FOR TRANSFERRING VITAL RECORDS TO ALTERNATE SITE.

a. The Vital Records Officers shall:

(1) Collect and review copies of vital records as they are identified and provide safeguards for temporary storage in accordance with EPA security procedures outlined in the Facilities and Support Services Manual, Document Security, SCR 2-09. A file unit (folder, manual, guide, etc.) must be complete when superseding an obsolete file unit. Alternate Site Representative personnel shall not be responsible for placing updated pages within any file unit. Outdated records shall be returned to the Vital Records Officer for destruction.

(2) Prepare vital records to be forwarded to the alternate site, in accordance with the requirements specified in the EPA Vital Records Protection Plan. This includes:

a. Packing the records in Federal Records Center boxes.

b. Preparing an original and two copies of EPA Form 1340-1, Vital Records Transmittal, Figure 4-3.

c. Forwarding the original and one copy of EPA Form 1340-1 with the boxes to the alternate site.

d. Retaining one copy of EPA Form 1340-1 in a suspense file until the original (signed by the Alternate Site Representative) is returned. The Vital Records Officer should annotate the accession number on the suspense copy and file and forward the original of the form to the Agency Records Management Officer at Headquarters, for retention.

(3) Describe the records listed on the EPA Form 1340-1, by giving a general statement identifying them. The following information should be included: Code number (if assigned); title and/or subject and inclusive dates of the records; and name of the office originating the documents.

(4) Handle all National Security Information (NSI) in accordance with the requirements outlined in the Facilities and Support Services Manual, Document Security, SCR 2-08. Do not pack security classified records with unclassified records. All security classified documents should be reviewed for possible downgrading prior to their transfer to the alternate site.

(5) Any records containing confidential business information (CBI) shall be processed and stored as if it were SECRET national security information. Superseded or outdated CBI material shall be returned to the Vital Records Officer who transferred the material.

(5) Pack boxes in conformance with requirements below.

(a) Use Federal Records Center boxes. See Chapter 3, subparagraph 7c of the EPA Records Management Manual on how to obtain Federal Records Center boxes (FRC).

(b) Estimate the total number of cubic feet of records to be transferred to the alternate site.

(c) Pack vital records in FRC boxes in an upright position to preclude movement or damage while in transit and to make retrieval easier (see Records Management Manual, Chapter 3, Figure 3-4). Do not pack records with widely different retention periods or from more than one office in the same box. When packing records that contain NSI or CBI, wrap the records with heavy grade brown wrapping paper prior to placing them in the packing box. After the records have been packed, fasten the top of the boxes with nylon tape placed lengthwise over the flaps and extending at least two inches down the side of the boxes. Do not mark the security classification of the records on the outside of the box (security requirements prohibit this act). With a black waterproof marker write the following information on one end of the box:

1 Number each box consecutively;

2 The name of the Agency and Office transmitting the records;

3 A brief description of the records;

4 The retention period.

b. The EPA Emergency Preparedness Coordinator shall transmit vital records to the Alternate Site Representative or arrange for them to receive records directly from the Vital Records Officer.

c. The Alternate Site Representative shall:

(1) Compare the records received with the EPA Form 1340-1, Vital Records Transmittal, to assure completeness of the shipment to the alternate site.

(2) Carry out the action described in the instructions given on the form, and sign and date it.

11. RETRIEVAL OF VITAL RECORDS. The Vital Records Officer shall arrange for retrieving obsolete records from, or returning records to, the Alternate Site Representative by submitting EPA Form 1340-1, Vital Records Transmittal to the Alternate Site Representative. In the event of an emergency, procedures outlined in the Facilities and Support Services Manual, FMR 1-08, Vital Records Protection should be used to retrieve vital records.

EPA VITAL RECORDS PROTECTION PLAN

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
EPA Directives (Orders and Manuals)	Management and Organization Division HQ (PM-213)	Paper	Keep copies at EPA alternate sites	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Regional Directives (Orders and Manuals)	Regional Offices: (Management Offices)	Paper	Keep copies at alternate sites in each Region	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Laboratory Directives (Orders and Manuals)	Laboratories (Office of Administration)	Paper	Keep copies at alternate sites in each Region	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Emergency Preparedness Plans	Facilities and Support Services Division HQ (PM-215) Regions Laboratories	Paper (Classified)	Keep copies at appropriate alternate sites	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Maintain current; dispose of superseded records as indicated on transmittal form
Emergency Personnel Posters (Lists of personnel assigned to emergency functions)	Facilities and Support Services Division HQ (PM-215) Regions Laboratories	Paper	Keep copies at each appropriate alternate sites	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Maintain current; dispose of superseded records as indicated on transmittal form

*Major change should be forwarded ASAP to ensure that critical program records are kept current.

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Personnel/Payroll System	Financial Management Division HQ (PM-226)	Magnetic Tapes	Keep tapes at the EPA Emergency Operation Facility (EOF) alternate sites	Every two weeks	Maintain current for five pay periods; dispose of superseded records after that time frame.
Financial Management System (Final Run)	Financial Management Division HQ (PM-226)	Magnetic Tapes	Keep copies at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Security Clearance Files	Inspector General HQ (A-109)	Paper (Computer Printouts)	Keep copies at all alternate sites	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Maintain current; dispose of superseded records as indicated on transmittal form
Records Management System (SF 135 - Reference Purposes)	Information Management and Services Division HQ (PM-211D) Regions Laboratories	Paper	Keep copies at appropriate alternate site	31 Mar. 30 Sep.	Maintain current; dispose of superseded records as indicated on transmittal form
Employee Medical Monitoring Records	Occupational Health and Safety Staff HQ (PM-273)	Paper (Computer Printouts)	Keep copies at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form

Figure 4-1 (2 of 7)

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Contracts Information System					
a. Automated Procurement Documentation System (APDS)	Procurement and Contracts Management Division HO (PM-214)	Magnetic Tapes	Keep tapes at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
b. Contract Files (Legal contract documents and modifications showing legal obligations of the Government or individuals) - Inactive completed contracts	Procurement and Contracts Management Division HO (PM-214)	Paper	Keep copies at Federal Records Center, NARA	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain 6 years and 3 months, then destroy
Grants Information and Control System (Computer System)	Grants Administration Division HO (PM-216)	Magnetic Tapes	Keep tapes at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Grants and Cooperative Agreements	Grants Administration Division HO (PM-216)	Microfiche	Keep microfiche copies at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Loans (dealing with asbestos in schools)	Grants Administration Division HO (PM-216)	Paper	Keep copies at Federal Records Center, NARA	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain 20 years, then destroy
Interagency Agreements	Grants Administration Division HO (PM-216)	Paper	Keep copies at Federal Records Center, NARA	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain 6 years, then destroy

Figure 4-1 (3 of 7)

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Suspension and Debarment	Grants Administration Division HQ (PM-216)	Paper	Keep copies at Federal Records Center, NARA	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain 6 years and 3 months, then destroy
RCRA Grants	Regions	Paper	Keep copies at regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal
Administrative Hearing Records, Pleadings, Transcripts, and Exhibits (Inactive files)	Office of the Administrative Law Judges HQ (A-110)	Paper	Keep copies at Federal Records Center, NARA	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain 20 years after completion or termination of case
Background Technical and Scientific Materials for Development of Standards for Drinking Water	Office of Drinking Water HQ (WH-585)	Paper	Keep copies at two national alternate sites	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Drinking Water Additives	Office of Drinking Water HQ (WH-585)	Paper	Keep copies at two national alternate sites	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Office of Waste Programs Enforcement - Site Description Information	Office of Waste Programs Enforcement HQ (WH-527)	Paper	Keep copies at appropriate alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Office of Waste Programs Enforcement - Scientific Data/Records of Chemicals (DIOXIN)	Office of Waste Programs Enforcement HQ (WH-527)	Paper	Keep copies at appropriate alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Hazardous Waste Data Management System	Office of Solid Waste Program Management and Support HQ (WH-562)	Magnetic Tapes	Keep copies at appropriate alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
TSCA Rulemaking Records (Docket)	Office of Toxic Substances - Information Management Division HQ (TS-793)	Microfiche	Keep copies at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
TSCA Section 5 Assessment Files	Office of Toxic Substances - Information Management Division HQ (TS-793)	Paper	Keep copies at EOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
TSCA Inventory of Chemicals	Office of Toxic Substances - Information Management Division HQ (TS-793)	Magnetic Tapes	Keep tapes at alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
State Water Emergency Plans	Regions	Paper	Keep copies at regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Inventory of Public Water Supplies	Headquarters and Regions	Magnetic Tapes	Keep tapes at FOF alternate site and regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Superfund Site Investigations (Only where site investigations have been conducted and the sites have been ranked)	Regions	Paper and Magnetic Tapes	Keep copies and tapes at regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Superfund and RCRA Enforcement and Litigation records	Regions	Paper	Keep copies at regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
RCRA Part B Permit Application and Permit Files (only Permit and abstracted information referencing key information on RCRA Part B Permit Application)	Regions	Paper	Keep copies at regional alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Product Label File	Office of Pesticide Programs - Program Management and Support Division (H) (TS-757)	Magnetic Tapes	Keep tapes at FOF alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form

Name of Record System	Responsible Office	Media - Records Maintained In	Method of Protection	Transfer Frequency	Alternate Site Disposition Instructions
Company Data File (Inactive Files)	Office of Pesticide Programs - Program Management and Support Division HQ (TS-757C)	Microfiche	Keep microfiche copies at Federal Records Center	31 Mar. 30 Jun. 30 Sep. 31 Dec.	Retain permanently.
Dosimetry Records	EMSI, Las Vegas	Paper and Magnetic Tapes	Keep copies and tapes at Region 9 alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Radionuclide Radioactive Source Inventories	EMSI, Las Vegas	Paper	Keep copies at Region 9 alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Whole-Body Counting Data Files and Summary Files	EMSI, Las Vegas	Paper (Computer Printouts) and Magnetic Tapes	Keep copies at Region 9 alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form
Radiation Claims and Off-Site Surveillance	EMSI, Las Vegas	Paper	Keep copies at Region 9 alternate site	*Annually	Maintain current; dispose of superseded records as indicated on transmittal form

Figure 4-1 (7 of 7)

IDENTIFYING VITAL RECORDS

When selecting emergency operating records is consideration given to:

1. The types of information needed by EPA during an emergency?

2. The value of the records in meeting this need?

3. The availability of this information elsewhere?

When selecting legal rights and interests records is consideration given to:

1. The question of what rights and interests require the Agency's protection?

2. The value of the records in protecting those rights and interests?

3. The availability of this information elsewhere?

4. Do these rights and interests records include records of debts owed to the Government but not of those owed by the Government?

5. Do they exclude records supporting legal rights that can be reestablished through affidavit and are well known to those involved?

6. Do they exclude records that are duplicated, as a matter of standard practice, by local governments?

7. If the same records are needed for both emergency operating and legal rights and interests purposes, are they either designated as emergency operating records and handled accordingly or designated as both types and after duplication stored separately?

8. Does your office designate for vital records purposes only the minimum volume of records consistent with the program's objectives?

Figure 4-2

VITAL RECORDS TRANSMITTAL

(See instructions on reverse)

1. ACCESSION NO. *(To be assigned by Alternate Site Representative)*: R9-85-001

2. TO *(Area alternate site)*: EPA Region 9 Alternate Site

3. FROM *(Name of Vital Records Officer, address, zip code, and telephone number)*:
Robert A. Jones
Region 9 - Water Management Division
U.S. Environmental Protection Agency
Washingron, D.C. 20460

4. SECURITY CLASSIFICATION AND/OR RESTRICTION ON USE OF RECORDS *(If any)*: N/A

BOX NO 5.	SUBJECT/DESCRIPTION OF RECORDS AND DATE(S) 6.	ACTION CODE* 7.	SITE MAINTENANCE AND DISPOSITION INSTRUCTIONS 8.
	Inventory of Public Water Supplies 2 master magnetic tapes, Jul. - Dec. 1984	RP	Retain until updated
	Inventory of Public Water Supplies System Documentation, 1984	A	Retain until updated

SAMPLE

9. PREPARED BY *(Typed Name and Title)*	10. SIGNATURE	11. DATE
Robert A. Jones Vital Records Officer	Robert A Jones	2-28-85

RECEIPT ACKNOWLEDGMENT *(To be completed by alternate site personnel)*

12. RECORDS RECEIVED BY *(Typed Name and Title)*	13. SIGNATURE	14. DATE
John E. Smith Alternate Site Representative	John E Smith	3-6-85

EPA Form 1340-1 (Rev. 3-82) Previous edition may be used until supply is exhausted.

Figure 4-3 (1 of 2)

*ACTION CODES. A = Add, RM = Remove, RP = Replace

INSTRUCTIONS

VITAL RECORDS OFFICERS

Prepare this form in original and two copies when requesting the addition, withdrawal, and/or disposal of the vital records stored at the area alternate site. Complete Items 2 thru 11. Forward original and one copy, accompanied by pertinent records to the appropriate alternate site representative. Retain one copy in the suspense file until the original copy (signed by the alternate site representative) is returned.

ALTERNATE SITE REPRESENTATIVES

Alternate site representatives will enter accession number in Item 1, complete Items 12 thru 14, retain one copy of the form and return the original form to the Vital Records Officer listed in Item 3.

ITEM

4 Self-explanatory.

5 Enter each box number adjacent to the list of its contents.

6 Enter the title, subject description and date or inclusive dates of the item.

7 Enter appropriate code to indicate action desired. "A" indicates that a new record is forwarded for insertion into the file. "RM" indicates that a record is to be removed from the existing vital records file with no replacement. "RP" indicates that the record being forwarded replaces an existing record in the vital records file.

8 Enter instructions that alternate personnel are requested to carry out regarding maintenance of each record (i.e., retain permanently, return superseded record to the sender for destruction, retain until updated revision is received).

9-11 Completed by Vital Records Officers.

12-14 Completed by Records Alternate Site Personnel.

SAMPLE

Figure 4-3 (2 of 2)

CHAPTER 5 - FILING EQUIPMENT AND SUPPLIES

Table of Contents

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose	1
Policy	2
Standard Filing Equipment	3
Powered or Other Mechanized Filing Equipment	4
Utilization Standards for Filing Equipment	5
Requests for Filing Equipment	6
Standard Filing Supplies	7
File Folders	8
Folder Labels	9
Guide Cards	10
Ordering Filing Supplies	11

Figure 5-1. Checklist for Determining Need for Filing Equipment
Figure 5-2. Procurement Request/Requisition
Figure 5-3. Labor Services Request

1. PURPOSE. This Chapter prescribes criteria and procedures for the acquisition of filing equipment and supplies.

2. POLICY. Filing equipment and supplies acquired for use within the Agency will be the most economical possible to meet filing requirements. Filing equipment is not to be requested solely to improve appearance, office decor, status elevation, nor because of a desire for the latest design. Letter-size equipment will be used unless there is a requirement for legal-size. Used or reconditioned equipment will be used when available. As equipment becomes excess to local needs, it must be turned into the Property office for further disposition.

3. STANDARD FILING EQUIPMENT.

a. General Requirements. Standard equipment listed in the GSA Stores Stock Catalog and/or the Federal Supply Schedules should be used in preference to nonstandard items, unless there is a requirement for a special files operation. Letter-size equipment should be used in lieu of legal-size equipment because:

(1) Legal-size file cabinets cost 13 percent more than the letter-size for the upright variety and 28 percent more for the mobile or hanging file cabinets.

(2) Legal-size file cabinets require 16 percent more floor space than letter-size cabinets.

(3) Supplies for legal-size equipment costs more than letter-size equipment.

(4) Inactive legal-size files require 20 percent more space in Federal Records Centers than do letter-size files.

b. The five-drawer letter-size filing cabinet should be used for most smaller files operations.

c. Shelf Files. Shelf filing equipment costs less than file cabinets, requires less space, and permits ease of filing operations. Standard shelf filing may be more appropriate than filing cabinets for records that are alphabetically or numerically arranged, such as case or project files. Shelf filing should be used when records total 50 cubic feet or more and when:

(1) The purchase of new filing equipment is contemplated.

(2) Additional space for filing operations is required and only a limited amount of space is available.

(3) The filing station is in a relative permanent location.

d. Security Files. Classified documents and material are to be stored in security equipment as authorized by the Security office.

4. POWERED OR OTHER MECHANIZED FILING EQUIPMENT.

a. Mechanized filing equipment is only to be utilized in EPA when there is a result in savings over the use of standard filing equipment. The savings must exceed the difference between the cost of standard and mechanized equipment, prorated over a three-year period. A cost analysis should be done to determine the savings. The cost analysis should cover issues such as:

(1) Staff. The number of positions that can be freed for other purposes, either existing or budgeted.

(2) Space. The amount of space saved through the use of the mechanized equipment and how it may be used for other program requirements.

(3) Work Production. To determine if the workload will increase.

(4) Maintenance Costs. The cost of maintaining the equipment on a yearly basis.

b. Factors to consider when planning use of mechanized filing equipment.

(1) The system for which the equipment is used must be well established and not subject to frequent change due to reorganization, relocation, or other changes.

(2) Operation of the equipment is limited to one person.

(3) The equipment must be installed in a suitable location away from ceiling lights, and heat and air conditioning vents.

(4) Adequate floor space must be available.

(5) The weight of the equipment including the records may make it necessary to reinforce the floor. Adequate electrical current must be available to safely operate the equipment. Check the floor load capacity and the electrical current with the building engineer or with some competent authority in the Agency.

(6) Adequate maintenance and repair arrangements must be made.

5. UTILIZATION STANDARDS FOR FILING EQUIPMENT.

a. Dispose of all records that have been authorized for disposition by the Archivist of the United States, in accordance with EPA Records Control Schedules.

b. Remove office supplies, blank forms, publications, and other nonrecord material from filing cabinets to more suitable storage equipment.

c. Transfer to the Federal Records Centers, or approved Agency holding areas (to the extent that facilities are made available), inactive records not needed in daily business but not yet ready for disposal, when filing equipment can be released by such action.

d. Review records to determine if they can be microfilmed in accordance with Chapter 6, Records Management Manual. (Consult Records Officer for more information.)

e. Use filing cabinets with locks only when they are required by special needs which cannot be satisfied by less expensive equipment.

f. Use letter-size filing cabinets instead of legal-size.

g. Use five-drawer filing cabinets whenever available in lieu of four-drawer cabinets.

6. REQUESTS FOR FILING EQUIPMENT. A Checklist for Determining Need for Filing Equipment, Figure 5-1, has been included as an aid to assist personnel in determining the need for equipment.

a. Requests for New Filing Cabinets.

(1) The requesting office must complete EPA Form 1900-8, Procurement Request/Requisition, Figure 5-2, including a statement justifying the purchase of the new filing equipment and a certification that the criteria specified in Chapter 5 of the Records Management Manual has been complied with. Each request for mechanized filing equipment must be accompanied with complete justification for need and use and a cost analysis which describe the savings or benefits that may result. The requesting office should submit the request through normal channels to the appropriate Records Management Officer.

(2) The Records Management Officer will evaluate the request and determine if the file equipment is necessary based on information furnished. Requests which are not approved will be returned to the originating office with an appropriate explanation and recommendation.

(3) The appropriate Property Accountable Officer will certify all requests as to the availability of excess equipment.

(4) Requests for security cabinets will be approved by the Security Staff at Headquarters, or the designated Security Officer in the Field.

b. Requests for Used Filing Equipment.

(1) Requests for used equipment require the same utilization standards and justification as new equipment. In addition, Headquarters offices must complete EPA Headquarters Form 5100-2, Labor Services Request, Figure 5-3.

(2) The Local Records Management Officer will evaluate the request and determine if the file equipment is necessary based on the information furnished. Requests which are not approved will be returned to the originating office with an appropriate explanation and recommendation.

7. STANDARD FILING SUPPLIES. The use of standard types of file folders, guides, and labels will provide for neat and orderly files. Standardization of files supplies provide for interchangeability, lower costs through quantity purchasing, simplified stocking, and uniform appearance. Standard filing supplies are available from the GSA Catalog.

8. FILE FOLDERS.

a. Kraft Folders. Kraft folders should meet the majority of filing requirements since most records are current for a relatively short period before they are retired or destroyed. The standard kraft folder is 11 point, flat type, bottom scored for 3/4 inch expansion, reinforced self tab, and square cut.

(1) Drawer Files.

(a) Letter size: NSN 7530-00-663-0031, 9 1/2" x 11 3/4".

(b) Legal size: NSN 7530-00-200-0031, 9 1/2" x 14 3/4".

(c) Letter size with built-in 1 5/8" prong fastener: NSN 7530-889-3555, 9 1/2" x 11 3/4".

(d) Legal size with built-in 1 5/8" prong fastener: NSN 7530-00-559-4512, 9 1/2" x 14 3/4".

(2) Shelf Files.

(a) Letter size: NSN 7530-00-881-2957, 9 1/2" x 11 3/4".

(b) Legal size: NSN 7530-00-926-8975, 9 1/2" x 14 3/4".

(c) Letter size with built-in 1 5/8" prong fastener: NSN 7530-00-926-8974.

(d) Legal size with built-in 1 5/8" prong fastener: NSN 7530-00-926-8976.

b. Pressboard Folders. Pressboard folders are recommended for case and project files when the kraft folders will not withstand the added volume and/or use. The standard pressboard folders are flat-cut, one-inch expansion, with self-tabs, 1 5/8" prong fasteners, and square cut.

(1) Drawer Files.

(a) Letter size: NSN 7530-00-926-8981, 9 1/2" x 11 3/4".

(b) Legal size: NSN 7530-00-926-8982, 9 1/2" x 11 3/4".

(c) Special pressboard binder folders are recommended for case files such as grant case files. These folders have two kraft inner dividers with six built-in, two prong fasteners so that papers may be arranged by type. NSN 7530-00-990-8884.

(2) Shelf Files.

(a) Letter size: NSN 7530-00-926-8983, 9 1/2" x 11 3/4".

(b) Legal size: NSN 7530-00-926-8984, 9 1/2" x 14 3/4".

9. FOLDER LABELS. Use folder labels to place captions on the folder tab in a neat, uniform, and legible manner. Pressure-sensitive labels which require no water, solvent, or heat to apply are recommended. They may be fed directly into a typewriter or run on automatic equipment. Labels are 3 1/2" x 5/8" and are available in plain white or with a 3/32" wide identification strip in various colors (NSN 7530-00-577-4376).

10. GUIDE CARDS. File guides make files more usable, however too many guides will hinder files maintenance and operation. Guides serve to index files, especially correspondence files, and support the folders.

a. Drawer Files. Press board, one-third cut, angular metal tab, without lower projection, all positions.

(1) Letter size: NSN 7530-00-989-0692

(2) Legal size: NSN 7530-00-989-0694

b. Shelf Files. Pressboard, one-third cut, center position, with straight black steel tabs and metal shelf hooks on opposite edge.

(1) Letter size: NSN 7530-00-989-0184

(2) Legal size: NSN 7530-00-989-2425

11. ORDERING FILING SUPPLIES. The standard filing supplies cited in paragraphs 8, 9, and 10 should be obtained through normal supply channels.

CHECKLIST FOR DETERMINING NEED FOR FILING EQUIPMENT

This checklist is an aid to assist you in determining need for additional filing equipment. Check either yes or no to the following questions.

Yes	No		
☐	☐	1.	Have inactive records been retired to the Federal Records Center in accordance with EPA Records Control Schedules?
☐	☐	2.	Has disposition of temporary records not authorized for retirement to a Federal Records Center been accomplished in accordance with EPA Records Control Schedules?
☐	☐	3.	Have records been reviewed to determine if they should be microfilmed? (See Records Management Manual, Chapter 6.)
☐	☐	4.	Are all file containers being fully utilized at present, including all top and bottom drawers?
☐	☐	5.	Have extraneous items such as supplies, personal property, and decorations been removed from files?
☐	☐	6.	Has filing equipment within each office been surveyed to determine whether existing equipment can be transferred to the office requesting the equipment?
☐	☐	7.	Can bar locks be installed on existing file cabinets so that they meet security storage requirement? (Contact Security Officer.)
☐	☐	8.	Is this request for filing equipment being made in an effort to improve appearance, office decor, or for some similar reason?

Figure 5-1

RECORDS MANAGEMENT 1160 7/13/84

(Shaded areas are for use of procurement office only) Page of

US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON DC 20460	1 NAME OF ORIGINATOR Bob Franklin	2 DATE OF REQUISITION May 14, 1984
PROCUREMENT REQUEST/ORDER	3 MAIL CODE [illegible]	4 TELEPHONE NUMBER 382-5793
		5 DATE ITEM REQUIRED ASAP
SIGNATURE OF ORIGINATOR	7 RECOMMENDED PROCUREMENT METHOD ☐ Competitive ☐ Noncompetitive	
8 DELIVER TO (Project Manager)	9 ADDRESS	10 MAIL CODE / 11 TELEPHONE NUMBER

12 FINANCIAL DATA

(a) APPROPRIATION

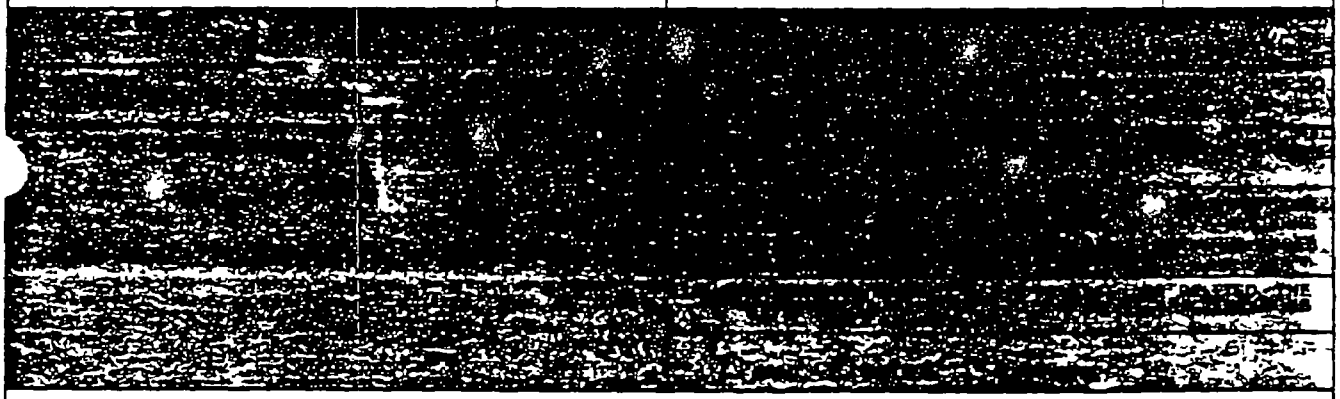
NOTE ITEM 12 (c) DOCUMENT TYPE—CONTRACT = C PURCHASE ORDER = P IGA = A OTHER (Misc.) = X

FMO USE (b) (13 digits)	DT (c)	DOCUMENT CONTROL NUMBER (d) (6 digits)	ACCOUNT NUMBER (e) (10 digits)	OBJECT CLASS (f) (4 digits)	AMOUNT (g) DOLLARS	CTS

13 SUGGESTED SOURCE (Name Address ZIP Code Phone/Contact)	14 AMOUNT OF MONEY COMMITTED IS	15 CONTRACTING OFFICE ☐ IS ☐ IS NOT AUTHORIZED TO EXCEED AMOUNT SHOWN BY 10%
D. N. Owens Company 2215 M Street, NW. Washington, D.C. 20037	☐ ORIGINAL ☐ INCREASE ☐ DECREASE	16 SERVICING FINANCE OFFICE NUMBER

17 APPROVALS

a BRANCH/OFFICE	DATE	d PROPERTY MANAGEMENT OFFICER/DESIGNEE	DATE
John Forest			
b DIVISION/OFFICE	DATE	e OTHER (Specify)	DATE
Robert Yowell			
c FUNDS LISTED ABOVE ARE AVAILABLE AND RESERVED Bob Franklin	DATE	e OTHER (Specify)	DATE



27 SCHEDULE

ITEM NUMBER (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	ESTIMATED UNIT PRICE (e)
	Lateral File Cabinet - Type IV - Five tiers high, style D - four shelves over one drawer, model 1 - without laminated plastic top, Size 2 - 42" wide 18" deep 64 3/4" high. color black. JUSTIFICATION: File cabinets are needed to house RCRA regulations which are currently being stored in boxes. CERTIFICATION: This certifies that all requirements of Chapter 5 of the Records Management Manual have been met.	3	ea.	241.00

TOTAL $

28 UNITED STATES OF AMERICA BY (Signature)	29 TYPED NAME AND TITLE OF CONTRACTING OFFICER

EPA Form 1900 2 (Rev 4-84) Replaces previous editions and EPA Form 1900-8T which are obsolete

Figure 5-2

COPY 1—PROCUREMENT FILE/CONTRACTING OFFICER

LABOR SERVICES REQUEST

NOTE: Your Administrative Officer must sign this request where indicated before it can be processed.)

AGENCY I.D. NUMBER (Official use only)

NAME OF REQUESTOR	BUILDING	ROOM NO	TELEPHONE NO	MAIL CODE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OFFICE	DATE
Office of Program Management Operations	May [illegible] 1984

SERVICE REQUESTED

☐ PICK-UP ☒ DELIVERY ☐ MOVE (Attach relocation worksheet)

☐ OTHER (Specify)

COMPLETE DESCRIPTION OF LABOR SERVICES TO BE ACCOMPLISHED

Deliver from warehouse a five drawer letter size file cabinet to Room 342, WSMW.

JUSTIFICATION: Filing cabinet is needed to house data from industries study program. Data and records are currently being housed in boxes which are creating a safety hazard.

CERTIFICATION: This certifies that all requirements of Chapter 5 of the Records Management Manual have been met.

APPROVAL SIGNATURES

PROGRAM ADMINISTRATIVE OFFICER	PROPERTY MANAGEMENT

FUND CERTIFICATION FOR MOVES

APPROPRIATION	DOCUMENT CONTROL NO	ACCOUNT NUMBER	OBJECT CLASS	DOLLAR AMOUNT
			2526	

I certify that funds are available

SIGNATURE OF COMMITMENT CLERK

ACTION TAKEN

ACTION	DATE	TIME	ACTION	DATE	TIME
LABORERS DISPATCHED			ARRIVED ON JOB		
LABORERS RETURNED			JOB COMPLETED		

FOREMAN'S SIGNATURE	CUSTOMER'S SIGNATURE

EPA Hq Form 5100-2 (Rev. 12-80) PREVIOUS EDITION MAY BE USED

COPY DISTRIBUTION
Originator submit three copies to Property Office, retain last copy for your records

Figure 5-3

6 - MICROGRAPHIC MANAGEMENT

CHAPTER 6 - MICROGRAPHIC MANAGEMENT - SOURCE DOCUMENT SYSTEMS

Table of Contents

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose	1
Policy	2
Objectives	3
Responsibility	4
Definitions	5
Protection of Permanent Microform Records	6
Records Control Schedules - Microform Records	7
Film Tests	8
Inspection of Master Films that Replace Paper Records	9
Periodic Review of Micrographic Systems	10
Preliminary Determination	11
Project Justification	12
Project Review of New Source Document Micrographic System	13
Procedures for Purchase/Lease of Source Document Microfilm Equipment or Contracts with Service Bureaus	14

Figure 6-1. Standards and Guidelines for the Maintenance of Microform Records

Figure 6-2. Standards for Film Tests

Appendix A. Feasibility Study for New Source Document Micrographic System - Cost-Benefit Analysis

CHAPTER 6 - MICROGRAPHIC MANAGEMENT - SOURCE DOCUMENT SYSTEMS

1. PURPOSE. The purpose of this Chapter is to establish the Agency source document micrographics program as required by the Federal Property Management Regulations. This Chapter provides Agency policy and procedures for all source document micrographic systems. NOTE: Micrographic systems involving the use of Computer Output Microfilm (COM) and other ADP hardware are excluded from this directive (see Chapter 9 of the ADP Manual).

2. POLICY. Micrographic equipment, services, and systems will be acquired only when it is determined that the use of such is: (1) technically feasible, (2) economically beneficial, and (3) administratively desirable.

3. OBJECTIVES. The objectives of the source document micrographic management program are to:

a. Develop criteria to determine the cost-effectiveness of micrographic applications over other methods of information storage and retrieval, and to insure that these methods are applied uniformly throughout the Agency.

b. Provide advice to potential users of micrographic systems, equipment, and technological advancements.

c. Review all requisitions for the acquisition of micrographic equipment or services in EPA.

d. Provide guidance to organizational elements concerning the advisability of microform production in-house or through contractual arrangements.

e. Develop Agencywide policies to insure that Agency systems are compatible and that microforms are produced in accordance with acceptable quality control standards.

f. Establish an inspection program for the review of all operating systems to insure compliance with the FPMR requirements for creating, processing, and storing microforms.

g. Maintain an inventory of all micrographic applications/activities being utilized by the Agency.

4. RESPONSIBILITY. Director, Information Management and Services Division has Agencywide responsibility for accomplishing the objectives outlined in paragraph 3 with respect to source document applications.

5. DEFINITIONS. For the purpose of this Chapter the following definitions apply.

a. Archival Microfilm. Archival microfilm is silver halide microfilm which meets the requirements of:

(1) Federal Standard No. 125 D Film, Photographic, and Film, Photographic Processed (for permanent use);

(2) American National Standards Institute (ANSI) Standard:

(a) PH1.25 - 1976 Safety Photographic Film, Specifications for;

(b) PH1.28 - 1976 Photographic Film for Archival Records, Silver Gelatin Type on Cellulose Ester Base, Specifications for;

(c) PH1.41 - 1976 Photographic Film for Archival Records, Silver Gelatin Type on Polyster Base, Specifications for.

When tested by ANSI Standard PH4.8 - 1971, Methylene Blue Method for Measuring Thiosulfate and Silver Densitometric Method for Measuring Residual Chemicals in Films, Plates, and Papers; and stored in accordance with ANSI Standard PH1.43 - 1976, Storage of Processed Safety Photoghraphic Film.

b. Microfilm. Microfilm is defined as:

(1) Raw (unexposed and unprocessed) film with characteristics that make it suitable for use in micrographics;

(2) The process of recording microimages on film; and

(3) A fine grain, high-resolution photographic film containing an image greatly reduced in size from the original.

c. Microform. A term used for any form containing microimages, for example microfilm, microfiche, aperture cards, etc.

d. Microform Applications. Any process which reduces any form of information into a microform medium in which the information (microimages) is too small to be read without magnification. These applications include any microfilm which has been produced by filming the paper copies or source documents of original records. Included are all roll microfilms, microfiche, micro-jackets, aperature cards, and all other microfilms produced from original records. Computer output microfilm (COM) is not a source document application since the film is produced by direct conversion of computer-generated data rather than by filming of paper records.

e. Micrographics. The science and technology of document and information microfilming and associated microform systems.

f. Microimage. A unit of information, such as a page of text or a drawing, that is made too small to read without magnification.

g. Micrographic System. A configuration of equipment and procedures for the production, reproduction, maintenance, storage, retrieval, display, or use of microforms.

h. New Micrographic System. A new micrographic system is any microfilming project in which the information to be microfilmed has not previously been maintained in microimage form.

6. PROTECTION OF PERMANENT MICROFORM RECORDS. The original microform (archival microfilm) must be protected against damage at all times. The following procedures can be used to insure the protection of original microform records.

a. Upon completion of the microfilming application and verification of the information on the microform, the silver halide original (or a silver halide duplicate microform record created in accordance with FPMR 101-11.506-3), plus one copy (Silver, diazo, or vesicular) will be transferred to the National Archives and Records Services; or

b. The originator may elect to maintain the original microform records in accordance with the approved records control schedules. If these records are maintained by the Agency, the standards specified in FPMR 101-11.507-1 and Figure 6-1, for storing original microform records, will be complied with until it is time to transfer the records to NARS or Federal Records Center in accordance with the approved records control schedule. The originator will certify that the records are to be maintained in accordance with the FPMR requirements.

7. RECORDS CONTROL SCHEDULES - MICROFORM RECORDS. Whenever paper records are converted to microform, a new records control schedule must be developed even if the paper records are scheduled. All proposed schedules which describe the disposition of microform records must be submitted to the Agency Records Management Officer for analysis and forwarding to the U.S. Archivist.

8. FILM TESTS. Organizational elements proposing to microfilm records will conduct film tests to insure that the standards specified in Figure 6-1 are complied with during the microfilming application (see FPMR 101-11.5). Tests should be conducted periodically during the microfilming application. Film tests must be forwarded by the originator to the Agency Records Management Officer. The Records Management Officer will review the tests to determine if the microfilming adheres to the standards specified in FPMR 101-11.5.

9. INSPECTION OF MASTER FILMS THAT REPLACE PAPER RECORDS. When a micrographic system replaces paper records that are scheduled to be kept ten years or longer (including permanent records), the master (original) microforms must be inspected every two years in accordance with FPMR 101-11.5. Guidance can be found in the NARS Handbook, Evaluating Micrographics Management. The system project officer or the local records officer shall maintain an "inspection log" in a form best suited to local needs. The local records officer should report major difficulties to the Agency Records Management Officer.

10. PERIODIC REVIEW OF MICROGRAPHIC SYSTEMS. A periodic review of all operating micrographic systems will be conducted by the local records officer. The purpose of the review is to determine if each system is relevant to the program's current needs and remains in conformance with the FPMR requirements for creating, processing, and storing microforms. Guidance can be found in the NARS Handbook, Evaluating Micrographics Management. The local records officer must maintain a "review log" in form best suited to local needs. The local records officer should report major difficulties to the Agency Records Management Officer.

11. PRELIMINARY DETERMINATION. Use of microforms in EPA requires thorough analysis and planning within the framework of the Agency's records/information program. Records/information management procedures frequently offer more simple and economical solutions to information storage and retrieval problems than do micrographics. These procedures include:

a. Outright destruction of the records;

b. Retirement of semi-active and inactive files to a Federal Records Center or storage or holding area;

c. Improved methods of maintaining the records, such as better classification, indexing, purging superfluous or duplicate material, or other filing practices; and

c. Establishing controls over the creation of records.

12. PROJECT JUSTIFICATION. If the procedures outlined in paragraph 11 do not represent adequate or appropriate solutions to an information storage and retrieval problem, a micrographic system may be justified under one of the following categories:

a. Archival. Microfilming is often justified as a means of preservation for records having permanent administrative, legal, fiscal, or historical value. Preservation by microfilming might be justified if records are deteriorating, fading, becoming brittle, or becoming mutilated through constant use. Also, microfilming might be justified to insure file integrity if out-of-life materials are frequently lost or otherwise not returned to the file.

b. Security. Microfilming may be justified to insure the protection of records that are vital to continued operations in the event of a national emergency, major natural disaster, or other catastrophe. Security microfilming may also be justified to provide security to records which safeguard the rights and interests of individual citizens or the Government. Microfilming for this purpose would not usually be justified if copies of the documentation already exist in alternate locations.

c. System Improvement. Microfilming may sometimes be justified if it can be demonstrated conclusively that substantial benefits will be achieved over the cost incurred by the conventional system. Although it is sometimes cost-effective to microfilm active records, it is generally uneconomical to microfilm records which may be destroyed or retired to a Federal Records Center within 10 years or less. Microfilming for system improvement may be justified to effect reduction in cost or time of work operations; save large scale repetitive operations from being performed; expedite the work flow; provide multiple, low-cost copies in systems where multiple users require access to a file; reduce the requirements for supplies, equipment, and space; reduce retrieval time; reduce duplication and mailing costs; or insure file integrity.

d. Centralized or Decentralized Information Sources. Microfilming may sometimes be justified to establish a central information point when the sources come from many locations; or conversely, a micrographic system may be justified to provide a means of convenient dispersal of large amounts of information to decentralized points, such as field office locations. Savings from duplication and mailing of paper records can sometimes be substantial. Microfilming proposals for this purpose must be supported by proven benefits.

13. PROJECT REVIEW OF NEW SOURCE DOCUMENT MICROGRAPHIC SYSTEM.

a. A Headquarters or field organizational element who has identified an area where conversion to a micrographic system might improve the information storage and retrieval system should submit a written proposal to the Agency Records Management Officer (PM-211D). The Agency Records Management Officer will review the proposal and advise the organizational element concerning the technical feasibility and cost-effectiveness of the proposed new system. This procedure applies to all proposed projects in which the information to be microfilmed has not previously been maintained in microimage form.

b. The organizational element initiating a proposal for a new micrographic system must conduct a feasibility study which includes a cost-benefit analysis following the guidelines shown in Appendix A, Feasibility Study for New Source Document Micrographic System. The feasibility study is an essential part of the project planning and evaluation process, and is required as supporting documentation for the Procurement Request/Requisition, EPA Form 1900-8, for all new micrographic systems in subparagraph 14c below. NOTE: No proposed source document micrographic system will be approved unless a feasibility study has been done which clearly documents and justifies the need for the system. All requests received which do not include a feasibility study will be returned to the originator immediately with a memo explaining that a feasibility study is to be done in accordance with Appendix 6-A.

14. PROCEDURES FOR PURCHASE/LEASE OF SOURCE DOCUMENT MICROFILM EQUIPMENT OR CONTRACTS WITH SERVICE BUREAUS.

a. The requesting office must complete EPA Form 1900-8, Procurement Request/Requisition and submit the request through normal channels to the Agency Records Management Officer (PM-211D) at Headquarters. This procedure applies to all procurement requests/requisitions submitted by Headquarters and field organizational elements, for the purchase or initial lease of all source document microfilm equipment and for the production of microfilm by contracts with service bureaus. It excludes supplies needed to operate an ongoing system, such as film stock, printing paper, chemicals, and the like.

b. All requests for purchase or lease of the equipment or contract for service must be accompained by a justification.

c. If the procurement request/requisition is to support a new source document micrographic system (defined as a project in which a service contract or equipment is requested to film a group of previously unfilmed records), it must be accompained by a feasibility study showing the

information required in Appendix 6-A (see subparagraph 13 b). Copies of any other feasibility studies that have been conducted by a consultant or contractor in the course of the project planning should be forwarded to the Agency Records Management Officer along with the procurement request/requisition and justification statement.

d. The procurement request/requisition must also include a "standard quality control clause" stating that the standards specified in FPMR 101-11.5 will be complied with when contracting with a service bureau to microfilm EPA records. The following standard quality control clause is to be included in all requests for micrographic services or systems.

> The microfilming application of EPA records must meet the requirements specified in Federal Property Management Regulation 101-11.5, Micrographics, in terms of: (1) Film stock used, (2) indexes or registers, (3) resolution, (4) density, (5) microforms and formats, and (6) microfilm duplicating. The service bureau must keep a log of the resolution and density tests. Spot checks will be made by the local Records Management Officer during the microfilming application.

Standards and Guidelines for the Maintenance of Microform Records

1. Microforms stored in roll form must be wound on cores of reels made of noncorroding materials such a nonferrous metals or inert plastics. Other metals may be used provided that they are coated with a corrosion-resistant finish. Plastics and coated metals that may exude fumes during storage must not be used. Rubber bands must not be used for confining film on reels or cores. If paper bands are used, the paper must meet the specifications of ANSI PH1.53 - 1978.

2. Storage containers for microforms must be made of inert materials, such as metal or plastic. Containers made of paper products should be avoided unless the conditions prescribed in ANSI Standard PH1.53 - 1978 are met. The containers must be closed to protect the microforms from environmental impurities and improper humidities.

3. Storage rooms or vaults for archival microforms must be fire-resistant and not be used for other purposes such as storage of other materials, office space, or working areas. The National Fire Protection Association (NFPA) publication NFPA 232, Protection of Records, 1970, provides further guidance. Protection from damage by water will be accomplished by storing permanent record microforms above reasonably anticipated flood stages.

4. Environmental conditions required.

a. The relative humidity of the storage room or vault must range 20 to 40 percent with an optimum of 30 percent. Rapid and wide-range humidity changes must be avoided and not exceed a 5 percent change in a 24-hour period.

b. Temperature must not exceed 70 F. Rapid and wide-range temperature changes must be avoided and not exceed a 5 percent change in a 24-hour period. A storage temperature of 35 F or below must be used for color film.

c. Solid particles, which may abrade film or react with the images, must be removed by mechanical filters from air supplied to housing or rooms used for archival storage. The mechanical filters are preferably of dry media type having an arrestance or cleaning efficiency of not less than 85 percent as determined by the stain test described in ASHRAE Standard 52-68(11).

d. Gaseous impurities such as peroxides, oxidizing agents, sulphur dioxide, hydrogen sulfide, and others which cause deterioration of microforms must be removed from the air by suitable washers or absorbers. Archival microforms must not be stored in the same room with nonsilver gelatin films. They also must not be stored in another room using the same ventilation system because gases given off by the other films may damage or destroy the images on the silver archival films.

Figure 6-1. Standards and Guidelines for the Maintenance of Microform Records

Standards for Film Tests

1. Microforms of permanent records planned for the purpose of disposal of the original must be processed so that the residual thiosulfate ion concentration will not exceed 0.7 microgram per square centimeter in a clear area. Program Offices or services that conduct tests for Program Offices must meet this requirement by performing the methylene blue test specified in ANSI PH4.8 - 1971.

2. If the processing is to be of the reversal type, it must be full photographic reversal, i.e., develop, bleach, expose, develop, fix, and wash.

3. The method for determining minimum resolution on microforms of source documents must conform to the Quality Index Method of determining resolution and anticipated losses when duplicating as described in the National Micrographics Association (NMA) Recommended Practice MS104.

a. For permanent records, a Quality Index of five is required at the third generation level.

b. For nonpermanent records, a Quality Index of five is required at the level of the specific number of generations used in the system.

c. Resolution tests will be performed using the NBS 1010a Microcopy Resolution Test Chart and the patterns will be read following the instructions provided with the chart.

d. The character used to determine the height used in the Quality Index formula will be the smallest character used to display record information.

4. The background photographic densities on microforms must be appropriate to the type of documents being filmed. Recommended background densities are as follows:

Classification	Description of Documents	Background Density
Group 1.....	High-quality printed books, periodicals, and dense typing.....	1.30-1.50
Group 2.....	Fine-line originals, letters typed with a worn ribbon, pencil writing with a soft lead, and documents with small printing.	1.15-1.40
Group 3.....	Pencil drawings, faded printing, graph paper with pale, fine colored lines, and very small printing such as footnotes.	1.00-1.20
Group 4.....	Very week pencil manuscripts and drawings, and poorly printed, faint documents.	0.90-1.10
Group 5.....	Computer output microfilm (COM).....	1.50-2.00

The procedure for density measurement is described in NMA Recommended Practice MS 104 - 1972.

Figure 6-2. Standards for Film Tests

APPENDIX A - FEASIBILITY STUDY FOR NEW SOURCE DOCUMENT MICROGRAPHIC SYSTEM-COST-BENEFIT ANALYSIS

1. GENERAL DATA.

As required in subparagraph 14c of Chapter 6, if equipment or service is requisitioned to support a "new source document micrographic system" (defined as a project in which a service contract or equipment is requested to film a group of previously unfilmed records), the Procurement Request/Requisition, EPA Form 1900-8 must be accompanied by a feasibility study to serve as supporting documentation. The following information must be included:

a. Project Justification. Write a brief narrative statement indicating the purpose of microfilming, i.e., archival, for security, for system improvement, to decentralize information source, etc. Summarize advantages of miniaturization over other methods of information storage and retrieval.

b. Name of Records Series. List the name of each file or group of records that you wish to microfilm. Include the inclusive dates of each file and a brief description of the record content.

c. Use or Value of Records. How are the records used and what value do they have; i.e., administrative value, legal value, fiscal value, historical value? If administrative value, what administrative purpose do the records serve? If historical, what research value do the records have? If legal, what legal proceedings might the records be used in? What is their evidentiary value and what measures will be taken to insure that the filmed records will be admissible as evidence? Will the filmed records be subject to audit?

d. Open or Closed Files. Is future interfiling necessary? Will updates or annotations ever have to be made to the filmed record?

e. Disposition of Original Records. List the records control schedule and item number of each file or group of records you wish to film. If records are unscheduled, what disposition is proposed for the original records after filming?

f. Arrangement of Records. How is each file arranged? Numerical, alphabetical, chronological, or a combination of arrangements? Is re-arrangement necessary prior to microfilming?

g. Physical Characteristics of Records. List size and color of papers. Are any oversized documents in the file? Carbon copies? Is information on one or two sides of the paper? Are there numerous fasteners such as staples and paper clips? Are the records in bound volumes?

n. Volume of Records. List volume (in cubic feet) of each file you wish to film. What percentage is active, inactive, backlog? What percentage must be purged before filming? What is the rate of file growth each month?

i. Image Production and Duplication. What type of camera film do you plan to use and what is its thickness and width? What kind of duplicating film? What reduction ratio? What image orientation and film format?

j. Film Distribution Requirements. How many copies of the film will be made? Will the film copies be distributed to other offices or to the public? If so, describe the distribution requirements.

k. Quality Control Procedures. What measures will be taken to insure that the file produced is of acceptable quality? Does the film need to conform to standards of archival quality? List proofreading and testing procedures and standards to be used.

l. Retrieval System. Describe the retrieval system that will be necessary to make references to the information on film. How will the information be arranged and indexed on the film to allow retrieval? What type of external index must be created? Will ADP equipment be used?

m. Reference Activity. What is the number of times per day each file must be referenced? What is the purpose and nature of these film references? Will this reference activity be evenly distributed over a given period of time or will it occur in "spurts"? How much time is needed to fill each reference? Will extracted data from a filmed record satisfy reference demands or is the entire record needed? Are hard copy prints from the film needed? If so, by whom? What percentage of the film references will require prints? Is retrieval or viewing equipment to be located in remote stations?

n. Filing Equipment and Space Occupied. List number of type of filing cabinets that will be cleared and made available for re-use by the filming project. How much floor space (in square feet) do they occupy?

o. Cost of Project. Estimated cost of project, including equipment and filming supplies. List and describe each piece of equipment, in paragraph 2, cost-benefit analysis. Include make and model numbers. Include estimate of costs savings in personnel, work facilitation, etc. Assistance or advice in answering these questions may be obtained from the Records Management Staff, Information Management and Services Division.

1. COST-BENEFIT ANALYSIS.

a. Purpose. The purpose of the cost-benefit analysis is to:

(1) Systematically examine the alternatives for accomplishing an objective; and

(2) Rank the alternatives according to their benefit to cost relationship.

b. Elements of a Cost-benefit Analysis. A cost-benefit analysis should contain the following:

(1) Objectives of the system being considered;

(2) A statement of the assumptions and constraints used in the analysis;

(3) Identification of alternatives;

(4) A cost estimate for each feasible alternative;

(5) A lease/purchase analysis

(6) A listing of benefits (outputs) for each feasible alternative;

(7) The savings/investment ratio of alternatives considered, in order of their respective economic performance.

ELEMENTS OF A COST-BENEFIT ANALYSIS

OBJECTIVES

A clear statement of the objective of a system is essential to the analysis. If there is more than one objective, the priorities must also be stated. A major objective must be:

(1) Measurable or quantifiable,

(2) Realistic and achievable, and

(3) Output or results oriented.

STATEMENT OF ASSUMPTIONS AND CONSTRAINTS

Assumptions are always made in the cost-benefit analysis. Assumptions provide a means for treating unknown or difficult to quantify elements and are used in performing calculations and reporting study results. All assumptions in the analysis should be stated as assumptions and the reasons for using that assumption should be given. Constraints that affect the scope of the analysis must be identified, and the reasons given.

IDENTIFICATION OF ALTERNATIVES

Alternatives may include new procedures, use of new equipment, and new ways of obtaining equipment or services. Continuing the present course of action is almost always one of the alternatives. Those alternatives that meet the objective and do not violate any of the constraints are considered feasible.

COST ESTIMATE

The cost-benefit analysis should contain an estimate of all the anticipated costs directly or indirectly associated with each alternative. All resources required to achieve the stated objectives should be presented in dollar terms if possible. The cost of each alternative should be examined in detail and described in the following cost categories to avoid overlapping figures:

(1) Nonrecurring costs. The costs occur once during the life cycle of the system. Nonrecurring costs are usually associated with equipment that is purchased for a system, but these costs can also cover the cost of a feasibility study, or the cost of renovating a facility to accommodate the new system.

(2) Recurring costs. These are costs that occur at some regular period of time throughout the life of the system. It might be a monthly lease cost, a yearly equipment maintenance charge, or the biweekly pay for personnel. The key is that it occurs on a regular cycle.

Recurring and nonrecurring costs in a micrographic system usually fall into one of five separate sub-categories. These are:

(1) Equipment. Equipment costs form a large part of the expenditure for any micrographic system. Equipment may be leased or purchased and most systems will have a combination of both. Large pieces of equipment are often leased while readers and other smaller pieces of equipment are purchased.

2) Supplies. This sub-category includes a multitude of large and smaller items that are easily overlooked in an analysis. A reader-printer needs a regular supply of paper, and readers use lamps that burn out periodically and have to be replaced. Most of these supppiies will be recurring costs in a system because they have to be purchased in small lots on a regular schedule. All of the film cannot be purchased during the first year and qualify as a nonrecurring cost because the film has a more limited shelf-life than the life of the normal micrographic system. These smaller items should not be overlooked in your effort to design the overall system.

(3) Personnel. The people that operate your system are definitely a recurring cost. This cost includes not only salaries, but employee benefits and training.

(4) Facility. The facility that houses the system adds a recurring cost to the system. Facility costs include not only the space for equipment, supplies, and personnel, but also includes the costs for telephones, overhead, and other support services.

(5) Other costs. There are many miscellaneous costs that will be associated with the development of a micrographic system. Nonrecurring miscellaneous costs might include the cost of a consultant to assist in the system design, the one-time cost for training system operators, managers, and users, or the development and printing of directives and operating manuals for the system. Other recurring costs that may be encountered in the system are the monthly or yearly maintenance contracts on equipment and, of course, the cost of service bureau contracts if the work is to be performed outside the Agency.

LEASE/PURCHASE ANALYSIS

There are several things to remember as you conduct a lease/purchase analysis, one being the subject of equipment maintenance. In most cases, equipment maintenance is included in the lease, and price, but not in the purchase price. Accordingly, maintenance costs must be considered in the purchase of equipment. Another consideration is rental credits. Some manufacturers will allow you to apply a percentage of the rental price toward the purchase of equipment. This percentage usually decreases as the length of rental increases.

LEASE/PURCHASE ANALYSIS FORMAT

Period of time equipment will be used

PURCHASE PRICE	$_____	a
MAINTENANCE ($) X___YRS/MOS	$_____	b
TOTAL PURCHASE PRICE	$_____	(1) a+b
LEASE PRICE ($) X___YRS/MOS	$_____	c
MAINTENANCE ($) X___YRS/MOS	$_____ (if applicable)	d
TOTAL LEASE PRICE	$_____	(2) c+d
LEASE PRICE ($) X___YRS/MOS	$_____	e
RENTAL CREDIT ____%	$_____	f
APPLICABLE RENTAL CREDIT	$_____	g (exf)
PURCHASE PRICE	$_____	a
APPLICABLE RENTAL CREDIT	$_____	g
PURCHASE PRICE BALANCE	$_____	h (a-g)
MAINTENANCE (X) X___YRS/MOS	$_____	i
BALANCE OF RENTAL PAID	$_____	j (e-g)
TOTAL LEASE/PURCHASE PRICE	$_____	(3) (h+i+j)

Below is an example of a lease/purchase analysis.

ANALYSIS A

Period of time equipment will be used - 10 yrs.

PURCHASE PRICE	$ 28,515
MAINTENANCE ($1827/YR) X 10 YRS	$ 18,270
TOTAL PURCHASE PRICE	$ 46,785 (1)
LEASE PRICE ($1190/MO) X 120 MOS	$142,800
MAINTENANCE ($) X___YRS/MOS	$_____
TOTAL LEASE PRICE	$142,800 (2)
LEASE PRICE ($1190/MO) X 3 MOS	$ 3,570
RENTAL CREDIT 75%	$ .75
APPLICABLE RENTAL CREDIT	$ 2,677.50
PURCHASE PRICE	$ 28,515
APPLICABLE RENTAL CREDIT	$ 2,677.50
PURCHASE PRICE BALANCE	$ 25,837.50
MAINTENANCE ($1827/YR) X 9.75 YRS	$ 17,813.25
BALANCE OF RENTAL PAID	$ 1,072.50
TOTAL LEASE/PURCHASE PRICE	$ 44,723.25 (3)
LEASE PRICE ($1190/MO) X 36 MOS	$ 42,840
RENTAL CREDIT 50%	$ .50
APPLICABLE RENTAL CREDIT	$ 21,420
PURCHASE PRICE	$ 28,515
APPLICABLE RENTAL CREDIT	$ 21,420
PURCHASE PRICE BALANCE	$ 7,095
MAINTENANCE ($1827/YR) X 7 YRS	$ 12,789
BALANCE OF RENTAL PAID	$ 21,420
TOTAL LEASE/PURCHASE PRICE	$ 41,304

LISTING OF BENEFITS

The analysis should identify the benefits of each alternative. Benefits should be expressed in terms of a quantified common denominator, such as dollars, the number of files transferred, the number of pages filmed, the number of personnel spaces released, and the number of file cabinets excessed.

Important nonquantifiable benefits, such as health, safety, or improved working conditions, should be specifically identified in the analysis, if the information is pertinent to a decision. A list of quantitative benefits also indicates what will not be accomplished if the system is disapproved.

SAVINGS/INVESTMENT RATIO

The savings/investment ratio can be used to determine the most effective alternative when benefits and costs are unequal. The ratio is obtained by dividing the total dollar benefits by the total dollar costs. A number larger than one indicates a cost effective system.

RECOMMENDATION

Objectively evaluate all of the alternatives and determine what micrographic application or equipment is best suited to the needs of your program. Recommend in the proposal the micrographic application or equipment you want approved.

7 - FILES MAINTENANCE

CHAPTER 7 - FILES MAINTENANCE

Table of Contents

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose	1
File Stations	2
File Custodian	3
Files Maintenance Plan	4
File Labels, Guide Cards, Supplies	5
Documentation of Filing	6
Avoid Unnecessary Filing	7
Preparation and Classification of File Material	8
Maintenance of Files	9
Availability of Reference Material	10

Figure 7-1. Files Maintenance Plan
Figure 7-2. File Labels, Guide Cards, and Supplies
Figure 7-3. Chargeout Record
Figure 7-4. Files Classification System for Administrative Records

CHAPTER 7 - FILES MAINTENANCE

1. PURPOSE. This chapter prescribes procedures for the efficient maintenance of Agency files.

2. FILES STATIONS. 41 CFR 101-11.303-1 requires that official file locations (files stations) should be established for the filing of official records. A file station is every separate location at which records of any kind are accumulated in an organized manner.

3. FILES CUSTODIAN. A files custodian is an individual who has been assigned responsibility for the operation of the files station.

4. FILES MAINTENANCE PLAN. A Files Maintenance Plan, Figure 7-1, is recommended for all files stations. A copy of the Files Maintenance Plan if prepared should be submitted to the local Records Management Officer.

5. FILE LABELS, GUIDE CARDS, AND SUPPLIES. Figure 7-2 contains guidance on the type of file labels, guide cards, and other filing supplies to be used in the maintenance of EPA records. In addition, it contains guidance on the preparation of folders and guide cards.

6. DOCUMENTATION OF FILES.

a. The integrity of the Agency's official files must be insured at all times, so that all official records relating to the operations of the Agency are documented in the official files. It is most important to have all information relating to a subject in one location. It is difficult to research when the information is incomplete or fragmented in different locations. The following techniques can be used to help assure complete documentation.

(1) Employees should forward approved official records to the files custodian for incorporation into the official files.

(2) Records being removed from the official files should be controlled and charged out to the individual removing the records from the files. Any time records are removed from the files a Chargeout Record, Optional Form 23, Figure 7-2, will be filled out and put in the files in the place of the records being removed.

(3) Employees should immediately return information or records to the official files when it is no longer needed.

b. Official files being used for research projects should be arranged to clearly identify record documentation from working supporting information. A file maintenance plan should be maintained at each file station to identify the official files. Also, the program office should identify and describe the type of information that exists in the official files to facilitate research projects.

7. AVOID UNNECESSARY FILING. In an efficient files operation, all unnecessary papers are eliminated before they are filed. Following are some ways of avoiding unnecessary filing.

a. Limit the creation of formal communications for routine matters where a memo or routing slip may be substituted, or where a reply may be made on the incoming communication, and then returned.

b. Limit the number of copies prepared to those which are specifically required or requested, or those which serve a valid purpose.

c. Eliminate file copies of routine communications which require no record, such as:

(1) Routine requests for publications. (Return the requesting letter with the material sent. An alternative is to reply by form letter. In neither case is a file copy needed.)

(2) Outgoing form letters. (A notation on the incoming letter showing the form letter identification number will suffice.)

(3) Routine transmittals.

(4) Copies of letters furnished solely for information, unless it is known that they will be subsequently referred to.

d. Limit "extra copy" files to those offices having justification for their maintenance.

e. Determine in advance the categories of paper that should be destroyed and those that must be filed. As material arrives, file only that paper that has been authorized for filing.

f. Limit the quantity of technical reference documents received, and file only those which will be of significant reference value.

3. PREPARATION AND CLASSIFICATION OF FILE MATERIAL. The real test of any file system is not how quickly material can be filed - anyone can place papers in folders in filing cabinets - but how quickly it can be produced when it is needed. Therefore, care should be exercised in processing, classifying, and filing the material. Figure 7-4 contains a files classification system for administrative records. This system should be used for the filing of all administrative records.

a. Preparing File Copies. The following preliminary steps should be taken in preparing documents for filing:

(1) Remove rubber bands, paper clips, pins, and other temporary fasteners.

(2) Determine that the file is complete and that all enclosures are accounted for.

(3) See that parts of another file are not accidentally attached.

(4) Mend or reinforce with transparent mending tape all torn or frayed papers.

(5) Destroy identical duplicate copies.

(6) Remove all envelopes, copies of mail control forms, and routing slips, unless these contain remarks of record value.

b. Assembling File Material. Assemble each unit of file material by stapling the file copy on top of the incoming communication. If enclosures are too bulky to attach to correspondence records, show in the original incoming communication where the enclosure is filed. Make sure that each unit of material is complete and then assembled in chronological order with the latest date on top.

c. Bringing Forward Related Papers. In preparing documents for filing in the subject file, care should be taken to bring together under the same subject those pertaining to the same transaction. If there has been previous documents on this transaction, the earlier papers should be taken from the file and consolidated with the latter.

d. Classifying Papers for Filing. Classification is the process of determining the correct file into which a record should be placed, and indicating the file on the face of the record. This is a most important process, for the ability to locate papers promptly after they have been filed depends largely on the care and skill used to determine where to file them. Be consistent in classifying material for filing. Observe the following procedures:

(1) Analyze. Read and analyze the correspondence or other material to determine in which main file group it belongs: administrative subject file, program subject file, program case file. First choice for classification of documents is by case. For example, a paper dealing with an aspect of water pollution may also relate to a specific enforcement action. In such a situation, file it in the enforcement case file rather than in the subject file. Of course, it may be cross referenced if necessary.

(a) Classification of Subject Files. Determine the most outstanding or prominent subject; that is, the subject by which the papers will most likely be requested. Annotate the document accordingly on the upper right hand corner. Sometimes a document can be just as well filed in more than one primary subject. Do not determine the classification on the basis of the subject line alone. Read the content of the material. When the subject is not clear, ask the originator or someone more familiar with the material for assistance.

(b) Classification of Case Material. Use the identifying name or number for classifying and coding case filed document. Sometimes both the name and the number used to identify the case are put on the file label. In most instances, this identification is somewhere on the paper and need only be underlined or circled. If not, write the appropriate file code on the upper right hand corner.

(2) Preparing Cross References. If a document being classified involves more than one subject or case and there is a good chance it might be asked for in more than one way, a cross reference should be prepared as a finding aid.

(a) Select and indicate the file designation for the additional subject or case directly below the file designation for the main subject or case. Mark an "X" by this file designation to show that a cross reference is required.

(b) Generally it is more efficient to use a quick copy rather than a cross reference form.

(c) Cross reference may be used to indicate that a record has been moved from one place in the file to another.

(d) If a document is too voluminous to reproduce in full and should be filed under more than one code, reproduce only the cover page.

9. MAINTENANCE OF FILES. Additional standards that will help to maintain the office files in a neat and orderly manner are as follows:

a. Loose Filing vs. Fasteners.

(1) Loose filing of papers in subject file folders is recommended. Papers should not be fastened to the folders. Loose filing permits the removal of one or more pieces of paper from the folder without removing the entire folder from the file. Papers pertaining to an individual transaction should be stapled together in the upper left hand corner before they are placed in the folder.

(2) Fasteners are normally used on case file folders where the entire file is used as a unit.

b. Avoid Overloading File Folders. When a file folder is full (about 3/4" thick), prepare a new one and indicate the dates covered on both the old and the new folders. The new folders should be placed in the file in front of the old folder.

c. Use of EPA Form 1340-4. This form, Files Maintenance Plan (see Figure 7-1), will aid files operators in referencing, maintaining, and disposing of files in their offices. Instructions for using the form are shown on the back of Figure 7-1.

10. AVAILABILITY OF REFERENCE MATERIAL. Information on files maintenance and filing instructions are contained in the General Services Administration (GSA) Records Management Handbooks listed below:

GSA HANDBOOK TITLE	FEDERAL STOCK NUMBER
Checklist for Appraisal Files Operations in your Office	7610-935-5871
File Operations	7610-985-6973
File Stations	7610-926-2129
Information Retrieval Systems	7610-181-7577
Microfilm Retrieval Equipment Guide	7610-181-7579
Subject Filing	7610-926-2128

These handbooks are available through normal supply channels.

FILES MAINTENANCE PLAN PAGE _ OF _

OFFICE OF RECORD (Office, Division and Branch)	PREPARED BY (Name of Records Clerk)
Office of Mobile Source Air Pollution Control	John Kramer
NAME AND TITLE OF PERSON IN CHARGE OF FILES	DATE
Richard S. Brown Administrative Assistant	December 16, 1983

FILE CODE	RECORDS SERIES TITLES (Include Primary, Secondary and Tertiary subject headings)
	ADMINISTRATIVE RECORDS
AMP	ADMINISTRATIVE AND MANAGEMENT PROGRAMS FILE
AMP 1	POLICY AND PROCEDURE
AMP 2	REPORTS AND STATISTICS
AMP 3	FACILITIES MANAGEMENT
AMP 3-1	Waterside Mall
AMP 3-2	Ann Arbor Facility
AMP 3-3	West Coast Lab.
AMP 4	PROPERTY MANAGEMENT
AMP 4-1	Office Equipment - Service & Maintenance
AMP 4-2	Word Processing Equipment
AMP 5	PRINTING SERVICES
AMP 5-1	Printing Requisitions
AMP 6	RECORDS MANAGEMENT
AMP 6-1	Files Maintenance Plan
AMP 6-2	Records Retirement
	PROGRAM RECORDS
LEL	LEGISLATION
LEL 1	LEGISLATION
LEL 1-1	Light Duty Diesel Emission Standards
LEL 1-2	National Energy Policy Conservation Act
LEL 1-3	Automobile Fuel Economy Standards
LEL 1-4	Gas Guzzler Legislation
LEL 2	LEGAL OPINIONS
MSP	OFFICE OF MOBILE SOURCE AIR POLLUTION CONTROL PROGRAM RECORDS
MSP 1	POLICY AND PROCEDURE FILE
MSP 2	REPORTS AND STATISTICS FILE
MSP 2-1	Internal Weekly, Monthly, or Quarterly Activity Reports
MSP 2-2	Program Reports to Congress
MSP 2-3	Negative Progress Reports
MSP 2-4	Formal Reports on Fuel Economy Tests
MSP 2-5	Significant Regulatory Actions Plan
MSP 3	ISSUE PAPERS
MSP 4	CONTRACTS
MSP 5	MOBILE SOURCE AIR POLLUTION CONTROL REFERENCE LITERATURE
MSP 6	REGULATORY REFORM
MSP 7	RULEMAKING RECORDS
MSP 7-1	Petrification
MSP 7-2	Light Duty Vehicle Emission Standards

Figure 7-1

1. GENERAL. Standard equipment and supplies facilitate economy, efficiency, uniform operations, and improved appearance.

2. ORDERING FILE SUPPLIES. Standard types of file folders, folder labels, and guide cards should be obtained through normal supply channels.

3. FILE FOLDERS. Letter size kraft folders (100% sulfate pulp). Medium weight, 147 pounds (11 point). Natural color kraft folders. Blank, vertical, flat type. Square cut. Bottom scored for 3/4" expansion. Legal size folders are authorized as compatible supplies for legal size cabinets.

4. FOLDER LABELS. Use colong self-adhering (pressure sensitive) labels which require no water, solvent, or heat to apply. Labels for captions comprising three or less typewritten lines, 3 1/2" by 1/2" are available in plain white and with color identification strips.

5. GUIDE CARDS. Use self tab, 1/3 cut pasteboard guide cards, or 1/3 cut steel tabbed heavy pressboard file guides.

6. FILE CHARGE-OUT CARDS. Use Optional Form 23, File Charge-out Card. This form is designed for repeated use and utilizes both sides of the card. Supplies of this form may be obtained through normal supply channels.

7. PREPARATION OF FOLDERS AND GUIDE CARDS. Prepare folder and guide card labels by typing directly on the label. After typing, separate labels from their backing and place them in the right most position on the folders. This is the only position to be used regardless of subject level, i.e., primary, secondary, tertiary, case, etc. NOTE: Prepare folders only for those subject titles for which there is a definite current or anticipated need. If there is little or no need for the use of subordinate topics, do not prepare folders for them. If only an occassional piece of material is classified under a secondary or tertiary subject, place the material in the primary subject folder.

Figure 7-2
File Labels, Guide Cards, and Supplies

RECORDS MANAGEMENT

OUT

JUL

IDENTIFICATION OF RECORD (NUMBER, TITLE AND OR SUBJECT, DATE OF FILE OR DOCUMENT)	CHARGED TO (PERSON & OFFICE)	DATE CHARGED OUT
ADP and Office Equipment - Service and Maintenance	Tom Young, Office of Program Management	6-14-84

OPTIONAL FORM 23
FEB 1962
GSA Circular No 259

CHARGEOUT RECORD

5023-101

GPO 643—16—80979-1 338-795

DATE CHARGED OUT	CHARGED TO (PERSON & OFFICE)	IDENTIFICATION OF RECORD (NUMBER, TITLE AND/OR SUBJECT, DATE OF FILE OR DOCUMENT)

OUT

Figure 7-3

SUBJECT CLASSIFICATION OF ADMINISTRATIVE RECORDS

The following is a list of subject headings used in classifying administrative records for filing. These records include "housekeeping" or facilitative records that do not relate directly to the programs or mission of your office.

PRIMARY SUBJECT HEADING	CLASSIFICATION CODE
ADMINISTRATIVE AND MANAGEMENT PROGRAMS	AMP
BUDGET ADMINISTRATION	BUA
FINANCIAL MANAGEMENT	FIM
PERSONNEL	PER
PROGRAM PLANNING	PRP
PUBLIC AWARENESS	PUB

Figure 7-4 (Part 1 of 3)
Files Classification System for Administrative Records

FILES CLASSIFICATION SYSTEM FOR ADMINISTRATIVE RECORDS

ADMINISTRATIVE RECORDS

AMP	ADMINISTRATIVE AND MANAGEMENT PROGRAMS
AMP 1	POLICY AND PROCEDURE
AMP 2	REPORTS AND STATISTICS
AMP 3	FACILITIES MANAGEMENT (Use this classification to file materials pertaining to space assignment and facilities management, maintenance, and protection).
AMP 4	PROPERTY MANAGEMENT (Use this classification to file material pertaining to the management, maintenance, and protection of Federally owned personal property).
AMP 4-1	Office Equipment - Service and Maintenance
AMP 4-2	Word Processing Equipment
AMP 5	PRINTING SERVICES
AMP 5-1	Printing Requisitions
AMP 6	INFORMATION MANAGEMENT
AMP 6-1	Data Systems (Use this classification to file materials pertaining to the development of data systems, including ADP systems, and other automated information storage and retrieval systems).
AMP 6-2	Documentation Management
AMP 6-2-1	Files Maintenance Plan
AMP 6-2-2	Records Disposal and Retirement
AMP 7	MAIL AND MESSENGER SERVICES
AMP 8	TELECOMMUNICATIONS (Use this classification to file materials pertaining to the use of telephone and other office communications devices).
BUA	BUDGET ADMINISTRATION
BUA 1	POLICY AND PROCEDURES
BUA 2	REPORTS AND STATISTICS
BUA 3	APPROPRIATIONS AND FUNDING
BUA 4	BUDGET PREPARATION
BUA 4-1	Personnel
BUA 4-2	Support Services
BUA 4-3	Travel
BUA 4-4	Budget Development
BUA 4-5	Workload Analysis
FIM	FINANCIAL MANAGEMENT
FIM 1	POLICY AND PROCEDURES
FIM 2	REPORTS AND STATISTICS
FIM 3	PAYROLL
FIM 4	EMPLOYEE TRANSPORTATION
FIM 4-1	Employee Travel (Includes material pertaining to employee—per diem, travel arrangements, and related materials. Establish a case file for each employee who performs official travel).
FIM 5	PROCUREMENT
FIM 5-1	Purchase Requests

Figure 7-4 (Part 2 of 3)
Files Classification System for Administrative Records

PER	PERSONNEL
PER 1	POLICY AND PROCEDURE
PER 2	REPORTS AND STATISTICS
PER 3	ATTENDANCE
PER 4	EMPLOYEE PERFORMANCE AND UTILIZATION
PER 4-1	Training and Career Development
PER 4-2	Performance Evaluation
PER 4-3	Employee Recognition and Incentives
PER 5	EMPLOYMENT (Applicants, Appointments, Recruitment)
PER 6	GENERAL PERSONNEL
PER 6-1	Inspections, Surveys, and Audits
PER 6-2	Personnel Records (Establish an individual case file for each employee. Include all personnel records relating to the individual).
PER 7	HEALTH AND INSURANCE
PER 8	EMPLOYEE RELATIONS
PER 8-1	Employee Responsibilities and Conduct
PER 9	POSITION CLASSIFICATION, JOB DESCRIPTIONS, PAY ALLOWANCES
PER 10	SEPARATION
PER 11	PERSONNEL ACTIONS AND REQUESTS
PER 12	EQUAL EMPLOYMENT OPPORTUNITY (Use this classification for all material pertaining to EEO, Civil Rights, and Minority Employment).
PER 13	RESUMES OF EMPLOYEES AND POTENTIAL CANDIDATES
PRP	PROGRAM PLANNING
PRP 1	POLICY AND PROCEDURES
PRP 2	REPORTS AND STATISTICS
PRP 3	ORGANIZATION PLANNING
PRP 3-1	Functional Statements
PRP 3-2	Organization Charts
PRP 4	DELEGATION OF AUTHORITY
PRP 5	BRIEFINGS
PUB	PUBLIC AWARENESS
PUB 1	PRESS RELEASES
PUB 1-1	Public Opinion
PUB 2	NEWS CLIPPINGS
PUB 3	SPEECHES
PUB 4	NEWSLETTERS
PUB 5	AUDIO-VISUAL MATERIALS
PUB 6	FREEDOM OF INFORMATION REQUESTS

Figure 7-4 (Part 3 of 3)
Files Classification System for Administrative Records

8 - ELECTRONIC RECORDS

CHAPTER 8 - DOCUMENTATION AND PRESERVATION OF ELECTRONIC RECORDS

Table of Contents

PARAGRAPH TITLES	PARAGRAPH NUMBERS
Purpose	1
Scope	2
Background	3
Responsibilities	4
Guidelines	5
Additional Guidance	6
Assistance	7

Figure 8-1. Electronic Recordkeeping Guidelines

CHAPTER -- DOCUMENTATION AND PRESERVATION OF ELECTRONIC RECORDS

1. PURPOSE. This Chapter provides guidelines on how to preserve records created, stored, or transmitted using electronic means including personal computers, word processors or other electronic office equipment.

2. SCOPE. The provisions of this Chapter apply Agency wide.

3. BACKGROUND.

a. Use of electronic equipment makes the documentation and preservation of records more complex. Large computers, remote time-sharing services, mini computers, personal computers, word processors, and other devices can be used to create, maintain and dispose of records. Some records may never appear on paper. Electronic mail and the use of personal computers as "note pads" are other examples of further elimination of the traditional paper documents which have long been the focus of records management.

b. Easily applied rules for the creation, maintenance, and disposition of documents created, stored, and transmitted in electronic media do not exist. The use of electronic media can present documentation problems for the Environmental Protection Agency since records created electronically can become the basis for official policy decisions. When this is the case, traditional records management practices must be modified to avoid problems of unauthorized disposal of records. These practices must be designed to ensure that (1) integrity of records is maintained, (2) records are retrievable, (3) only authorized records disposals occur, and (4) records having continuing value can be easily transferred to the National Archives and Records Administration.

c. The intent of this Chapter is to respond to changes in recordkeeping practices brought about through the use of electronic office equipment. It identifies the problems associated with records which are created, stored, or transmitted using electronic media. It addresses issues and provides solutions to some of the problems involved in preserving electronic records in an office situation. As additional solutions are found, they will be issued in this Chapter.

4. RESPONSIBILITIES.

a. Assistant Administrators, Inspector General, General Counsel, Associate Administrators, Regional Administrators, Laboratory Directors, and Staff Office Directors. These officials are responsible for adequately and properly documenting Agency functions, activities, and operations and for instituting the internal practices and procedures set forth in this Chapter to prevent the loss or destruction of official records created or acquired in electronic form.

b. Director, Office of Information Resources Management (OIRM). This individual provides Agencywide policy and guidance on the information resources management area, including data processing, office automation and records management.

c. Records Management Officers. The Agency Records Management Officer, Information Management and Services Division, OIRM, has Agencywide responsibility for implementing electronic recordkeeping guidelines. Local Records Management Officers (headquarters, regions and laboratories) have similar responsibilities in their respective areas.

d. Managers. EPA managers have responsibility in their respective areas for implementing practices to preserve electronically created and stored information, including assuring that records are properly labeled and indexed.

5. GUIDELINES. Guidelines on electronic recordkeeping are attached as Figure 8-1 to this Chapter. The guidelines are based on National Archives and Records Administration Bulletin No. 85-2, dated June 13, 1985, which contains additional technical information.

6. ADDITIONAL GUIDANCE.

a. Other Chapters of this Manual provide general guidance on records creation, maintenance and disposal. Principles outlined in this Manual apply to all records, including those created electronically.

b. The EPA Security Manual provides guidance on protecting information.

7. ASSISTANCE.

a. The Agency Records Management Officer, Information Management and Services Division, OIRM, can provide assistance on the documentation and preservation of information maintained in electronic media.

b. The Administrative Systems Division, OIRM, can provide technical Assistance regarding the use of electronic media.

Electronic Recordkeeping Guidelines

The increased use of electronic media such as personal computers, word processors and other electronic media results in more employees, ranging from senior program officials to support staff, creating records using these media and making decisions concerning the accessibility and preservation of electronically-generated information. To familiarize these individuals with their responsibilities, the following guidelines have been prepared.

These guidelines address a range of issues concerning the creation, maintenance, disposition, and preservation of electronically-generated and/or stored information.

The guidelines address the following:

1. Accurate Labeling and Indexing
2. Retention
3. Backup System
4. Disposal
5. Electrical Power
6. Diskette Care and Handling

NOTE: In order to implement these guidelines, it is neccessary to distinguish between various types of "records". For definitions see Figure 1-1, par. 24, of this Manual.

1. Accurate Labeling and Indexing. To retrieve information created and stored electronically the user is dependent upon "labels", both external (on the outside of the diskette) and internal (recorded on the "index" of the diskette/disk). Accurate and complete labels are essential to ensure that Agency personnel can identify information on electronic media.

Insufficient external labels on word processor diskette inhibit the ability to identify the contents. The external label should include: File plan code established for your office, subject, and inclusive dates.

EXAMPLE: MSP 1 - Policy & Procedures (certifications) 1/85-6/85

(Check with your local Records Management Officer for a copy of your office's file plan). This information should also be entered on the internal index of the word processor diskette as part of the file title with specific dates for each document. On the personal computer, enter only the file code and date. Additionally, the index should be printed out to ensure access.

RECORDS MANAGEMENT

Most users of word processors prefer to treat each diskette as a "file drawer", containing similar documents (position descriptions, personnel actions, etc.). Others have one or more diskettes per person, and put all work by an individual, regardless of subject, on a diskette. The subject to what method is used, accurate and complete external labels are necessary.

Users of personal computers will treat each disk as a "file cabinet", containing a wide variety of subjects. The internal "label" could include: file plan code and the date the document is created.

EXAMPLE: IMON3 010586I

Check with your local Records Management Officer for a copy of the file plan.

2. Retention. The fact that information is created or stored electronically has no bearing upon whether that information is a permanent record, temporary record, or reference material. Status is determined by the same criteria for all information, regardless of the medium in which it is created or stored. But, ensuring the retention of information stored electronically is not as simple as ensuring the retention of information stored on microform or paper.

- The decision about whether an electronic document is a record needs to be made much earlier than for paper because of the ease of erasing or changing the document.

- The record status of electronically stored drafts of policy documents should be continually re-evaluated as changes are made. Substantive updates to such electronic documents probably constitute new records while minor changes probably do not.

- With a personal computer, a "backup" is needed for record material. This can be done by periodically adding new information to diskettes (daily, weekly, etc., depending on volume).

- All "record" material received by electronic mail should be converted to paper and retained until its disposition date. Many electronic mail messages contain reference material rather than record material and can be read and deleted.

If the same information is stored on more than one medium such as paper and disk (diskette), the originator and the local Records Management Officer should determine which set of information constitutes the record. Then, the material on the other medium can be considered reference [illegible] discarded.

3. Backup System. Information created electronically that contains 'record' material that is vital to the Agency should have a backup system. This can be done by duplicating the material on paper, diskette, tape, or microform. Consult with your local Records Management Officer for the best backup system for your office.

4. Disposal. As with paper records, electronic records can only be disposed of according to the approved EPA Records Control Schedules found in Appendix B through E of this Manual. However, there are certain considerations when disposing of records stored electronically. The compactness of electronic media may present problems. At times they are stored in non-traditional locations (like work stations) since they do not present the space problems evident with paper records. As a result, some may become less diligent in disposing of records at the time of their authorized destruction. The failure to dispose of records in a timely manner undermines the efficiency of the office as well as the records management program.

5. Electrical Power. Poor quality electrical power may cause equipment to malfunction and affect electronic records. Check with your facilities staff to see what steps need to be taken to prevent problems of this type. Some problems can be solved with inexpensive devices such as a surge protector. More serious problems may require additional electrical circuits.

6. Diskette Care and Handling. A tremendous amount of information in EPA is maintained on flexible diskettes. Below are practical guidelines that will assist you in protecting this information.

a. A clean working environment is of utmost importance. A dirty diskette surface is a serious case of data losses. Finger oil, smoke, food and drinks, abrasive materials (such as dust or filings), pencil eraser debris, etc. are typical contaminants.

b. Never make finger contact with exposed media surface through the elongated, oval slot in the envelope where the head-to-disk access contact is made. Also avoid touching the exposed media surface area near the hub.

c. Have the diskette drive cleaned regularly, particularly at its insertion slot position. Dirt and dust can be picked up by the diskette during insertion. Note: Your maintenance agreement should provide for regular cleaning of the drive. Check with your administrative officer.

d. Have the read/write heads cleaned on a regular basis. Note: Your maintenance agreement should provide for regular cleaning of the read/write heads. Check with your administrative officer.

e. Always return the diskette to its protective envelope after it is used.

f. Don't flex or fold the diskette. Avoid bending the diskette when loading into or extracting it from the drive.

g. Don't put a rubber band or paper clip onto the diskette envelope.

h. Always write on the label before it is applied to the diskette. However, if the original label is used, do not write on it with a ball point pen; use a soft, fiber tipped pen. (A ball point pen can emboss the diskette.)

i. Never erase the label on a diskette. The pressure and the erasure remains may cause damage.

j. Do not use or store in exteme temperature and humidity. As an example, a closed, hot, stationary vehicle in the sunlight may cause damage.

k. Don't place objects (coffee cups, staplers, etc.) on diskettes.

l. Never place a magnet of any kind onto the envelope surface of a diskette. This includes typical bar magnets found in offices (coat and picture hanger magnets, flashlight magnets, magnetized screwdrivers, etc.)

m. Maintain a schedule for checking, cleaning, or replacing air filters. Dirt causes media damage.

n. Make copies of vital or master diskettes and store in an alternate location.

o. Store diskettes in a vertical position in an appropriate storage container, preferably near the computer or word processor with which the diskettes are used.

p. Do not place electronic recording media near a telephone where the telephone's magnetic pulses could cause damage to the media.

ADVANCED RECORDS MANAGEMENT TECHNOLOGY

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Different Optical Disk Formats Co-Exist to Provide End-User Applications Flexibility

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Optical disk systems are finally here, in the form of reliable, cost-effective media and the optical disk drives and robotic "jukeboxes" used to access optically-stored information. On first glance, the proliferation of different optical disk sizes and formats may seem confusing, at best. Researchers have developed not one, but several optical disk formats. We have CD-ROMs (Compact Disc read only memory), CD-I (Compact Disc-Interactive), as well as proprietary formatting schemes in 3½-inch, 5¼-inch, 12-inch, and 14-inch sizes. Optical disks in use today are write-once, read-many-times (WORM)—but prototypes of erasable optical media have already been demonstrated by companies such as Kodak's Verbatim subsidiary. How can a systems integrator or end user decide which optical disk option is best?

Since erasable optical disks are still some time in the future, the contention today is among the three basic WORM sizes. While different formatting techniques exist, particularly in the 12-inch size, optical disks of a given size generally share many characteristics.

It is very likely that all sizes of optical disk will co-exist, complementing each other rather than competing. Each optical disk format provides a slightly different mix of benefits from among the array of features possible with optical disk technology. These include capacity and cost per megabyte of storage, cost of the hardware, and the ability to expand databases. For example, each larger optical disk format holds significantly more information than the smaller disks, with corresponding reductions in per-megabyte media cost. Disk drives which handle optical disks typically cost more as the disk size increases, but at the same time provide larger online databases. The cost, size, and expandability of the optical disk jukeboxes are also important factors in determining which format is better suited for a given task.

The most likely scenario will be that end-users in the future will choose their optical disk format based on the needs of their application. After all, even though different optical disk formats are not directly interchangeable, the digital information they store is identical in all cases. Should a user need to upgrade or transfer a database to a different format, such a data exchange can be accomplished over a network, directly by hard-wiring the two drives together, by telecommunications, or even through the exchange of intermediate magnetic media.

This interchangeability of information in digital form is the basis for the continued existence of different optical disk media. The most sophisticated information management retrieval equipment presently available, or planned for the future, features open architecture that can easily handle a variety of media.

For example, Kodak's KIMS system was designed to accept, distribute, and manipulate digitized image-intensive information. The system can handle digitized images whether the source is optical disk of any size, images digitized from microfilm, supplied in electronic form from magnetic media (generated, say, by a computer-output microfilmer) or read directly from hard copy documents through a scanner.

Whether digitized images or digitized alphanumeric information, optical disks of all formats can handle these data with equal facility. It is other features which make one type preferable to another. The technical differences and strengths of the various optical disk formats have been covered extensively in journals like *Computer Technology Review*. This article will look more closely at applications considerations which are involved in optical disk format selection.

5¼-inch and Smaller Optical Disk Systems

There is a close correlation between the size of the task at hand and the optimum optical disk capacity for that task. For example, an optical disk storage system dedicated to a single user or which is used by one person at a time needs much less storage than a multi-user system. One person will not be able to access a significant enough portion of a 300 gigabyte data base to justify keeping that much information available for a single person: with such large databases a multi-user configuration makes more sense. One-person information files are likely to be much smaller.

At the same time, there is a need to keep the cost of

such a single-user system down. It makes little sense to dedicate a $150,000 piece of equipment to a single person. In such cases it might be more cost-effective simply to hire another person: the combined salaries would still be less than the cost of the equipment over its useful life.

On the other hand, it makes a great deal of sense to dedicate even a $50,000 system to a person making a $20,000 salary if that person can be significantly more productive.

Optical disk systems based on 5¼-inch disks can make a great deal of sense for single-user applications. Such systems will generally use a personal computer such as the IBM PC/AT and one or two manually loaded optical disk drives in a single-user, stand-alone configuration. A desktop scanner and laser printer, along with a high-resolution monitor are the basic components. Such a configuration would provide the user with the capability to scan incoming documents, index and store them to optical disk, and access the information immediately.

The system could also function as a personal office copier, since a scanned document could be immediately printed out as multiple copies at the 8-page-per-minute rate typical of laser printers. Unlike many copiers however, the operator could append other document images, notes, etc. before printing out the copies.

The 5¼-inch optical disk is sized right for one-person use. This size optical disk will typically store 115 to 400 megabytes of information per side, or 230 to 800 megabytes for a dual sided disk.

This represents much more information than is commonly available to users of PCs. Few personal computers are equipped with more than a pair of 30-megabyte hard disk drives, so even the most modest optical disk configuration represents almost four times that online storage. Optical media can be removed and replaced with another in a few seconds. So, a user could maintain a library of disks at the desktop, inserting another 230 to 800 megabytes of information just by swapping disks.

Text or numeric databases seldom require the type of capacity provided by 5¼-inch optical disks; otherwise, the 20-60 megabytes of magnetic storage most users have available would seem ridiculously small. However, much information that must be managed in business consists of image-intensive data, including signatures, charts, graphs, photographs, and images of entire documents. Traditionally, this type of information has been captured for permanent storage on microfilm.

Microfilm will continue to maintain its solid niche for image-intensive information in the future, of course, for archival reasons and for large document volumes where only a fraction of the images will need to be retrieved later. Microfilm is a very low-cost data storage medium capable of very high information densities, rapid data capture, and image permanence measured in decades, which can be easily accessed through modern computer-assisted retrieval (CAR) microimage terminals.

However, where online access rivaling magnetic storage in speed is desirable, optical disk systems will make strong inroads. Document filing systems using 5¼-inch optical disks will be popular for applications with lower volume capture and lookup requirements, on the order of 500 or fewer documents per day and 100 or fewer retrievals. Because the disks are small and can be manually loaded, they are suitable for high-security applications. Unlike hard disk data, at the end of the day a disk library can be locked in a desk or vault.

Moreover, unlike other removable media, even the 5¼-inch optical disk has sufficient capacity to allow keeping significant image or data files on a single disk. In a bank signature card verification application, for example, a single disk can store 40,000 to 150,000 signature-only cards, or 3,000 to 10,000 signature cards plus photograph.

Other typical applications would include near-instant access to credit applications and other forms; legal, medical, and accounting data; and the extensive files used to support insurance and real estate agencies.

The 5¼-inch optical disk drive can be mounted internally in a PC, along with the special image management and interfacing boards necessary to handle the drive, providing a compact, all-in-one configuration that leaves room on the desktop for productive work.

12-inch Optical Disks

Twelve-inch optical disks fit neatly in another niche or two. An entry-level 12-inch OD system would be a stand-alone system for several users based on a supermicro computer with one or two terminals, a desktop scanner and laser printer, and one or two manually loaded optical disk drives. Such a configuration would typically cost about three times that of the $50,000 or less required to set up a 5¼-inch workstation.

Today, typical 12-inch optical disks store 2.6 gigabytes of information, or three to 11 times that of 5¼-inch disks. Correspondingly larger databases, with 50,000 document images per disk and 1000 to 2500 documents handled per day, can be accommodated by such a system.

Typical applications for manually loaded 12-inch optical disk workstations include many departmental information management environments, such as personnel, employee benefit, or medical files.

These entry-level systems will have connectivity. Gateways can be provided to allow them to access IBM computers through SNA protocols, although the communication is likely to be one-way. Kodak's KIMS system 3000 is a stand-alone system of this type with the added advantage of being migratable to a fully-networked environment using optical disk jukeboxes, microfilm, and other media.

Such a system, exemplified by the KIMS system 5000, takes a quantum leap in functionality. These large scale systems add optical disk automated libraries, or "jukeboxes," a local area network, and multiple workstations to help cost-justify the additional expense.

At a cost starting at around $700,000, such networked systems currently offer more than 340 gigabytes of optical-disk stored information accessible in a few seconds. Such optical disk repositories offer true centralized data filing for the largest department or corporation.

Typical applications would include digitizing all incoming correspondence, claims forms, invoices, and other "action" items as they come in the door for efficient access and processing electronically, as well as permanent online availability of personnel, legal, research and other documents.

14-inch Optical Disks

The 14-inch optical disk, as demonstrated by Kodak, and announced as part of future KIMS system offerings through an automated disk library in March, holds promise as a cost-effective solution for the very largest database applications.

With 6.8 gigabytes of information per disk, an automated library holding only a few more disks than are currently handled by today's 12-inch jukeboxes would offer a full terabyte of information.

A trillion bytes of data—a million magabytes—seems like an incomprehensible number. However, large corporations with huge and active data files, such as telephone companies and utilities, government agencies such as the IRS, and others all easily could justify such storage for image-intensive information files. When compared to magnetic media, optical disk offers fast, much more economical storage of today's increasing quantities of business information.

The 14-inch optical disk is worth special mention because of the innovative technology used to provide a capacity three times greater than the 12-inch disk. Such disks consist of a 14-inch aluminum substrate coated first with a smoothing layer of gold, five microns thick. Even though the disk is polished and diamond turned, the surface is still much too rough for use as optical media. Peaks on the surface can range from tens to hundreds of angstroms RMS, which would cause tremendous 'noise,' or leading to read errors.

The gold smoothing layer is in turn coated with a reflector layer a tenth of a micron thick, followed by the dye/binder layer another tenth micron in thickness. A thin, .05 micron overcoat layer is placed next. This layer serves to "dome up" when the laser beam writes a pit on the surface of the disk, allowing the material ablated to collect around the rim of the pit, rather than 'raining back down in clumps large enough to obscure the data.

This "sandwich" is duplicated on both sides of the disk, allowing two-sided recording. A unique flexible proprietary polycarbonate resin cover sheet separated from the recording surface by a layer of air, protects each side of the disk.

Many of the applications suitable for 12-inch optical disk will be prime applications for 14-inch optical disk as well: the chief difference is in capacity and data transfer rate. A large-scale, networked application that works well with 12-inch disks can be scaled up for the heftier capacity of the 14-inch disk.

For example, large corporations receive a massive volume of incoming mail. With a networked image management system based on optical disk, these documents need never get past the mail room.

Large institutions often assign a separate post office box number for various types of correspondence. Further sorting can be done by the mail room personnel, followed by capture of the document images for the information management system with a scanner. Images captured can be made immediately available for access.

While the reduced paper flow possible with front-end image capture is impressive, the advantages of such systems becomes more impressive at the workstation, where knowledge workers can carry out a host of functions from a single terminal.

In answering a customer inquiry, for example, the worker can review a high-resolution image of the customer's letter, examine a loan application or other document to verify signatures, and summon any supporting documents as needed. Frequently, it will be necessary to check the computer database for information—has the customer made a payment recently? Were other transactions for this amount billed previously? Are there similar vendor account numbers where the transaction might actually have taken place? The power of the computer can be used to rapidly search for this information, and display it on the same screen.

This workstation can be used to generate a form letter reply, or personal note to the customer. If the worker needs to attach a notation to a document image, systems like KIMS allow doing that, as well. Any time that document image is retrieved in the future, the "note" will be recalled from magnetic storage at the same time, and displayed.

As we've seen, there are many solid applications for optical disk technology in each of the three basic sizes that are currently available. Just as different types of magnetic media coexist today, it is likely that systems integrators and users will plan their future optical disk equipment and media choices around those formats that best suit the applications at hand. ■

(Note: Kodak and KIMS are trademarks.)

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Microfilm or Optical Disk: The Choice is Between *Systems*, Not Media

By Robert D. Barr
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3M Document Systems Division
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Today's information managers are bombarded with data about microfilm and optical disks. In fact, so much has been written about the subject that media selection is beginning to look even more complicated than it really is. My goal here is to help put some of the questions in perspective, and simplify the process of evaluating each medium's advantages in a particular application.

I believe that media selection is not really the question at all. The choice is between the kinds of systems that can be built around the two media, and that means taking a look at software and hardware as well as media.

Software is, of course, a vital element in any document management system, but it need not concern us in considering a film based versus an optical disk based system. Good document management software packages function independently of the storage medium, managing documents on paper, film or disk. As a result, the information manager can choose software suited to the application, rather than the present or future requirements of the hardware or storage medium.

As for the other two elements of a document management system, there are some differences inherent in the media, and other hardware factors which follow from the nature of the media. To begin with the differences in the media, the most important are:

Density—More images can be stored on a disk than on a film cartridge, meaning less storage space for files and less loading and unloading during retrieval.

Cost—Optical disks are more expensive, so much so that even with their superior storage density, it costs more to store an image on a disk than on film. The cost of duplicate disks should make multiple copies a rarity.

Digital Storage—The images on optical disks are stored in digital form. This makes it possible to transmit images as data to a remote location, often making duplicate files unnecessary.

Capture—A document can be scanned and captured immediately on an optical disk. No processing is necessary, meaning no delay before the document is available for retrieval.

Permanence—Properly processed silver film is a proven and accepted archival storage medium. At this time, optical disks are considered to have a useful life of up to ten years. In some applications, legal or long term storage requirements will be a factor in favor of choosing film.

Hardware differences between film based and optical disk based systems are a direct result of differences in the media. For example, images on film must be mechanically transported past the viewing lens. This means several mechanical parts not needed with an optical disk based system, and the possibility of more frequent maintenance. Other differences exist, but the primary ones are:

Retrieval Speed—Optical disk based systems are much faster. This is largely because images are stored linearly on film but can be accessed randomly on optical disks. Recent advances in software and film hardware have narrowed this gap considerably, but have not been able to match the near on-line retrieval speeds of optical disk based systems.

Cost—Optical disk hardware is much more expensive than that for film based systems. This is partially because optical disk storage is a relatively new technology, and the gap may narrow slightly as more optical systems reach the market. It will remain substantial, however, since the necessary equipment is much more sophisticated for optical disks.

Adding up all the factors, it comes to this: an optical disk based document management system will normally cost considerably more, but will likely be more productive than a film based system due to superior retrieval speed and other factors. Just how much greater the cost would be, and whether the greater productivity would justify the cost difference, depends on the application. Each information manager must determine the cost/performance ratio of the two types of systems for the particular application. The most difficult part of this task is determining what value to place on the various advantages offered by the two technologies.

Turnaround Time

It has already been mentioned that a document can be placed into the system immediately in an optical disk based system, a fact which has resulted in considerable interest in certain applications. Before deciding on the value of this fact however some things should be kept in mind:

1. In film based systems, the indexing can often be done before the film is sent for processing. This makes the index information available immediately, which is frequently all that is required to answer a good percentage of inquiries.

2. The time spent waiting for processed film can often be reduced, either by special arrangement with the service bureau who processes and duplicates your film, or by implementing in-house film processing and duplicating. The new generation of cost effective and easy to use processing and duplicating equipment reduces processing and duplication turnaround to less than one hour. This option has become more attractive to a growing number of information managers.

3. Only ten to fifteen percent of all documents filed are *ever* retrieved. Before purchasing an expensive system on the basis of turnaround time, it should be determined how many documents are actually consulted during the film processing delay time or in total during the document's retention time.

Multiple Access

As mentioned earlier, optical disk based systems permit an image to be transmitted, printed and viewed at a remote location, giving multiple users access to a central file. This can be a big advantage, but its importance may be limited by the following factors:

1. In film based systems, remote stations can have access to the index information, which may answer a good percentage of inquiries. Inexpensive film duplicates can also be made for these stations, or users at these remote locations can also request, through their terminal, a copy of the document if one is needed. This means a delay, but often one of acceptable length at a substantial workstation cost savings.

2. If it makes sense to have rapid access to complete files at remote locations, the creation and distribution of duplicate filmed files is relatively inexpensive.

3. As retrieval volume increases in a film based, multistation system, the only new equipment required is additional reader/printers. The only competition arises when two people need images on the same film cartridge, a problem which can be solved by duplicating the files. With optical disk based systems, contention (competition for access to the system) can become a major problem and new and expensive equipment (juke boxes, multiple disk drives, etc.) must be added to the system.

In other words, the cost of a film based system rises in a fairly straightforward manner as volume increases. In a disk based system the cost will take sudden jumps at certain stages in volume growth, when additional investment is required to maintain the initial advantage in retrieval speed.

On-Line Retrieval Speeds

Yes, optical disk based systems are capable of near on-line retrieval speeds, but:

1. Film based systems are also a lot faster than they used to be. In some applications, the few seconds saved may be important, making it possible to answer customer inquiries during the initial phone call, for example. This also can be accomplished in a microfilm computer assisted retrieval system. In other cases, the faster retrieval may be a luxury that costs more than it is worth.

2. If the goal is to reduce labor costs rather than improve service, there are less expensive ways to make even bigger improvements. These should be explored first. For example, new document management software packages require fewer keystrokes for both indexing and retrieval. Bar code scanning systems can virtually eliminate keystrokes during indexing on film based systems and electronic image systems. And the list goes on.

It is therefore apparent that both optical and film based systems have their advantages, and that brings us to the subject of hybrid systems designed to make the best of both technologies.

There are three possible techniques for placing records on both film and optical disk:

1. Filmed records can be scanned for storage on optical disks. This method will be used for converting some old files. This can be very valuable in the future when certain microfilm files become cost effective to migrate to the optical storage media.

2. Documents can be scanned and filmed at the same time using hybrid equipment. This method has the advantage of not adding a step to the document flow. Its primary purpose is to provide an inexpensive archival back-up copy to the optical file.

3. Finally, optical records, since they are stored as digital information, can be output on computer output microfilm when they are no longer accessed frequently. The use of this type of system, which is designed for rapid access to frequently needed documents and economical storage of less frequently needed records, should become quite common once erasable optical disk systems become available. The purging and reuse of expensive optical disk storage space will provide sound economic reasons for looking into this hybrid approach.

Conclusion

State-of-the-art technology has a price. It exists in the first place because it has its rewards. Whether the rewards are great enough to make the price a good investment depends on how the technology performs in a particular application. In other words, the question of film versus optical disk is a system question, not a media question, and the answer will be different for every information manager and every application. ■

CAR Versus Paper Files: Hard Facts About Software Driven Systems

By Joseph E. Casurella
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You already know that maintaining your paper filing system is costing your company money—too much money. The question is, Can you justify upgrading your paper filing system to an electronics-based file management system?

The following figures represent a compilation of various records management studies and compare actual average costs associated with maintaining a paper filing system in 1984 with estimated average costs of maintaining that same paper filing system in 1987. Consider

Item	Cost Per/Yr 1984	Cost Per/Yr 1987
Space (sq ft)	$ 80.82	$ 93.00
Supplies (per drawer)	153.36	176.00
Cost of cabinet (depreciation over 10 years)	30.10	36.00
File clerks pay (handling 12 cabinets)	882.98	1,015.00
Overhead	226.50	260.00
Total cost/year	$1,373.76	$1,580.00

These figures show that if you were going to do something about upgrading your costly paper filing system in 1984 but didn't, you will have spent another $206.24—*per four-drawer file cabinet*—by the time 1987 rolls around just to maintain your paper filing system in now outdated 1984 condition.

What are your alternatives? As many as there are computer-based file management system configurations.

Software-driven, computer-assisted retrieval systems (CAR) using microfilm, magnetic tape, or even optical disk as the storage medium instead of paper can save between 90 and 98 percent of the space previously required by paper-based filing systems. Since office space is not likely to decrease in cost, the savings afforded by reclaiming filing space for other office activities is one that increases as time goes on.

The cost of supplies to maintain documents kept within electronics-based systems is also less than that associated with maintaining paper-based files. One 100-foot microfilm cartridge can hold as many as 4000 letter-sized documents; one optical disk can hold as many as 60,000. You can eliminate the cost of maintaining standard four-drawer cabinets with just one microfilm cartridge or with a single optical disk.

File clerk productivity also increases with a computer-based file management system. Fifty percent fewer file clerks are needed to maintain documents with CAR system than one needed to maintain the same number of documents in paper-based systems. That means your company can save fifty percent of your current file clerk salary expenses.

Granted, the above figures are averages. Each real case scenario will vary depending upon the current application's configuration and the volume of documents handled. If you consider that once a document is filed on electronic media it never has to be refiled, you can appreciate how significant productivity gains can be achieved.

But upgrading a paper-based system to a CAR document management system *will* provide the following real benefits in *any* case.

First, easy access. All the source documents are stored in one location, whether on microfilm, magnetic media or optical disks. There will be no more lost documents.

Second, increased security. Only those people authorized to perform specified functions such as filing, retrieving, copying, storing and transmitting documents within the electronic system can do so. Access to documentation is prohibited to any non-authorized person.

Third, increased productivity of knowledge workers. Managers and other specialists will be able to get the document information they need faster.

Fourth, better service. Internally, departments that rely on the information will get it quicker, and externally, you'll be able to service your customers' needs more efficiently.

The costs associated with paper filing systems are increasing. The costs associated with electronics-based document management systems are not. In fact, as electronic technology advances, storage and manipulation costs are decreasing.

If you haven't already examined the benefits of upgrading your paper-based system to an electronics-based one, now is the time to do so. You'll save money in the long run, and enjoy the benefits of a more efficient, more effective document management system. ■

The Integration and Use of Write-Once Optical Information Systems

By Mason Grigsby
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As digital optical disk systems become more prevalent and as new vendors enter the field, more questions are being raised by end-users as to what constitutes a "system" and what features are needed, and are important, than are being properly answered.

There is a direct correlation between the entry of new vendors into this marketplace and the confusion among end-users as to the use and implementation of the technology.

The most prevalent questions center around types of disks, scanning techniques, software capabilities, and applications. These issues will be discussed in the context of a total system approach to the use of optical technology.

ALL OPTICAL DISKS ARE NOT EQUAL

The terms videodisk, compact disk (CD-ROM), and write-once read many times (WORM) digital optical disk are used to describe types of disks using laser recording techniques. They each have separate and distinct uses. The *videodisk* is used primarily for audio-visual consumer and training applications. It is not generally considered for business document systems. The *compact disk (CD-ROM)* is intended for use in the consumer audio-visual market and for publishing and distributing widely used relatively static data bases. CD-ROM is not appropriate for office documents or for computer or textual data when frequent or rapid updating is a requirement, hence, it is **not** appropriate for most office document image or data retrieval systems. The *write-once optical disk*, the subject of this article, is used for digital **data and text** storage (in the same manner as magnetic disks or magnetic tape) and electronic **image** storage. This category includes non-codeable documents which have been digitized, and computer created graphic images.

The use of write-once optical disks for document storage and retrieval is an emerging technology which can have an incredible effect on the efficiency and productivity in an automated office. A clear understanding of the strategic implications of this class of image processing systems can mean very rapid and tangible benefits in meeting information access needs.

WRITE-ONCE DISKS OFFER THREE KEY PRODUCTIVITY ADVANTAGES

Digital document storage and retrieval provides three major information management advantages:

1. The document is digital and can be **remotely accessed and transmitted** to any user or multiple user—regardless of location.
2. The **speed of access** to one or many documents by multiple parameter searches (i.e. Name, Number, Date, Document Type, etc.) is dramatically faster (2-20 seconds) than with paper or microfilm.
3. **Paper documents, computer data files and text can be accessed, linked, sequenced, and displayed simultaneously.** One step retrieval of paper and computer files is of major significance in the total information retrieval transaction.

These justifications alone are reasons for implementing an optical information system, but the overall impact on strategic corporate-wide information systems can be enormous in terms of improved competitiveness and profitability.

Linking paper and computer data—a major office breakthrough

The productivity gains which can be achieved by providing the ability to find, link, and display digitized data, text or paper documents relating to an inquiry or other business transaction on the same screen can easily exceed 100 percent. If you doubt this statistic, compare the time it now takes to assemble all the information for a given transaction from your computer system, your word processing file, and your paper files with the 2 to 20 second access time which a digital optical information system will provide.

This "customer information file" (CIF) concept has been a dream of corporate management since the inception of computers. Write-once optical information sys-

tems now make the CIF" concept a reality by creating a bridge between paper based systems and computer and word processing systems

Exhibit I illustrates the concept of merging computer data, text, and document images using a write-once disk system. The strategic impact of this system design can be dramatic for a wide variety of applications

An example of such a strategic system is a parts manual application in which the part schematic is scanned, indexed, and stored on the optical disk. The price list, part description, and inventory status are also maintained on the system When a part is retrieved, the description the price, and the inventory status are displayed in windows on the screen along with the schematic. The accuracy of the part description, the inventory status and the prices are verified, the customer invoice is printed on the system laser printer and the inventory is updated automatically One-step part retrieval, pricing and inventory control is achieved The remote electronic updatability of the write-once disk is a key feature of the overall system design since the parts image data base is frequently updated The return on investment in terms of productivity and customer service provides a very short system pay-back.

THE PROCESS, FUNCTIONS, AND APPLICATIONS

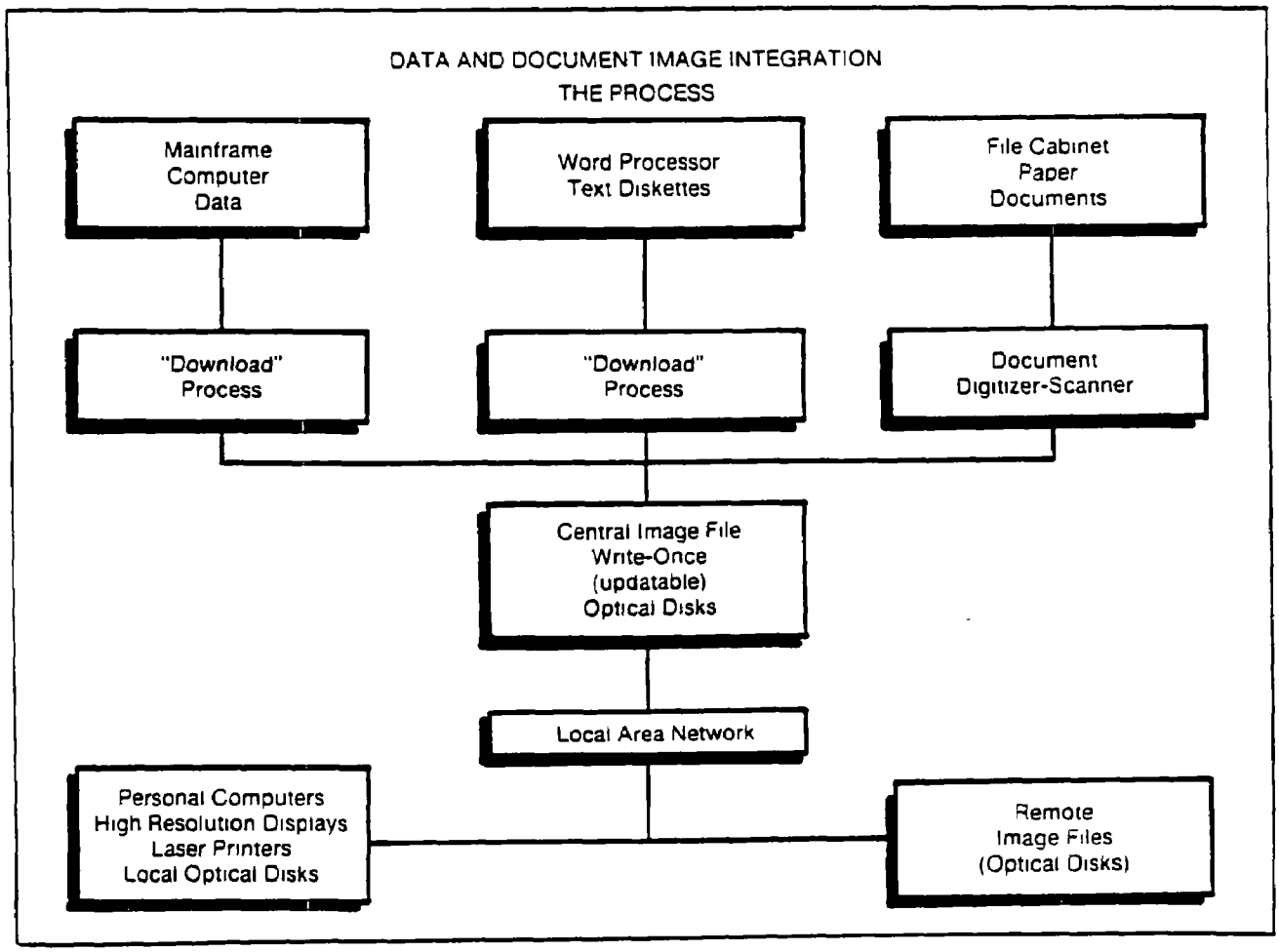
Given these productivity benefits in utilizing write-once systems it becomes important to understand the capabilities of the various components of optical systems and practically apply them to the applications The following represent major areas of misunderstanding in the implementation of both write-once and CD-ROM disk systems

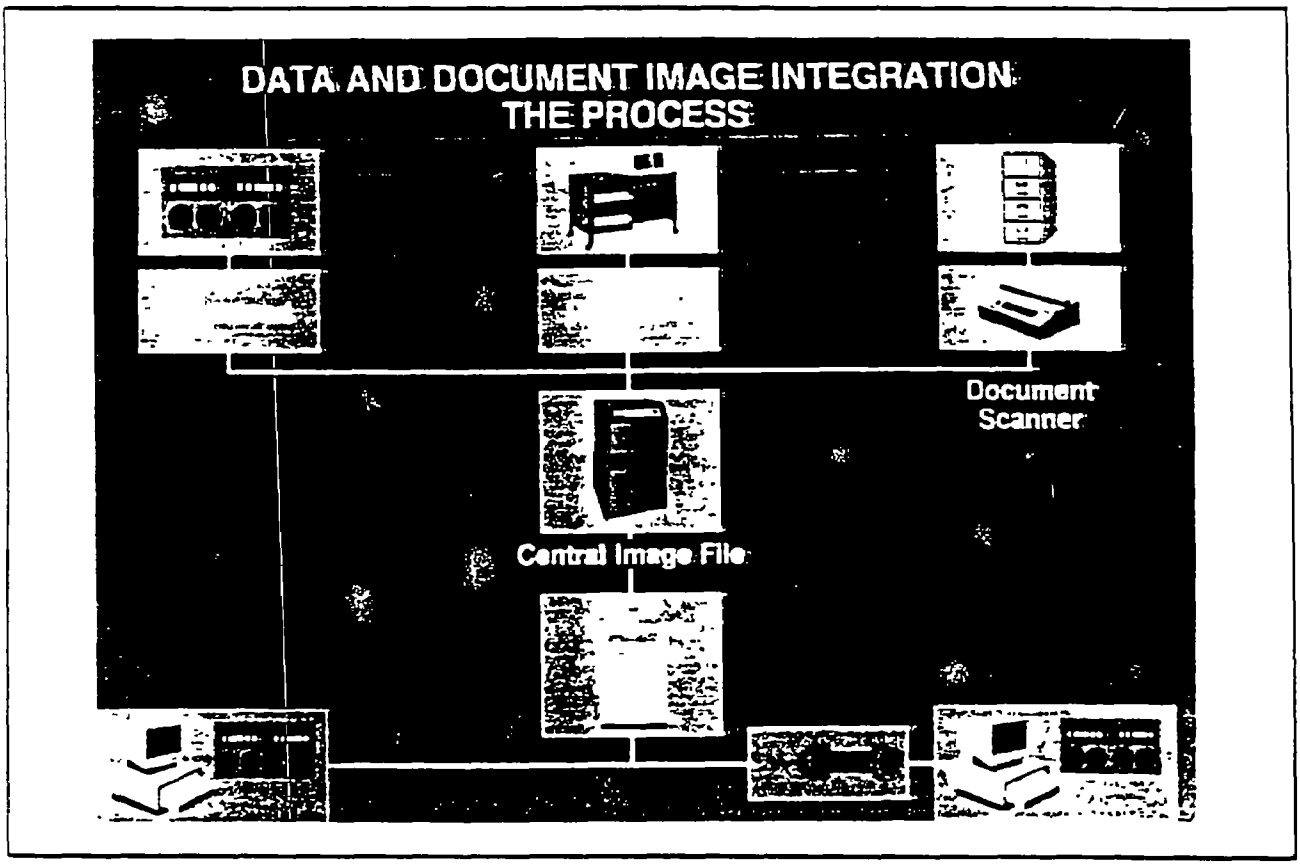
The distinction between external paper documents and internal machine generated documents

The distinction between internally and externally created documents is of great importance in the discussion of optical disk applications The presumption of many managers that their company is mostly 'on-line' or paperless' is totally false: **in fact, between 50 and 60 percent of all documents originate from external sources and reside in paper file cabinets** It is this large base of externally created documents that is causing corporate management to consider alternative electronic solutions to the growing filing problem Optical information systems are the technological driving force in the creation of this new class of strategic information systems aimed at capturing storing and retrieving this large base of externally generated paper

Document digitizer scanners capture the entire document

One of the areas of confusion regarding the capturing of documents is the difference between document *digitiz-*





ing and *optical character recognition* (OCR)

Digitizing a document is the equivalent of a facsimile device scanning a page and converting the printed matter to "picture elements" (pixels) a digital format consisting of 1's and 0's (hence the term "bit-mapped" images) This "digitized" or "bit-mapped" image cannot be recognized by the computer as anything other than what it is light and dark spots which when reconstructed will accurately represent the original paper document (Digitizing is necessary to capture signatures, logos, diagrams or handwriting which are integral to the document). This is the process that must be used to capture externally prepared documents

Since the image cannot be identified by the computer, there must be an indexing process which stores and locates the document which has been scanned. **This means *manual keyboard entry* of the criteria by which the user wishes to eventually search for and retrieve the document**: data elements such as account names, numbers, document types and document dates (Information may be "downloaded" from an existing mainframe computer database to eliminate some keystroking and to verify account numbers, but the process of providing identifiers for each document must still be accomplished) Write-once optical disk systems which are used for capturing **externally generated paper documents** for storage and retrieval must, therefore, utilize *digitizing scanners* and keyboard entry of descriptive fields to properly index individual documents (Note. Since documents no longer need to be individually sorted for filing in folders, the keying process is not an additional step, it merely replaces a slow and error prone manual process)

Optical character recognition (OCR) scanners capture text

As the name implies, optical character recognition is the scanning and recognition of text characters and/or numbers Present OCR scanning equipment only allows specific stylized characters, numbers (fonts) or bar codes to be recognized, ignoring the rest of the document information. While this scanning process is fine when an entire group of documents have been printed utilizing the same or similar stylized fonts, documents which are received from a *variety of random external sources* cannot possibly be expected to be printed in the character fonts which are necessary for scanning. Even if a variety of random fonts could be recognized, the OCR process would still ignore letterheads, signatures diagrams or any other non-standard" (non-codeable) information on the document While scanners are emerging which have both digitizing *and* OCR capability they are far too slow and expensive to be effective in the daily conversion of large numbers of incoming business documents. Additionally, OCR capture of characters requires the use of full text search software to retrieve documents (since no group of specific identifier keys have been isolated) As described in the following section, full text searching is not practical for the retrieval of the vast majority of office files The obvious conclusion is that the vast majority of optical systems require the use of digitizer scanners, rather than OCR to capture and preserve the integrity of non-

codeable documents The exception to this is the turnaround document which can be preprinted by the originator with an OCR identifier in a specific location for scanning when it is returned (a freight way-bill is an example) An OCR wand/light pen could then be utilized to avoid manual keying of this index data. Most documents and applications, however, do not fall into this category

The use of key word and full text search software

Another area of great misunderstanding is the difference between *key word* search software and *full text* search software Write-once optical disk systems, like their predecessor paper filing and computer-assisted microfilm systems, are primarily used for the storage and retrieval of **specific types of documents in specific functional departments of an organization.** Any one who has been remotely involved in filing and finding documents knows that the overwhelming majority of documents are retrieved by **known criteria** such as number, name(s) subject(s), document type, and date This characteristic of files and file folders means that the key word retrieval process results in the proper documents being found and displayed in the least amount of time. Full text searching of a document file with these specific, known characteristics would be totally counter-productive and unnecessary Full text searching (which first requires that the full text of the document be entered into the system) is more properly used when the search criteria is generalized and when document specific data cannot be isolated to provide an index. This category would include some legal documents (particularly litigation support) and case studies, medical manuals or libraries, governmental data, periodicals and other reference documents and data bases where the search may span a wide variety of **pure text** information (Full text search is more properly a necessity of CD-ROM applications where the search may be for a subject or group of subjects in a "non bit-mapped" textual data base which cannot otherwise be easily searched and where specific key words cannot be predetermined). The logical process of finding documents utilizing key word data entry and retrieval eliminates the need for a full search in the vast majority of office applications since specific search criteria is known.

Image storage and electronic photocomposition

Another question frequently asked about optical disk information systems is "can you change the image"? The answer, of course, is yes with the proper software The question that must be asked: why do you want to change a document? As always the understanding of the individual application is the determining factor. Document storage and retrieval systems for filing applications (loan documents, insurance records and claims, proof of delivery receipts, accounts payable files, etc.) dictate that the image **not be allowed to be changed. The inability to change documents is one of the major benefits of write-once optical disks:** they become a permanent record incapable of being altered. This is the major reason that the advent of erasable optical disks will not affect the use of write-once disks in office applications; erasability would be unacceptable since it could easily compromise the integrity of the document

Completely different applications of write-once disks, however, are those of photocomposition (sometimes called cut and paste), electronic publishing and computer-aided design (CAD) The use of optical disks will become very widespread for image storage and distribution for this class of documents The ability to scan, change, update, and transmit parts illustrations, schematics, pocedure manuals, and forms under software control will be a major factor in creating applications for write-once optical disk systems The capability to change and update documents and transmit them to local as well as remote locations in a timely manner is a major benefit of write-once systems in these applications. This rapid updatability is an advantage, incidently which CD-ROM optical disks **do not** share since they must be mastered, produced in quantity, and manually delivered to the user. The difference in the static image and the modifiable image application is the software that is used with the system Each can co-exist within the optical system with control being exercised through individual user security codes

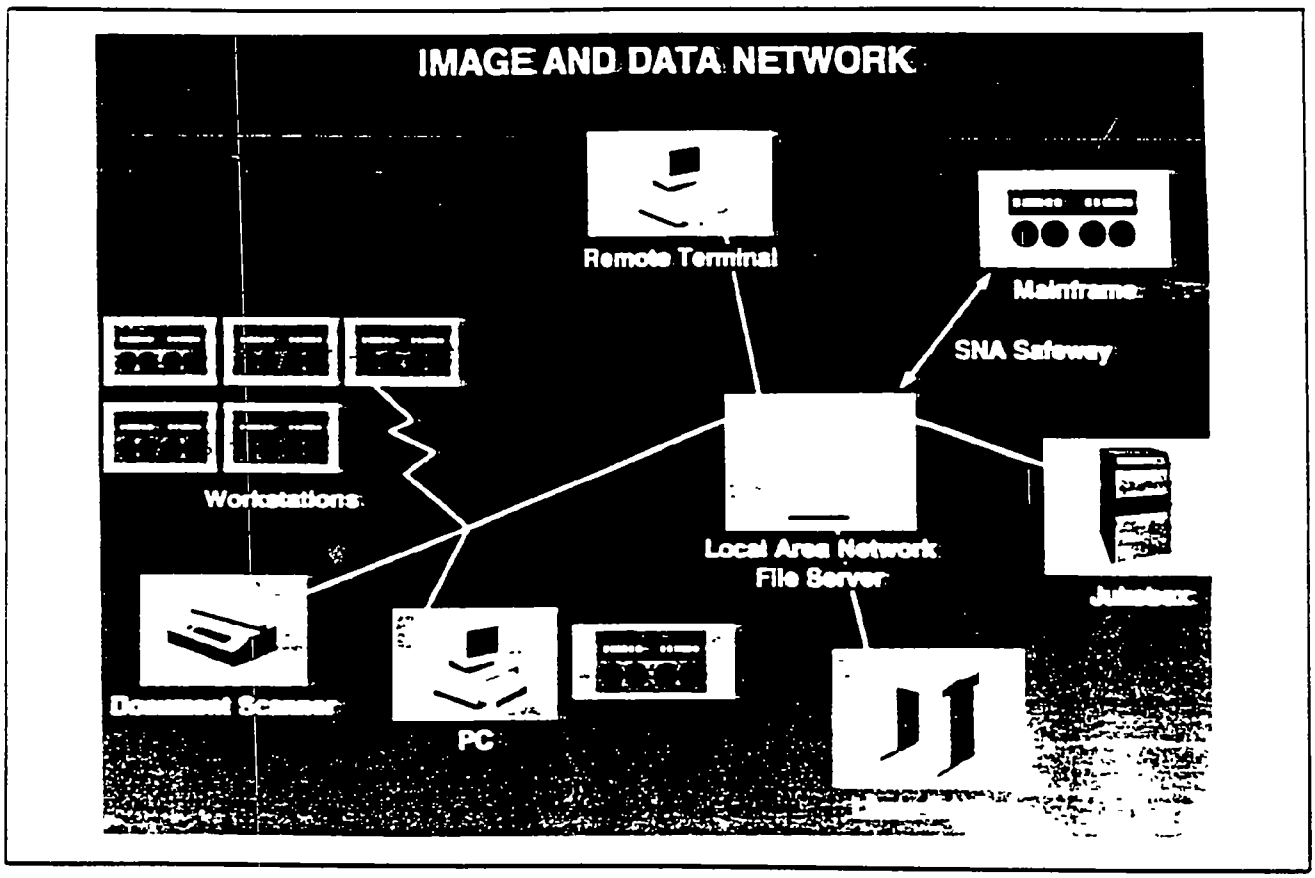
APPLICATIONS FOR WRITE-ONCE DISK SYSTEMS:

Paper document replacement

The reduction of the external, non-codeable paper file represents the single largest opportunity for write-once disks in terms of increased productivity reduced labor cost, profit improvement, and competitive advantage as an integral component of a new class of strategic information systems. There is no technology which can provide such dramatic increases in productivity and efficiency. Optical image processing systems as a part of an overall office automation plan to reduce the paper file cabinet burden is now a strategic necessity The ability of this technology to digitally link paper and computer files represents the ultimate strategic use of optical systems.

Digital data storage

The ability to keep large pure data files on-line to improve information access is also a highly motivating factor in using digital optical technology Computer data and other machine generated text, when stored on optical disks, provide multiple field access and fast retrieval to data which has, heretofore been kept off-line on magnetic tape or computer-output-microfiche Customer data such as statements are an example of this type of application. Most organizations would find it extremely useful to keep a year or more of their customer history on-line, particularly if they could also provide name to number cross refernece index capability This on-line data access will replace many computer-output-microfiche (COM) systems now utilized for active reference files. "Optical COM" will become a new tool in providing rapid access to customer information files A 5 1/4" optical disk will hold between 60,000-90 000 COM pages and provide access and image display times of under two seconds; offering tremendous productivity increases for highly active data files. Another use of the disks is as a backup for data currently stored on magnetic memory The perm-



anent nature of the disk media as well as its large capacity makes this an excellent archiving application: however a considerable educational process will be necessary to convince data processing management that optical technology is truly viable for purely archival data

Document microfilm replacement

Current and potential users of 16mm microfilm, microfiche jackets, updatable microfiche, and computer-aided microfilm retrieval systems (CAR) are candidates to upgrade or switch to document-based optical disk storage and retrieval systems

Microfilm and microfiche (jacket) systems have long been recognized as a means to store and retrieve large document files Recently, microfilm image systems utilizing computerized index data bases have been developed as alternatives to existing paper filing systems and write-once microfilm systems. The advantages they offer over paper filing systems are the same as those for optical systems: reduced labor costs associated with filing and retrieval of documents, virtually unlimited index schemes semiautomated document/image retrieval, and integration with other information data bases. The major limitations of this technology are that the static images are nondigital and cannot be transmitted to other user locations, the access process is semi-automated which extends retrieval time, and documents which have been randomly filmed cannot be easily assembled as a single file. The logical alternative to many of these microforms is an optical information system where the benefits of more rapid access and delivery are required There are developments occurring in microfilm scanning technology which will allow digitization of microfilm images and movement to remote locations or transfer to optical systems, but this technology will still suffer the disadvantage of slow access and the ability to scan will depend on maintaining consistent microfilm imge quality The inherent disadvantages may limit this class of system as a major force in image management It is however, an excellent transitional tool in moving to optical systems.

THE IMAGE PROCESSING PAYOFF

Image processing is a key tool in the implementation of strategic information systems in the office It has the potential to allow reorganization of a department or even the entire company to deliver improved value to customers due to the ability to integrate the corporate paper and computer memory The key benefit of these improved optical delivery systems will be to allow employees "full-service" capability in handling customer information requirements This "total transaction" ability will allow people to use more of thier own skills and initiative to improve the competitive advantage of the organization. it is the understanding of the strategic **use** of optical technology that will add ultimate value to an organization rather than the bits and bytes understanding of the technology itself The ability to separate the technology issues from the practical understanding of how optical information systems can strategically and economically improve the competitive position of the organization is the important issue in the ultimate success of these systems. ■

Tailor Software for CAR Systems and Application Needs

By Hans Hollink
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The Netherlands

Trying to convince a user to change their operations to better suit a particular information storage and retrieval system makes as much sense as taking the long route to work because your car doesn't have enough pep to climb a big hill along the way. The tool should be selected, and tailored if necessary, to suit the job at hand, rather than the other way round.

In microfilm installations, the application should determine the hardware and software chosen, in order to smoothly integrate the storage and retrieval of information with the end-user's everyday needs.

These applications-related criteria include the number of documents filed and retrieved per day, the response time required, total number of users, the microimage file size and location, the microimage index file size, the rate of growth of the file, and application workflow.

The ideal microfilm hardware and its software for a given application depend a great deal on these factors. In general, one of three different hardware/software approaches are chosen for a computer-assisted microfilm (CAR) solution to information management. These are the *instream*, *standalone*, and *distributed* approaches.

Instream CAR

All three handle what we think of as the basic CAR functions: data entry/validation, editing of data, index search for microimage retrieval, reporting on document data, support operator communication, and housekeeping.

The instream approach integrates microfilming and retrieval hardware with existing mainframe facilities and applications software. The present computer system stores document image indexing information, and supplies the microfilm operator with the information needed to find a given document image.

In addition to the basic CAR functions, the applications software supporting this approach must be flexible enough to allow the additional index search keys required by the CAR application.

In addition, this software may also support computer output microfilming (COM) of index data that is less-frequently retrieved, as well as supply an optional log of all microimage index traffic.

One potential advantage of the instream approach is that, if there is excess capacity on the existing mainframe system, the cost to implement the system is lower than if a separate minicomputer or PC is used. Furthermore, the integration of image address data into an existing database makes long-term maintenance of that information easier. Finally, such systems are simpler for the user because existing equipment and procedures can be used, as opposed to learning a new method of information retrieval.

Instream CAR systems are well-suited for applications where a customer already performs data capture from documents, using a database structure which allows the addition of an extra field at the document level. This extra field would contain the microimage address information. This system allows many users access to the database and to the image address information.

However, when taking the instream approach, the user must determine the capability and feasibility of establishing communication between the software of the retrieval equipment and the mainframe. For some, the modifications required would tax existing resources too heavily. In addition, some users may not have the free CPU or disk capacity for such an application, or may not be willing to devote these resources to a microfilm retrieval system.

Standalone CAR

Many turn instead to the standalone approach, in which the retrieval software is installed on a minicomputer or personal computer dedicated to the CAR application. The standalone software package is expected to support all basic CAR functions and the intelligence in both the microfilming equipment and the retrieval equipment.

One advantage of standalone CAR systems is that because the software is independent of any existing database management systems, it may be tailored quite closely to fit the particular application. Thus, the system can be installed and used quickly as a turnkey system. The implementation does not depend on, nor is limited by, the customer's EDP resources.

In a typical standalone installation, the customer may have no free EDP resources available, such as those needed for an instream solution. Or the application may

require a degree of flexibility and responsiveness which cannot be achieved by using the current mainframe. This may be because the database structure existing on the mainframe does not easily lend itself to document level indexing.

One example of such an application might be storage and lookup of mug files or fingerprint records within a law enforcement agency. Such files are sensitive, and must be kept from unauthorized eyes. At the same time, when fast access is necessary, the information may literally have life-or-death importance. Here, a dedicated standalone microfilm system is clearly the best approach.

Within ordinary business environments, however, users must address other issues, such as the need to duplicate entry of data into the mainframe computer and the standalone system where such information must be available to both. Duplicate files can also lead to inconsistency between them. Moreover, those with standalone systems must contend with the need for buying and using additional computer hardware.

Standalone systems, then, are most efficient when the data used for indexing the microfilm files is not extensively duplicated in the mainframe computer system. For example, key information on invoices may be stored temporarily in the mainframe while the invoices await payment. Only the invoice number and date may be duplicated in the microfilm index. These two pieces of information allow rapid access to the document image itself when it must be retrieved from permanent storage.

Distributed CAR

Another choice is the distributed approach to CAR. With this method, a standalone system communicates with a mainframe, combining many of the advantages of both the instream and standalone approaches. But,

In general, one of three different hardware/software approaches are chosen for a computer-assisted microfilm (CAR) solution to information management. These are the instream, standalone, and distributed approaches.

whereas data is still entered on the mainframe system, there is no need to re-key common information for the CAR system. This exchange is handled by software.

The major potential advantage of this approach is that it eliminates the duplication of data entry and reduces the resulting risk of inconsistency in files.

Such systems must include a procedure for communication between the mainframe and the minicomputer, and account for compatibility of tape formats when data is transferred via magnetic tape, the scheduling of this operation, translation protocols, line speeds, and use of a single CRT to access both the mainframe and minicomputer.

While each of the three CAR approaches has pros and cons, the choice of one over the other depends on the application, computer resources, and personnel available in the existing information management environment.

All three approaches can be used to access either 16 mm roll microfilm, or microfiche. The number of users, retrieval requests, and whether the microimage system supports a centralized or decentralized application all control choice of media.

For 16 mm microfilm, image marks exposed on a micronext to each document enables intelligent microimage film terminals such as those in the family of Kodak IMT microimage terminals to access source document images recorded on that film. The image mark is exposed on the film by a microfilm camera. The software in the microfilmer can ensure that the image mark and the film address can be exposed on the film next to the document image automatically, and with no operator intervention. In addition, image management coded (blips of differing sizes) can also be used to provide filming of batches in random sequence and to facilitate error correction.

The sequential image number can be stamped on the original document during microfilming and then stored on a computer with other specific data.

When this index is accessed, the image address will be displayed to the operator. He or she will be prompted to insert the relevant microfilm cartridge into the microimage terminal and the computer will then drive the microimage terminal to the image or images required.

For this purpose, the image address information is sent from the computer terminal, via an interface, to the microterminal. The intelligence in the microimage terminal image accepts the image address and scans the film lengthwise at high speed. During the film transport, image marks are counted until the required image number is found, and the image is displayed.

Roll microfilm systems can store massive amounts of information in one package. As many as 4000 document images can be captured and stored on a single magazine, yet accessed in seconds with an intelligent microimage terminal. Duplicate rolls can be made to allow access to this information by several operators. The Kodak Information Management System (KIMS) features a robotic film autoloader that can select a given microfilm magazine, locate the desired document image, digitize it, and distribute the image over a local area network for even broader access.

Microfiche is a microform which records source document images on a A6 sheet of microfilm. On microfiche,

the images are organized in relationship to x, y coordinates which can be used in different ways to retrieve a specific image. Microfiche typically store fewer images on an individual fiche than can be packed into a roll of 16 mm microfilm. However, microfiche can be readily duplicated by inexpensive equipment. As a result, users of microfiche can reproduce many copies of such data for distribution to a large number of remote locations. A few fiche can be mailed to branch offices for the cost of a first-class stamp.

Microfiche are used extensively for computer output microfilm (COM) reports, although COM devices can also generate 16 mm microfilm of computer data.

Computer assisted retrieval systems are available on the market to access this microfiche information. The microfiche are normally stored in cartridges. After entering search criteria into the computer system, the computer will search the index data of the microfiche file and will display the cartridge number and microfiche number. The software requirements for a microfiche-based CAR system are similar to those for a 16 mm rollfilm system.

In summary, microfilm systems for computer assisted retrieval can be configured in many different ways to fit a broad range of applications. Software can be tailored to accommodate existing database software, or customized for a special application. Information retrieval is most efficient when it is designed to serve the needs of humans. ■

(Note: Kodak and IMT are trademarks.)

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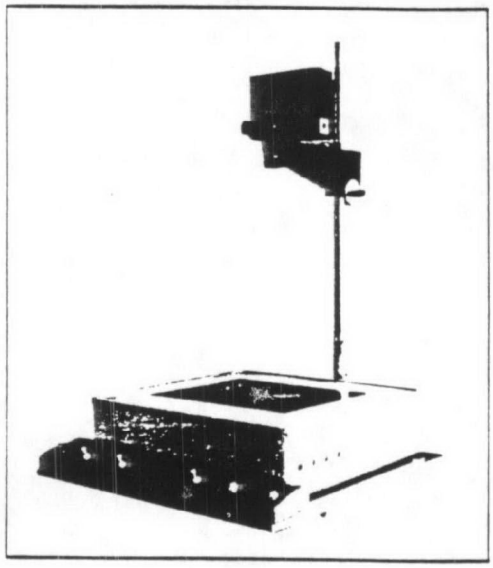

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KIMS Integrates Proven and Future Technologies as Office Automation Systems Converge

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The convergence of office automation technologies has been at work for a long time, but in recent months has reached a breathtaking place. We are seeing the introduction of innovative image management systems that integrate computer data base, image processing and enhancement, and communications technologies to a degree few would have imagined a decade ago.

Computer-output microfilm (COM), of course, was one of the earliest matings of computer and microfilm technologies. Today, many large-scale computer users think of COM as just another type of high-speed printer, and routinely direct long reports, material with large distribution lists, and hefty systems output to COM as a time—or paper—saving process.

More recently, the link of technologies has involved using computer data processing power to track and assist in the retrieval of microfilm images at high speeds.

Technological convergence is barely underway, however. Magnetic and electronic innovations are being matched with laser breakthroughs that promise optical disks with gigabytes of storage in the near future, printers eight to ten times faster than those in common use, and with telecommunications improvements that are speeding digital information within and between offices nationwide. Robotics is moving from the factory floor to the office environment, and fiber optics, satellite communications, and even products as "mundane" as the office typeare providing a new look to office automation.

The Kodak image management system (KIMS), officially introduced in May 1985, and currently promised for general commercial availability in the first half of 1986, is one of the first of a new breed of office automation tools that integrate proven technologies, while leaving the door open for expansion into newly emerging areas.

Open-Ended Design a Novel Concept

This in itself is something of a novel concept. Most products are designed to use a given product or line of products, and may not be able to "talk" to other systems. When technology changes, as it always does, users must choose between preserving their investment in existing equipment and data, or moving to the latest-generation product with improved features. Manufacturers, at the same time, must frequently scrap their investments in design and tooling to introduce a new competitive product.

KIMS, on the other hand, is designed to use *technologies* such as microfilm, optical disk, and computers. The interface with these technologies has been made flexible enough to allow KIMS to integrate a broad range of present and future products to meet specific information management needs. KIMS can evolve to embrace improved systems, while allowing those who already have invested in KIMS to continue using the information bases and equipment they have.

KIMS is designed to accommodate enhancements like optical disk recorder/players, digital paper scanners, facsimile units, and other devices which incorporate emerging technologies.

The Kodak image management system's modular design is elegant, while allowing almost limitless expansion. To those using the system, the workings will be totally transparent; seated at their workstations, they can access computer data and microfilm images with equal ease.

KIMS' basic foundation is the simple fact that, at present, the so-called "competing" technologies each have distinct advantages over other systems. KIMS allows users to implement the best features of each. For example, computer systems are excellent at manipulating data, and routing it for display to users at remote workstations. Optical media, such as microfilm or optical disk on the other hand, are unsurpassed among current technologies in their cost-effectiveness of storage.

While optical disks can easily store digitized information in a form computers can handle, microfilm must be converted from human-readable to machine readable form before it is palatable to a data processing system. KIMS provides a gateway for those who wish to use their large and efficient microfilm files with their computer systems.

KIMS Basics

KIMS is able to display digitized microfilm document images on high-resolution workstations and reproduce them on paper via electronic laser printers attached to the MIMS network. The system makes data stored on microfilm available to anyone at remote locations using the KIMS display workstation, mating data processing speed with the advantages of microfilm for long-term storage.

One of the well-known benefits of microfilm is its ability to store alphanumeric information as easily as graphic elements such as customer signatures, graphs and charts, or blocks of fine print in contracts and pre-printed forms. Microfilm also allows integrating alphanumeric data with actual document images.

Such information, contained in up to 240 microfilm magazines, each containing as many as 9000 document images, can be positioned within a KIMS film autoloader. This configuration places 2,160,000 different documents with many megabytes of data on line for fast access.

When a given microimage is requested for workstation display or printout, a robotic arm moves the magazine to one of four scanning stations.

Robotics, of course, is growing in popularity among manufacturers, particularly in the automotive industry. Except for some automated robotic tape-mounting devices, these machines are almost unknown in the office automation field.

However, robotics is a technology with proven advantages. Robot arms are tireless, and can be faster and more precise than human arms. Given a repetitive task such as loading and unloading microfilm magazines, a robotic device is able to perform flawlessly for hours on end.

In the autoloader scanning station, the microfilm images with the requests automatically sorted and queued to provide the most efficient retrieval are scanned and digitized using charge-coupled device (CCD) technology. Those requesting a document image will see the results within 30 seconds.

Scanning Key to High-Quality Image

The scanning stage is a key to the high quality of KIMS' document image. Kodak has already demonstrated a CCD sensor capable of 360,000 picture elements (pixels) and measuring only 7 mm x 8 mm. With KIMS, each microimage is digitized to provide a resolution of 200 pixel elements to the inch. However, using system image enhancement algorithms, the software can manipulate the resulting digital data to improve the appearance and resolution of the image beyond this point. The sophisticated software can suppress artifacts such as specks of dirt on the film, or distracting background elements that result when a poor-quality or smudged original is microfilmed.

The enhanced, digitized images are transmitted over the KIMS network for either workstation display or printing. On the prototype network, the resolution offered by workstations is just under 200 pixel elements per inch. However, the commercial offering will probably use workstation options in the 100 to 200 pixels/inch resolution range, modified by gray scales. Users can choose the type of display best suited for their applications—high resolution for finely detailed work, or lower-cost lower-resolution workstations for routine work.

The KIMS workstations feature a variety of helpful image manipulation capabilities. Our software allows images to be enlarged, panned, scrolled and rotated. The rotation capability permits easy changing of print orientation when documents have been microfilmed at an angle, sideways or upside down. Workstation users can view, at near-normal size, images which have been microfilmed at reduction ratios of up to 40:1. The workstations also provide zoom capabilities which allow users to enlarge fine print by a factor of four.

In the future, we should see further advances in workstation power, due in part to the plummeting prices of computer memory, and the proliferation of fast, flexible true 32-bit microprocessors. True 'image' workstations—offering users access to real pictures with gray-scale depth—might well be available in the near future at word processor price levels.

KIMS Adaptable to LANs

Despite all the interest and discussion, most businesses have been slow to adopt or install local area networks, and there are several standards to choose from in both the baseband and broadband arena. We believe more organizations will embrace LAN technology as part of an integrated system like KIMS and our Kodak Ektaprint electronic publishing system (KEEPS), which also uses a LAN.

The first commercial offering of KIMS will be comaptible with Ethernet systems. Depending upon the applications being run, businesses with Ethernet systems already in place may be able to interconnect devices running different protocols on these networks for file transfer and information sharing purposes. In theory, components of KIMS could also co-reside and operate on an existing network; practically, KIMS fully utilizes the LAN for optimal performance.

It is expected that, eventually, fiber optics will provide backbone networking capabilities within and between offices complexes, and there will be an increasing use of terrestrial fiber and satellite communications for remote network interconnection. Such developments will not necessitate writing off KIMS' investments in LANs. If a fiber optics utility is installed, a business can employ an available channel to bridge to distributed parts of its KIMS network. Other channels remain usable for video, computer data, voice communications, and other purposes. And there is no inherent reason KIMS can't tie into a satellite system at such time as flexible bandwidth utilization becomes commercially cost-effective.

The KIMS network is also planned to be compatible with facsimile devices, which Kodak believes customers of KIMS will rely on in the short term as the most cost-effective way to initially relay document images to remote locations.

While it is technically feasible to transmit KIMS' images to remote high-resolution workstations, the amount of data contained in an image is very high. Low transmission speeds over telephone lines make this undesirable

improvements in private network or satellite communications should bring the long-distance data communication costs down

Broad Range of Printers Supported

KIMS supports many different types of printers. The first interfaced with the system are laser printers, which can create clean text and crisp graphics at about 300-dots-per-inch resolution, which is often considered a standard for "office quality" document reproduction.

However, other printer types can be used, and it should not be long before new generations of fully dot-addressable, non-impact printers come to market. Ink-jet printers may well be future candidates for KIMS networks. Kodak's subsidiary, Diconix, Inc., manufactures magnetic-tape-driven ink-jet printing systems that can image more than 30,000 documents per hour.

Optical Disk in the Future

Optical disks, in the form of write-once-read-many CD-ROMS, or as erasable media (such as those displayed by our subsidiary at NCC, Verbatim Corporation) seem to be a factor in everyone's future predictions. KIMS is ready for this form of image storage, even though it appears to be feasible sometime in the future

Optical disks, with their high capacity, make excellent media for digitized images of documents which must be retrieved quite frequently

We anticipate that KIMS will incorporate optical disk and other mass media technologies. If a microimage can be digitized, it can be transmitted to workstations, or transferred for optical disk storage with equal ease. In some cases, microfilmed documents might be temporarily stored on optical disk during peak retrieval periods, then permanently retained on microfilm.

There is no need to put a limit on the amount of information that can be stored as a microimage, as long as microfilm remains as a cost-effective option. Therefore, advances in digitizing and image enhancement technology will play a role in determining optical disk's overall imaging versatility

The development of high-density optical disk recorder/players will add a new dimension to KIMS. The ability to cost-effectively store hundreds of thousands of document images on an optical disk which is less than 14 inches in diameter should provide a large incentive to eliminate bulky paper files.

Compatibility With Existing Equipment

KIMS is compatible with much existing equipment, such as Kodak KAR-4400 or KAR-8800 information systems. The KIMS autoloader will retrieve and read thus microfilm files customers are building with intelligent Kodak microfilmers, and users of KAR-4400 or KAR-8800 systems should be able to continue using their electronic data base, including microfilm addresses, without rekeying information.

The capability to move existing data base and microfilm address files to KIMS will extend to companies which have opted to pair Kodak IMT microimage terminals and intelligence microfilmers with IBM systems or some other vendor mainframe in their computer-assisted retrieval (CAR) systems. File conversion will also be available to businesses which have information stored on jacket microforms or microfiche.

Computer output microfilmers—the computer peripheral that started the merging of data and image processing—will also be linked to KIMS. The latest Kodak Komstar microimage processor IV, along with the previous Komstar 200 microimage processors which can process digital data at 500,000 bytes per second, uses lasers to image computer-generated data on either microfiche or 16mm microfilm for automated retrieval on KIMS

These peripherals should give KIMS even more storage versatility. Data initially stored in magnetic form can be transferred to microfilm at a throughput speed of 10,000 pages per hour. So organizations will be able to free disk space for vital on-line applications, and still retain the ability to access COM data in digital form on the same workstations.

KIMS workstations won't be limited to microimage retrieval. KIMS operating system permits popular software packages, developed for personal computers, to run on KIMS workstations. KIMS workstations also will be able to emulate IMB 3278 terminals

Another planned KIMS network addition is the paper laser scanner. The ability to digitize paper originals early in transaction cycles could eliminate inefficient paper routing procedures, as well as the need to microfilm documents containing transient data. Where this type of application exists, digitized document information could be stored and processed further on high-capacity optical disks.

The discussion of present and future applications for KIMS could continue endlessly. That's the whole point of the Kodak image management system—an open-ended, integrated system that gives users a real choice over how they manage their information, today and tomorrow ■

(Note: Kodak, Ektaprint, KAR-4400, KAR-8800, IMT and Komstar are trademarks.)

Circle #131

Optical Disk Systems—Technology

By Terry Plume
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Although the majority of my presentation will concentrate on the advent and implementation of document image processing, there is a need to look at some of the history of office automation, its needs and some of the answers that have been provided. These answers have come from equipment manufacturers, media suppliers and more recently from system integrators.

It is important to the end user, and indeed to the manufacturers that they do not become side tracked or confused about optical discs themselves. They are an enabling storage media which today provides an answer to some of the storage problems which have faced the office and factory environment for decades if not centuries. My first point must therefore be that the use and implementation of this new storage media must not be technology for technology sake. The end user needs an answer to problems that existed before the optical disc, will continue to exist for many years to come and may in the years ahead be solved by the use of another technology or perhaps a further development of an existing one.

Over the last decade, it is claimed, we have seen an 80% increase in productivity in the factory or industrial environment, whilst the office has managed just 4%. If we look at the investment in the two environments we might find part of the answer.

The major obstacle to improved productivity in the office over the past 20 years has, I believe, been the ability to handle the growing amounts of paper. If we look at the results of a recent Coopers and Lybrand study I think this is illustrated very well—of all the information arriving in the office in paper form (either internally or externally generated):

1% is data entered
5% is microfilmed
94% is retained throughout its active life in paper form

There are many other surveys which point to the growth of paper over the same period.

The advent of the computer did bring some changes, the rows of comptometer operators were replaced, but then we added line printers to the end of the line to provide us with still more paper—an area that has been addressed by COM.

We went on to develop the word processor which greatly reduced the size of typing pools but did not stem the flow of paper—we added office automation systems from the late seventies and the personal computer in the eighties.

However paper remains the easiest to use medium for communication, it is available to everyone, and particularly where the customer for the product or service is the "man in the street" Mister Public.

The providers of document image systems must therefore address and understand the use of paper and its functions within the office environment, the offering of a store and retrieve system is fine for the end user who simply wants to save space but it is only part of the need.

Image processing will have a significant impact on office operations and office personnel over the next decade, because the emerging image processing systems can provide the bridge between paper processing systems and machine processing systems.

There is now an opportunity to bring together three key areas of business operation:

- Record management
- Administration
- Information processing

I believe that the first of these, record management, is given far too little importance in many organizations today because of the inability to bring together the different departmental needs into a corporate strategy.

The dream of the paperless office may still not be totally achievable but there are some substantial steps which can be taken today with significant benefits.

We can list some of the obvious benefits and these will become clearer as we look at the capabilities of systems, and no doubt each potential user can add some more specific savings relevant to his needs:

- Space
- Time—improved productivity
- Document and data viewed together

- All information rapidly available to the decision maker from various data bases
- Reduced copying costs
- Reduced phone costs
- Remote access to files
- Remote printing of information
- Job enhancement

With all of these benefits I will return frequently to the point of processing images because this forms the major activity for which paper is used today

For the providers of systems I believe there is a clear message from the marketplace—they want an implementation of technology that meets the end user needs and their development strategy The provision of an "off the shelf" package which requires the user to change his method of working his interface with suppliers and customers and the type and nature of his workforce is not the answer Many paper processing systems have developed over years of evolution and contain individual customer differences that are crucial to that environment—better therefore to customize systems to the environment and provide the benefits with the minimum of change to the methods and the staff.

However the end user will again modify and evolve the system and therefore it must be possible for the system to change and move with the users changing needs.

The key to achieving this is for the system supplier to understand paper systems, how they work, and why they exist in their current form, and to be able to translate that into a document image processing alternative

Let us now look at the components of a document processing system We can break them into two distinct areas, first the hardware components.

- Scanner
- Magnetic cache
- Optical disc and drives
- Juke box or autoloader
- Workstation or display
- Laser printer
- Local area/wide area networks

And the software components

- Index
- Compression
- Windows
- Zoom
- Edit
- Annotate
- Cut and paste
- Word processing
- Document routing
- Host emulation and telecom

A good system will provide most, if not all, of these capabilities. It is also likely to demonstrate a clear upward path for system enhancement and technology tracking.

What does an image processing system actually do

- Firstly you can capture an image of a paper document or book or technical report payment voucher or engineering drawings
- You can then compress the image using standard fax group 3 or 4 algorithms
- The resultant image may be stored on optical discs, which may be held in large capacity mass storage units. With approximately 40,000 A4 pages per 12" disc and up to 150 discs per storage unit then several million images are available on-line. With standard four drawer filing cabinets the same number of documents need around 3,300 sq feet of storage space. This is condensed into 35 sq. feet with average access time of approximately 25 seconds to any image. For those who require even greater speed you can choose to link multiple drives—up to 54 for example—with constantly loaded discs an average access time of 6 to 7 seconds is achieved. On the other hand when speed of access is not the critical factor you may decide to keep a disc library on the shelf and load the disc into a single drive as required.
- From the optical store you can retrieve a desired image—say one A4 page—or a whole file
- The retrieval image or multiple images are displayed on high resolution viewing screens, or can be worked with at high resolution workstations. Documents may be compared on the screen side by side or as overlays or with data from a main frame which may be viewed in a window on the same screen.
- The workstations also allow you to work with the images. They provide, with paper, the functions you are used to You may handwrite notes on the documents, you may type on the documents and these annotations are stored on the optical disc as layers to the original image—they are not destructive to the original and may be viewed either with the image, or separately, and may be printed in the same way This annotation facility provides a wide range of possibilities for the processing of documents—for example, the completion of separate parts of a form by different individuals, to the final authorization signature at the end of the process, the form being automatically routed around the network as each phase is completed.
- The provision of cut and paste facilities allows you to work through a file of information extracting items and notes of interest to compile a precis of the file or provide a report for a meeting
- Word processing and the provision of standard documents allows the user to respond and carry out normal procedures at the workstation and automatically file the results
- The availability of sophisticated data base packages also allows a more comprehensive filing capability for the image file, it provides for range searches, cross references and key word searches which are impossible with paper files Many enquiries can be

answered by accessing the index file and establishing the total contents of a document file—this identifies the type of document, the subject, the date, and it may therefore not be necessary to look at an image at all Systems can incorporate automatic bring forward files which will provide the user with actions to be taken each day when they log into the system

- You can print out on demand copies of the images, data and text on high quality laser printers.
- You may choose on the other hand to mail images to other users on the system or output them to remote facsimile units or over wide area public networks to remote workstations.
- A sub-set of facilities may also be provided to PC's linked into the network such as searching the index data base and requesting prints, or viewing images on request
- Systems may be interfaced with existing microfilm data bases where film images may be scanned and transferred to the optical system—they may simply be viewed or they may be stored on the optical disc as part of a new and active file.
- Output currently transferred to microfilm from COM devices may alternatively be loaded direct to optical disc with the index information transferred to the document processing system. This provides the end user with a common retrieval format for current and archival information

I think that is a very impressive list of capabilities for document image processing systems but to realize the full benefits the system provides, system integrators and the users must clearly understand how they use paper today and what the problems are that need to be solved Failure to do this will make cost justification a difficult problem—image processing systems are not cheap. Again I stress I am talking about processing systems These have a starting price of around $130,000 upwards: these are not multi-user processing systems but will be ideal for many standard applications of storage and retrieval

Let us think about image processing and compare it with what the potential user does with paper today

When the paper is received, whether externally or internally generated, they are firstly captured by placing them in an in-tray, and at this time copies may be taken for distribution to several in-trays. They may or may not at this time be given some form or index or be date stamped. This action in many cases leads to numerous copies of the same document being filed within the organization

With image processing—the document is scanned, automatically timed and dated, and may be sent to numerous users on the network for action or may be stored and retrieved by any user.

With paper—we store it in pending or action files or simply add it as another item to an existing file which may be personal, departmental or a central registry

With image processing—we create an index which is stored on the data base, and on the optical disc. The document may then be placed in a pending or bring forward file added to an existing file, and the access levels on the system may be used to define whether this is a personal or public file

The most important thing about paper is that when using it we

- add information to it
- staple pieces together
- handwrite comments
- mail to other departments
- add text
- stick post-it notes on it
- index it so we can find it again
- file it

Very often we use paper to do things we can t currently do in any other way

- Instruct a course of action (please see me)
- Formal issue
- Authorization (signature)
- Signature check
- Value check

With image processing systems we can now do all of these things from the workstation, using a bit pad and pen to write on documents, using the keyboard to type The layers may be direct as if working on the document itself (although stored as a layer) or may be indirect as though we were adding a post-it note. By using the mail or document routing facilities, instructions and actions may be routed around the user departments Pages may be stapled together to form documents and documents placed in selected files. When we have completed our actions with paper we store it, even though it may remain active for some time The store tends to be in a file folder, in some form of file cabinet, which is eventually transferred to the archive. In most cases indexing is limited to a single parameter name, account number and so on

With image processing the document can actually be indexed and filed at the time of capture—this may be immediately to optical disc or it may be held in magnetic buffer until a final decision is taken on retention. The store may be on-line in dedicated drives, in a mass storage juke box or in a disc library held in a cabinet or on shelves It is possible to mix all of these options within an image processing system as you would today with a paper based or even microfilm environment Files or documents may be given a range of index parameters to provide wide search capabilities

When we need to retrieve paper we do it in a number of ways We take the complete file out of the cabinet—thereby making it unavailable to any one else who may wish to see it We may take one document out of the file, an even more risk-prone activity, resulting in lost documents and mis-files We may take a batch of information to browse through, or to compare documents from one file to another. Increasingly, documents are retrieved to compare the content with data held on some other storage system—perhaps a typical example would be to compare an incoming invoice with order details held on

the main frame and a goods received note for signature verification

With image processing you can retrieve in all of these modes and any information that one user has retrieved is available simultaneously to any other user on the system Workstations with local memory can buffer numerous pages allowing 20 to 50 A4 pages to be stored and worked with by the user Once the pages are buffered in the workstation flipping between pages is a sub-second activity

The user needs to identify the problems which he currently experiences from paper Apart from those of bulk and speed of access some of the most common

- Waiting for documents
- Out of file
- Internal mail delivery
- Filed with someone else
- Is it current and complete
- Access and privacy

Image processing systems are targeted at problems currently handled

- With paper based solutions
- Microfilm based solutions
- Magnetic based solutions

Many users often within the same company or industry, work differently and therefore the ability to be able to customize image processing systems to the company, department, and even the individual is a key benefit of the emerging market offerings

With many bad experiences behind them end users are now very conscious of the need for integration with other systems and in particular for a dedication to open systems from the suppliers This is of course much more critical in the multi-functional multi-user environment It is also important that systems are modular in their offering at all levels in the workstations the networks and in the image management system or core

The benefits afforded by image processing do not remove all of the bottlenecks from the office environment in particular that of indexing the documents either at capture or at completion of the process. However we are now beginning to see systems which incorporate OCR and OR bar-code reading into the scanning process to provide for automatic indexing of the captured images This does not mean OCR of the total input document to provide free text searching from a wide range of different documents. Realistically today it provides for the windowing of certain areas of a document and reading of predetermined ing information such as invoice numbers account number policy number etc No doubt this facility will improve and will be integrated into both new and existing systems

Systems offer different interfaces to the end users but it is possible to choose from an iconic interface which may be driven with a standard mouse and offer a free choice of functions or actions to be carried out on the system to keyboard menu driven systems. Here the customization allows a group of repetitive tasks to be folded down into a single keystroke operation, thereby simplifying the user interface and reducing the training requirements and error opportunities

The providers of image processing systems are dedicated to solving the problems of typical paper based departments·

- Receipt and collation
- Sorting and matching
- Creation of pending files
- Filing and retrieval
- Archiving

The selection of the file status can be achieved by indicating the document type being input for example, an application form on receipt may be allocated a pending status

In setting up the file structure automatic procedures may be built in for file archiving, the system indicating which discs contain material to be archived and a copy over system put into operation This will ensure that optimum use may be made either of on-line drives or a juke box facility

To summarize the change from paper based environments to image processing environments

- Automatic paper flow—saves time
- Optical storage—saves space
- Integration—saves repetition
- Electronic retrieval—saves time and money
- Tailored systems—saves compromise

Those potential users seeking solutions for their problems, and who understand the strategic and corporate nature of the decision, should seek a supplier who offers

- Imaging consultancy
- System design
- Installation, maintenance/support
- Product growth strategy
- Future product strategy ■

Micrographics and/or Optical Disk? Ideas to Help You Make the Right Decision

By W. Clair Sceli
Manager
3M File Management Systems
St. Paul, Minnesota

We have all been hearing and reading about the approaching boom in advanced document management technologies—specifically optical disks. Well, the technology is here, and continue to improve. New systems sales and installations are taking place, and people are still talking about the tremendous potential of electronic document storage. Yet nothing that we could really call a *boom* has taken place so far. Why not?

It's certainly not a problem with interest. The presence of optical disk systems on a trade show floor pretty much guarantees heavy traffic, and attendance at optical disk seminars has been very strong. This has been true both in the U.S. and at various trade shows in Europe, including SICOB in France, SMAU in Italy, Hannover Fair in Germany and the recent London Business Show in the United Kingdom.

At last fall's IMC Congress in Toronto, an all time record for seminar attendance was set, and particular interest was shown in high tech subjects such as PC Networking and Systems Integration, Software for Document Management, Office Automation Systems and numerous sessions dealing with optical disk technology and applications.

In one Toronto session, a representative of the Yankee Group summarized the findings of a recent study which attempted to explain the slower-than-expected growth of optical disk system sales. The report concluded that strong growth still lies in the future, but that the curve will not be as steep as had been expected. In other words, the technology works, the need for it is real, but people just aren't rushing out to buy.

Budget restrictions may be a part of the story, but they don't fully explain the delay. Traditional technologies such as micrographics and related products have sold quite well recently, including the systems needed for high volume applications, which target the same market segments as optical systems.

Software has done particularly well, especially those document management softwares which are independent of the media on which documents are stored—and that may be a clue to what is going on.

There is no doubt that there is a need for more powerful, faster document handling techniques. The problem is that there are many alternatives to choose from. Do I go with optical disk, or one of the new generation of micrographic systems? Do I buy now, or wait and see what happens with the new technologies? Will something else come along and make optical disks obsolete?

The questions are complex, and the risks of making the wrong choice are high. It is no wonder that many users involved in document management have waited to see if some of the issues would resolve themselves—waited while others took the risks that come with being a pioneer. But they haven't just been waiting.

I think that we are currently seeing the user community show foresight, as well as caution, in carefully preparing for the future of document management. People are opting for real world solutions to current problems, as shown by healthy sales of traditional micrographic systems. At the same time, the interest shown in optical and other advanced systems seminars shows that they want to be ready for the future when it gets here.

Finally, they are making decisions—and purchases—that will improve their position when it comes time to make the conversion to optical disk. In addition to the media independent softwares already mentioned, we are seeing early signs of a healthy growth for bar code indexing.

The ability to eliminate keystroking by placing machine readable index information on documents can greatly increase the productivity of film-based CAR systems. However, once bar coded documents are in use, there is no reason why bar code indexing couldn't be used with optical disk storage. The index, the software and the method of encoding documents would remain the same, as would the benefits of fast, automated indexing.

By investing scarce capital improvement dollars in the upgrading of proven technologies, users gain immediate benefits with a minimum of risk, and gain time to wait for developments in advanced technologies.

Like any new technology, electronic document management must go through a period of testing and development in the areas of systems and applications design. In the near future, users will be given a wider choice of disk systems. This wider selection will greatly increase the chances of finding a system with exactly the capabilities needed for a particular application and within the budget allocated for it. The reliability and general quality of systems will improve, costs may very well come down, and experience should result in numerous design improvements.

While all this is happening, users will be arming themselves with the data necessary for an informed purchas-

ng decision

In many ways this caution in converting to newer technologies can be beneficial but there are some things that people should keep in mind while they are waiting

Optical disk systems in certain carefully selected and designed installations have been extremely successful in providing document management solutions that would not have been possible with more traditional methods For a number of people, the time to convert to optical disk is now The benefits—in these specialized cases—are simply too great to ignore

In Japan, optical disk has progressed much further than anywhere else in the world in reaching its real potential. For various reasons having to do with language culture and business practices, microfilm has been the document management solution it is in other parts of the world

When electronic document management became a viable in Japan, it was quickly accepted As the Japanese experience demonstrates, the question is not whether optical disk technologies have progressed to the practical stage, but whether a given application has progressed to the point of benefitting from optical disk.

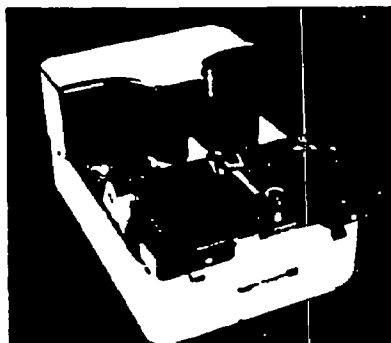
Is it possible that other areas of the world will like Japan, adopt optical disks without going through the stage of full micrograpics utilization? There is no doubt that many regions have far less capital tied up in film systems than Europe and the U S This may possibly remove one obstacle to the rapid acceptance of the kind of systems that are now becoming available The case of Japan at least shows us that there is more than one possible course of development

The important thing, of course, is not whether one technology or another dominates the market, but whether users have access to systems that can solve their document management problems. In the case of electronic document management systems, this means the rapid development and painless implementation of optical disk systems That's not a prediction. It's a goal, and one we vendors are working toward.

Manufacturers must place an even greater emphasis on understanding the problems of users In normal times, this understanding insures healthy sales In transitional periods such as we are experiencing now when new technologies and techniques are being developed it insures the future health of the industry

In addition every effort should be made to provide the user community with the information it is so hungry for At the upcoming IMC show in Vienna this October for example, people will be gathering from all over the world to look at the latest products, and learn from the experiences of those already realizing the benefits of electronic document management.

These two forms of communication—listening and sharing information—are our best ways of making sure that the promised boom in optical disk technology comes at the proper time, and that it is based on a solid foundation ■



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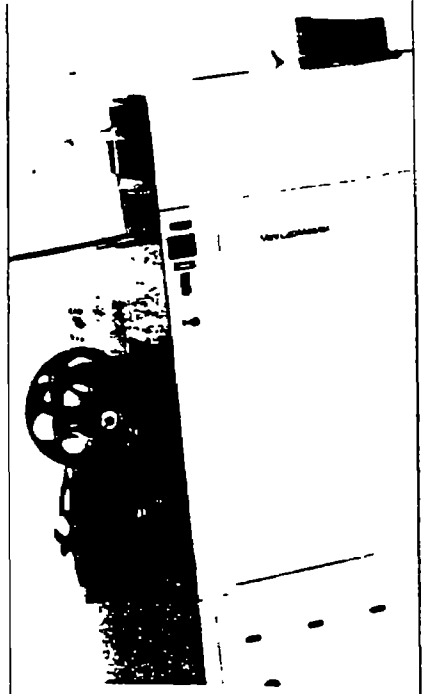

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Document Management Software— A View from the Inside

By Adam M. Stack
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What is document management? I think it appropriate to briefly discuss basic elements of document management before going on to tackle the software approach. Document management consists of the following:

- Document Storage: This can mean storage in a four-drawer file, microfilm or microfiche, optical disk, an electro-mechanical file storage system, or entirely within a computer's database system.
- Retrieval: Retrieval is as varied a concept as the storage medium. The mechanics of retrieval from a manual filing system are abundantly clear to most people (i.e. pulling a folder from a file cabinet). The mechanics of retrieval from a computerized document management system can be quite sophisticated. It is important to note that one does not need an in-depth understanding of the retrieval mechanisms to understand document management software.
- Dissemination (or Distribution): In a small office with a series of filing cabinets, distribution can accompany retrieval when someone pulls a file folder from a drawer. In a modern records center, distribution can range from inter-office mail to electronic image transmission.
- Update: Adding a document to a file folder, loading film into a fiche jacket, entering a "detail record" to a database, or electronically "editing" a digitized image.
- Deletion: In most cases this indicates a removal of the document to be deleted from the "active" area. In some cases it simply means removing an index pointer (such as in a CAR system).
- Retention scheduling: This is a method of removing records from the system when they have reached the end of their useful life. For some types of documents this is a regulatory time period. For others it is based upon a window of peak retrieval activity. For instance, your company may keep shipping orders on file for 30 days because most retrieval activity (driven by customer inquiries) occurs within that "time window". At the end of a retention period, some types of documents are discarded. Others are moved to a less easily accessible area where they may be kept forever, or for a secondary retention period.
- Check-out management: In many document applications, it is necessary to know that a document has been removed from the records center and also to know who took it. Additionally, it is useful to keep a "queue" of requests for the "checked-out" document so that users of the records center needn't wait for the document to be "checked-in" before they can even request it.

Generalized Document Management Software. I have only one more bridge to cross before addressing the specifics of document management software. This is the concept of "generalized" software. Generalized carries the connotation that a system can be unpackaged and installed "identically" by every user (customer) and solve each user's unique problem.

The first step toward accepting such "multiple-application" software is to throw out the term generalized. Generalized document management software doesn't exist today. For now, we must concentrate on something which is widely available today: adaptable software systems.

An adaptable system is one which provides basic records management tools. A specific application is built using these tools. In this way, two users of the same system invoke records management functions similarly, but, their data (the configuration of their documents) is different.

Document Management Software. To understand how software manages documents, I would like to reacquaint you with three terms: Data, Information, and Knowledge. This is going to sound a bit like basic Geometry where we were introduced to the interrelated concepts of point and line, each defined in terms of the other.

Information is that which, once conveyed (and therefore understood) becomes knowledge. "6-4, 6-3, 6-4" is not knowledge or information. "McEnroe won 6-4, 6-3, 6-4" is information which has now become knowledge by your reading and absorbing it. The scores alone can be thought of as merely data. Without an application or analysis, data takes on no significance, much like a sentence fragment.

Now for the application of my circuitous examples. The purpose of document management software is to facilitate the storage and subsequent retrieval of information. This information, once distributed to the appropriate

party and understood, becomes knowledge. Computer systems however only deal with data. It is the job of the document management software to structure the data in such a way as to allow information retrieval. For instance, you could store a factual account of World War II in a computer system. Even if the entire history of the war were stored as a large computer text file, the computer system only views it as a "stream" of unstructured data. Only by causing the computer to display the file on a computer terminal where a person can read it, does it become knowledge.

We could store the same WWII history on a computer, but, this time specially "mark" all occurrences of General George Patton. Further, we could mark the beginning and ending of each sentence or paragraph that contained his name. Now, we could use the same data to find all references (in the context of sentences or paragraphs) to this particular general. This is a much more specific type of information retrieval which assumes that when a document is stored, there is a specific retrieval purpose in mind.

The same thing is true for business documents. While it is true that throwing all your shipping orders into a big box is document storage, and that you could retrieve any document in the box, it is not a feasible system if you are to retrieve specific documents. Therefore, in a manual filing system, you might place shipping orders into file folders which are stored in alphabetical order by customer name. Within each folder, the documents are "sorted" in order of date by simply adding new documents to the back of the folder.

Document management software accomplishes this type of orderly filing by using database management techniques. The mechanics of database management and file structures are not as important (for this discussion) as the fact that such orderly storage using a computer is possible.

Two of the greatest advantages of using computers to store and retrieve documents are retrieval speed and multiple filing sequences.

Document management software which runs on a modern computer system is likely to provide a substantial saving of time over manual filing (in most cases). This is simply because a computer can perform a "pre-programmed" instruction within fractions of a second and can perform the instruction repetitively without fatigue, complaint, or coffee break.

Also, using database storage techniques, a computer program can retrieve a document in multiple sequences without actually storing copies of the entire document once for each retrieval sequence. For instance, going back to our shipping order example, you could retrieve shipping orders by customer name, customer number or date range. You could even combine "retrieval criteria" so that you retrieve shipping orders for all customers within a given date range and over a specified dollar value. This type of complex retrieval might take hours, or even days if done manually. With document management software, this is accomplished in seconds.

Other advantages. Since document management software runs on a computer system, there are features that go far beyond manual document management. For instance, computerized document management systems may be "integrated" into other computer systems (such as office automation products). Documents may be "shared" between computers (which may be in different cities). Requests to the records center may be initiated from remote terminals (even touch-tone telephones). The possibilities are truly without limit.

Considerations for acquisition. From a user's point of view, it is important to know what to look for in document management software. This begins with asking "What is possible?" Even if you won't be using all of the sophisticated features of a very complex system, it does help to know what kinds of things are possible just by computerizing your current document management operation. Talking to vendors and users (and user groups) will prompt you to ask more questions.

When converting from a manual system to an automated one, make sure that you will be taking advantage of the automation (i.e. Don't have a computer do the same work now being done manually!).

After interviewing your user departments and studying work flows, create a form listing all the features you require. Have each prospective vendor show you how their system will meet each of these needs. In some cases the vendor will propose an alternative. Be open to alternatives, but, remember your objectives and see that the alternative meets those objectives.

One of the most important phrases you can use in dealing with a vendor is "show me." This can mean having a vendor demonstrate the capabilities of his current system or showing how responsive they have been creating "custom" solutions similar to yours.

Ongoing support. Obviously, this is an issue you will address with the vendor before purchase. Be aware that there are many levels of ongoing support. Most software companies are capable of supporting you in the event there is a "problem" or "bug" in their software. What is even more important is finding a vendor who understands the records management business and can "support" your new ideas. You may consider entering into a long-term consulting arrangement with your vendor. This provides you with an on-call document management software expert. Look for a vendor who will be able to visit your site regularly to meet with you and your user groups. This serves to head off any problems before they develop and also to discuss future plans with someone who is not swayed by your organization's politics. Be aware, however, that they will be swayed by the possibility of selling further products and services.

Generalized Document Management Software. As discussed earlier, generalized systems don't exist today, only adaptable ones.

The road to generalized document management software is paved with Artificial Intelligence (or AI). There are two basic elements of AI, a knowledge base and an inference engine. The knowledge base is nothing more than a collection of facts fed into the computer in a highly structured manner.

An inference engine is a program that makes "decisions" based upon the knowledge base. For instance, in

an old computer game called 'Animal' the knowledge base consisted of several facts. Fish swim birds fly. and cats have fur and can't fly or swim The program would ask you to think of an animal and it would then try to guess the animal It would start by asking Does the animal swim?" If you answered yes. it would guess Is the animal a fish?" If you answered 'no the program would ask you to enter a question which would distinguish your animal from the one it guessed Your new question would become a fact in the knowledge base for subsequent guesses (the AI equivalent of learning)

A generalized document management software system can be structured the same way Many types of "predefined' applications would be known to the system as facts in the knowledge base By answering a few questions. the system would "know exactly how to build your files

An additional type of "knowledge that can be conveyed to the system is based upon experience That is since each customer would use the system in a slightly different way. the system would "learn better ways to handle your requests A perfect example of that technology in use today is a fully electronic typewriter that I recently purchased It has all the modern formatting features of a word processor including a spelling checker The spelling checker will propose alternate spellings of a word if it doesn't know the word you just typed. By using the typewriter for a period of time. you essentially teach" it what types of mistakes you are likely to make (i.e. transpositions. missing letters. etc.) and that "knowledge" is used to more quickly propose the types of alternate spellings that are likely to correct your spelling

This type of "experience' knowledge (which is nothing more than a statistical averaging) can be used by document management software to better construct searches of the document database

In summary:

- Document management software has all the advantages of manual filing systems plus the added advantages of computerization
- Today's systems are "adaptable", but not yet "generalized"
- Generalized document management software will encompass artificial intelligence (or AI)
- Information is treated by Document management software as structured data. which in turn is interpreted by people and becomes knowledge.
- The two greatest advantages of computerized document management are speed and multiple. concurrent retrieval sequences.
- Document management software may be integrated into office automation and "interface" to a communications network to share data over great distances
- Plan carefully to acquire a document management system. Interview users. talk to vendors. talk to vendor's reference sites. and create a 'shopping list" of features Also. be open to alternatives
- Seek vendors who will support your system and your document management plans into the future ■

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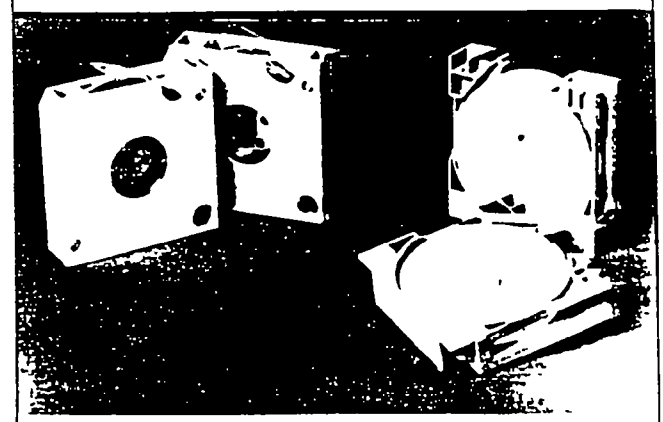

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FAA Tracks Airport Slots With Optical Disks

By Mike Pennington

The purchase, sale, trade, leasing and loaning of takeoff and landing slots is monitored and tracked at the nation's busiest airports with optical disks.

Anyone who flies in or out of Chicagos O'Hare, New Yorks Kennedy or LaGuardia, or Washington, DC's National Airport knows what a high density airport is So did former Secretary of Transportation Elizabeth Dole, who in December 1985, issued a rule that the Federal Aviation Administration (FAA), which is under the Department of Transportations purview would keep track of about 3,500 takeoff and landing slots at those four airports.

Documentation relevant to the slots—who controls and operates flights within them—is being stored on optical disks and and retrieved from a 3M Docutron 2000 Electronic Document Management System in the FAA chief counsel's office in Washington, DC The slot system has been designed to spread out operations and thus minimize delays at the countrys four most congested airports What the FAA has done is to put an hourly lid on the number of operations each airport can handle. Slots are bought and sold by the airlines, but there's a twist: under a use-or-lose rule, airlines must occupy those slots at least 65 percent of the time.

To reduce congestion

"Those airports, the heaviest players in terms of delays and air traffic, cannot handle more than a specified number of operations each hour," says FAA Deputy Chief Counsel Edward P Faberman. His task was to design and implement a system that would track slot holders at those airports

Mike Pennington is Manager of Government Marketing for 3M Document Systems Division

To the airlines takeoff and landing slots are more than tickets to operate their carrier services from those busy airports Slots are commodities, and they are bought, sold, traded, leased and loaned by the airlines that hold them The FAA keeps tabs on who holds what slot, where, and when. Essentially, the FAA is running a title system for the slots, not unlike a motor vehicle department Although a slot system has been in existence for years (it fell under the auspices of the now-defunct Civil Aeronautics Board), airlines distributed their slots through an industry committee But the recent DOT rule altered the way in which slots are exchanged, and created a very different atmosphere. Faberman says, "This is the ultimate deregulation. If

> "We had to have a storage and retrieval system in which we could trace every item very quickly."

you're an air carrier, you no longer go to an industry meeting and get a committee to vote for your slots Today you go out and buy them, or you make a deal to lease them with the carrier that holds the slot you want. All we at the FAA do is monitor those slots, keep track of who has them, and make sure that if you don't have the slot, you don't show up with your airplane at that hour."

Keeping track of slots

DOT's December 1985 rule change took effect in April 1986 At that time, airlines began to buy and sell slots, and the FAA began monitoring operations in earnest Before, the Air Transportation Association (ATA), the alphabet group of carriers, took care of slots, tracking how many slots each carrier had in what hours at which airport "When ATA handled this, there were no slot numbers," Faberman says. "ATA knew, however, that at 8:00 AM at LaGuardia, for example, TWA had 12 slots, United had 10 slots, and American had four

Now each of approximately 3,500 slots are numbered Their ownership and occupancy is closely monitored. While an FAA computer system keeps track of ownership and possession of slots, Faberman points out that "we have to have the ability to trace when Airline A sold or leased a particular slot to Airline B," adding that this system is "like any other titling system· at some point, there'll be a dispute over occupancy, or we'll have to figure out why a slot was occupied 30 percent of the time in a two month period" In order to keep track of slot documentation among the airlines, the FAA installed the 3M Docutron 2000 Electronic Document Management System Now each time a slot is traded, leased or loaned, a supporting document is sent to the FAA. The system consists of an optical disk controller, a high resolution monitor, a laser scanner, laser printer and two 12-inch optical disk drives that can each store 60000 letter-sized documents. As transaction documents are received, they are logged into a master file, then automatically scanned into the system

Data entry operator Stephanie

"Because of the large but varying volume of documents on the system, it may be the only way we can get to the information we need quickly."

McClain indexes the documents from the system's terminal by slot number, entry log number, airline holder and date range. The multiple indexing capability of the system allows the FAA to pull up stored slot data in seconds. "We had to have a storage and retrieval system in which we could trace every item very quickly," Faberman says. "This was the only system we found that met both our volume and response time requirements." Although volumes can vary from day to day, the FAA responds to allocation questions (from either the airlines themselves or legislators on Capitol Hill) within a day, providing hard copy of all slot activity for a particular request. "Because we didn't know what our volume would be," Faberman explains, "we decided against a microfilm system. If we had to process 400 pieces of paper a week, that would have wasted a lot of film; on the other hand, we had no idea how much volume we might have to handle in a day." He adds that eventually he'd like a desk top terminal networked to the system, so he could see documents stored on optical disk. "We can find any of the slot documentation within a very few seconds simply by keying in the name of the carrier, a date range, the master log number or the slot number," says program analyst Denise Hall. "Multiple indexing is very important to us; because of the large but varying volume of documents on the system, it may be the only way we can get to the information we need quickly."

By way of example, Hall explains that if she wanted to know what Eastern Airlines had done with its slots for the last year, she'd have to go through every paper record that comes into the agency. "Now, I don't have to do that. The system automatically gives me a slot count just by pulling up the name of the airline." Why is that important? "When an airline takes off or lands without a slot allocated to it, we'll take an enforcement action against them." The enforcement action—a civil penalty of $1,000 for each incident—is designed to ensure compliance with the high density airport limitations. And those $1,000 fines can add up pretty quickly (after all, one slot is needed for landing, another for takeoff) if an airline is operating under a slot that it actually has sold or traded to another airline. If, on the other hand, a slot is not occupied at least 65 percent of the time, the owning airline loses it under the "use-or-lose" requirement of the DOT ruling. Thanks to quick access to the optical disk storage, the FAA knows who is in violation of that requirement, and it will pull the slot.

The enforcement action —a civil penalty of $1,000 for each incident— is designed to ensure compliance with the high density airport limitations.

Twice a year, the FAA holds a lottery in which slots it has pulled are given to new entrants, who are allocated a percentage of available slots (the percentage, as well as the number of slots, varies from airport to airport). "We created an instantaneous tracking system from scratch," says Faberman. Despite a steadily increasing workload, Faberman claims the airlines and legislators are "shocked by how responsive we are." For example, Faberman's office worked with Pan American, Eastern, and New York Air to iron out the shuttle service between LaGuardia and Washington National. "We were able to give approval for what was the largest slot transaction ever—hundreds of slots—within 36 hours. It would have been much harder to accomplish without the Docutron 2000 optical disk system."

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Riding the Optical Wave

By Mike Pennington

The tide is changing in document management, with optical storage emerging as the new technology of choice; government managers can use some navigational guidance to help chart their way toward deeper waters.

There are three facts of life that every government person responsible for paper-related systems must live with.

- Money is tight. The goal of any document program, now more than ever is to handle ever-greater volumes under increasingly severe manpower and budgetary constraints;
- Paper is still king. Only about 10 percent of government documents are stored in any other medium. Government paper files tend to be large, and they are getting larger all the time; and
- Technologies are changing. Many more options are now available for managing government documents. Interest is high in such state-of-the-art technologies as optical disk despite the fact that funding is often difficult to obtain.

Under the circumstances, the most exciting developments in government document management are those offering high productivity, dollar savings, faster information access, and easy cost justification. Believe it or not, many new techniques actually meet this demanding list of criteria.

Optical Disks in Focus

Perhaps the most revolutionary—and certainly the most talked-about—new document management technology is optical disk. Many government agencies are looking into possible applications, even though industry standards have not yet been determined. The Department of Defense's Computer-Aided Logistics Support (CALS) initiative has led the way with a joint Army and Air Force program already in place and the Navy accepting bids for the Engineering Data Management Information and Control System (EDMICS) it will install at 47 sites.

The reasons for this high level of interest are that optical storage has incredibly high packing density and offers "real time" information access. The potential savings in space and labor are greater than with any other available medium.

However, though optical disks may be the technological standard of the future, there are currently a few drawbacks. For one thing, system costs are still fairly high. It requires high document volumes or special factors to justify the installation costs of an optical system. In addition, there are some technological limitations that are still being worked out, such as communication between different systems.

But these problems are being addressed. Recent developments have brought optical disk systems several steps closer to being a viable alternative for average government applications.

For one thing, there are now available relatively (very relatively) low cost, standardized systems for scanning, storing, accessing, and printing documents. Such systems are in place at the Postal Service (correspondence control), the Federal Aviation Administration (landing slot allocation), and the Naval Ocean Systems Center (contract files). Several other agencies, including the U.S. Army Supply Depots and the Defense Logistics Agency, are looking into such systems.

In addition, firms have introduced systems capable of handling all sizes of documents. The ability to merge drawings and support documentation in a single, easily accessible file has caused considerable interest in agencies with large drawing collections, such as the Nuclear Regulatory Commission.

Another breakthrough is the development of application-specific optical disk systems. The availability of specialized application software for particular document management tasks allows government records administrators to purchase systems tailored to their individual needs without paying for individualized customization.

Finally, the rise of systems integrators and integrated systems is making optical disk technology more prominent. At the high end of the scale, optical units are being used as image handling subsystems within extremely powerful information systems. The optical files expand the "real time" information umbrella by permitting immediate access to images and data from a single terminal. The DOD has given considerable support to these modular and easily expanded systems, incorporating them in its CALS, EDMICS, and Digital Storage and Retrieval Engineering Data System (DSREDS) programs to provide a logistics support communications link with prime contractors.

CAR: Software

Advances in computer-aided-retrieval, microfilm-based systems have narrowed the access time gap between micrographics and optical-disk-based systems. For users not yet ready for optical disk—and that is probably the majority of government records administrators—that means substantial gains in productivity for a relatively modest investment. Microprocessor controls, advanced ergonomic designs, and enhanced abilities to work in conjunction with digital databases have made CAR systems more attractive and much easier to cost justify.

For handling the 90 percent of government documents still stored in paper form, CAR offers the advantages of random filming, easy indexing, and fast access to information, in addition to the

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Photoimage System Makes LAX Security Anything But

The Board of Airport Commissioners for the Los Angeles International Airport (LAX) has approved the purchase of the Edicon security access control system.

The computerized image/information system will be used to identify persons who work in—or require access to—restricted areas of the airport. The system produces computer-coded ID badges and digitally stored photographic image and related information about the badge carrier.

LAX plans to install this spring a central processing station and at least five inspection posts at key entryways. Employees entering the airfield will be required to insert their IDs into a sensor device. This will activate a color, television-quality image of the employee, along with the identifying information, on a monitor. The guards on duty can immediately verify the badge holder's identity and status. Those without proper clearance, including former employees, will be denied access.

The system allows text, graphics, and images to be integrated on one monitor. Since the stored data can be retrieved nearly instantaneously, the system will not impede efficient and speedy access while it secures the entrance points.

Clifton A. Moore, executive director of the Los Angeles Department of Airports, said, "We look forward to this augmentation to our security program and recognize the potential for expansion of the system in the future."

Atlanta's Hartsfield International Airport has also purchased the system from Edicon, which is a Kodak company, and other airports are evaluating it.

space- and time-saving benefits and archival characteristics of microfilm storage.

Many of the advances in computer-assisted-retrieval, microfilm-based systems have been made possible by more powerful document management software. The latest generation of such software requires minimal training and fewer keystrokes for indexing and document access. Improved search techniques mean faster retrieval and an even greater increase in productivity.

Most of the new software is media transparent. It maintains an index with the location of all documents—paper, film, or optically stored—and directs the retrieval of those that are automatically accessible. This media transparency permits great flexibility in systems acquisition. For example, the military is currently interested in automating files for pay documents, travel vouchers, and supply requisition. Each base could choose to store documents in whatever medium it wants, depending on volume.

Bar Codes; CAD/CAE

Even with the new software, the keystroking of index data remains one of the most labor-intensive operations in any document management system. If the information is stored digitally, it can be handled electronically. If the information must be pulled off the document, technology offers two improvements over keystroking, one eventual and one immediate.

Eventually systems will be able to read information printed in eye-readable form directly off the document and enter it automatically into the index. This is called Optical Character Recognition (OCR). However the effectiveness of such systems is currently limited by a high error rate and a lack of proven systems experience.

In the meantime, bar code indexing systems are a good alternative. Bar code labels, such as those used in grocery and other retail stores, are attached to a specified area of the document and are used to record such relevant index information as invoice numbers and file names. The bar code scanner is mounted on the microfilm camera, so the information is captured during filming and automatically merged with the location of the image on the film, eliminating keystroking altogether.

The only difficulty with a bar code system lies in getting the bar code information on the document in the first place. Internally produced documents—such as government forms—can have the information included during printing, but outside documents must have labels affixed (thus taking up some of the time saved by eliminating keystroking) unless suppliers supply bar-coded documents.

As with private-sector manufacturers and engineering firms, many government agencies are discovering the advantages of using CAD/CAE (Computer-Aided Design/Computer-Aided Engineering) systems to produce engineering drawings. Unfortunately, while computers can make changes in engineering drawings in a matter of seconds, it takes a relatively long time to create the hard copy on a mechanical plotter. However, just as Computer Output Microfilm (COM) recorders take digital information and record it as alphanumeric characters on film, there are CAD film recorders that can record digital data graphically on film in a fraction of the time required by mechanical plotters.

Although such systems have been around for several years, recent advances have made them more convenient and easier to integrate into overall information systems. For example, one system in place at the Naval Surface Weapons Center records CAD data on 35mm film and outputs a fully punched and processed aperture card ready for filing, duplicating, or scanning into an optical disk storage system.

To Float or to Swim?

In both government and the private sector, file and document management is in a period of transition. While exciting technological advances are offering promises of a brighter future, delays and budgetary considerations are causing many government administrators to hold off, waiting for either the ideal system or the ideal price. Perhaps this is one reason for the high proportion of paper files.

Many recent document management systems take these transitional factors into account and offer immediate benefits without painting users into a technological corner. Transitional products such as bar code indexing systems will pay for themselves long before the next generation becomes truly practical. Hybrid products such as media-transparent software permit the immediate installation of cost-effective document management systems and an easy eventual conversion to more advanced technologies.

Document management system procurers should not be intimidated by the current array of choices and considerations. Though it can be a complicated task to purchase a system that meets current needs and lays a foundation for future upgrades, it can and should be done. A period of transition is not a time to merely "wait and see," but one in which to take advantage of technological advances as they become available.

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VIRUSES: CAUSES AND CURES

Prevention Solutions Beginning to Appear

by SALLY SMITH

Viruses. I got the fever; who's got the cure?

If you've been reading the computer press lately, you may have begun to regard a public domain program as a gift horse that has to be looked in the mouth. Viruses are among us, invading MS/DOS machines as well. Apples causing some havoc and a lot of concern.

The latest virus incident in this area was reported in late March. It tampered with Macintosh software.

Viruses and the distrust they create affect the whole user community. "Computing in general is like the Commons used to be in England," comments John Paff, manager of Clinton Computers Rockville store. "It's a public value, a public trust. It's a mutual resource and something that should be protected and cherished." This feeling has mobilized the whole user/developer/manufacturing community to look for solutions to the problem.

What Is a Virus?

A virus is a program designed to invade one file after another and to issue commands that will erase or damage programs and data. Viruses vary, but they all have the ability to multiply themselves, moving from one file to another and from one machine to another, without the knowledge or consent of the computer user. Viruses often delay their destructive action until they have had plenty of chance to contaminate all your files and all your back-ups. There have been destructive programs as long as there have been programmers. The problems are worse now because more people are connected by networks and electronic mail and because today's ever larger hard disks put hundreds of files within the virus' reach.

So What Can You Do?

First, haul out those shiny silver write-protect stickers and start using them on your floppies. When you are computing in a strange place, keep your floppy protected unless you are actually writing to it. For example, if you take a floppy to the office to print a letter on the spiffy laser printer, that floppy could be write-protected. Some advisers are suggesting that the often-attacked operating system should be booted from a write-protected disk.

Second thing you should do is join a user group. This may seem like the time to dig a moat around your desk and populate it with alligators. Resist that thought. A user group will keep you up to date on the latest problems and fixes.

Prevention

Hardware and software solutions are beginning to emerge. Vaccine from Foundationware in Cleveland offers a five-module software utility to protect the hard disks of XT, AT, 386, and PS2 machines. The new version of Vaccine, to be introduced at this month's Comdex, includes a BOMB SHELTER module which temporarily rewrites the CMOS on an AT or 386 so that you can localize the disaster when you test downloaded software or a newly "finished" program containing God-only-knows-what bugs. This module temporarily convinces your computer that it has no hard drive to erase or garbage.

The Vaccine module which seems most useful is the Critical Disk. It contains a copy of your essential operating files, including the file allocation table (FAT) which is used by DOS to locate your files when you need them. If a virus or the well known human factor muck up your disk, you slip the Critical Disk in drive A, turn on the computer, and you are back in business without so much as a keystroke.

The module you'll love to hate in this package is called the Quality Assurance Module. You will call it Big Brother.

According to Michael Riemer of Foundationware, this memory resident program occupies only 600 bytes and works in the time it takes to refresh a screen. So where's the beef? This is the software equivalent of soldering a board so it can't do as much as it was built to do. You install the Quality Assurance module by letting it "take a picture" of all the files in all programs you intend to run on the computer. Then it refuses to let you run those programs if they have been corrupted or infected. It also refuses to let you run anything else, not even Flight Simulator.

As the product information states, Vaccine "can insure that expensive computer equipment is used for appropriate applications and not for frivolous activities." Phooey!

A Hardware Solution

PC users with half a slot to spare can install a hardware solution to the virus problem. Disk Defender from Director Technologies, Inc., in Evanston, IL, costs $240 and allows you to write-protect a portion of your hard disk or all of it, if you're feeling that paranoid. The hardware does not interfere with the functioning of the computer or slow its operation. Dennis Director, president of the company, suggests reserving about half the hard disk for write protected software, beginning with the operating system. He has found that most widely used programs accept having their data stored in a separate directory. Disk Defender is currently in use at Virginia Commonwealth University in Richmond.

If you're hooked on viruses, you can subscribe free to Director's newsletter, Computer Virology, which reports on the latest outbreaks ranging from Lehigh University in Pennsylvania to Hebrew University in Jerusalem. Software fixes for specific viruses in the MS/DOS world are covered as well.

Mac Gnash

Macintosh users in this area are cleaning up after a viral outbreak which was first detected in late March. The virus causes damage to Excel spreadsheets and interferes with laser printing.

Washington Apple Pi, the local Apple user group, is advising every Macintosh owner to

CONTINUED ON PAGE 32

CONTINUED FROM PAGE 19

Viruses. . .

examine his or her software for this virus It causes a change in the icons which represent the Note Pad File and the Scrapbook File in the Macintosh System folder In a healthy Macintosh these icons resemble a Macintosh. In infected machines, the icon changes to a sheet of paper with the upper right corner folded over (the Macintosh document icon)

For Hackers Only

To be sure that your machine is indeed infected, Dave Lavery of Apple Pi suggests that you execute ResEdit or some other utility which allows you to see "invisible" files Examine the System Folder If you find two invisible files in the System Folder called "Desktop" and "Scores," your machine is definitely infected.

For the Rest of Us

According to Chuck Perrelli of Clinton Computer ResEdit is a developer's tool which is "cryptic and confusing" for ordinary users It would be easy for a novice to wreck his or her system and crash the hard disk if he or she starts rooting around in Resource code There is another way to approach the problem

John Paff suggests using a freeware program for the Mac, available on the Apple Pi bulletin board It is called Virus Detective It is already programmed to look for the "old" MacMag virus It can be programmed to look for this virus, too

What To Look For

Dave Lavery of Apple Pi has provided a very thorough description of this virus

"The virus transmits itself from Macintosh to Macintosh by invading a standard executable application file on a contaminated Macintosh When this contaminated application is copied to a sterile Macintosh and executed the virus attacks the new system by making changes to the contents of the System file First three INIT resources are added to the Systemfile If the files Note Pad File and Scrapbook File do not exist in the System Folder, they are created The type and creator fields of the Notepad File are changed from ZSYS and MACS to INIT and ZSYS respectively, and an INIT resource is added to the file. The type and creator fields of the "Scrapbook File" are changed from ZSYS and MACS to RDEV and ZSYS respectively, and an INIT resource is added to the file Two new invisible files are added to the system folder named Desktop and Scores each with an appl, DATA and INIT resource. Note that this Desktop file is not the standard Desktop file that is found at the root level of every disk and diskette The legal Desktop file has a type of FNDR and creator of ERIK Do not confuse the Desktop file created by the virus in the System Folder with the legal version found at the root level

"As each application is attacked, the virus install a new CODE resource into the application. The identification of this new resource is variable, depending upon the existing resources within the application The virus apparently creates a list of the CODE resource identification numbers within the sterile application It then checks the list for the first break in sequential numbers or the end of the list.

"The new virus CODE resource is then given an identification number one greater than the break in the sequence or the end of the list. For example, HyperCard contains CODE resources 0 through 20, leaving an ID of 21 as the first unoccupied resource ID The virus places the new CODE resource in the application with an identification one greater than that. CODE ID=22

"The second step of the infection of the application is the modification of the CODE ID=0 resource of the application In all of the infected applications which I have found, the virus modifies the eleventh word of this resource In each of these applications, the eleventh word seems to normally be a pointer to the CODE ID=1 resource

"Where the application would normally jump to the CODE ID=1 segment, the virus modifies this pointer to refer to the new CODE resource that has just been installed. The example below shows the first 16 words of a sterile and an infected version of Hypercard.

Sterile

0000 1EF0 0000 559C
0000 1ED0 0000 0020
0008 3F3C 0001 A9F0
0000 3F3C 0001 A9F0

Infected

0000 1EF0 0000 559C
0000 1ED0 0000 0020
0008 3F3C 0016 A9F0
0000 3F3C 0001 A9F0

"The eleventh word has been changed from 0001 to 0016 which points to the new CODE ID=22 resource (hex 16=decimal 22) Note that during our examination of suspected applications, we found that at least one computer normally places non-0001 values in the eleventh word of the CODE ID=0 resource. To verify infection, if the eleventh word is not 0001 check to see if the eleventh word points to the new CODE resource. If it does, then the application is infected

"The new CODE resource is a copy of the virus code, is of size 7028, and is executed when the infected application is invoked When the virus completes execution, it returns to the invoked application, which appears to proceed normally The first sixteen words of the virus are

0000 0001 xxxx 3F3C
0001 A9F0 4EBA 002E
204D D0FC 0020 43FA
FFEC 2009 2091 204D

"The third word of the virus code is variable and may be based on the return address used when the execution of the virus is completed The virus makes a third modification to the code of the application in a manner which has not been fully deciphered This was determined by trying to recover the HyperCard application by removing the new CODE ID=22 resource and patching the eleventh word of the CODE ID=0 resource Any attempt to run the rebuilt application resulted in a system bomb, intimating that the virus has modified other sections of the application which prevented its complete exorcism."

The Cure: For Hackers Only

Contaminated system files and applications must be completely removed from the Macintosh Follow these steps.

1 Identify the diseased files using the above information. List them

2 Using ResEdit, open the infected System Folder and locate the "Desktop" file Select the file and use the "Get Info" option on the "File Menu" When the file information window opens turn off the "invisible" bit, then close the window and save the file information Do the same for the "Scores" file

3 Locate a sterile system diskette (preferably one of the "System Tools diskettes from Apple), LOCK IT and boot from it.

4 Delete the entire System Folder

5 Throw away all the infected applications listed in step 1

6 Shut down the Macintosh and turn the power off Do not just "Restart" your Mac! You must completely power down to guarantee that the Macintosh memory is cleared. Wait at least 30 seconds for the memory to clear before rebooting again from the sterile diskette

7 Reinstall the Macintosh operating system from the System Tools disette to your Macintosh

8 Locate your original copies of the deleted application software Before reinstalling the applications, examine each one to be sure that it is sterile If there is no problem reinstall the application

Don't Forget

Bill Baldridge of Apple Pi has the best advice of all Don't panic.

And don't assume that everything that goes wrong with your system is caused by a virus Remember to look for the other things that cause printing problems. Sometimes the Mac likes to have its batteries removed for a short spell, for instance.

And remember, that when you are looking at things you've never looked at before, you may see new things that look weird, but have been there all along, doing no harm at all Some shareware games, for example, create "Scores" files. They are invisible so that gamesters won't open them up and inflate their scores The Scores you find may be your own

Happy Computing and stay virus free

Sally Smith teaches Ventura for the Write Words, a consulting firm in Arlington, Virginia

■

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Job Title
Do you work in the ☐ federal government, ☐ state or local government, or ☐ private sector?

2. Do you use computers for
☐ 1) business
☐ 2) personal/home
☐ 3) education

3 Which microcomputers do you use?
☐ 1) IBM/compatible
☐ 2) Macintosh/other Apple
☐ 3) Other
☐ 4) None

4 Please indicate your primary position. (check only one)
☐ 1) CEO/top management
☐ 2) Retail-owner/operator
☐ 3) Programs management
☐ 4) Systems management/analysis
☐ 5) Communications management/analysis
☐ 6) Hardware/Software Development
☐ 7) Programming
☐ 8) Personnel/Training
☐ 9) Procurement
☐ 10) Sales/Marketing
☐ 11) Legal/Legislative
☐ 12) Consulting
☐ 13) Education
☐ 14) Other

5 Please indicate your annual household income.
☐ 1) $10,000-25 000 ☐ 4) $65 000-80,000
☐ 2) $25 000-40,000 ☐ 5) $80 000-100 000
☐ 3) $40,000-65 000 ☐ 6) $100 000+

6 How many people does your company/organization employ?
☐ 1) 50 or fewer ☐ 4) 500-999
☐ 2) 50-99 ☐ 5) 1,000+
☐ 3) 100-499

7 Which of the following computers does your organization use? (check all that apply)
☐ 1) Mainframe Computers
☐ 2) Mini/Mid-range Computers
☐ 3) Microcomputers

8 Does your organization use services for (check all that apply)
☐ 1) Education/Training
☐ 2) Maintenance
☐ 3) Software/Systems Design
☐ 4) Timesharing
☐ 5) Database maintenance

9 How much does your organization plan to spend on computer systems in the next 12 months?
☐ 1) $0-25,000 ☐ 4) $100,000-500 000
☐ 2) $25,000-50 000 ☐ 5) $500 000-1,000,000
☐ 3) $50,000-100,000 ☐ 6) $1,000,000+

10 How much does your organization plan to spend on peripherals in the next 12 months?
☐ 1) $0-25 000 ☐ 4) $100 000-500,000
☐ 2) $25,000-50,000 ☐ 5) $500 000-1 000,000
☐ 3) $50,000-100 000 ☐ 6) $1,000,000+

11 How much does your organization plan to spend on software and services in the next 12 months?
☐ 1) $0-10,000 ☐ 4) $50,000-100,000
☐ 2) $10 000-25,000 ☐ 5) $100 000-500 000
☐ 3) $25 000-50 000 ☐ 6) $500 000+

12. Do you make or influence decisions for purchasing computers and related products and services?
☐ Yes
☐ No

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RECORDS MANAGEMENT REFERENCES

RECORDS MANAGEMENT REFERENCES

DIANE COLLIER - Region VII Records Officer - 757-2828

GEOFF STEELE - Agency Records Management Officer - FTS 475-8675

SUZANNE ANNAND - HQ Records Management Staff - FTS 475-8675

HAROLD WEBSTER - HQ Records Management Staff - FTS 475-8675

RECORDS MANAGEMENT FUNDAMENTALS QUIZ

Check the correct answer or answers for each of the following questions.

1. The term "records" refers to:

(a) any scrap of paper in a government building.
(b) any memorandum that has a signature on it.
(c) information on any medium which may have enduring value.
(d) information on any paper that has at least two signatures on it.

2. The term record series relates to:

(a) any group of similar documents that have been classified for disposition purposes.
(b) any group of documents that are numbered in sequence.
(c) any group of documents pertaining to a single matter which are filed chronologically.
(d) a baseball competition in which a lot of records are broken.

3. A "disposition schedule" is:

(a) a calendar of litigation events.
(b) a formally approved calendar for retiring, destroying or archiving records.
(c) a formally approved distribution list.
(d) a cooperative understanding that permits each person in the office to be grouchy on certain days.

4. Each office must be in complete control of every document that it receives.

(a) True
(b) False

5. All records processed in an office are "official" and must be treated with utmost care.

(a) True
(b) False

6. A permanent record is a record that:

(a) has been kept for over three years.
(b) has been sent to the Federal Records Center.
(c) can't be broken.
(d) has been defined as such by the National Archives and Records Administration.

RECORDS MANAGEMENT FUNDAMENTALS QUIZ - P.2

7. There is no formal set of EPA policies governing records.

(a) True
(b) False

8. If you keep a copy of every memorandum ever prepared or received by your office then you are practicing proper records management.

(a) True
(b) False

9. Once a record is sent to the Federal Records Center, you will:

(a) never see that record again
(b) have to bribe someone to get it back.
(c) have to work with the local records officer to recall it.
(d) can assume that it will be destroyed after two years.

10. Only permanent records are sent to the Federal Records Centers.

(a) True
(b) False

11. Archived records are kept at the Federal Records Centers.

(a) True
(b) False

12. A Standard Form 135 is used to retrieve a record from the Federal Records Centers.

(a) True
(b) False

13. There is no way to protect Confidential Business Information after it goes to the Federal Records Centers; therefore, you can't send CBI records to the Federal Records Centers.

(a) True
(b) False

14. Personal records are any records you keep in your desk.

(a) True
(b) False

RECORDS MANAGEMENT FUNDAMENTALS QUIZ - p.2

15. If a published report is used for reference in your office, then you must keep a copy of that report in your files to assure a complete decision record.

(a) True
(b) False

16. There is at least one point of contact in EPA which can be called to get the answer to any records management question you may have.

(a) True
(b) False

17. The official records officer for your office is: _____.

18. Do you know where the EPA Records Management Manual is kept in your office? If so, where: _____.