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## ABSTRACT

The Environmental Protection Agency's (EPA) inhouse library systems fall into two principle categories: basic library inventory systems and literature retrieval systems. Currently, the library network supports three inventory systems: the journal system; the hard bound book system; and the circulation system. At the same time, five efforts are under way in the area of literature retrieval: (1) a system involving bibliographic information concerned with the health aspects of pesticides; (2) a similar application in the area of air pollutants and their effects on vegetation and animals; (3) a system covering a collection of international environmental reports pertaining to national environmental policies and laws; (4) an EPA reports system using master files provided by the National Information Service (Department of Commerce); and (5) an EPA document control system which monitors documents not covered by other library applications. Each of these systems generates comprehensive computer outputs meeting the total needs of the data managers as well as the daily user. (WCM)

**A DESCRIPTION OF THE ENVIRONMENTAL  
PROTECTION AGENCY'S IN-HOUSE  
LIBRARY SYSTEMS**

**February 1974**

**LIBRARY SYSTEMS BRANCH  
MANAGEMENT AND ORGANIZATION DIVISION  
MANAGEMENT INFORMATION AND  
DATA SYSTEMS DIVISION  
OFFICE OF PLANNING AND MANAGEMENT**

**U. S. ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C., 20460**

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IN-HOUSE LIBRARY SYSTEMS

February 1974

Library Systems Branch  
Management and Organization Division  
Management Information and  
Data Systems Division  
Office of Planning and Management

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

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A Description of the Environmental Protection Agency's Inhouse  
Library Systems

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## Purpose and Scope

EPA's inhouse library systems fall into two principle categories: basic library inventory systems and literature retrieval systems.

## The Inventory Applications

Currently, the library network supports three inventory systems: the journal system; the hard bound book system; and the circulation system. The journal and book systems are national in scope and serve the agency in the following ways:

1. The systems facilitate intelligent and efficient ordering. With the knowledge of the total inventory, the librarian can determine what additional journals and books should be ordered to stock the library properly in each of the environmental subject areas. Also, by reviewing the inventories of nearby EPA libraries, the librarian can determine if the journal or book should be ordered or borrowed from another EPA library.
2. These inventory applications provide for better utilization of library space. Libraries in a given region can coordinate inventories so that unnecessary duplication of holdings does not occur.
3. The systems assist the users of the library. By presenting complete and concise inventory documents, the users are able to obtain a better understanding of the vast information available in the total library network.

The third inhouse inventory application is the circulation system. This system is local in nature in that it services individual EPA libraries. Currently, this application is being used in various EPA libraries including the Washington D.C. library, the National Environmental Research Center libraries in Cincinnati, Ohio, and Research Triangle Park, North Carolina, and regional libraries in Seattle and Chicago. This system will be extended for use to any library requesting it. It provides the librarian with the ability to monitor all aspects of library material on loan.

## Literature Retrieval Systems

At this time, five efforts are under way in the area of literature retrieval:

1. A system involving bibliographic information concerned with the health aspects of pesticides,
2. A similar application in the area of air pollutants and their effects on vegetation and animals,

3. A system covering a collection of international environmental reports pertaining to national environmental policies and laws,
4. An EPA reports system using master files provided by the National Technical Information Service (Department of Commerce), and
5. An EPA document control system which monitors documents not covered by other library applications. A major component of this collection is the vast environmental state and local report collection held by the EPA library system.

Each of these systems generates comprehensive computer outputs meeting the total needs of the data managers as well as the daily user.

Following is a summary description of the computer hardware and computer software used in the development and maintenance of each of the systems:

#### The Computer Hardware

All of the inhouse library systems utilize the National Institutes of Health's computer facility located in Bethesda, Maryland. This facility is one of the world's largest biomedical research computer centers.

The library systems have been developed and maintained on NIH's two IBM 370/165's. In addition to providing an extensive on-site computing facility to the many users, this center supports a comprehensive remote job entry and telecommunication capability. Through this capability, users in all parts of the country can communicate with the central computer center and perform all operations as if they were on-site. A large number of EPA's regional offices and National Environmental Research Centers are linked to NIH. To give the reader an idea of the capacity of this center, in April 1972 the center handled more than 125,000 jobs including 30,000 low speed communicating terminal sessions. In June, 1972, the second IBM 370/165 was installed. This computer has three million bytes of storage and the ability to perform over twelve and a half million computations per second. (1) The facility can support over two hundred low speed communicating terminal users simultaneously.

#### The Computer Software

Wylbur--This is a computer program which serves as a text editor and remote job entry facility. Developed by the Stanford University Computation Center, Wylbur has been adapted for use at the NIH computer facility. This program allows a user to communicate on-line (via a low speed communicating terminal) with the central computer and to perform a comprehensive text editing function without interfering with other jobs being processed by the computer. Using Wylbur, one can create, modify, store and retrieve text. This text can take the form of a computer program, a data master file, or even a business letter. (2) All of the computer programs, system documentation, and many of the library systems' master files are built and maintained through Wylbur. This documentation package was fully developed and edited using Wylbur. As comprehensive as this text editor is, it has been easily learned and extensively used by people with no data processing experience.

The Inquiry And Reporting System (IRS)--This is a commercially available data retrieval and report generation software package. It provides

(1) INTERFACE, (No. 34; Bethesda, Maryland: The Computer Center, Division of Computer Research Technology, National Institutes of Health, June 5, 1972), pp.

(2) WYLBUR REFERENCE MANUAL, (Bethesda, Maryland: The Computer Center, Division of Computer Research Technology, National Institutes of Health, December, 1970), p.3.

a fast, efficient, and simple technique for extracting information from computer files, performing basic data processing functions, and producing the desired form of output. (3) All of the computer programs in each of the library systems has been written in this computer language.

(3) INQUIRY AND REPORTING SYSTEM USER'S GUIDE, (Bethesda, Maryland: Sigma Data Computing Corporation, 1968), p.1.

The library application's initial development began nearly thirty months ago. Over time a basic system design approach has developed and some of the major aspects and considerations of the approach are presented at this juncture.

As described, the inhouse library systems involve two broad areas: library inventory systems and literature retrieval systems. In developing systems in these areas, standards of development have been established. This includes master file organization, basic computer programming techniques, alternative methods of input development and control, primary computer outputs, and so forth. The basic premise is to apply standards that have been used successfully in one area to other similar areas. An example of this approach is the agency's pesticides and air pollution systems. The pesticides system was developed first. The same primary standards were applied to the air pollution system. One of the favorable results was that the development time and costs of the air pollution system were 25% less than those of the comparable pesticides system. Another important result of using similar approaches is the reduction of training costs associated with understanding any phase of the two systems. A data preparation clerk for one system can easily learn the procedures for the other. A researcher who understands the outputs of one can quickly learn how to use the outputs of the other. In every way, learning about one of the systems helps lay the foundation for learning about the other.

A second consideration is to make available to other libraries systems that have worked for an individual library. The circulation system is an example of this approach. This system was developed for the Headquarter's library. Recently, it has been implemented in five other EPA libraries that can justify its need.

A third consideration of the system's approach is that in the development of each system the first technical procedure (following a thorough discussion of the application by the technical and functional parties) is that of establishing a working system based on a small test data base. As this test system develops the technical and functional parties work closely together insuring that the final result meets the total need. When the small test system is completed all concerned can be reasonably certain that the system will function as intended. The critical consideration is that a small test system is developed, analyzed, modified, and completed prior to the commitment of any large resource to the effort. As a result of this procedure, none of the established systems have undergone major modifications beyond the test phase.

Another important aspect of this system's approach involves the planned, effective utilization of the powerful hardware/software environment employed by these systems. The use of the on-line capabilities in each application is well planned. While small scale on-line monthly updating is used extensively, the larger initial data bases have been provided in machine readable form by contractors using conventional off-line data preparation methods. In all but the circulation system, the master files are maintained off-line on magnetic tape. Whenever practical, computer processing is accomplished during the lowest priority of computer job class. This can mean a savings of 25% over what higher unnecessary job priorities would cost. The proper use of the computer environment is essential if any system is to be cost effective.

in any computer based system, an accurate and current data base is essential if a library application is to prove successful. In achieving such a data base, the proper use of input forms is crucial to the system. Generally, the greater the number of decentralized sources of input, the more rigid and defined the input forms and procedures must be. In our book system, approximately twenty-eight libraries from around the country submit input forms daily. The input form is well structured, and complete instructions to the participating libraries are provided. On the other hand, the circulation system serves an individual library. The input forms and controls are somewhat less rigid as all aspects of the system are managed by one individual in each library. Another important consideration is to design the input forms as closely as possible to the actual master file format. This will keep input costs as reasonable as possible.

Certainly one of the most important considerations in the design of any of the library applications is that the users' needs are satisfied. Each of the systems is designed to provide a complete set of documents presenting the data in the required formats. In the literature search applications, reports meeting refined search requirements can be generated. In all the systems, any report can be available within twenty-four hours of the request. The systems are designed to allow the user to be computer independent with the reports providing all of the necessary information. They are designed in this manner to allow for users without terminals to benefit from the systems. A further consideration is that all basic information is available if the computer is down. When necessary, the user is provided assistance by trained people who can efficiently access the systems. This not only insures that the user will be well served, but keeps system operation costs to a minimum.

In the initial design stage of user oriented systems, a primary step is to outline the necessary information report outputs. Once this is defined, the remaining elements of the system, such as file formats, input procedures, data element specifications are designed. An important point is to keep the input layouts and file formats as close in design to the principle output formats as possible. This will greatly reduce computer programming and system operation costs as well as enhance the ability of a user to comprehend the system.

A final consideration in our design approach is the desire to make full use of data bases that are not initiated and maintained inhouse. The EPA Reports System (reports submitted to NTIS) and the International Environmental Reports System are examples of this approach. In both cases the data bases are prepared by other organizations. The necessary software is developed inhouse that allows for the generation of the required information reports.

Each of the considerations described above has contributed significantly to the effective development of these systems. However, the crucial consideration necessary for the success of any system is functional people who truly understand their subject areas and their customers' needs. Without the active participation of such people, it is unlikely that any system will succeed.

# Application of COM (Computer Output on Microform) in the Library Systems

One of the most significant features of these systems is that most of the reports are available on COM (Computer Output on Microform). This allows for wide distribution of any output at a very small cost. The NIH Computer Center provides output on microfiche or microfilm in the form of an on-line Datagraphix 4400 Business Graphics Recorder.<sup>(4)</sup> To date, the library applications have used only the microfiche feature of this equipment. The microfiche has a reduction ratio of 42X. In real terms, one microfiche contains the equivalent of over 200 pages of hard copy constituting nearly 12,000 lines of print.

One of the principle reasons for the use of COM is in a situation where many copies of a structured computer generated information report are desired. The original COM costs little more than hard copy to generate. From the original, one can generate any number of copies for pennies. EPA's inhouse copies cost about four cents per microfiche. COM plays an important part in EPA's library systems because several of the reports are widely distributed both domestically and internationally. Without the microfiche medium, such distribution would be too costly for EPA to undertake.

In addition to being an inexpensive means for distributing information, in many instances, COM represents the most practical presentation of large amounts of data widely desired. Large reports not only are impractical to store but are impractical to use. One of the systems' subject indexes creates a report of 60,000 records equal to 4,000 pages or 240,000 lines of print. On microfiche, it was presented on twenty indexed microfiche less than one half inch thick.

In an area such as environmental information, complete data bases are desired by universities, foreign countries, corporations, and public groups. Mailing of large expensive reports is impossible. Domestically, one can mail five microfiche for the price of first class letter postage.

There are numerous on-line interactive computer efforts operating in the information area. The day when unlimited, on-line access to any data base is available is still some time away. Microfiche is not computer bound. It is not necessary to have access to a communicating terminal, a telephone, or a computer to use microfiche. All that is necessary to use microfiche is a reader costing approximately one hundred and fifty dollars, less than one month's rental on many communicating terminals.

A further consideration in the use of microfiche is the paper shortage. As the paper shortage continues, the necessity for a reasonable alternative will increase. The day may not be too far off when the seven inch computer listing is an expensive, impractical item of the past. COM represents one practical alternative.

COM is a very useful form of computer output. The EPA library systems have made extensive use of COM simply because with proper training, the ultimate users of these systems find COM an acceptable, inexpensive means of satisfying their information need.

<sup>(4)</sup> COMPUTER CENTER USER'S GUIDE, (Bethesda, Maryland: The Computer Center, Division of Computer Research Technology, National Institutes of Health), p. 251.

JOURNAL HOLDINGS INVENTORY SYSTEM

Below is a brief description of each of the inhouse library systems. Comparisons of systems' costs, development time, and so forth are presented in a table at the end of this documentation. In order to interpret properly the information in the table, a thorough understanding of the system description is necessary.

### The Journal Holdings Inventory System

#### Purpose and Scope

This system gathers data on the journal holdings of all participating EPA libraries and generates a journal holdings document reflecting the inventory at any given time. In addition to generating a total EPA holdings report, an individual holdings report by library is produced. All libraries receive copies of the total journal holdings report as well as the report reflecting just the particular library's holdings. All other interested areas receive a copy of the total journal holdings report. An updated edition is generated once a year.

#### Data Elements

Journal titles are maintained on a title file which also contains the International Standard Serial Number. All holding information is maintained on a holdings file. Each record on the holdings file contains the library identification and the basic holding information--volume and year. The files are linked together by a journal identification number which appears on both files. The system is designed in this manner so that once a title is entered, only a holding entry is required to identify the same journal in a new library. Document #2 (page 11) is a sample file format.

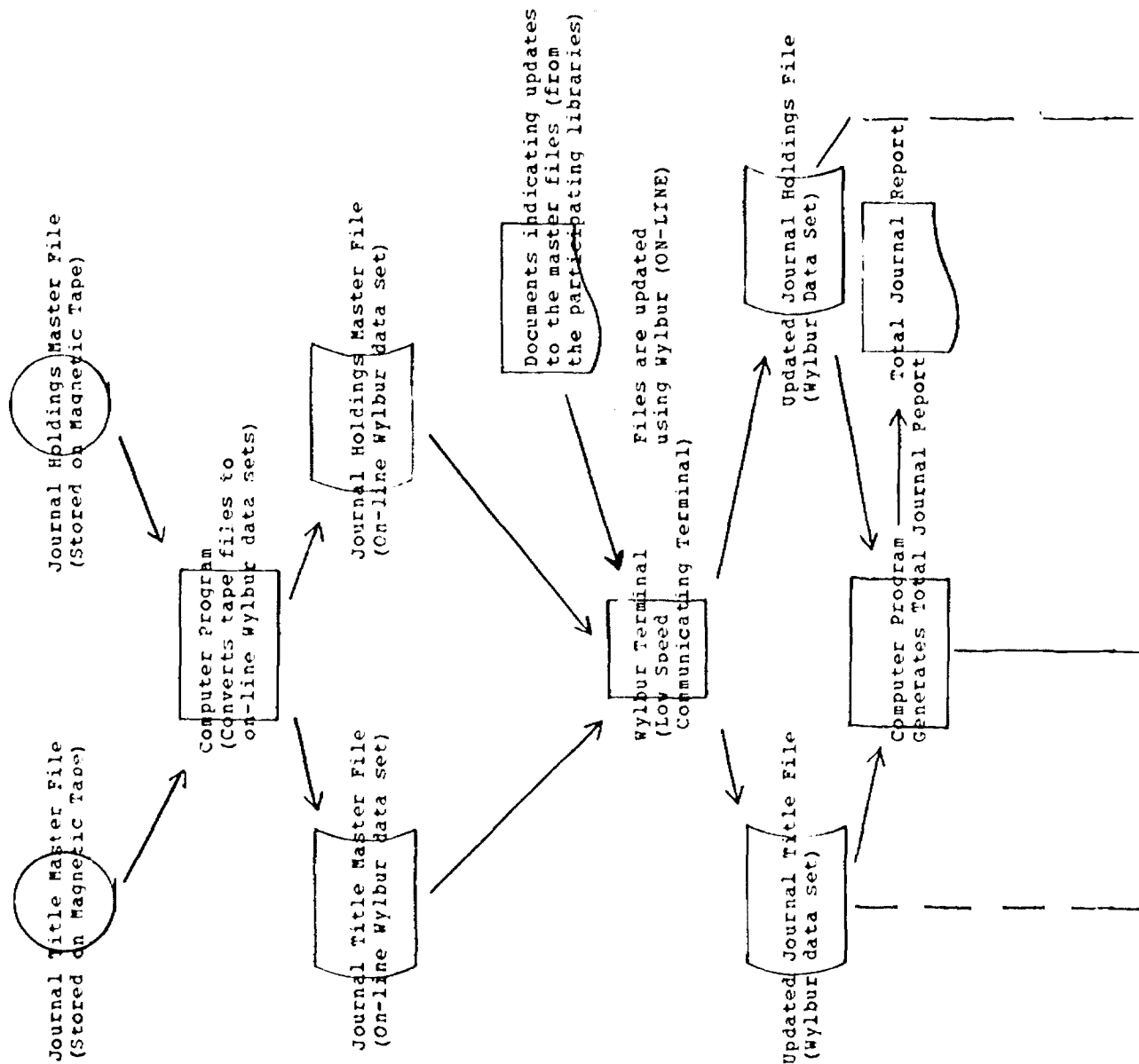
#### Status

All of the computer programs are operational. The data base is complete. The system contains nearly 2500 titles and nearly 6000 holding entries. The second edition of the principle report has been printed. The cost of computer program execution of the primary journal inventory document (second edition) was under \$16.00. A special computer program which generates all twenty-eight individual library holding reports was executed at an average cost of under \$.60 per library. The reports were also generated on microfiche. In July, 1973, the International Standard Serial Number was added to the majority of the journal titles.

#### Plans

The ability to assign multiple subjects to the journal titles and generate journal title reports by subject has been accomplished in a test environment. In addition, the programming to support a journal check-in system has been completed in a test environment.

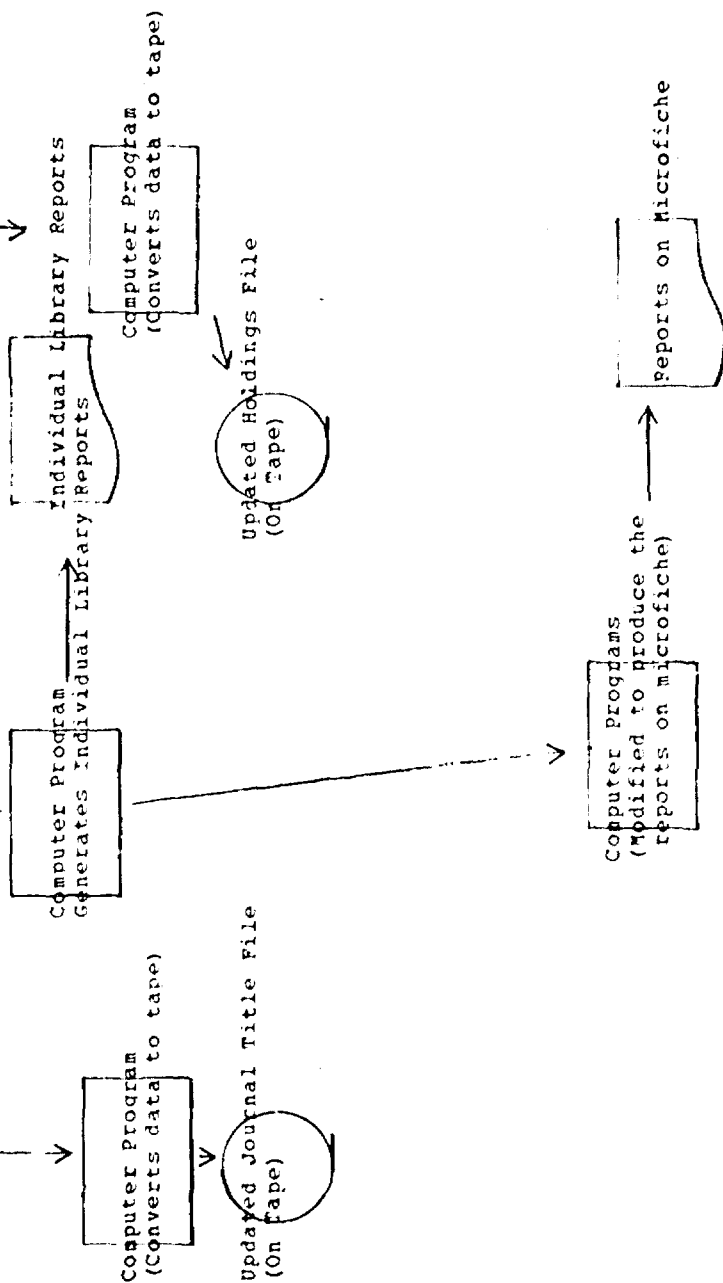
Document #1 (pages 9-10) is a brief system flow.  
Document #3 (pages 12-13) is a sample of the total inventory report.  
Document #4 (pages 14-15) is a sample of the individual library report.



# Document #1 Continued Journal Holdings System

## System Flow

10



Document #2  
Journal Holdings System  
Sample Master File Layouts

Journal Title File

| Journal Title                                                          | ISSN      | Journal ID Number |
|------------------------------------------------------------------------|-----------|-------------------|
| ↓                                                                      | ↓         | ↓                 |
| AAPSE NEWSLETTER                                                       |           | 000050            |
| ABRIDGED INDEX MEDICUS                                                 |           | 000100            |
| ABST OF AIR AND WATER CONSERVATION LITERATURE                          | 0001-3331 | 000200            |
| ABST OF DWR PUBLICATIONS. (CALIFORNIA DEPT. OF WATER RESOURCES)        |           | 000300            |
| ABST OF ENTOMOLOGY                                                     |           | 000400            |
| ABST OF LITERATURE ON THE BIOLOGICAL AND RELATED ASPECTS OF LEAD ..... | 0001-3579 | 000500            |
| ABST OF MYCOLOGY                                                       |           | 000600            |
| ABST OF NORTH AMER GEOLOGY                                             |           | 000700            |

Journal Holdings File

| Journal ID Number | Beginning Volume and Date | Ending Volume and Date |
|-------------------|---------------------------|------------------------|
| ↓                 | ↓                         | ↓                      |
| Library ID        |                           |                        |
| 00005005A         | 003 (1972) - TO PRESENT * |                        |
| 00010004E         | 002 (1971) - TO PRESENT   |                        |
| 00020004B         | 001 (1969) - TO PRESENT   |                        |
| 00020004M         | 001 (1970) - TO PRESENT   |                        |
| 00030003B         | 001 (1967) - 002 (1968)   |                        |
| 00040005B         | 002 (1971) - TO PRESENT   |                        |
| 00050004B         | 001 (1965) - TO PRESENT   |                        |
| 00060004J         | 001 (1967) - 004 (1970)   |                        |
| 00070002B         | (1966) - (1971)           |                        |
| 00070005B         | (1966) - TO PRESENT       |                        |

## AAPSE NEWSLETTER

05A 003 (1972) - TO PRESENT \*

## ABRIDGED INDEX MEDICUS

04E 002 (1971) - TO PRESENT

0001-3331

## ABST OF AIR AND WATER CONSERVATION LITERATURE

04R 001 (1969) - TO PRESENT

04M 001 (1970) - TO PRESENT

## ABST OF DWR PUBLICATIONS. (CALIFORNIA DEPT. OF WATER RESOURCES)

03A 001 (1967) - 002 (1968)

## ABST OF ENTOMOLOGY

03B 001 (1973) - TO PRESENT \*

05R 002 (1971) - TO PRESENT

0001-3579

## ABST OF LITERATURE ON THE BIOLOGICAL AND RELATED ASPECTS OF LEAD ....

04B 001 (1965) - TO PRESENT

## ABST OF MYCOLOGY

04J 001 (1967) - 004 (1970)

## ABST OF NORTH AMER GEOLOGY

02R 001 (1966) - (1971)

05R 001 (1966) - TO PRESENT

06R 001 (1966) - TO PRESENT

04A 001 (5/1969) - (1971)

10B 001 (10/1967) - TO PRESENT

## ABST OF PAPERS

03B 001 (1964) - (1971) \*

## ABST OF RECENT PUBLISHED MATERIAL ON SOIL AND WATER CONSERVATION

03R 001 (1952) - (1967) \*

## ABST ON HEALTH EFFECTS OF ENVIRONMENTAL POLLUTANTS

03R 002 (1973) - TO PRESENT \*

04M 001 (1972) - TO PRESENT

04N 001 (1972) - TO PRESENT

09A 001 (1972) - TO PRESENT

ABST ON HYGIENE  
 04F 007 (1966) - TO PRESENT  
 053 043 (1968) - TO PRESENT

ACCESS  
 03E 001 (1971)  
 05B (1969)

ACCESSION 3UL SOLID WASTE INFO RETRIEVAL SYSTEM  
 03E 001 (1970) - TO PRESENT  
 05B 001 (1970) - TO PRESENT

0001-3866

ACCOUNTS OF CHEM RESEARCH  
 03R 001 (1968) - 001 (1968) \*  
 04N 001 (1968) - TO PRESENT  
 05B 001 (1968) - TO PRESENT

ACCUMULATIVE VETERINARY INDEX  
 04C 002 (1960) - TO PRESENT

ACOUSTICAL SOCIETY OF AMER. JNL  
 03G 049 (1971) - TO PRESENT  
 104 CURRENT ONLY

ACUSTICS ABSTRACTS  
 05A (1973)

ACTA BIOCHIMICA POLONICA (ENGLISH TRANSLATION, WARSAW)  
 04B 014 (1967) - TO PRESENT \*

ACTA BIOLOGICA (F ACTA UNIVERSITATIS SZEGEDIENSIS)  
 05C 020 (1969) - TO PRESENT

0001-3978

ACTA CHEMICA SCANDINAVICA  
 05B 001 (1947) - 023 (1969) \*

ACTA MEDICA JUGOSLAVICA (ENGLISH TRANSLATION, BELGRADE)  
 04B 020 (1966) - TO PRESENT

ACTA PHARMACOLOGICS TOXICOLOGICS  
 100 020 (1965) - 028 (1970)

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM

## 1973 JOURNAL HOLDINGS

|           |        |                                                                   |           |
|-----------|--------|-------------------------------------------------------------------|-----------|
| JNL ID NO | 186600 | WESTERN CITY MAGAZINE<br>044 (1968) - TO PRESENT                  | 0006-4455 |
| JNL ID NO | 187100 | WILDLIFE MONOGRAPHS<br>(1969) - TO PRESENT *                      |           |
| JNL ID NO | 187200 | WILDLIFE REVIEW<br>103 (1961) - TO PRESENT *                      |           |
| JNL ID NO | 187300 | WILDLIFE SOCIETY NEWS<br>(1969)                                   |           |
| JNL ID NO | 187400 | WILLING WATER<br>013 (1969) - TO PRESENT *                        |           |
| JNL ID NO | 187500 | WILSON LIBRARY BUL<br>042 (1968) - 043 (1969) *                   |           |
| JNL ID NO | 187750 | WORLD<br>(1972) - TO PRESENT                                      | 0006-5566 |
| JNL ID NO | 187900 | WORLD ECOLOGY 2000<br>002 (1971) - TO PRESENT *                   |           |
| JNL ID NO | 188000 | WORLD HEALTH<br>(1965) - TO PRESENT *                             |           |
| JNL ID NO | 188200 | WORLD HEALTH ORGANIZATION, CHRONICLE<br>019 (1965) - TO PRESENT * |           |

\* INDICATES MISSING ISSUES IN THE HOLDING

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM

1973 JOURNAL HOLDINGS

|           |        |                                                                         |           |
|-----------|--------|-------------------------------------------------------------------------|-----------|
| JNL ID NO | 188500 | WORLD INDEX OF SCIENTIFIC TRANSLATIONS<br>002 (1968) - TO PRESENT       |           |
| JNL ID NO | 188600 | WORLD LIST OF FUTURE INTERNATIONAL MEETINGS<br>(1967) - (1969)          |           |
| JNL ID NO | 188700 | WORLD MEETINGS OUTSIDE THE U.S. AND CANADA<br>001 (1968) - TO PRESENT   |           |
| JNL ID NO | 188800 | WORLD MEETINGS, U.S. AND CANADA<br>007 (1969) - TO PRESENT *            | 0006-5678 |
| JNL ID NO | 189100 | WORLD REVIEW OF PEST CONTROL<br>004 (1965) - 008 (1969) *               |           |
| JNL ID NO | 189500 | ZEITSCHRIFT FUR WASSERRECHT<br>007 (1968) - 009 (1970) *                | 0006-5766 |
| JNL ID NO | 189550 | ZERO POPULATION GROWTH NATIONAL REPORTER<br>(1972) - TO PRESENT         |           |
| JNL ID NO | 190000 | 102 MONITOR (COUNCIL ON ENVIRONMENTAL QUALITY)<br>(1972) - TO PRESENT * |           |

\* INDICATES MISSING ISSUES IN THE HOLDING

HARD BOUND BOOK SYSTEM

## a Hard Bound Book System

### Purpose and Scope

This system gathers data on the total book holdings in the agency. From the resulting title and holding files a union book catalogue (by title), subject report, and author report are generated for the total holdings. A title and Library of Congress classification number report (by title and by LC Number) is also available. Reports for individual library holdings are generated. All reports are available for distribution on microfiche.

### Data Elements

Book titles are maintained on a title file. This file contains a book identification number and the book title. A second file contains all other information (holdings file). This includes the book identification number (through which the files are linked); Library of Congress classification number; primary and co-authors; publisher; subjects (as many as desired); library identification; volume or edition (if applicable); and date of publication. The files are designed in this manner so that a library location entry is all that is necessary to identify the same book in a new library. The system is flexible so that additional data elements can be added. Document #7 (page 21) is a sample file format.

### Status

All of the computer programs are operational. Because of the vast book inventory held by the library network, EPA will build a history book file containing all books to August, 1973. This file should be in machine readable form by the end of 1974. Currently, the partial or complete holdings of twenty libraries are in machine readable form. Inventory reports have been generated from the existing data base. A portion of this file was generated under contract. The remainder was built inhouse using Vylbur. When the files are complete, all reports will be generated and distributed. These files will be permanently held on magnetic tape. At this time the system contains nearly 10,000 unique book titles.

Beginning in August, 1973, an accession file was created. This file will contain all holdings added in fiscal year 1974. The file is built and maintained using Vylbur. Accession inventory reports are distributed on a monthly basis. From this time forward, inventories will be built on a fiscal year basis. They will be maintained on-line for one year and then transferred to magnetic tape for permanent storage. Currently, over twenty of the twenty-eight libraries are participating in the accession book system.

### Plans

The book history file should be completed by the end of 1974. The accession file will be expanded to include all EPA libraries.

Document #5 (pages 18-19) is a system flow of the history file building procedure.  
 Document #6 (page 20) is a system flow of the current file building procedure.  
 Document #8 (pages 22-23) is a sample of the total book catalogue by title.  
 Document #9 (pages 24-25) is a sample of the total title run by the Library of Congress classification number.

Document #10 (pages 26-27) is a sample of the total title run by title (alphabetic).  
 Document #11 (pages 28-29) is a sample of the book catalogue meeting a specific

subject(s) requirement.

Document #12 (pages 30-31) is a sample of the total subject run. The book title appears under each assigned subject.

Document #13 (pages 32-33) is a sample of the total author run. The title appears under both the primary and co-authors.

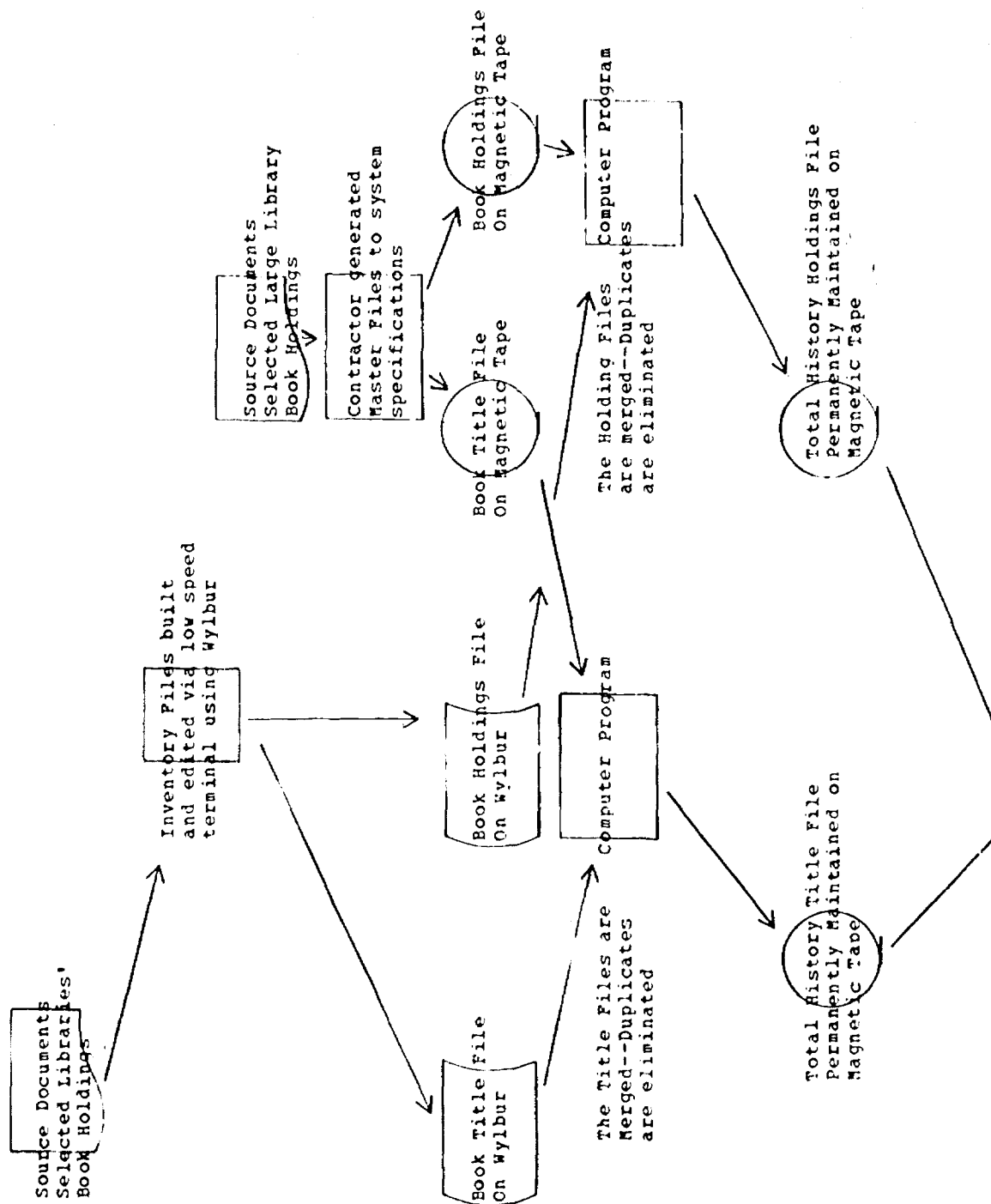
Each of the above book outputs is available for a given library in the total library network.

Document #14 (pages 34-35) is a sample of the monthly current awareness. This is generated from the accession file and is distributed by library.

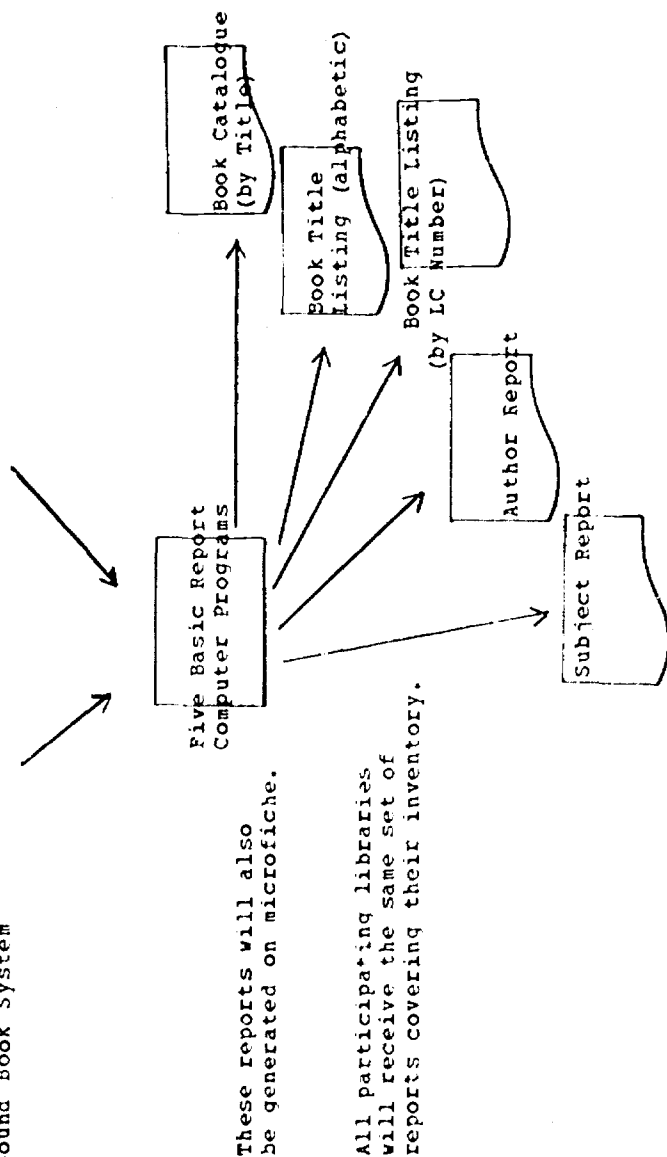
In addition, monthly and cumulative quarterly listings of the accession file are generated by title, author, and subject. Samples of these outputs are not included as they are very similar to the standard book system reports shown as samples of the history book outputs.

Document #5 System Flow--History File Building Procedure  
Hard Bound Book System

These files will contain all book holdings held by EPA to August, 1973.

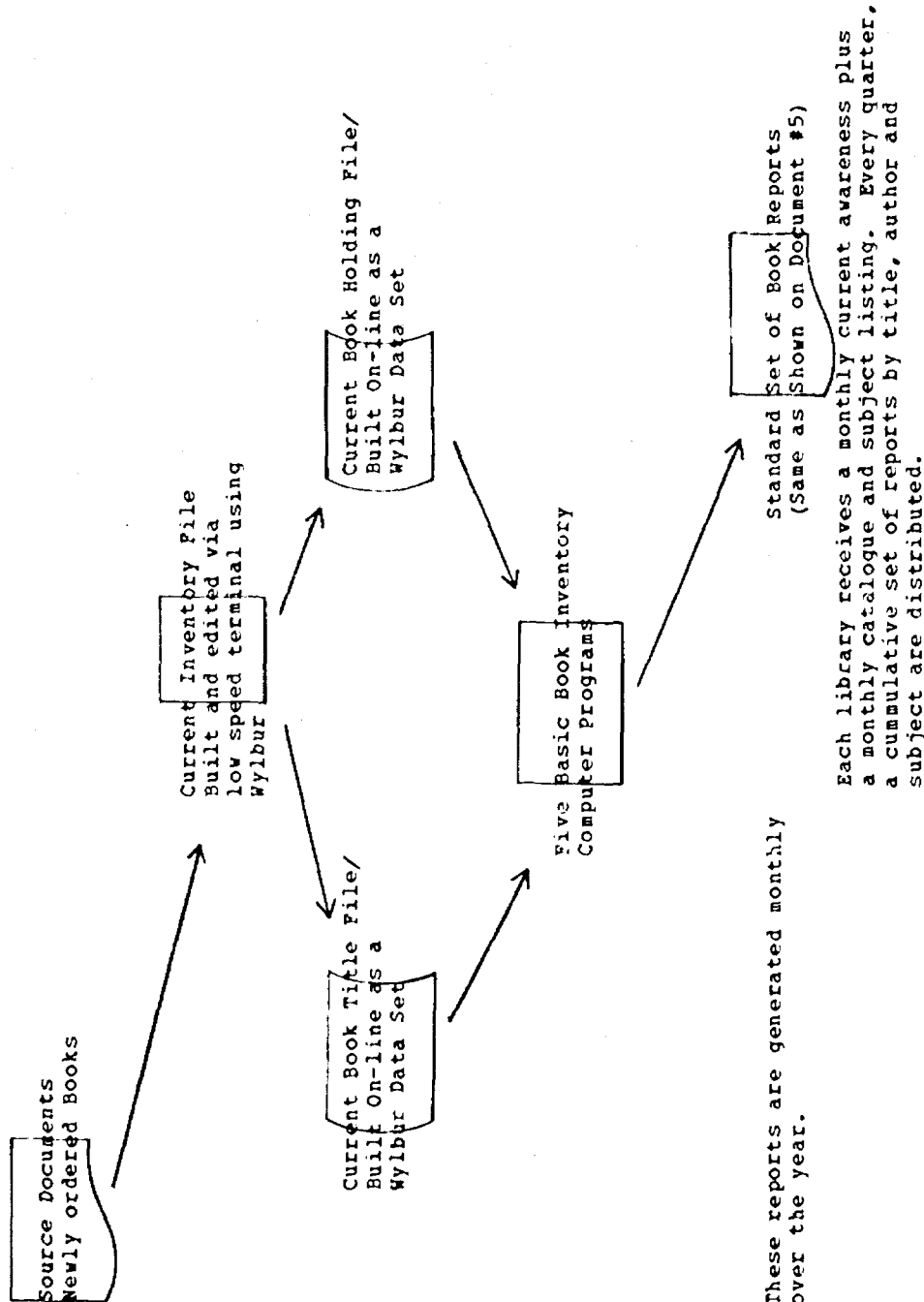


System Flow--History File Building Procedure



Document #6 System Flow--Accession File Building Procedure  
Hard Bound Book System

This procedure began in August, 1973. Inventories will be maintained by fiscal year. In July, 1974, a current yearly inventory will be started again.



These reports are generated monthly over the year.

Each library receives a monthly current awareness plus a monthly catalogue and subject listing. Every quarter, a cumulative set of reports by title, author and subject are distributed.

Document #7 Sample File Layouts  
Hard Bound Book System

Book Title File

| Book ID Number | Book Title                                                         |
|----------------|--------------------------------------------------------------------|
| 1000001        | FAMOUS FIRST FACTS                                                 |
| 1000002        | SPECIALIZED SCIENCE INFORMATION SERVICES IN THE UNITED STATES      |
| 1000004        | WORLD OF LEARNING                                                  |
| 1000005        | SCIENTIFIC AND TECHNICAL SOCIETIES OF THE UNITED STATES AND CANADA |

Book Holding File

| Book ID Number | Sub Record ID Number | LC Classification Number           | Author (S)                  | Volume or Edition | Library ID Number | Date of Publication | Publisher     |
|----------------|----------------------|------------------------------------|-----------------------------|-------------------|-------------------|---------------------|---------------|
| 1000001        | 00AG5 K315           |                                    | KANE JOSEPH N               |                   |                   |                     | WILSON        |
| 1000001        | 11                   | ENCYCLOPEDIAS + DICTIONARIES       |                             |                   |                   |                     | NSF           |
| 1000001        | 20                   |                                    |                             | 03B ED 3          |                   |                     |               |
| 1000002        | 00AG521 B3           |                                    | BATTELLE MEMORIAL INSTITUTE |                   |                   |                     |               |
| 1000002        | 11                   | INFORMATION SERVICES DIRECTORY     |                             |                   |                   |                     |               |
| 1000002        | 20                   |                                    |                             | 03B               |                   |                     |               |
| 1000004        | 00AS2 W6             |                                    |                             |                   |                   |                     | LONDON EUROPA |
| 1000004        | 11                   | LEARNED INSTITUTIONS + SOCIETIES   |                             |                   |                   |                     |               |
| 1000004        | 20                   |                                    |                             | 03B ED 21         |                   |                     |               |
| 1000005        | 00AS15 H3            |                                    | NAS/NRC                     |                   |                   |                     | NATL ACAD SCI |
| 1000005        | 11                   | LEARNED INSTITUTIONS + SOC CANA US |                             |                   |                   |                     |               |
| 1000005        | 20                   |                                    |                             | 03B ED 8          |                   |                     |               |

ENVIRONMENTAL PROTECTION AGENCY  
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|---------------------------------------------------------------------------|-----|------|--|------------------------|-----------------------------------------------------|
| WOODWORM PROBLEM<br>ENTOMOLOGY                                            | C3B | 1963 |  |                        | 1001548<br>1001548<br>1001548                       |
| WORKING PRESS OF THE NATION<br>Z6951 W6                                   |     |      |  |                        |                                                     |
| AMERICAN NEWSPAPERS US DIRECT<br>C3B                                      |     | 1968 |  | NATL RES BUREAU        | 1001203<br>1001203<br>1001203<br>1001203            |
| WORLD ALMANAC AND BOOK OF FACTS<br>AY67 N5W7                              |     |      |  |                        |                                                     |
| ALMANAC'S AMERICAN<br>C3B                                                 |     |      |  |                        |                                                     |
| 09A                                                                       |     |      |  | NY WORLD TELEGRAM      | 1000013<br>1000013<br>1000013<br>1000013<br>1000013 |
| WORLD CATALOGUE OF THESES ON THE PACIFIC ISLANDS<br>Z4501 D52 1970B       |     |      |  |                        |                                                     |
| HAWAII                                                                    |     |      |  | U OF HAWAII            | 5000275<br>5000275<br>5000275<br>5000275            |
|                                                                           |     |      |  | PACIFIC ISLANDS        |                                                     |
| WORLD CRCP PROTECTION<br>SB601 S65                                        |     |      |  |                        |                                                     |
| CROPS                                                                     |     |      |  | CHEM RUBBER CO         | 1001603<br>1001603<br>1001603<br>1001603            |
|                                                                           |     |      |  |                        |                                                     |
| WORLD DYNAMICS<br>HD82 F6J                                                |     |      |  |                        |                                                     |
| ECONOMIC POLICY MATH MODELS<br>C3B                                        |     |      |  | WRIGHT ALLEN           | 1002570<br>1002570<br>1002570<br>1002570            |
|                                                                           |     |      |  | DEMOGRAPHY MATH MODELS |                                                     |
| WORLD GUIDE TO SCIENCE INFORMATION AND DOCUMENTATION SERVICES<br>Q223 D45 |     |      |  |                        |                                                     |
| UNESCO                                                                    |     |      |  | UNESCO                 | 1002571<br>1002571<br>1002571<br>1002571            |
| SCIENCE INFO SERVICES DIRECT<br>C3B                                       |     |      |  |                        |                                                     |
| 1965                                                                      |     |      |  |                        |                                                     |
| WORLD OF LEARNING<br>AS2 W6                                               |     |      |  |                        |                                                     |
| LEARNED INSTITUTIONS + SOCIETIES<br>C3B ED 21                             |     |      |  |                        |                                                     |
| 1971                                                                      |     |      |  |                        |                                                     |
| WORLD OF WATER<br>GB661 W26 197C                                          |     |      |  |                        |                                                     |
| WATER                                                                     |     |      |  | LONDON EUROPA          | 1000004<br>1000004<br>1000004<br>1000004            |
|                                                                           |     |      |  |                        |                                                     |
| WORLD REGISTER OF DAMS<br>TC540 I453                                      |     |      |  |                        |                                                     |
| DAMS REGISTERS                                                            |     |      |  | TAPLINGER              | 1002069<br>1002069<br>1002069<br>1002069            |
|                                                                           |     |      |  |                        |                                                     |
| INTERNATIONAL COM ON LARGE DAMS<br>DAMS REGISTERS                         |     |      |  |                        |                                                     |
| C3B V 1-4                                                                 |     |      |  | INTL COM LARGE DAMS    | 1000874<br>1000874<br>1000874<br>1000874            |
| 1964                                                                      |     |      |  |                        |                                                     |

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| WORLD SPACE DIRECTORY<br>TL788 3 W65 DEAN DONALD W ED<br>ASTRONAUTICS DIRECT<br>C3E V 6,7                        | 1002572<br>1002572<br>1002572<br>1002572 |
| WORLD WATER AND ENVIRONMENT<br>GB661 S197 SALE COLIN J + SALE M E<br>WATER C3E                                   | 1000051<br>1000051<br>1000051<br>1000051 |
| WORLD WEIGHTS AND MEASURES<br>JX71977 A2 UNITED NATIONS<br>WEIGHTS + MEASURES C3E                                | 1000436<br>1000436<br>1000436<br>1000436 |
| WORLDS WHOS WHO IN SCIENCE<br>Q141 W7 DEBUS ALLEN G ED<br>SCIENTISTS BIOGRAPHIC DIRECTORY C3E                    | 1000512<br>1000512<br>1000512<br>1000512 |
| WRECK OF THE TORREY CANYON<br>G530 T72 G5 GILL CRISPIN + BOOKER F<br>TORREY CANYON SHIP C3B                      | 1000038<br>1000038<br>1000038<br>1000038 |
| WRITERS MARKET FOR CINCINNATI OHIO<br>PN161 W83 MATHIEU ARON M + JONES R A EDS<br>PUBLISHERS + PUBLISHING US C3E | 1000490<br>1000490<br>1000490<br>1000490 |
| WRITING FOR PROFESSIONAL AND TECHNICAL JOURNALS<br>T11 M56 MITCHELL J HOWARD<br>TECHNICAL WRITING C3E            | 1000805<br>1000805<br>1000805<br>1000805 |
| XSUSSWASSER FLORA MITTEL-EUROPA<br>OKJ14 H8 HUSTEDT FRIEDRICH<br>C5C V 10                                        | 3248000<br>3248000<br>3248000<br>3248000 |
| YEARBOOK<br>TD1 A28 AMER PUBLIC WORKS ASSOC<br>YEARBOOKS C3E                                                     | 1000882<br>1000882<br>1000882<br>1000882 |
| YEARBOOK OF INTERNATIONAL ORGANIZATIONS<br>JX1904 A42 TEW EYVIND S ED<br>INTERNATIONAL AGENCIES YEARBOOKS        | 1000435<br>1000435<br>1000435            |

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SHAKESPEARE HEAD

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MARQUIS

TAPLINGER

WRITERS DIGEST  
PUBLISHERS + PUBLISHING GT BRIT

WILEY

FISHER

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UNION INTNL ASSOC

1964/65, 67/68, 70

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## L C ORDERED LISTING OF BOOK TITLES

AES F363 1949  
ENCYCLOPEDIA BRITANNICAAG5 K315  
FAMOUS FIRST FACTSAG521 B3  
SPECIALIZED SCIENCE INFORMATION SERVICES IN THE UNITED STATESAS15 H3  
SCIENTIFIC AND TECHNICAL SOCIETIES OF THE UNITED STATES AND CANADAAS2 W6  
WORLD OF LEARNINGAS25 D5  
RESEARCH CENTERS DIRECTORYAS6 H4  
HOW TO RUN BETTER MEETINGSAS911 A2 A67  
ANNUAL REGISTER OF GRANT SUPPORTAS911 A2E65  
FOUNDATION DIRECTORYAS911 F6 A442  
FORD FOUNDATION REPORTAY414 C2  
CANADIAN ALMANAC AND DIRECTORYAY64 I55  
INFORMATION PLEASE ALMANAC ATLAS AND YEARBOOKAY64 P4  
READER'S DIGEST ALMANACAY67 N5T55  
NEW YORK TIMES ENCYCLOPEDIA ALMANAC

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1 C ORDERED LISTING OF BOOK TITLES

BOOKS WITHOUT 1 C NO ASSIGNED

ABSORPTION SPECTROSCOPY  
ACCIDENT PREVENTION MANUAL  
ADVANCES IN BIOLOGICAL AND MEDICAL PHYSICS  
AFRICAN AND INDO AUSTRALIAN MURIDAE EVOLUTIONARY TRENDS  
AGRICULTURAL PRACTICES AND WATER QUALITY  
ALORIN DIFLORIN ENDRIIN AND TRIODORIN  
AMERICAN MOTOR CARRIER DIRECTORY FALL 1971 NATIONAL EDITION NO 56  
ANIMAL COMMUNICATION TECHNIQUES OF STUDIES AND RESULTS OF SEARCH  
APPLIED INORGANIC ANALYSIS  
APPA MANUAL MANUAL OF RECOMMENDED PRACTICE  
APPA STANDARDS  
BASIC GAS CHROMATOGRAPHY  
BATS OF AMERICA  
BIOCHEMICAL CALCULATIONS  
BIOCHEMICAL TOXICOLOGY OF INSECTICIDES  
BIOLOGICAL ACTIONS OF DIMETHYL SULFOXIDE  
BIOLOGY OF BATS  
BIOLOGY OF POPULATIONS  
BIRDS OF THE REPUBLIC OF PANAMA PART ONE  
BRIEF GUIDE TO SOURCES OF SCIENTIFIC AND TECHNICAL INFORMATION  
BUGS OR PEOPLE  
CALCIUM IN REPRODUCTIVE PHYSIOLOGY  
CARCINOGENESIS A BROAD CRITIQUE  
CATIONIC SURFACTANTS

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ALPHABETIC LISTING OF BOOK TITLES

AR BOOKMAN'S YEARBOOK  
Z990 A18

ABBREVIATIONS DICTIONARY  
PE1A33 N4

ABSORPTION SPECTRA AND CHEMICAL BONDING IN COMPLEXES  
QD 95 J4

ABSORPTION SPECTROSCOPY

ACCIDENT PREVENTION MANUAL

ACCOUNTANT AUDITOR COMPLETE STUDY GUIDE FOR SCORING HIGH  
WE5661 A62

ACCOUNTING FOR NON ACCOUNTANTS  
WE5635 W9893

ACHIEVE EXECUTIVE SUCCESS AVOID FAMILY FAILURE  
WE5509 Z A72 A

ACRONYMS AND INITIALISMS DICTIONARY  
PE1593 G3

ACTIONS OF HORMONES ON MOLECULAR PROCESSES  
QPI87 L535

ADMINISTRATION OF INTERSTATE COMPACTS  
JK2441 L4

ADMINISTRATIVE ASSISTANT OFFICER COMPLETE STUDY GUIDE FOR SCORING HIGH  
JK716 Y76

ADMINISTRATORS FOR ISSUES AND DILEMMAS  
W331 R43

ADSORPTION FROM AQUEOUS SOLUTION  
QD 1 A355 ND 79

ADVANCED ANALYTICAL CHEMISTRY  
QD 75 M4

ADVANCED ORGANIC CHEMISTRY  
QD 251 F44

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## ALPHABETIC LISTING OF BOOK TITLES

ADVANCED WASTEWATER TREATMENT  
T0745 G8

ADVANCES IN APPLIED MICROBIOLOGY  
Q81 A38

ADVANCES IN BIOLOGICAL AND MEDICAL PHYSICS

ADVANCES IN BIOLOGICAL WASTE TREATMENT  
T0755 G66

ADVANCES IN CHROMATOGRAPHY  
Q0271 A23

ADVANCES IN COMPARATIVE PHYSIOLOGY AND BIOCHEMISTRY  
Q031 A28

ADVANCES IN ENVIRONMENTAL SCIENCES  
T0180 A38

ADVANCES IN FLUORINE CHEMISTRY  
Q0181 F1 A33

ADVANCES IN GEOPHYSICS  
Q0401 A283

ADVANCES IN MARINE BIOLOGY  
Q491 A1 A22

ADVANCES IN MICROBIOLOGY OF THE SEA  
Q8109 D75

ADVANCES IN PEST CONTROL RESEARCH  
S8401 A54

ADVANCES IN TRACER METHODOLOGY  
TK2600 A3

ADVANCES IN WATER POLLUTION RESEARCH  
T0420 A27

ADVANCES IN WATER POLLUTION RESEARCH

ADVANCES IN WATER QUALITY IMPROVEMENT  
T0745 G58

-19-73  
ARCH PARAMETERS: ABSORPTION, MOLECULES  
CHEMISTRY ORGANIC, PSYCHOLOGY

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## BOOK CATALOGUE LISTING

|                                                                                                                                       |                                  |           |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------|-------------------------------------|
| FISCHER TROPSCH AND RELATED SYNTHESSES<br>CHEMISTRY ORGANIC SYNTHESSES<br>038                                                         | SYNTHINE PROCESS<br>1951         | CATALYSIS |                                     |
| FLUORESCENCE AND PHOSPHORESCENCE ANALYSIS<br>20 271 H46<br>HERCULES DAVID M ED<br>FLUORIMETRY<br>05C 2 V                              | CHEMISTRY ORGANIC<br>1962-66     |           | INTERSCIENCE                        |
| HORMONES AND BEHAVIOR<br>20 356 B35<br>HORMONES<br>BEACH FRANK A<br>05C ED 2                                                          | PSYCHOLOGY PHYSIOLOGICAL<br>1961 |           | CODDER SQUARE                       |
| INFRARED ABSORPTION SPECTROSCOPY PRACTICAL<br>20 95 N383<br>SPECTROCHEMISTRY<br>NAKANISHI KOJI<br>ABSORPTION SPECTRA<br>05C           | SPECTRUM INFRA RED<br>1962       |           | HOLDEN-DAY<br>CHEMISTRY ORGANIC     |
| INTEGRATING THE INDIVIDUAL AND THE ORGANIZATION<br>HF5549 A9968<br>PERSONNEL MANAGEMENT<br>ARGENTIS CHRIS<br>09A                      | PSYCHOLOGY INDUSTRIAL<br>1964    |           | WILEY                               |
| INTERPRETATION OF MASS SPECTRA OF ORGANIC COMPOUNDS<br>20 95 B8<br>RUDZIKIEWICZ HERBERT + DJERASSI C<br>MASS SPECTROMETRY<br>05C      | CHEMISTRY ORGANIC<br>1964        |           | HOLDEN-DAY                          |
| ION MOLECULE REACTIONS IN THE GAS PHASE A SYMPOSIUM<br>20 1 A355 NO 58<br>DIV PHYSICAL CHEMISTRY<br>MASS SPECTROMETRY<br>GASES<br>05C | IONS<br>1966                     |           | AMER CHEM SOC                       |
| MASS SPECTRA OF ORGANIC MOLECULES<br>20 271 B49<br>REYNOLDS JOHN + SAUNDERS R A<br>MASS SPECTROMETRY<br>05C                           | CHEMISTRY ORGANIC<br>1968        |           | ELSEVIER                            |
| MASS SPECTROMETRY ORGANIC CHEMICAL APPLICATIONS<br>20 95 B49<br>RIEMANN KLAUS<br>MASS SPECTROMETRY<br>05C                             | CHEMISTRY ORGANIC<br>1962        |           | MCGRAW                              |
| MEN MANAGEMENT AND MORALITY<br>HF5549 A 645 G<br>COLEMBIEWSKI ROBERT T<br>PSYCHOLOGY INDUSTRIAL                                       | PERSONNEL MANAGEMENT             |           | MCGRAW HILL<br>INDUSTRIAL SOCIOLOGY |

9-71  
 24 PARAMETERS: ABSORPTION, MOLECULES ENVIRONMENTAL PROTECTION AGENCY  
 CHEMISTRY ORGANIC, PSYCHOLOGY LIBRARY SYSTEM

## BOOK CATALOGUE LISTING

- ABSORPTION SPECTRA AND CHEMICAL BONDING IN COMPLEXES  
 QD 95 J6 JORGENSEN CHRISTIAN K  
 ABSORPTION SPECTRA OSC  
 1962 MOLECULES PERGAMON
- ABSORPTION SPECTROSCOPY  
 HAUMAN ROBERT D  
 ABSORPTION SPECTROSCOPY Q2C  
 1967 WILEY
- ADVANCED ORGANIC CHEMISTRY  
 QD 251 F44 FIESER LUIS F + FIESER W  
 CHEMISTRY ORGANIC OSC  
 1961 REINHOLD
- APPLICATIONS OF MASS SPECTROMETRY TO ORGANIC CHEMISTRY  
 QD475 R43 REED DONALD I  
 MASS SPECTROMETRY OSC  
 1966 ACAD PR
- APPLICATIONS OF NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY IN ORGANIC CHEMISTRY  
 QD 475 J3 JACKMAN LLLOYD W  
 CHEMISTRY ORGANIC OSC  
 1966 SPECTRUM ANALYSIS PERGAMON
- ATOMIC ABSORPTION SPECTROPHOTOMETRY  
 QD117 D5 ELMFELL WILLIAM T + GIDLEY J A F  
 SPECTROCHEMISTRY OSC ED 2 REV  
 1966 1961 SPECTROPHOTOMETRY PERGAMON
- BIOCHEMICAL APPLICATIONS OF GAS CHROMATOGRAPHY  
 QD271 B95 BURCHEFIELD HARRY P + STOROS F F  
 GAS CHROMATOGRAPHY OSC  
 1962 1962 ACAD PR
- CHEMISTRY OF ORGANIC COMPOUNDS  
 QD 253 N45 NOLLER CARL R  
 CHEMISTRY ORGANIC OSC  
 1965 SAUNDERS
- ELECTRONIC INTERPRETATIONS OF ORGANIC CHEMISTRY  
 QD451 D43 REMICK ARTHUR E  
 CHEMISTRY ORGANIC Q38 ED 2  
 1949 CHEMISTRY PHYSICAL + THEORETICAL ELECTRONS WILEY
- FISCHER TROPSCH AND RELATED SYNTHESSES  
 QD262 S94 STORCH HENRY H + COLUMBIC N  
 WILEY

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## SUBJECT LISTING

|                                                                                                                         |                       |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------|
| US DESCR + TRAV<br>FACE OF NORTH AMERICA                                                                                | QH104 F3              |
| US EXECU DEPTS DIRECT BIRE<br>DIRECTORIES OF GOVERNMENT AGENCIES                                                        | Z7165 U5W9            |
| US FED TRADE COMM<br>WATER REPORT ON THE FEDERAL TRADE COMMISSION                                                       | HD2795 C8             |
| US FPD AND DRUG ADMINISTRATION<br>CHEMICAL ABSTRACT                                                                     | HD9000 9 U5T83        |
| US GOVT COMM. BUREAU<br>GOVERNMENT REFERENCE BOOKS                                                                      | Z1223 Z7G68           |
| US GOVT PUBL BUREAU<br>SUBJECT GUIDE TO MAJOR U S GOVERNMENT PUBLICATIONS                                               | Z1223 Z7J32           |
| US GOVT PUBL BIBLIOGRAPHY<br>ANNOTATED BIBLIOGRAPHY OF BIBLIOGRAPHIES ON SELECTED GOVERNMENT PUBLICATIONS               | Z1223 Z7B65           |
| US PUBLIC LANDS HISTORY<br>HISTORY OF PUBLIC LAND LAW DEVELOPMENT                                                       | KF5605 G3             |
| US SOIL CONSERVATION SERVICE<br>SOIL CONSERVATION SERVICE                                                               | S622 S44              |
| US STATISTICS<br>COUNTY AND CITY DATA BOOK                                                                              | HA202 A36             |
| VALENCE THEORETICAL CHEMISTRY<br>THEORY OF TRANSITION METAL IONS<br>UNFAMILIAR OXIDATION STATES AND THEIR STABILIZATION | QC176 G7<br>QD469 K55 |
| VERS US<br>DOCUMENTS ON THE USE AND CONTROL OF WATERS OF INTERSTATE AND INTERNATIONAL STREAMS                           | KF5569 A45            |
| VERTEBRATES ANATOMY<br>MORPHOGENESIS OF THE VERTEBRATES                                                                 | QL955 T6              |
| VETERINARY PATHOLOGY<br>VETERINARY PATHOLOGY                                                                            | SF769 S54             |
| VIBRATION<br>NOISE AND VIBRATION CONTROL                                                                                | TD892 N65             |
| VIBRATIONS<br>VIBRATION AND IMPACT                                                                                      | TA355 B8              |

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VIROLOGY TECHNIQUE  
ELECTRON MICROSCOPE IN BIOLOGY

QH212 E4 G7

VOLUMETRIC ANALYSIS  
EDTA TITRATIONS  
MICRODIFFUSION ANALYSIS AND VOLUMETRIC ERROR  
VOLUMETRIC ANALYSIS

QD111 F47  
QD98 C5  
QD111 K642

WASTE DISPOSAL  
DISPOSAL OF RADIOACTIVE WASTES INTO SEAS OCEANS AND SURFACE WATERS  
WASTE DISPOSAL IN THE MARINE ENVIRONMENT

T0898 S898 1966  
TD511 I6

WASTE ECONOMICS  
WASTE MAKERS

HC110 W3P3

WASTE PRODUCTS CONGRESSES  
INDUSTRIAL WASTE CONFERENCE

TP995 A115

WASTE WATER TREATMENT  
QUALITY AND POLLUTION RESEARCH 1969

TD370 J47 1969

WATER  
ANNUAL BOOK OF AMERICAN SOCIETY FOR TESTING AND MATERIALS ASTM STANDARDS  
LIVING WATER  
STREAMS LAKES PONDS  
WATER  
WATER J S DEPARTMENT OF AGRICULTURE YEARBOOK

TA401 A653  
PH46 B7  
QH96 C6  
GR671 L4  
S21 A35 1955

WATER ADDRESS LEC  
WATER FOR PEACE

MD1691 I5

WATER ANALYSIS  
MICROSCOPY OF DRINKING WATER  
PRACTICAL HANDBOOK OF SEAWATER ANALYSIS  
RECOMMENDED PROCEDURES FOR THE EXAMINATION OF SEA WATER AND SHELLFISH

T0384 W58 1927  
SH223 A344 NO 167  
QR65 A52

WATER ANALYSIS ADDRESSES  
TRACE INORGANICS IN WATER A SYMPOSIUM

Q01 A355 NO 73

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BIBLIOGRAPHY ON WATER AND SEWAGE ANALYSIS

TA7 G4

WATER BIRDS  
WATERFOWL TOMORROW

OL696 A5U5 U

WATER CHEMISTRY CONGR  
NONEQUILIBRIUM SYSTEMS IN NATURAL WATER CHEMISTRY

QD1 A355 NO 106

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AUTHOR LISTING

|                                                                                   |             |
|-----------------------------------------------------------------------------------|-------------|
| WARD RITCHIE R<br>PRACTICAL TECHNICAL WRITING                                     | 711 W35     |
| WAPKAY JOSEF ED<br>TERATOLOGY PRINCIPLES AND TECHNIQUES                           | QL991 W35   |
| WARSHOFKY FRED<br>POISONS IN THE AIR                                              | TD883 2 F3  |
| WASHFELL C C H<br>NUCLEONIC INSTRUMENTATION                                       | TK7870 W32  |
| WASSERMAN R H ED<br>TRANSFER OF CALCIUM AND STRONTIUM ACROSS BIOLOGICAL MEMBRANES | QP535 S8 C6 |
| WASTLER T A<br>SPECTRAL ANALYSIS                                                  | TD420 W33   |
| WATERMAN TALBOT H ED<br>PHYSIOLOGY OF CRUSTACEA                                   | QL445 W3    |
| WATT JOHN H ED<br>AMERICAN ELECTRICIANS HANDBOOKS                                 | TK151 A47   |
| WATT KENNETH F F ED<br>SYSTEMS ANALYSIS IN ECOLOGY                                | QH541 W3    |
| WEADOCK VIRGINIA A<br>CHALLENGE FOR SURVIVAL                                      | HM206 C4    |
| WEBB EDWIN C<br>ENZYMES                                                           | QP601 D48   |
| WEBB JOHN L<br>ENZYME AND METABOLIC INHIBITORS                                    | QP601 W38   |
| WEBB WALTER F<br>UNITED STATES MOLLUSCA                                           | QL414 W42   |
| WEBER RUDOLF ED<br>BIOCHEMISTRY OF ANIMAL DEVELOPMENT                             | QL963 W4    |
| WEBER WALTER J JR<br>PHYSIOCHEMICAL PROCESSES FOR WATER QUALITY CONTROL           | TD430 W42   |
| WEIL R H<br>DIALTOGRAPHY ON WATER AND SEWAGE ANALYSIS                             | TA7 G4      |

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AUTHOR LISTING

WEISSBERGER ARNOLD ED  
TECHNIQUE OF INORGANIC CHEMISTRY

Q0151 J76

WELFORD HARRISON  
SORTING THE WIND PESTICIDES MEAT AND THE PUBLIC INTEREST

TX533 W45

WESSELLS NORMAN ED  
METHODS IN DEVELOPMENTAL BIOLOGY

OL961 W54

WEST EDWARD S + OTHERS  
TEXTBOOK OF BIOCHEMISTRY

QP514 W38

WESTFALL MINTER J JR  
MANUAL OF THE DRAGONFLIES OF NORTH AMERICA

QL513 O2 N46

WHEELER F L  
SCIENTIFIC GLASSBLOWING

TP859 W48

WHEELIS ALLEN  
QUEST FOR IDENTITY

BF173 W43

WHIPPLE GEORGE C + FAIR G M  
MICROSCOPY OF DRINKING WATER

TD384 W58 1927

WHITE CHARLES F  
FLUORESCENCE ANALYSIS

QD117 F5W45

WHITE-STEVENS ROBERT FO  
PESTICIDES IN THE ENVIRONMENT

SB951 W52

WHITTINGTON LLOYD R  
WHITTINGTONS DICTIONARY OF PLASTICS

TP1110 W46

WISERG KENNETH B  
COMPUTER PROGRAMMING FOR CHEMISTS

QD251 W5213

WIDENER DON + LANDAU F R  
TIMETABLE FOR DISASTER

TO180 W53

WILBUR KARL M + YONGE C M EDS  
PHYSIOLOGY OF MOLLUSCA

QL431 W58

WILDAVSKY AARON B  
POLITICS OF THE BUDGETARY PROCESS

HJ2051 W 485 W

WILLARD HOBART H + MERRITT L L JR  
INSTRUMENTAL METHODS OF ANALYSIS

QD61 W67

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM

13 BOOK HOLDINGS

LIBRARY:

015 WEST KINGSTON, RHODE ISLAND

NOVEMBER CURRENT AWARENESS

ABYSSAL ENVIRONMENT AND ECOLOGY OF THE WORLD OCEANS

QH541.5.S3M4

ALGAE ABSTRACTS A GUIDE TO THE LITERATURE

QK564.5.A38

ANALYSIS OF ORGANIC POLLUTANTS IN WATER AND WASTE WATER

TD427.O714513

BIOLOGICAL MINERALIZATION

QP531.755

CBE STYLE MANUAL

Z750.6-95C6

COASTAL AQUACULTURE IN THE INDO PACIFIC REGION

SH1-15144

CULTURE AND DISEASES OF GAME FISHES

SH151.028

EARTH BENEATH THE SEA

QE33.S47

ECOLOGY OF SALT MARSHES AND SAND DUNES

QH541.5.S24934

ENVIRONMENTAL CONTROL OF CELL SYNTHESIS AND FUNCTION

QR66.162

ENVIRONMENTAL LAW

KF3775.R42

ESTUARIES A PHYSICAL INTRODUCTION

GC97.D93

HARD AND SOFT ACIDS AND BASES

QD477.P39

HOW TO MAKE THE OSHA 1970 WORK FOR YOU

KF3570.Z9S5

INTERNATIONAL AND METRIC UNITS OF MEASUREMENT

QC91.G75

MARINE AQUARIUM KEEPING THE SCIENCE ANIMALS AND ART

SF457.1.S66

ENVIRONMENTAL PROTECTION AGENCY  
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NOVEMBER CURRENT AWARENESS

ALGAE ABSTRACTS A GUIDE TO THE LITERATURE

QK564.5.A38

CHEMICAL STERILIZATION

QR69.867

CODES RULES AND REGULATIONS OFFICIAL COMPILATION TITLE 6

KF5790.A4

HANDBOOK OF CHEMISTRY AND PHYSICS

QD65.H3

INFERRATED ANALYSIS OF POLYMERS RESINS AND ADDITIVES AN ATLAS

QD139.P4H813

INTERNATIONAL SYMPOSIUM ON MODELING TECHNIQUES IN WATER RESOURCES SYSTEMS OTTAWA 1972 PROCEEDINGS

TC409.I57

INTRODUCTION TO THE SCIENTIFIC STUDY OF ATMOSPHERIC POLLUTION

TD883.M3

THEORY OF CORROSION AND PROTECTION OF METALS

TA462.T9

TRITIUM

QD466.5T8M6

## The Circulation System

### Purpose and Scope

This system maintains information on all documents borrowed from an individual library. From the resulting master file, periodic reports (normally weekly) by document title and borrower's name are produced indicating all outstanding library material. In addition to these outputs, a quarterly report by borrower is distributed to all borrowers indicating the material which is over due. The system also provides an on-line clearance check for departing employees. In total, this application allows the librarian to monitor properly all aspects of library materials on loan.

### Data Elements

There is one master file containing one record per loaned document. Each record contains the document title; name of borrower; borrower's phone number; borrower's room number; date checked out; date due if inter-library loan; next individual waiting for the document; and the individual's phone number. The file is maintained on-line. Document #16 (page 38) is a sample file format.

### Status

All of the computer programs are operational. The system is currently in use in the Washington D.C. library, the National Environmental Research Center libraries in Research Triangle Park, North Carolina, and Cincinnati, Ohio, and the regional libraries in Chicago and Seattle.

### Plans

The agency plans to provide this system to any individual EPA library that has sufficient circulation. Many of the agency's libraries are small and will not need this service.

Document #15 (page 37) is a systems flow.

Document #17 (pages 39-40) is a sample of the periodic circulation title report.

Document #18 (pages 41-42) is a sample of the periodic inhouse report by borrower.

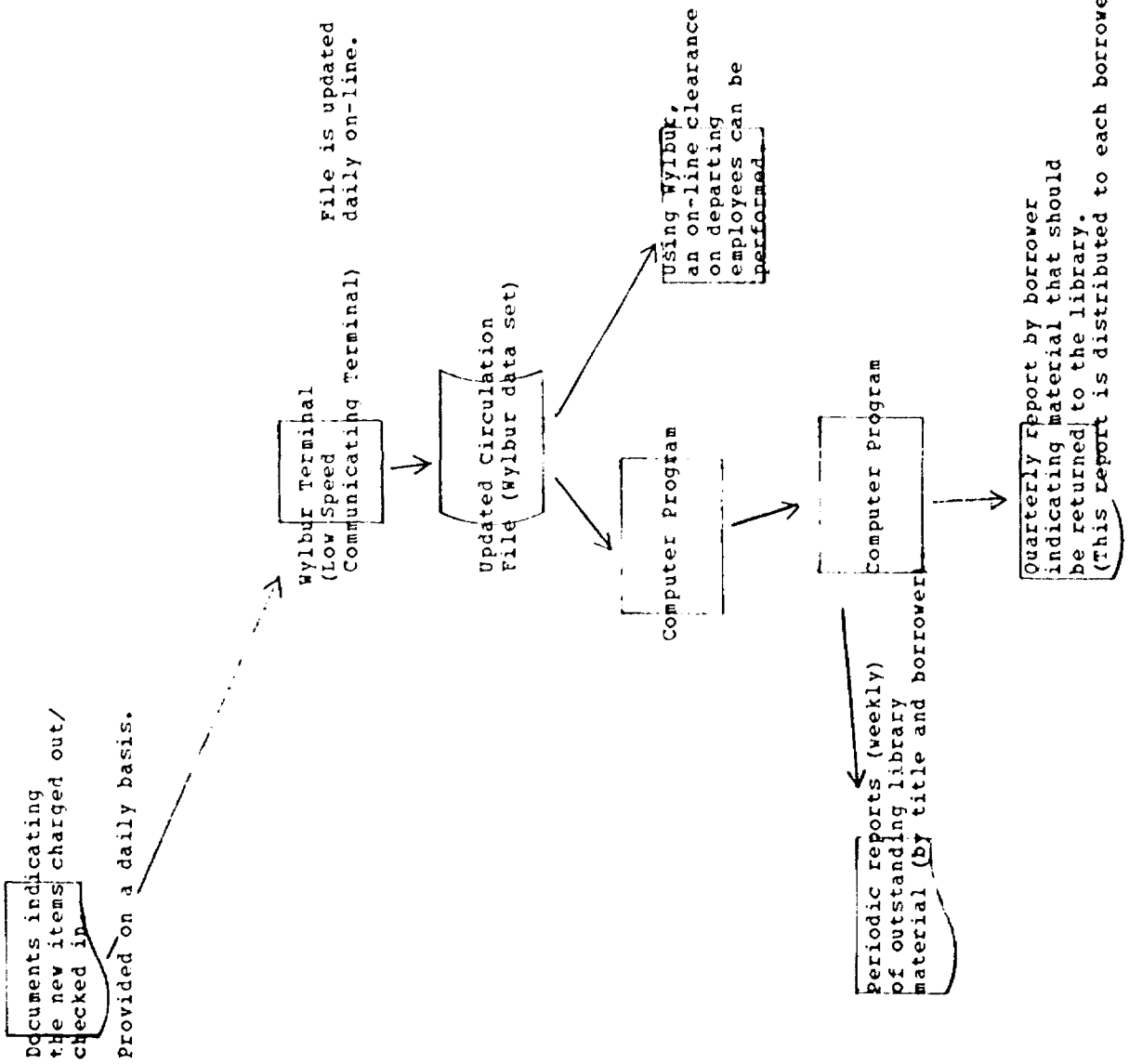
Document #19 (pages 43-44) is a sample of the quarterly report by borrower which is distributed to all borrowers.

CIRCULATION SYSTEM

2

Document #15  
The Circulation System

System Flow



Master File

| Document Title             | Name of Borrower  | Borrower's Phone Number | Date Checked Out      | Date Due<br>(if inter-library loan) |
|----------------------------|-------------------|-------------------------|-----------------------|-------------------------------------|
| FOUR-DAY WEEK              | HOUSE P           | XX7-7484                |                       |                                     |
| AMERICAN AGRICULTURAL ECON | 080072 GARVIN C   | 223-1950                |                       |                                     |
| ASCE J WATERWAYS HARBORS   | 090067 SANTIAGO H | XX7-7663 518A CM        | 040273                |                                     |
| ASCE J SANITARY ENG        | 040072 BASILICO J | 522-0544                |                       |                                     |
| ASCE J WATERWAYS HARBORS   | 020071 SANTIAGO H | XX7-7663 518A CM        | 040273                |                                     |
|                            |                   |                         | 071272 080772 JAMES H | XX7-4324                            |
|                            |                   |                         | 122972R010573         |                                     |

Next Individual Waiting for the Document Phone Number

3-73  
 ENVIRONMENTAL PROTECTION AGENCY --- TITLE LISTING OF CIRCUL-FILE  
 HEADQUARTERS LIBRARY, WATERSIDE MALL, WASHINGTON, D.C.

| DOCUMENT TITLE                   | BORROWER        | PH NO    | RM NUMBER | DATE OUT | DATE DUE |
|----------------------------------|-----------------|----------|-----------|----------|----------|
| WATER POLLUTION CTL FED J 050063 | REINHARDT H     | XX5-5245 | 3211 WSM  | 04/06/73 |          |
| WATER POLLUTION CTL FED J 020072 | JACKNOW J       | XX5-2770 | 3241 WSM  | 04/11/73 |          |
| WATER POLLUTION CTL FED J 010073 | URBAN INSTITUTE | 223-1950 | LIBRARY   | 04/06/73 | 04/20/73 |
| WATER POLLUTION CTL FED J 060072 | REINHARDT H     | XX5-5245 | 3211 WSM  | 04/06/73 |          |
| WATER POLLUTION CTL FED J 010065 | REINHARDT H     | XX5-5 45 | 3211 WSM  | 04/06/73 |          |
| WATER POLLUTION ECOLOGY          | BITTERS M       | 676-7128 | GMU LIB   | 04/02/73 | 04/16/73 |
| WATER POLLUTION ECONOMIC         | MORELL D        | XX7-1192 | 1018 CM   | 04/09/73 |          |
| WATER POLLUTION IN THE U S       | LUKEN R         | XX5-2573 |           |          |          |
| WATER QUAL AND TREATMENT         | SONNETT W       | XX7-7420 |           |          |          |
| WATER QUAL CRITERIA 3RD ED       | BELK T          | XX7-7470 |           |          |          |
| WATER QUALITY AND TRMT 3D E      | LIM B           | XX5-0666 |           | 03/13/73 |          |
| WATER QUALITY CRITERIA           | SUTTON W        | XX7-0704 | 801 CM    | 01/24/73 |          |
| WATER QUALITY CRITERIA           | HOFFMAN A       | XX5-2893 | 3318 WSM  | 03/27/73 |          |
| WATER RESEARCH 030072            | JACKNOW J       | XX5-2770 | 3241 WSM  | 04/11/73 |          |
| WATER RESEARCH                   | CONWAY E        | 386-5176 | GAO LIB   | 04/02/73 | 04/16/73 |
| WATER RESOURCES BULLETIN 020071  | HIBBS J         | XX5-0648 | 635W WSM  | 04/10/73 |          |
| WATER RESOURCES DEVELOPMENT      | NOTZIN E        | XX7-7614 |           |          |          |
| WATER RESOURCES SYSTEMS ENGN     | HEADLEY A       | XX5-0672 |           | 03/08/73 |          |
| WATER SPECTRUM 010072            | JACKNOW J       | XX5-0946 | 3617 WSM  | 04/09/73 |          |
| WATER SUPPLY SEWERAGE 2D ED      | BERGMAN H       | 522-7162 |           |          |          |
| WATER-RESOURCES ENGINEERING      | SU Y M          | XX7-7490 |           |          |          |
| WEST VIRGINIA STATE PLAN FY6     | PETERS A        | XX7-7383 |           |          |          |
| WKLY COMP PRESENTL DOCS 030270   | LOBIT J         | XX5-0646 |           |          |          |
| WKLY COMP PRESENTL DOCS 012670   | LOBIT J         | XX5-0646 |           |          |          |
| WKLY COMP PRESENTL DOCS 081169   | LOBIT J         | XX5-0646 |           |          |          |

-13-73  
ENVIRONMENTAL PROTECTION AGENCY --- TITLE LISTING OF CIRCUL-FILE  
ACQUARTERS LIBRARY, WATERSIDE MALL, WASHINGTON, D.C.

| DOCUMENT TITLE               | BORROWER   | PM NO    | RM NUMBER | DATE OUT | DATE DUE |
|------------------------------|------------|----------|-----------|----------|----------|
| WKLY COMP PRESENTL DOCS      | LOBIT J    | XX5-0646 |           |          |          |
| WORLD DYNAMICS               | SFIDEL M   | 522-6335 | 903 XER   | 04/05/73 |          |
| WORLD HLTH ORG TECH REP 506  | JOHNSON M  | XX5-0428 |           | 02/13/73 | 03/01/73 |
| WORLD HLTH ORG TECH REP 511  | JOHNSON M  | XX5-0428 |           | 02/13/73 | 03/01/73 |
| WPCRS 110240QU10/70          | TRUTANIC M | XX5-2573 |           |          |          |
| WPCRS 110244EL901/71         | TRUTANIC M | XX5-2573 |           |          |          |
| WPCRS 110344FKL07/70         | TRUTANIC M | XX5-2573 |           |          |          |
| WPCRS 12020E1002/71          | MAGRUDER J | 762-5820 | GEOMET    | 04/03/73 | 04/17/73 |
| WPCRS 12060DS107/71          | QUINN H    | XX5-0524 | 811W WSM  | 03/27/73 |          |
| WPCRS 15080---03/69          | VRANOR B   | XX5-0900 |           | 02/23/73 |          |
| WPCRS 15090F0Z10/70          | VRANOR B   | XX5-0900 |           | 02/23/73 |          |
| WPCRS 160600MP03/71          | PRIVAL M   | XX5-0687 | 701W WSM  | 03/30/73 |          |
| WPCRS 16070---07/70          | JACKNOW J  | XX5-2770 |           | 03/20/73 |          |
| WPCRS 16130 ENT11/69         | JACKSON D  | XX5-0611 | 613W WSM  | 04/11/73 |          |
| WPCRS 16130---04/70          | LEWIS D    | 426-3614 |           | 03/07/73 | 04/17/73 |
| WPCRS 16130DJH01/71          | ERNST M    | 973-7748 | AEC LIB   | 03/21/73 | 04/04/73 |
| WPCRS 16130DJH04/71          | ERNST M    | 973-7748 | AEC LIB   | 03/21/73 | 04/04/73 |
| WPCRS 16130DP002/71          | LEWIS D    | 426-3614 |           | 03/07/73 | 04/17/73 |
| WPCRS 16130ENT11/69          | LEWIS D    | 426-3614 |           | 03/07/73 | 04/17/73 |
| WPCRS 16130FSU12/71          | LEWIS D    | 426-3614 |           | 03/07/73 | 04/17/73 |
| WPCRS 17010EL003/71          | SUTTON W   | XX7-0704 |           | 02/24/73 |          |
| WPCRS 17070---05/68          | MORGOND S  | XX5-2733 |           | 02/22/73 |          |
| WPCRS 17090---06/69          | JACKNOW J  | XX5-0946 |           | 02/23/73 |          |
| WPCRS 18060DAZ04/72          | HITTERS M  | 676-7128 | GWU LIB   | 04/02/73 | 04/16/73 |
| WST OSPL 009LMS IN SLCTD IND | SONNETT W  | XX7-7420 |           |          |          |

11-74  
ENVIRONMENTAL PROTECTION AGENCY - PERIODIC ANSWER REPORT  
DOJANTERS LIBRARY, WATERFORD HALL, WASHINGTON, D.C.

|             |                                       |                    |               |
|-------------|---------------------------------------|--------------------|---------------|
| CANTOR K    | WORLD DYNAMICS                        | XX6-9455 637H WSM  | 121073        |
| CAPLIN A    | MANAGING WATER QUALITY ECONOMICS      | XX5-0650 637H WSM  | 070373        |
| CARPENTER D | PROGRAM BUDGETING                     | 557-7725 810CE WSM | 073073        |
|             | TOWARD MORE EFFECTIVE LAND USE        | XX6-2928 810F WSM  | 101673        |
|             | URBAN LAND USE PLANNING               | XX6-2928 810E WSM  | 101673        |
| CARROLL A   | ANNALS NY ACADEMY OF SCIENCES VOL 132 | XX5-6956 709F WSM  | 111473 120873 |
|             | INTERNATIONAL CONGRESS PHARM 4TH 1964 | XX5-6954 709F WSM  | 102373 110673 |
| CARRILL J   | ATMOSPHERIC ENVIRONMENT               | XX5-2720 3238 WSM  | 103373        |
| CASSEL C    | PA 207 644                            | 265-8382 LIBRARY   | 080373 081773 |
| CASSELL C   | CHEMICAL TREATMENT OF SEWAGE          | 265-8382 LIBRARY   | 112973 112373 |
|             | ELEMENTS OF WATER SUPPLY AND          | 265-8382 LIBRARY   | 110973 112373 |
|             | LIQUID WASTES OF INDUSTRY             | 265-8382 LIBRARY   | 110973 112373 |
| CEDEP R     | JOURNAL OF ENVMTL SCIENCES            | XX6-8906 840F WSM  | 013074        |
|             | SOCIO-ECONOMIC PLANNING SCNGS 060073  | XX6-2432 840F WSM  | 012974        |
|             | SOCIO-ECONOMIC PLANNING SCNGS 020073  | XX6-2432 840F WSM  | 012974        |
| CESSINE R   | USDA AGRICULTURAL HANDBOOK 305        | XX5-7014 503F WSM  | 120373        |
| CESSINE R   | CONTROL OF AGRICULTURE RLTD           | XX5-0714 503F WSM  | 112073        |
|             | INITIAL ANALYSIS OF ECONOMIC          | XX5-0714 503F WSM  | 112073        |
|             | US AGRICULTURE ENVMTL CILS AND        | XX5-0714 503F WSM  | 112073        |
| CHARLTON T  | OUTLOOK ENERGY US TO 1995             | XX7-7307           |               |

11-74  
ENVIRONMENTAL PROTECTION AGENCY - BIOLOGIC RESOURCES REPORT  
HEADQUARTERS LIBRARY, WATERGATE MALL, WASHINGTON, D.C.

|                                |          |      |     |        |        |
|--------------------------------|----------|------|-----|--------|--------|
| CHANDROFF N                    |          |      |     |        |        |
| ENVIRONMENTAL MERCURY PROBLEM  |          |      |     |        |        |
|                                | XX5-6183 | 4245 | WSM |        | 092573 |
| CIPICELLI J                    |          |      |     |        |        |
| ASCE IRRIGATION & DRAINAGE J   | 090072   |      |     |        |        |
|                                | REC 9    | FPA  | LIR | 071373 | 072773 |
| CIRILLI D P                    |          |      |     |        |        |
| GAS CHROMATOGRAPHIC ANALYSIS   |          |      |     |        |        |
|                                | XX6-0413 | 3175 | WSM |        | 082173 |
| CIPICELLI D P                  |          |      |     |        |        |
| STATISTICAL METHODS 4TH ED     |          |      |     |        |        |
|                                | XX5-0800 | 3608 | WSM |        | 070573 |
| CLOSE C                        |          |      |     |        |        |
| CONSERVATION OF NATL RESOURCES |          |      |     |        |        |
|                                | XX5-0683 | 715W | WSM |        | 073073 |
| RESOURCES AND MAN              |          |      |     |        |        |
|                                | XX5-0683 | 715W | WSM |        | 062973 |
| SCARCITY AND GROWTH            |          |      |     |        |        |
|                                | XX5-0543 | 715W | WSM |        | 073073 |
| COBLE P                        |          |      |     |        |        |
| AD 750 094                     |          |      |     |        |        |
|                                | XX5-0630 | 629W | WSM |        | 071273 |
| COHEN V                        |          |      |     |        |        |
| AUTOMATIC DATA PROCESSING      |          |      |     |        |        |
|                                | XX5-0911 | 3614 | WSM | 071073 | 072473 |
| CONIGLIO W                     |          |      |     |        |        |
| APT0-0970                      |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| APT0-1086                      |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| APT0-1466                      |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| APT0-1543                      |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| PR 188 074                     |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| PR 188 086                     |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| PR 188 090                     |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| PR 190 058                     |          |      |     |        |        |
|                                | XX5-2110 | 703E | WSM |        | 121273 |
| CONWAY E                       |          |      |     |        |        |
| NATURAL RESOURCES JOURNAL      | 040070   |      |     |        |        |
|                                | 386-5176 | GAC  | LIR | 011674 | 013074 |
| NATURE FRIDAY                  | 090373   |      |     |        |        |
|                                | 386-5176 | GAC  | LIR | 011674 | 013074 |
| NATURE FRIDAY                  | 092173   |      |     |        |        |
|                                | 386-5176 | GAC  | LIR | 011674 | 013074 |
| COOK D                         |          |      |     |        |        |
| ENVIRONMENTAL DEMONSTRATIONS   |          |      |     |        |        |
|                                | XX5-2937 | 3105 | WSM |        | 092773 |

TO: JOHNSON E L

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| MANS IMPACT ON GLOBAL ENVIRMT |  |
| POLITICS OF ECOLOGY           |  |

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13-73  
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TO: JOHNSON R

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MATERIAL.

PESTICIDES LITERATURE SEARCH SYSTEM

Pesticides Literature Search System  
 (This system has been developed for the Technical Services Division  
 in the Office of Pesticide Programs.)

#### Purpose and Scope

This system gathers bibliographic information on literature concerned with the health aspects of pesticides. From the resulting master file, various, complete and refined bibliographies are generated. The bibliographies are available by author, subject classification, CAS Registry Number, and date of publication. These bibliographies will be generally available in both printed form and on microfiche. By using these bibliographies, literature will be readily identified that will satisfy a particular users information need. The Technical Services Division also maintains an inventory of the articles. All articles reviewed since 1969, are available on microfiche.

#### Data Elements

All of the bibliographic information is contained in a single file format. The data elements include a unique bibliographic identification number; primary and secondary authors; CAS Registry Number (unique compound number assigned by The Chemistry Abstract Service); HAPAB Abstract Number (the number of the abstract as it appears in the published bulletin); title of the article; source of the article (and type); year of publication; remarks field; foreign language (if applicable); and the primary and secondary subject classifications (assigned by the Technical Services Division). This represents a comprehensive bibliographic system which allows the data managers and users to access the data in every meaningful way. Document #21 (page 48) is a sample file format.

#### Status

All of the computer programs are operational. The history bibliographies number over 30,000. For this reason, a large portion of the citations will be prepared under contract. Currently, members of the Technical Services Division have converted 1000 of the history bibliographies to machine readable form. When the history file is complete (approximately December, 1974) it will be maintained on magnetic tape.

Also, the staff is using the system to gather and maintain all new bibliographies. The first computer generated current awareness report was distributed in April, 1973.

#### Plans

The efforts necessary to convert the large history file to machine readable form are proceeding as rapidly as possible. The staff will continue to use the system to gather and maintain all current citations. Computer generated current bibliographies will be made available as needed.

Document #20 (page 47) is a systems flow.  
 Document #22 (pages 49-50) is a sample of the subject classification report.

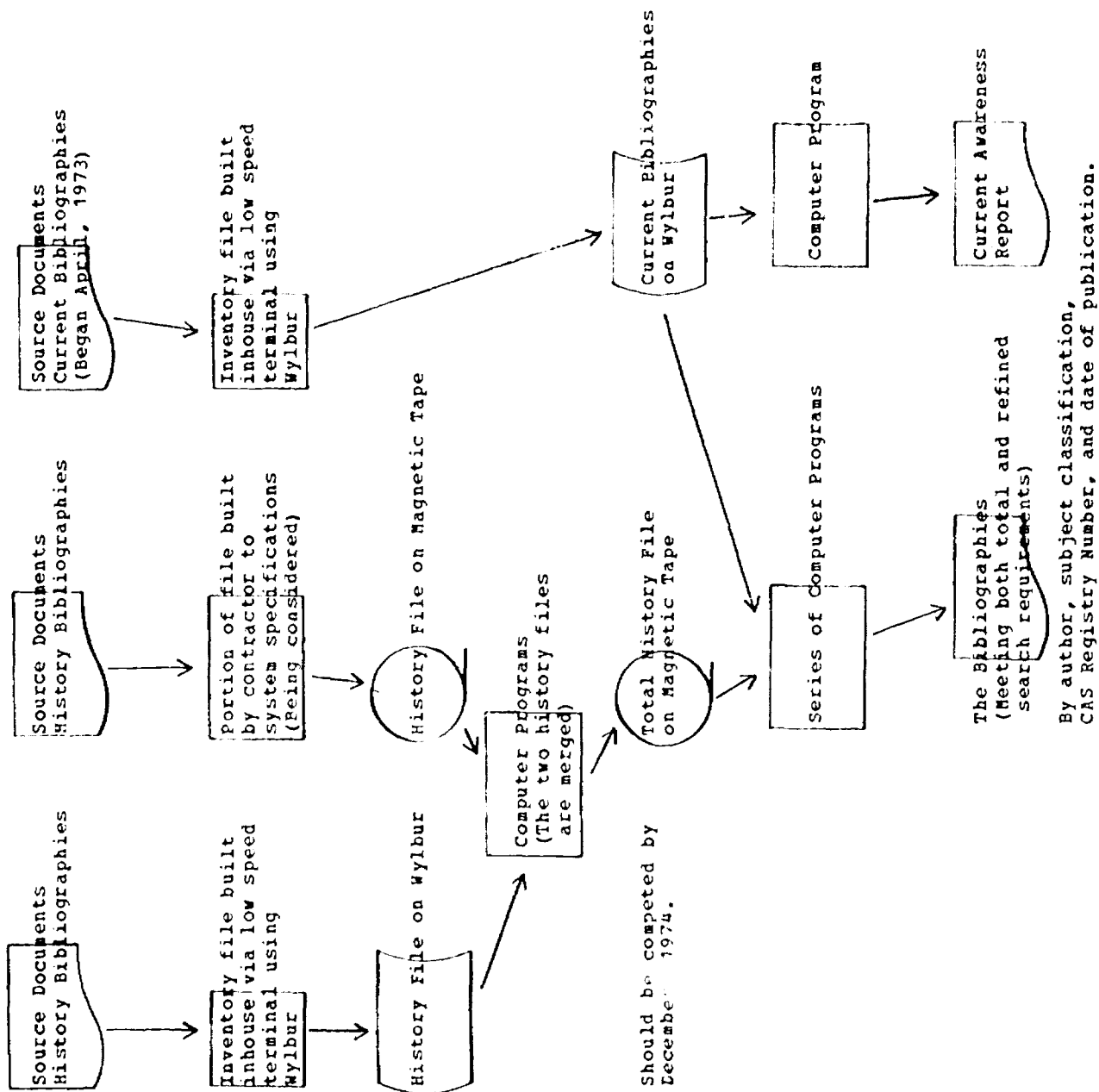
Document #23 (pages 51-52) is a sample of the author report.  
Document #24 (pages 53-54) is a sample of the date of publication report.  
Document #25 (pages 55-56) is a sample of the journal (source) title report.

These reports represent the basic report inventory. Additional reports are available.

A refined bibliographic search can be generated and printed in report forms #22-24.

All report heading information can be adjusted to a particular user's need.

# System Flow



Document #21 Sample File Layout  
The Pesticides Literature Search System

48

Master File

| Bibliographic ID Number                                                                                                                             | Author(s) | Source Information (Type--P=Periodical, B=Book,etc) | CAS Registry Number (if applicable)<br>(none shown) | HAPAB Number<br>(none shown) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------|-----------------------------------------------------|------------------------------|
| 100000 ANONYMOUS<br>CHICAGO MEETING OF ACS PRESENTS NUMEROUS PAPERS ON AGRICULTURAL CHEMICALS:<br>INSECTICIDES, HERBICIDES, FUNGICIDES, FERTILIZERS |           |                                                     |                                                     |                              |
| F AGR CHEM<br>8(9): 60-62, 65, 1953                                                                                                                 |           |                                                     |                                                     |                              |
| 1953                                                                                                                                                |           |                                                     |                                                     |                              |
| S1004000000                                                                                                                                         |           |                                                     |                                                     |                              |
| 100001 ADELSON L<br>POISON AND THE PATHOLOGIST                                                                                                      |           |                                                     |                                                     |                              |
| P J AMER MED ASSOC<br>187:918-920, 1964<br>1964                                                                                                     |           |                                                     |                                                     |                              |
| S1004000000                                                                                                                                         |           |                                                     |                                                     |                              |

Year of Publication

Remarks (if applicable)

Foreign Language (none shown)

Subject Classification  
(primary and secondary)

0100000000

0100000000

ENVIRONMENTAL PROTECTION AGENCY  
NICAL SERVICES DIVISION

## CLASSIFICATION NO/AUTHOR/PUBL YR SCHEDULE

PROG: PEST-CLASSAUM

1004000000  
1201000000

1959

SHEPARD H H

THE PESTICIDE SITUATION FOR 1958-59. GENERAL OUTLOOK  
USDA COMMODITY STABILIZATION SVC, WASH D C PP 24, APR 1959  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100576

1004000000  
1200000000

1965

MITCHELL L E

PESTICIDES: PROPERTIES AND PROGNOSIS  
AMERICAN CHEMICAL SOCIETY, 150TH NAT MEETING, SEPT. 13-17, 1965  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100541

1004000000  
2100000000

1969

BRODIE R B  
SOME PROSPECTS IN TOXICOLOGY  
ENVIRON OFS  
2 (5-6): 368-72, 1969  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100585

1004000000  
2106060000

1964

ALPERT J J  
TREATMENT OF ACUTE POISONING  
BRIT MED J  
2:1593, 1964  
LANGUAGE\*  
HAPAB NO:  
REMARKS: IM 65-1120, 1965

CAS:

100627

## PROG: PEST-CLASSAUTH

S1004000000  
0100000000

1964

ADOLSON L  
PTJISON AND THE PATHOLOGIST  
J AMER MED ASSOC  
187:918-920, 1964  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100001

S1004000000  
0100000000

1953

ANONYMUS  
CHICAGO MEETING OF ACS PRESENTS NUMEROUS PAPERS ON AGRICULTURAL CHEMICALS:  
INSECTICIDES, HERRICIDES, FUNGICIDES, FERTILIZERS  
AGR CHEM  
8(9): 60-62, 65, 1953  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100000

S1004000000  
0100000000

1953

BARNES J M  
SELECT RIPLTOGRAPHY ON THE TOXICOLOGY OF PESTICIDES IN MAN AND MAMMALS  
BULL WLD HLTH ORGAN  
8(4):535-589, 1953  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100002

S1004000000  
0100000000

1957

BARNES J M  
CONTROL OF HEALTH HAZARDS ASSOCIATED WITH THE USE OF PESTICIDES  
ADVANCES PEST CONTROL RESARCH  
VOL 1 EDITED BY R L METCALF, INTERSCIENCE, NEW YORK, 1957  
LANGUAGE\*  
HAPAB NO:  
REMARKS:

CAS:

100003

-73  
ENVIRONMENTAL PROTECTION AGENCY  
TOXICOLOGICAL SERVICES DIVISION

## AUTHOR/YEAR SCHEDULE

PRG: PEST.AUT.YEAR

AINSWORTH M

1960

SI004000000  
0203010500

METHODS FOR MEASURING PERCUTANEOUS ABSORPTION

J SOC COSMETIC CHEM

XI(2):59-78, 1960

LANGUAGE\*

HAPAB NO:

REMARKS:

CAS:

100337

ALARASTER J S  
ARRAM F S H

1965

SI004000000  
0203010500

ESTIMATING THE TOXICITY OF PESTICIDES TO FISH

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11(2):91-9, 1965

LANGUAGE\*

HAPAB NO:

REMARKS:

CAS:

ABST: WHO INFORM CIRC NO. 20: ABST NO. 45, 1966

100038

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IRRITATING PROPERTIES OF AIRBORNE MATERIALS TO THE UPPER RESPIRATORY TRACT

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13:433-449, 1966

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HAPAB NO:

REMARKS:

CAS:

100039

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RENAL TESTS IN TOXICITY STUDIES ON RATS

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HAPAB NO:

REMARKS:

CAS:

10610

18-73  
ENVIRONMENTAL PROTECTION AGENCY  
TECHNICAL SERVICES DIVISION

## AUTHOR/YEAR SCHEDULE

## PROC: PEST.AUTHYFAP

ALBARMY C  
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HEMATOLOGICAL PROBLEMS POSED BY VARIOUS OCCUPATIONAL DISEASES

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2:230-240, 1962

LANGUAGE\*

HAPAB NO:

REMARKS:

CAS:

100627

ALPERT J J

1964

S1004000000  
2106060000

TREATMENT OF ACUTE POISONING

BRIT MED J

2:1593, 1964

LANGUAGE\*

HAPAB NO:

REMARKS: 1M 65-1120, 1965

CAS:

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CAS:

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REMARKS:

CAS:

100579

ENVIRONMENTAL PROTECTION AGENCY  
TOXICOLOGICAL SERVICES DIVISION

YEAR OF PUBLICATION SCHEDULE

PROG: PEST-VEAP0014

1970

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FARMERS' PESTICIDE EXPENDITURES IN 1966  
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HAPAR NO:  
REMARKS:

CAS:

100506

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HAPAR NO:  
REMARKS:

CAS:

100518

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HAPAR NO:  
REMARKS:

CAS:

100092

1-19-73  
ENVIRONMENTAL PROTECTION AGENCY  
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## YEAR OF PUBLICATION SCHEDULE

SNGG: PEST.YEARAITH

1969

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HAPAR NO:  
REMARKS:

100529

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15(4):373-6, 1969  
LANGUAGE\*  
HAPAR NO:  
REMARKS:

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CAS:

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GUIDELINES FOR ESTIMATING TOXICOLOGICALLY INSIGNIFICANT LEVELS OF CHEMICALS IN FOOD  
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PERIODICAL TITLE LISTING

PROG: PEST.PEPTITLE

ACTA PHYSIOL PHARMACOL NEERLAND  
ACTA PHYSIOL SCAN  
ACTUALITIES PHARMACOL  
ADV CHEM SER  
ADVANCES IN CHEMISTRY SERIES  
ADVANCES PEST CONTROL RESEARCH  
AGR CHEM  
AGR RESEARCH  
AM IND HYG ASSOC J  
AMA ARCH INDUST HEALTH  
AMA ARCH INDUST HYG OCCUP MED  
AMCO IND HYG ASSOC J  
AMEO J MED SCI  
AMER SCIENT  
AMEO SOC AGR ENG TRANS  
ANN AGR PENN  
ANN APPL BOTL  
ANN EPIDEMIOLOGY  
ANN NY ACAD SCI  
ANN REV PHARMACOL  
ANNU REV PHARMACOL  
ANNUAL REVIEW OF ENTOMOLOGY  
ARCH ENVIRON HEALTH  
ARCH ENVIRON HLTH

19-73  
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TECHNICAL SERVICES DIVISION

## PERIODICAL TITLE LISTING

P000: PEST.PESTITLE

ARCH INDIKTR HVS OCCUP MEN

ARCH INT MED

ARCH INT PHARMACODYN

ARCH MAL PROF

ARCH TOXIKOL

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BRUCE THOMPSON INST

BRIT MED J

BRIT VET J

BULL ENTOMOL SOC AMER

BULL WLD HLTH ORGAN

CANAD FARM IMPR

CANAD J BIOCHEM

CANAD J PHYSIOL PHARMACOL

CANAD MED ASSOC J

CANCER CHEMO REP

CAROLINA MED J

CHEM AND CHEM PROCESS INDUSTRIES

CHEM ENG NEWS

CHEM ENG PROG

CHEM IND

CHEM WEEK

CIENCE

ECOLOGICAL AIR POLLUTANT LITERATURE SEARCH SYSTEM

The Ecological Air Pollutant Literature Search System  
(This system has been developed for the National Ecological Research Laboratory.)

#### Purpose and Scope

This system gathers bibliographic information on literature principally concerned with air pollutants and their effects on vegetation and animals. In addition, some citations deal in the research support areas and in heavy metals. Computer generated bibliographies (by author, subject, article title, and library reprint number), will be produced from the master file. The referenced literature is available in The National Ecological Research Laboratory's reprint library. By using these bibliographies, literature meeting a particular information need can be readily identified and made available to the user. Total bibliographies will be available on microfiche as well as in printed form.

#### Data Elements

All bibliographic information is contained in a single file format. The data elements include a unique bibliographic identification number; up to four authors; up to nine subjects (selected from a subject thesaurus); a library reprint number (indicates the location of the article in the library); the article title; source information; translation information (if applicable); Air Pollution Technical Information Center number (APTIC); date of publication; and a remarks field (if applicable). This bibliography completely identifies pertinent literature in this subject area. Document #27 (page 59) is a sample file format.

#### Status

All of the computer programs are operational. Currently, there are approximately 6,000 citations (bibliographies) on file in The National Ecological Research Laboratory's library. Under contract, these bibliographies have been converted to the system specifications. The retrospective master file is complete. The various bibliographic reports are available on microfiche (COM).

#### Plans

In March, 1974, new bibliographies will be added to the master file (using Wylbur) as needed. Requested bibliographies should be available within 24 hours of the time requested. Refined bibliographies can be generated with variable heading information. The master file will be permanently maintained on magnetic tape. The full articles are to be microfiched to enhance distribution at very reduced costs.

Document #26 (page 58) is a system flow.

Document #28 (pages 60-61) is a sample of the article title report.

Document #29 (pages 62-63) is a sample of the library reprint number report.

Document #30 (pages 64-65) is a sample of the primary author report.

Document #31 (pages 66-67) is a sample of the author report-multiple indexed.

Each article is shown under all assigned authors.

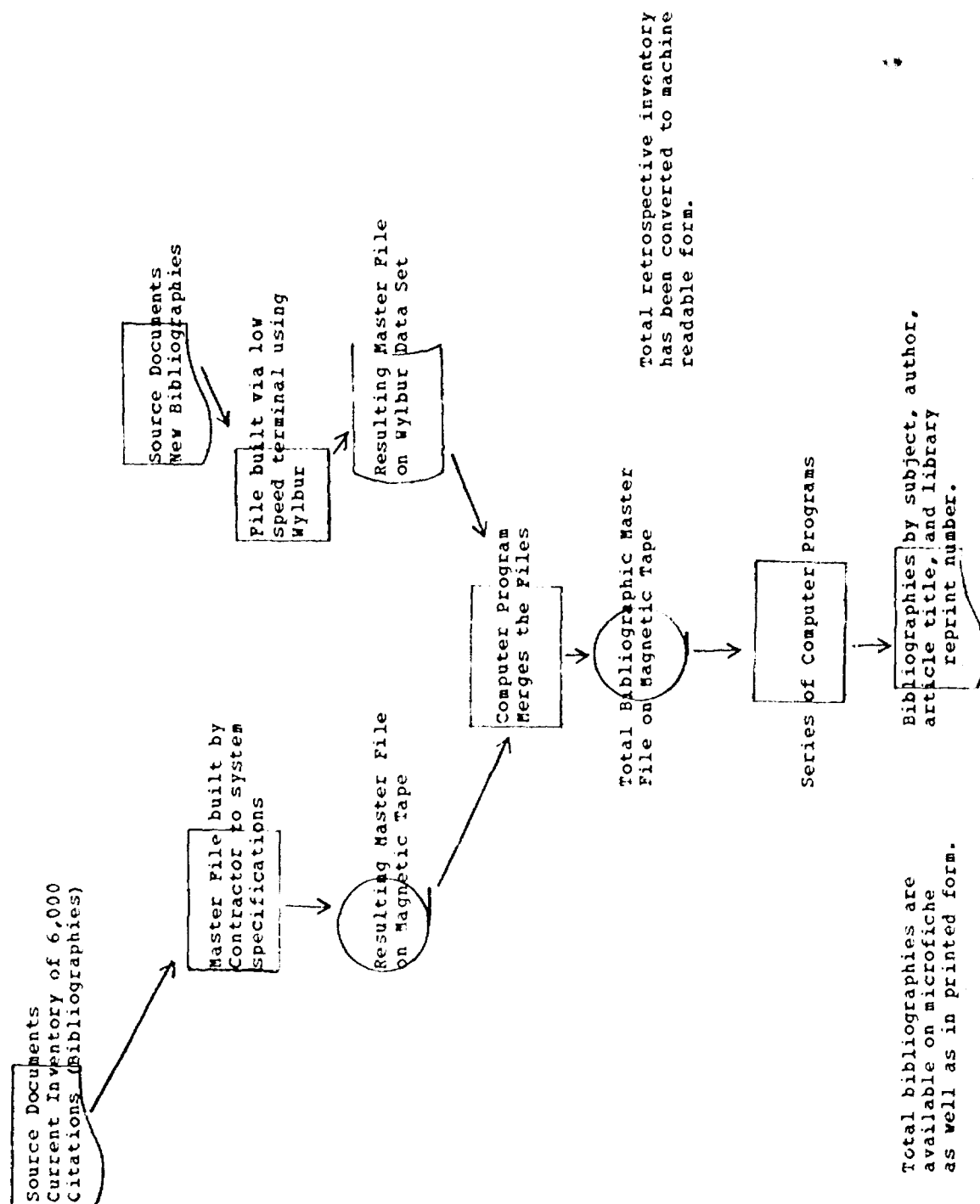
AN... indicates the primary author in all cases.

Document #32 (pages 68-69) is a sample of the subject report-multiple indexed.

Each article is shown under all assigned subjects.

This represents the basic (but not complete) report inventory.

Document #26 System Flow  
The Ecological Air Pollutant Literature  
Search System



Master File

| Bibliographic ID Number                                                                                                        | Author(s)               | Library Reprint Number               |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------|
| Title of Article                                                                                                               |                         |                                      |
| Main Subject Area                                                                                                              |                         |                                      |
| 00001<br>HECK W W<br>H-450 1 GER T 11305<br>TOBACCO A SENSITIVE MONITOR FOR PHOTOCHEMICAL AIR POLLUTION                        | POX F L                 | BRANDT C S                           |
| 12D TOBACCO                                                                                                                    |                         | 12E OXIDANT                          |
| 1969 U. S. DEPT. HEW, NAPCA PUBL. NO. AP-55. 23 PP                                                                             |                         |                                      |
| 00002<br>HECK W W<br>H-416<br>OZONE TIME CONCENTRATION MODEL TO PREDICT ACUTE FOLIAR INJURY                                    | TINGEY D T              |                                      |
| 12E OZONE                                                                                                                      |                         | 12B TIME CONCENTRATION               |
| 1971 SECOND INTERNATIONAL CLEAN AIR CONGRESS, PROCEEDINGS. PP 249-255. ACADEMIC PRESS, NEW YORK<br>ENGLUND H M & BERRY W T EDS |                         |                                      |
| Subject(s)                                                                                                                     | Date of Publication     | Source Information                   |
| APLIC No                                                                                                                       | Remarks (if applicable) | Translation/Language (if applicable) |

3 AP CONTROL METHODS & DEVICES

12D PLANTS INVESTIGATED

TITLE SCHEDULE

0000: AP.TITLE

ABSCISSION: ROLE OF PROTEIN SYNTHESIS

A-203 ABEL'S F R HOLM R F  
1967 ANNALS N. Y. ACAD. SCI. 144(PART.1):367-373  
SUBJECT(S):  
27B ABSCISSION 27C NITROGEN METABOLISM  
27A ETHYLENE (PHYS) 12D BEAN

2 12D COTTON

ABSCISSION: THE ROLE OF AGING

A-253 ABEL'S F R HOLM R F  
1967 PLANT PHYSIOL. 42:1351-1356  
SUBJECT(S):  
12B BEAN  
27B SENESCENCE

27B ETHYLENE (PHYS)  
23 MEASUREMENTS  
GAHAGAN H E

2 27B ABSCISSION  
27B GROWTH REGULATION

BIOCHEMICAL PATHWAY OF STRESS-INDUCED ETHYLENE

A-251 ABEL'S A L ABEL'S F R  
1972 PLANT PHYSIOL. 50:494-498  
SUBJECT(S):  
27A ETHYLENE (PHYS)  
12E ZONIF  
27A GROWTH REGULATORS

12D 9EAN  
27C RESPIRATION  
12D TOBACCO  
27C PHOTOSYNTHESIS

1

CELL-FREE ETHYLENE EVOLUTION FROM ETIOLATED PEA SEEDLINGS

A-052 ABEL'S F R RUBENSTEIN B  
1964 BIOCHEM. BIOPHYS. ACTA 93:675-677  
SUBJECT(S):  
12D PEA

27B ETHYLENE (PHYS)

2

EFFECT OF ETHYLENE ON AUXIN TRANSPORT

A-034 ABEL'S F R  
1966 PLANT PHYSIOL 41:946-948  
SUBJECT(S):  
27A ETHYLENE (PHYS)  
12D COTTON  
30B AUXIN

12D CORN  
12D BEAN  
12D SUNFLOWER  
12D COLEUS

2

TITLE SCHEDULE

PROG: AP-TITLE

ETHYLENE PRODUCTION FROM LINOLENIC ACID

A-032 ARELES F R

1966 NATURE 210(5031):23-25

SUBJECT(S):

120 PEAN

120 BEAN

2

279 ETHYLENE (PHYS)

MECHANISM OF ACTION OF ABSCISSION ACCELERATORS

A-124 ARELES F R

1967 PHYSIOL. PLANT. 20:442-454

SUBJECT(S):

278 AUXINS

279 SENEESCENCE

2

278 ABSCISSION

128 COTTON

278 ETHYLENE (PHYS)

ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE

A-028 ARBUTT D C

HARRISON R R

1966 NATURE 211(5046):259-261

SUBJECT(S):

126 CHLORINE COMPOUNDS

TATTON J D

THOMSON J

5

25 PESTICIDES

23 CHEMICAL

ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT

A-140 ARBUTT D C

HARRISON R B

1965 NATURE 208:1317-1318

SUBJECT(S):

25 INSECTICIDES

TATTON J D

THOMSON J

5

## 8-73 ENVIRONMENTAL PROTECTION AGENCY

## RE-PRINT NUMBER LISTING

PROC: AP.REPRINTNO

|       |                                                                                                                   |   |                                                     |
|-------|-------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------|
| A-004 | ARELES F B<br>EFFECT OF ETHYLENE ON AUXIN TRANSPORT<br>1966 PLANT PHYSIOL 41:946-948                              | 2 |                                                     |
| 01179 | SUBJECT(S):<br>278 ETHYLENE (PHYS)<br>120 COTTON<br>308 AUXIN                                                     |   | 120 CORN<br>120 BEAN<br>120 SUNFLOWER<br>120 COLEUS |
| A-028 | ABBOTT D C<br>ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE<br>1966 NATURE 211(5046):259-261                        |   | THOMSON J                                           |
|       | SUBJECT(S):<br>12F CHLORINE COMPOUNDS                                                                             | 5 |                                                     |
| A-032 | ARELES F B<br>ETHYLENE PRODUCTION FROM LINOLENIC ACID<br>1966 NATURE 210(5031):23-25                              |   | 23 CHEMICAL                                         |
|       | SUBJECT(S):<br>120 PEA                                                                                            | 2 |                                                     |
| A-052 | ARELES F B<br>CELL-FREE ETHYLENE EVOLUTION FROM ETIOLATED PEA SEEDLINGS<br>1966 BIOCHEM. BIOPHYS. ACTA 93:675-677 |   | 278 ETHYLENE (PHYS)                                 |
|       | SUBJECT(S):<br>120 PEA                                                                                            | 2 |                                                     |
| A-093 | ARELES F B<br>ABSCISSION: THE ROLE OF AGING<br>1967 PLANT PHYSIOL. 42:1351-1356                                   |   |                                                     |
|       | SUBJECT(S):<br>12R BEAN<br>27A SENESCENCE                                                                         | 2 | 278 ABSCISSION<br>278 GROWTH REGULATORS             |
| A-124 | ARELES F B<br>MECHANISM OF ACTION OF ABSCISSION ACCELERATORS<br>1967 PHYSIOL. PLANT. 20:442-454                   | 2 |                                                     |
|       | SUBJECT(S):<br>27A AUXINS<br>27A SENESCENCE                                                                       |   | 278 ABSCISSION                                      |

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RE-PRINT NUMBER LISTING

ORIG: AP.REFPRINTNO

|       |                                                                                                                                                                            |                                                 |                                        |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------|
| A-140 | ABOTT D C<br>ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT<br>1965 NATURE 208:1317-1318<br>SUBJECT(S):<br>25 INSECTICIDES                                       | HARRISON R B<br>YATTON J O                      | THOMSON J<br>5                         |
| A-203 | ABELES F R<br>ARSCISSION: ROLE OF PROTEIN SYNTHESIS<br>1967 ANNALS N. Y. ACAD. SCI. 144(ART.1):367-373<br>SUBJECT(S):<br>278 ARSCISSION<br>278 ETHYLENE (PHYS)             | HOLM R E<br>27C NITROGEN METABOLISM<br>12D BEAN | 2<br>12D COTTON                        |
| A-251 | ABELES A L<br>BIOCHEMICAL PATHWAY OF STRESS-INDUCED ETHYLENE<br>1972 PLANT PHYSIOL. 50:496-498<br>SUBJECT(S):<br>278 ETHYLENE (PHYS)<br>12F OZONE<br>278 GROWTH REGULATORS | ABELES F R<br>12D BEAN<br>27C RESPIRATION       | 1<br>12D TOBACCO<br>27C PHOTOSYNTHESIS |

## AUTHOR SCHEDULE

ORIG: AP-AUTH

|            |                                                           |                     |           |     |                 |
|------------|-----------------------------------------------------------|---------------------|-----------|-----|-----------------|
| ABRAV D C  | HARRISON R R                                              | TATTON J O          | THOMSON J | 5   | A-140           |
| 1965       | ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT  |                     |           |     |                 |
|            | NATURE 208:1317-1318                                      |                     |           |     |                 |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 25 INSECTICIDES                                           |                     |           |     |                 |
| 1965       | ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE               | TATTON J O          | THOMSON J | 5   | A-028           |
|            | NATURE 211(5046):259-261                                  |                     |           |     |                 |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 12E CHLORINE COMPOUNDS                                    | 25 PESTICIDES       |           | 23  | CHEMICAL        |
| ABELES A L | ABELES F B                                                |                     |           | 1   | A-251           |
| 1972       | BIOCHEMICAL PATHWAY OF STRESS-INDUCED ETHYLENE            |                     |           |     |                 |
|            | PLANT PHYSIOL. 50:495-498                                 |                     |           |     |                 |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 27R ETHYLENE (PHYS)                                       | 12D BEAN            |           | 12D | TOBACCO         |
|            | 12F OZONE                                                 | 27C RESPIRATION     |           | 27C | PHOTOSYNTHESIS  |
|            | 27R GROWTH REGULATORS                                     |                     |           |     |                 |
| ABELES F B | RURENSTEIN B                                              |                     |           | 2   | A-052           |
| 1964       | CELL-FREE ETHYLENE EVOLUTION FROM ETIOLATED PEA SEEDLINGS |                     |           |     |                 |
|            | BIOCHEM. BIOPHYS. ACTA 93:675-677                         |                     |           |     |                 |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 12D PEA                                                   | 27R ETHYLENE (PHYS) |           |     |                 |
| 1965       | ETHYLENE PRODUCTION FROM LINOLENIC ACID                   |                     |           | 2   | A-032           |
|            | NATURE 210(5031):23-25                                    |                     |           |     |                 |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 12D PEA                                                   | 12D BEAN            |           | 27R | ETHYLENE (PHYS) |
| 1965       | EFFECT OF ETHYLENE ON AUXIN TRANSPORT                     |                     |           | 2   | A-004           |
|            | PLANT PHYSIOL 41:946-948                                  |                     |           |     | 01179           |
|            | SUBJECT(S):                                               |                     |           |     |                 |
|            | 27R ETHYLENE (PHYS)                                       | 12D CORN            |           | 12D | SUNFLOWER       |
|            | 12D COTTON                                                | 12D BEAN            |           | 12D | COLFUS          |
|            | 30R AUXIN                                                 |                     |           |     |                 |

PAGE: AP.AUTH

ARFLO'S F R

## MECHANISM OF ACTION OF ABSCISSION ACCELERATORS

1967 PHYSIOL. PLANT. 20:442-454

2 A-124

## SUBJECT(S):

27B AUXINS

12B COTTON

27B ABSCISSION

27B SENESCENCE

27B ETHYLENE (PHYS)

HOLM R F

GAHAGAN H E

2 A-083

## ABSCISSION: THE ROLE OF AGING

1967 PLANT PHYSIOL. 42:1351-1356

## SUBJECT(S):

12B BEAN

27B ETHYLENE (PHYS)

27B ABSCISSION

27A SENESCENCE

27B GROWTH REGULATION

HOLM R F

## ABSCISSION: ROLE OF PROTEIN SYNTHESIS

1967 ANNALS N. Y. ACAD. SCI. 144(PART 1):367-373

## SUBJECT(S):

27B ABSCISSION

27C NITROGEN METABOLISM

12D COTTON

27B ETHYLENE (PHYS)

12D BEAN

2 A-203

## ENVIRONMENTAL PROTECTION AGENCY

## AUTHOR LISTING

## ORIG: AP-AUTHING

\*ABBOTT D C      ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT      THOMSON J  
1965 A-140      HARRISON R B      TATTON J O

1966 A-029      ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE      THOMSON J  
                 HARRISON R B      TATTON J O

\*ABELES A L      BIOCHEMICAL PATHWAY OF STRESS-INDUCED ETHYLENE  
1972 A-251      ABELES F R

\*ABELES F B      CELL-FREE ETHYLENE EVOLUTION FROM ETIOLATED PEA SEEDLINGS  
1964 A-052      RUBENSTEIN B

1966 A-032      ETHYLENE PRODUCTION FROM LINOLENIC ACID

1966 A-004      EFFECT OF ETHYLENE ON AUXIN TRANSPORT

1967 A-203      ABSCISSION: ROLE OF PROTEIN SYNTHESIS  
                 HOLM R E

1967 A-124      MECHANISM OF ACTION OF ABSCISSION ACCELERATORS

1967 A-083      ABSCISSION: THE ROLE OF AGING      GAHAGAN H E  
                 HOLM R E

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GAGAN H F      ABSCISSION: THE ROLE OF AGING      HOLM R E  
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## PROC: AP.AUTHIND

HARRISON R R  
ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT  
1965 A-140 \*ABBOTT D C TATTON J O THOMSON J

ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE  
1966 A-028 \*ABBOTT D C TATTON J O THOMSON J

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1967 A-203 \*ABELES F R

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CELL-FREE ETHYLENE EVOLUTION FROM ETIOLATED PEA SEEDLINGS  
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TATTON J O  
ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT  
1965 A-140 \*ABBOTT D C HARRISON R R THOMSON J

ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE  
1966 A-028 \*ABBOTT D C HARRISON R R THOMSON J

THOMSON J  
ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERIC ENVIRONMENT  
1965 A-140 \*ABBOTT D C HARRISON R R TATTON J

ORGANOCHLORINE PESTICIDES IN THE ATMOSPHERE  
1966 A-028 \*ABBOTT D C HARRISON R R TATTON J

## ENVIRONMENTAL PROTECTION AGENCY

## SUBJECT LISTING

PROG: AP.SURJNO

## REVIEWS

4520  
1 AIP CONSERVATION REPORT REFLECTS NATIONAL CONCERN  
D-0068 1965 DIXON J P

1 EFFECT ON PLANTS OF AIR POLLUTANTS DERIVED FROM MOTOR VEHICLE EMISSIONS  
D-0070 DAPLEY E P

1 EFFECT OF PEROXYACETYL NITRATE ON PLANTS PHOTOREDUCTIVE REACTIONS AND SUSCEPTIBILITY OF BEAN PLANTS TO PAN  
D-0091 1968 DUGGER W M JR

1 REVIEW OF LITERATURE ON HEALTH HAZARDS OF FLUORINE AND ITS COMPOUNDS IN THE MINING AND ALLIED INDUSTRIES  
D-0097 1964 DAVENPORT S J

1 AIR POLLUTANTS AND PLANT RESPONSE  
D-0102 1967 DAINES P H

1 AIR POLLUTION OXIDANTS THEIR EFFECTS ON METABOLIC PROCESSES IN PLANTS  
D-0122 1970 DUGGER W M JR

1 EFFECT OF AIR POLLUTANTS ON VEGETATION  
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1 TOXIC PROPERTIES OF INORGANIC FLUORINE COMPOUNDS CHAPTER 2 EFFECTS ON ANIMALS CHAPTER 3 OTHER EFFECTS  
E-0078 1969 EISENBERG P Y

1 MERCURY PROBLEM IN SWEDEN  
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1 ANALYTICAL METHODS FOR AIR POLLUTANTS  
P-0037 1963 FELDSTEIN M

1 PLANTS AND POLLUTION  
P-0079 1970 FOY C L

1 TOXIC EFFECTS OF CADMIUM A REVIEW  
S-0105 1971 PLICK D P

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## SUBJECT LISTING

PROG: AP-SUBJNO

## REVIEWS

4520  
2 SULFUR DEFICIENCY IN SOILS  
C-0012 1945 CROCKER W

2 SULPHUR CONTENT OF PLANTS  
P-0066 1935 FRAZER J

## METABOLISM

4690  
1 DYNAMIC CRITERIA FOR THE EVALUATION OF THE BIOCHEMICAL EFFECTS OF AIR POLLUTANTS  
E-0103 1957 ESTES F L

## SINGLE CELLS

4710  
1 DYNAMIC CRITERIA FOR THE EVALUATION OF THE BIOCHEMICAL EFFECTS OF AIR POLLUTANTS  
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## LEAVES

4760  
2 SOME PHYSIOLOGICAL RESPONSES TO D L ABSCISIN DOPHIN  
E-0017 1967 EL ANTABLY H M M

## WATER POLLUTION

4890  
1 OCCURRENCE OF AIRBORNE LEAD IN SAN FRANCISCO BAY AND ITS RELATION TO ANIMAL DISEASE  
C-0214 1970 COOPER R C

1 HORTICULTURE AND POLLUTION  
D-0148 1970 DAY B E

1 DISPOSAL OF MERCURY WASTES FROM WATER LABORATORIES  
D-0208 1971 DEAN P B

1 YEARLY CIRCULATION OF SULFUR IN NATURE  
E-0077 1963 ERIKSSON E

1 MERCURY USES IN CANADA AND THEIR POSSIBLE HAZARDS AS SOURCES OF MERCURY CONTAMINATION  
P-0093 1970 YIMPEITE N

1 MERCURY CONTAMINATION OF CANADIAN FISH AND FISH EATING BIRDS  
P-0107 1970 YIMPEITE N

EPA REPORTS REPORTING SYSTEM

## EPA Reports Reporting System

### Purpose and Scope

EPA provides the National Technical Information Service (Department of Commerce) with inhouse EPA reports. These reports are converted by NTIS to their system requirements and become a portion of the total NTIS Reports System. As a result, EPA receives all of the standard services provided to such NTIS customers. Because of the agency's desire to provide expanded reporting services in this area, an inhouse reporting system has been developed. This system utilizes NTIS report master files and provides title indexes, subject indexes, and abstract reports for distribution on microfiche. Selective bibliographies are also available.

### Data Elements

The NTIS reports master file is converted inhouse to two separate tape files. The first file contains the complete report abstract. The second file contains all pertinent bibliographic information. The NTIS accession number is maintained on both files and provides the link between the two files. A complete file layout is provided in Document #34 (pages 72-73).

### Status

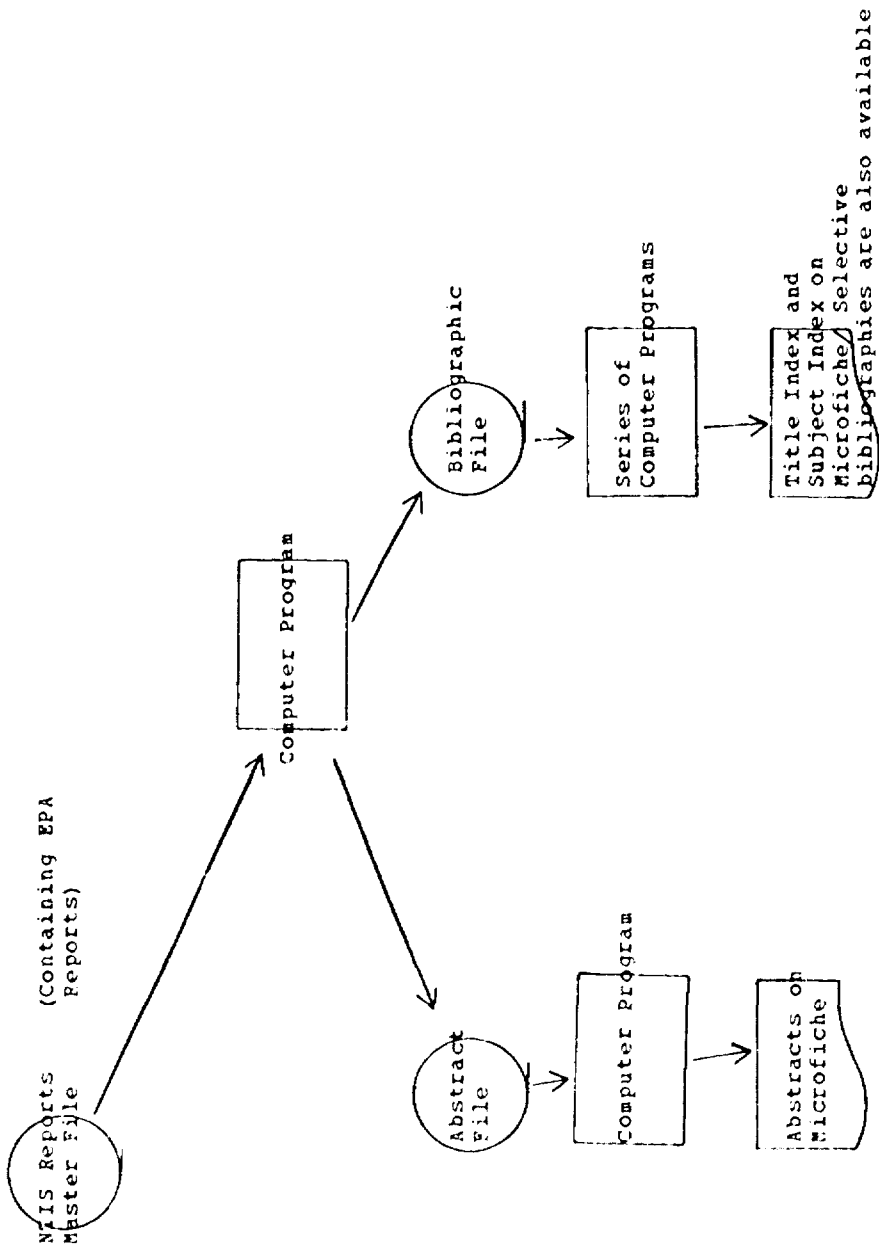
All computer programs are operational. The second NTIS report master has been converted by EPA and the resultant reports on microfiche have been distributed domestically and internationally. The second master tape contained 3748 environmental reports.

### Plans

EPA will continue to provide this service as long as it remains practical. Further, additional computer programs will be developed providing a greater variety of outputs as needed.

Document #33 (page 71) is a system flow.  
Document #35 (pages 74-75) is a sample of the title index.  
Document #36 (pages 76-77) is a sample of the subject index.  
Document #37 (pages 78-79) is a sample of the abstract listing.

These reports are generally available only on microfiche.



## Document #34 File Layout Specifications

## EPA Reports Reporting System

ABSTRACT FILE This is a variable length file with a maximum of 48 lines per abstract.

| ITEM                        | START POSITION | LENGTH |
|-----------------------------|----------------|--------|
| DOCUMENT NUMBER (ACCESSION) | 1              | 15     |
| SUBJECT GROUP CODE          | 16             | 6      |
| LINE 1 OF ABSTRACT          | 22             | 99     |
| LINE 2 OF ABSTRACT          | 121            | 99     |
| LINE 3 OF ABSTRACT          | 220            | 99     |
| LINE 4 OF ABSTRACT          | 319            | 99     |
| LINE 5 OF ABSTRACT          | 418            | 99     |
| LINE 6 OF ABSTRACT          | 517            | 99     |
| LINE 7 OF ABSTRACT          | 616            | 99     |
| LINE 8 OF ABSTRACT          | 715            | 99     |
| LINE 9 OF ABSTRACT          | 814            | 99     |
| LINE 10 OF ABSTRACT         | 913            | 99     |
| LINE 11 OF ABSTRACT         | 1012           | 99     |
| LINE 12 OF ABSTRACT         | 1111           | 99     |
| LINE 13 OF ABSTRACT         | 1210           | 99     |
| LINE 14 OF ABSTRACT         | 1309           | 99     |
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| LINE 17 OF ABSTRACT         | 1606           | 99     |
| LINE 18 OF ABSTRACT         | 1705           | 99     |
| LINE 19 OF ABSTRACT         | 1804           | 99     |
| LINE 20 OF ABSTRACT         | 1903           | 99     |
| LINE 21 OF ABSTRACT         | 2002           | 99     |
| LINE 22 OF ABSTRACT         | 2101           | 99     |
| LINE 23 OF ABSTRACT         | 2200           | 99     |
| LINE 24 OF ABSTRACT         | 2299           | 99     |
| LINE 25 OF ABSTRACT         | 2398           | 99     |
| LINE 26 OF ABSTRACT         | 2497           | 99     |
| LINE 27 OF ABSTRACT         | 2596           | 99     |
| LINE 28 OF ABSTRACT         | 2695           | 99     |
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| LINE 31 OF ABSTRACT         | 2992           | 99     |
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| LINE 35 OF ABSTRACT         | 3388           | 99     |
| LINE 36 OF ABSTRACT         | 3487           | 99     |
| LINE 37 OF ABSTRACT         | 3586           | 99     |
| LINE 38 OF ABSTRACT         | 3685           | 99     |
| LINE 39 OF ABSTRACT         | 3784           | 99     |
| LINE 40 OF ABSTRACT         | 3883           | 99     |
| LINE 41 OF ABSTRACT         | 3982           | 99     |
| LINE 42 OF ABSTRACT         | 4081           | 99     |
| LINE 43 OF ABSTRACT         | 4180           | 99     |
| LINE 44 OF ABSTRACT         | 4279           | 99     |
| LINE 45 OF ABSTRACT         | 4378           | 99     |
| LINE 46 OF ABSTRACT         | 4477           | 99     |
| LINE 47 OF ABSTRACT         | 4576           | 99     |
| LINE 48 OF ABSTRACT         | 4675           | 99     |

BIBLIOGRAPHIC FILE  
(Fixed length-1442 characters)

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|-----------------------------|------|-----|
| DOCUMENT NUMBER (ACCESSION) | 1    | 15  |
| SUBJECT GROUP CODE          | 16   | 6   |
| LINE 1 OF ARTICLE TITLE     | 22   | 99  |
| LINE 2 OF ARTICLE TITLE     | 121  | 99  |
| LINE 3 OF ARTICLE TITLE     | 220  | 99  |
| PERSONAL AUTHOR 1           | 319  | 25  |
| PERSONAL AUTHOP 2           | 344  | 25  |
| PERSONAL AUTHOR 3           | 369  | 25  |
| PERSONAL AUTHOR 4           | 394  | 25  |
| PERSONAL AUTHOR 5           | 419  | 25  |
| CORPORATE SOURCE            | 444  | 125 |
| SUBJECT 1                   | 569  | 40  |
| SUBJECT 2                   | 609  | 40  |
| SUBJECT 3                   | 649  | 40  |
| SUBJECT 4                   | 689  | 40  |
| SUBJECT 5                   | 729  | 40  |
| SUBJECT 6                   | 769  | 40  |
| SUBJECT 7                   | 809  | 40  |
| SUBJECT 8                   | 849  | 40  |
| SUBJECT 9                   | 889  | 40  |
| SUBJECT 10                  | 929  | 40  |
| SUBJECT 11                  | 969  | 40  |
| SUBJECT 12                  | 1009 | 40  |
| SUBJECT 13                  | 1049 | 40  |
| SUBJECT 14                  | 1089 | 40  |
| SUBJECT 15                  | 1129 | 40  |
| SUBJECT 16                  | 1169 | 40  |
| SUBJECT 17                  | 1209 | 40  |
| SUBJECT 18                  | 1249 | 40  |
| SUBJECT 19                  | 1289 | 40  |
| SUBJECT 20                  | 1329 | 40  |
| CPIG REPORT NUMBER          | 1369 | 15  |
| CONTRACT NUMBER (GOVT)      | 1384 | 20  |
| CORP AUTH REPORT NUMBER     | 1404 | 15  |
| CORP AUTH TASK NUMBER       | 1419 | 20  |
| DATE OF PUBLICATION         | 1439 | 4   |

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PA-204 976 13868A

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| PB-190 870                  | 6L 6R                 | REPORT OF TESTS MADE ON THE WESTINGHOUSE PANORAMIX (TRADE MARK) X-RAY MACHINE.                                                                                                        |
| PB-191 395                  | 14873D                | COMPARISON OF MICROWAVE DETECTION INSTRUMENTS.                                                                                                                                        |
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6M 138

MICROBIOLOGICAL FACTOR IN ACID MINE DRAINAGE FORMATION. II. FURTHER OBSERVATIONS FROM A PILOT  
PLANT STUDY. WATER POLLUTION CONTROL RESEARCH SERIES,

PB-196 113

6M 138

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1388I

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ACIDS

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OXYGENATION OF FERROUS IRON: THE RATE-DETERMINING STEP IN THE FORMATION OF ACIDIC MINE DRAINAGE.  
FINAL PROGRESS REPT. 1 APR 66-31 DEC 68,

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OXYGENATION OF FERROUS IRON: THE RATE-DETERMINING STEP IN THE FORMATION OF ACIDIC MINE DRAINAGE.  
FINAL PROGRESS REPT. 1 APR 66-31 DEC 68,

THE REPORT DETAILS RADIATION PROTECTION RECOMMENDATIONS FOR X-RAY DIFFRACTION AND SPECTROGRAPHIC EQUIPMENT, INCLUDING GUIDELINES FOR ADMINISTRATIVE RESPONSIBILITIES, OPERATING PROCEDURES, PERSONNEL MONITORING, AREA MONITORING, AND SAFETY ENGINEERING. THE REPORT IS DIRECTED TO OPERATORS, ADMINISTRATORS, GOVERNMENTAL HEALTH AGENCIES, AND MANUFACTURERS. (AUTHOR)

6P 5A

J-182 717

THE REPORT DISCUSSES THE EXTENT OF THE USE OF RADIUM IN PRODUCTS AVAILABLE TO THE PUBLIC. IT IS AN ATTEMPT TO CONSOLIDATE INFORMATION PERTAINING TO THESE PRODUCTS SO THAT THEIR POTENTIAL HEALTH IMPLICATIONS CAN BE PUT INTO PERSPECTIVE. A GREATER AWARENESS IS NEEDED TO PROTECT THE PUBLIC FROM POTENTIAL EXPOSURE TO CONSUMER RADIUM. THE EXTENT AND HAZARDS OF THE USE OF THESE PRODUCTS SHOULD BE UNDERSTOOD BY ALL PUBLIC HEALTH AGENCIES. (AUTHOR)

INTERNATIONAL ENVIRONMENTAL REPORTS SYSTEM

# The International Environmental Reports System (Developed for the Office of International Activities)

## Purpose and Scope

This system contains summaries of foreign government environmental reports received by EPA through document exchange programs with foreign countries. The resultant computer generated reports serve to alert the agency to major environmental developments around the world. The system produces reports by category (legal, planning and management, scientific and technical, and socio-economic), by country, and by subject (air, water, pesticides, radiation, solid waste, noise, and general).

## Data Elements

All of the data is contained in a single file. The data elements include publisher ID number; document title; author; English translation; continent; country; language; date of publication; number of pages; category; document location; subjects; remarks; and the abstract. Document #39 (page 82) is a sample file layout.

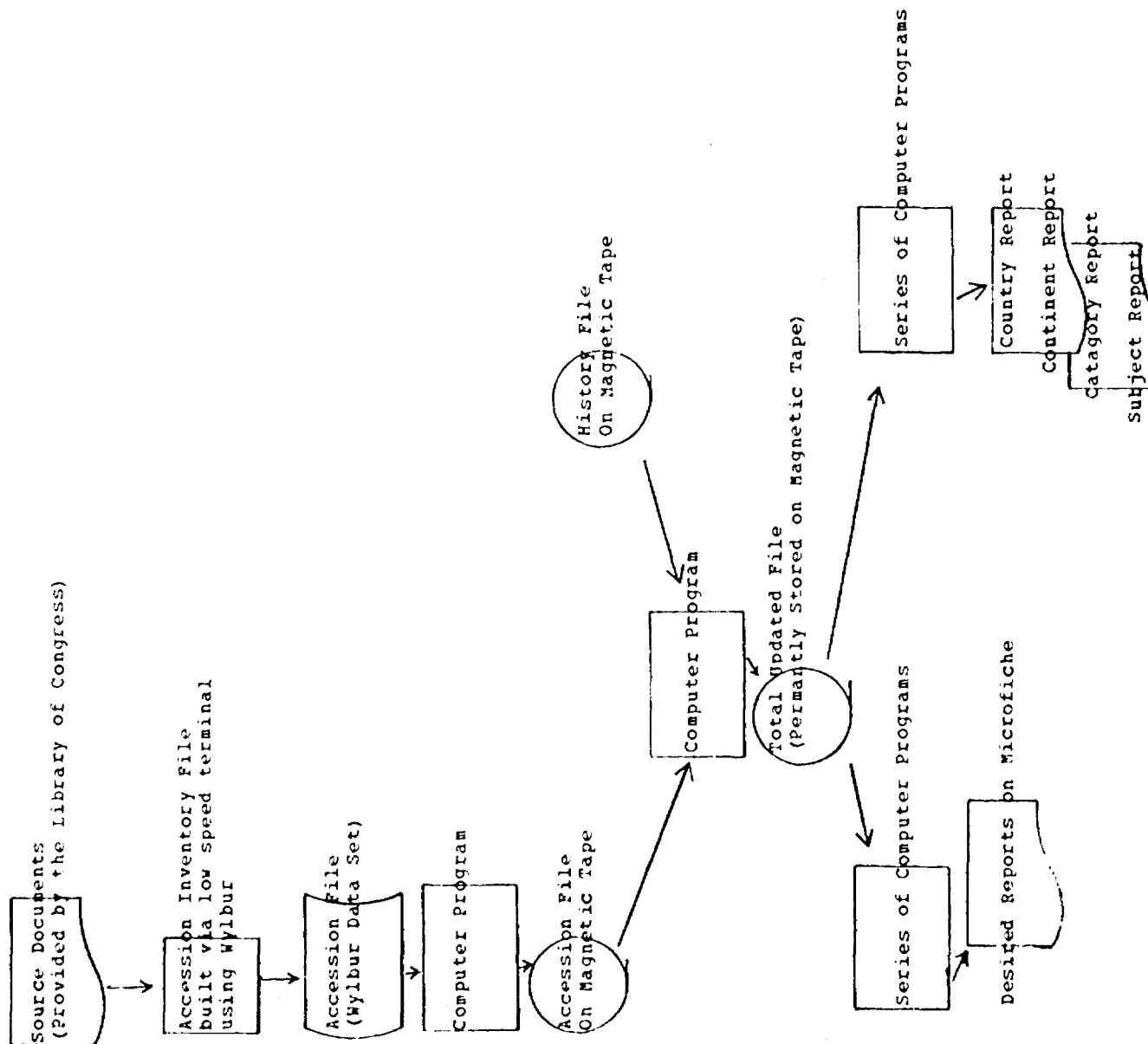
## Status

The annotated bibliography containing reports of legal, legislative, and regulatory aspects of environmental quality has been prepared in machine readable form. The computer outputs have been generated and distributed. They are available in hard copy as well as on microfiche.

## Plans

The necessary procedures for a continuous updating of the file have been finalized. The system will be expanded to meet the total needs of the functional area as they become defined.

Document #38 (page 81) is a system flow.  
Document #40 (pages 83-84) is a sample of the country report.  
Document #41 (pages 85-86) is a sample of the subject report.  
Document #42 (pages 87-88) is a sample of the category report.  
Document #43 (pages 89-90) is a sample of the continent report.



| Publisher Id Number | Document Title                                | Author                                       | Document Source Category | Abstract |
|---------------------|-----------------------------------------------|----------------------------------------------|--------------------------|----------|
| 00102               | REVISED EMISSION STANDARDS FOR SULPHUR OXIDES | DEPT. OF STATE AIRGRAM A-46. AMEMBASSY TOKYO | EPA<br>1LR               |          |
|                     | ENGLISH                                       | 012072 1                                     |                          |          |

REVISED, MORE STRINGENT STANDARDS FOR SULPHUR DIOXIDES TOOK EFFECT ON JANUARY 5, 1972, REFLECTING THE JAPANESE GOVERNMENT'S DETERMINED EFFORTS SINCE 1969 TO REDUCE THIS MAJOR SOURCE OF AIR POLLUTION. A RECENT SURVEY BY THE GOVERNMENT'S ENVIRONMENTAL PROTECTION AGENCY REVEALED THAT SULPHUR DIOXIDE CONTAMINATION DECREASED DURING FY 1971, ALTHOUGH OTHER AIR POLLUTANTS INCREASED, NOTABLY NITROGEN OXIDES.

| Continent<br>Subjects | Country                                          | Language | Number of Pages | Date of Publication | Remarks            |
|-----------------------|--------------------------------------------------|----------|-----------------|---------------------|--------------------|
| 00106                 | GOVERNMENT OF JAPAN<br>ASIA JAPAN<br>GENERAL AIR | ENGLISH  | PESTICIDES      | 000071 20           | EPA<br>1LR ALSO PM |
|                       |                                                  |          | WATER           |                     |                    |
|                       |                                                  |          | RADIATION       |                     |                    |

THE PRESENT STATE OF MONITORING AND SURVEILLANCE OF ENVIRONMENTAL POLLUTION

TEXT AND TABLES PROVIDE A CONCISE OUTLINE OF THE LEGAL BASIS, JURISDICTION, MONITORING SYSTEMS, AND METHODOLOGY FOR MEASURING POLLUTANTS PRESENT IN AIR, WATER, OCEAN, SOIL, INCLUDING RESIDUE PESTICIDES IN FOODS. IN MONITORING RADIOACTIVE FALLOUT, VARIOUS COUNTERMEASURES HAVE BEEN FORMULATED FOR AN EMERGENCY SITUATION IN WHICH POLLUTION EXCEEDS SAFE LIMITS, BUT TO DATE NO SUCH INCIDENT HAS OCCURRED.

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
COUNTRY/CATEGORY REPORT  
PROG: OIA-COUNTRY

COUNTRY:

SWEDEN

LR

PUBLIC HEALTH SERVICE  
STOCKHOLM CENTRAL BOARD OF ADMINISTRATION INFO. COMMITTEE EPA  
ENGLISH 72 PGS 28 10# 00111  
NOISE

SEVERAL ANTINOISE MEASURES HAVE BEEN INITIATED BY STOCKHOLM'S PUBLIC HEALTH COMMITTEE. JET AIRCRAFT NOISE WAS REDUCED BY DESIGNATING NEARBY BROMMA AIRPORT EXCLUSIVELY FOR PISTON-ENGINE AIRCRAFT WHILE DIVERTING JET TRAFFIC TO ARLANDA AIRPORT 40 MILES AWAY. THE REQUIRED WARMUP OF PISTON ENGINES BEFORE TAKEOFF HAS BEEN HELD TO A MINIMUM SINCE SWEDEN'S DOMESTIC AIRLINES WERE URGED TO FIT THEIR AIRCRAFT WITH ENGINE HEATERS. A RECENT ORDINANCE PROHIBITS IDLING OF MOTOR VEHICLE ENGINES OUTDOORS FOR LONGER THAN THREE MINUTES EXCEPT DURING TRAFFIC DELAY. THE SOUND LEVEL FROM A REFUSE COLLECTION TRUCK MUST NOT EXCEED 70 DB (DECIBELS) MEASURED THREE METERS AWAY, AND COMPRESSORS ON CONSTRUCTION SITES MUST NOT EMIT NOISE EXCEEDING 70 DB AT A DISTANCE OF SEVEN METERS.

LR

ENVIRONMENT PLANNING AND CONSERVATION IN SWEDEN  
SWEDISH INFORMATION SERVICE EPA  
ENGLISH 6/00/72 PGS 4 10# 00118  
WATER

RECENT SWEDISH ENVIRONMENTAL LEGISLATION IS HIGHLIGHTED IN THIS PUBLIC INFORMATION BROCHURE. SINCE JANUARY 1, 1972, ALL DUMPING FROM SWEDISH SHIPS AND AIRCRAFT IS PROHIBITED IN TERRITORIAL WATERS AND THE HIGH SEAS. THE LAW ALSO BANS DUMPING BY FOREIGN VESSELS IN SWEDISH TERRITORIAL WATERS, AND IT IS ILLEGAL FOR THEM TO EXPORT WASTES FROM SWEDEN FOR THE PURPOSE OF DUMPING IN THE HIGH SEAS. ANOTHER LAW, EFFECTIVE JUNE 1, 1972, STIPULATES THAT PCB'S AND MATERIALS CONTAINING PCB'S MAY NOT BE MANUFACTURED, SOLD, OR USED WITHOUT LICENSE.

-13-73  
ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
COUNTRY/CATEGORY REPORT  
PROG: OIA-COUNTRY

COUNTRY:

U.S.S.R.

LR

PREVENTION OF OIL POLLUTION IN OCEANS

NINUPAROV S.M.  
RUSSIAN  
WATER

71 PGS 164  
EPA  
ID# 00168

THE BOOK DISCUSSES REASONS FOR OCEAN POLLUTION AS A RESULT OF TRANSPORT OPERATIONS AND WAYS TO DECREASE THE HARMFUL EFFECTS OF THIS POLLUTION ON NATURE AND MAN. A SURVEY IS GIVEN OF BASIC INTERNATIONAL AND USSR LEGISLATION FOR PREVENTION OF OIL POLLUTION. PRACTICAL METHODS APPLIED IN THE USSR FOR DECREASING THE PROBABILITY OF ACCIDENTAL SPILLAGE OF OIL AND FOR PROHIBITING THE DUMPING OF OIL-POLLUTED WATER INTO THE OCEAN ARE PRESENTED. THERE ARE DESCRIPTIONS OF THE MOST EFFECTIVE ARRANGEMENTS AND DEVICES FOR LOCALIZING OIL SPILLS, THEIR REMOVAL, CONSTRUCTIONS FOR UNLOADING TANKERS, AND PURIFICATION.

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
SUBJECT REPORT  
PRPG: OIA-SUBJECT

GENERAL

EUR

SWEDEN

LR

ENVIRONMENT PROTECTION ACT MARINE DUMPING ACT WITH COMMENTARIES  
NAT. ENVIR. PROT. BOARD. EPA  
4/00/72 PGS 85 ID# 00129  
INFO FOR U.N. CONF. ON ENVIRONMEN  
AIR NOISE WATER

THE FIRST PART OF THIS BOOKLET REVIEWS THE SCOPE OF THE ENVIRONMENT PROTECTION ACT OF 1969, A LEGISLATIVE LANDMARK IN SWEDEN'S ANTI-POLLUTION PROGRAM. IT SETS FORTH CRITERIA FOR CONTROL OF AIR AND WATER POLLUTION, NOISE, AND OTHER NUISANCES, AND CITES CASE DECISIONS OF EXAMINING BOARDS TO SHOW THE LAW'S APPLICATION, COMPENSATION GRANTED, OR PENALTIES IMPOSED. UNDER THE ACT, PERSONS OR FIRMS PLANNING TO ENGAGE IN SPECIFIED INDUSTRIAL ACTIVITIES ARE REQUIRED TO APPLY TO A FRANCHISE BOARD FOR A PERMIT TO OPERATE. THIS BOARD MUST BE FULLY APPRAISED OF POSSIBLE POLLUTING EFFECTS OF THE ENTERPRISE, AND WHAT CONTROL DEVICES ARE TO BE USED TO COUNTERACT THE POLLUTION. THE SECOND PART CONTAINS A BRIEF COMMENTARY ON THE MARINE DUMPING PROHIBITION ACT, WHICH CAME INTO FORCE ON JANUARY 1, 1972.

NOISE

APR

SOUTH AFRICA

LR

REPORT ON POLLUTION  
THE PLANNING ADVISORY COUNCIL OF THE PRIME MINISTER EPA  
3/00/72 PGS 15 ID# 00253  
ALSO PM  
\*GENERAL AIR RADIATION WATER

ASIA

JAPAN

LR

TOKYO FIGHTS POLLUTION AN URGENT APPEAL FOR REPORT  
TOKYO METRO. GOV. BUREAU OF GEN. AFFAIRS EPA  
3/00/71 PGS 267 ID# 00119  
ALSO PM  
\*GENERAL AIR SOLID WASTE WATER

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
SUBJECT REPORT  
PROG: OIA-SUBJECT

## NOISE

EUR

NETHERLANDS

LR

ENVIRONMENTAL HEALTH IN THE NETHERLANDS  
MINISTRY OF PUBLIC HEALTH AND ENVIRONMENTAL HYGIENE  
3/00/72 PGS 60 ID# 00239 EPA  
\*GENERAL WATER AIR SOLID WASTE RADIATION

SWEDEN

LR

ENVIRONMENT PROTECTION ACT MARINE DUMPING ACT WITH COMMENTARIES  
NAT. ENVIR. PROT. BOARD. EPA  
4/00/72 PGS 85 ID# 00129  
INFO FOR U.N. CONF. ON ENVIRONMEN  
\*GENERAL AIR WATER

SWEDEN

LR

PUBLIC HEALTH SERVICE  
STOCKHOLM CENTRAL BOARD OF ADMINISTRATION INFO. COMMITTEE EPA  
72 PGS 28 ID# 00111

SEVERAL ANTINOISE MEASURES HAVE BEEN INITIATED BY STOCKHOLM'S PUBLIC HEALTH COMMITTEE. JET AIRCRAFT NOISE WAS REDUCED BY DESIGNATING NEARBY BROMMA AIRPORT EXCLUSIVELY FOR PISTON-ENGINEED AIRCRAFT WHILE DIVERTING JET TRAFFIC TO ARLANDA AIRPORT 40 MILES AWAY. THE REQUIRED WARMUP OF PISTON ENGINES BEFORE TAKEOFF HAS BEEN HELD TO A MINIMUM SINCE SWEDEN'S DOMESTIC AIRLINES WERE URGED TO FIT THEIR AIRCRAFT WITH ENGINE HEATERS. A RECENT ORDINANCE PROHIBITS IDLING OF MOTOR VEHICLE ENGINES OUTDOORS FOR LONGER THAN THREE MINUTES EXCEPT DURING TRAFFIC DELAY. THE SOUND LEVEL FROM A PEPUSE COLLECTION TRUCK MUST NOT EXCEED 70 DB (DECIBELS) MEASURED THREE METERS AWAY, AND COMPRESSORS ON CONSTRUCTION SITES MUST NOT EMIT NOISE EXCEEDING 70 DB AT A DISTANCE OF SEVEN METERS.

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
CATEGORY/COUNTRY REPORT  
PROG: OIA-CATG

## CATEGORY:

LP

FUR  
ITALY

FACTS ON FILE  
VOL. 32, NO. 1645, 5-3  
ENGLISH  
GENERAL WATER

5/03/72 PGS 35583 LOC  
ID# 00138

AN ITALIAN INDUSTRIALIST, ALBERTO REDAELLI, WAS ARRESTED AND JAILED IN MILAN ON MAY 3  
AFTER FAILING TO COMPLY WITH AN ORDER TO INSTALL ANTI-POLLUTION DEVICES IN HIS STEEL PLANT.

## NETHERLANDS

ENVIRONMENTAL HEALTH IN THE NETHERLANDS  
MINISTRY OF PUBLIC HEALTH AND ENVIRONMENTAL HYGIENE  
ENGLISH  
GENERAL WATER AIR

3/00/72 PGS 60 NOISE  
ID# 00239 SOLID WASTE RADIATION

AFTER A SURVEY OF THE GENERAL ENVIRONMENT OF THE NETHERLANDS, THE BOOK TURNS TO SPECIFIC PROBLEMS. THE FIRST OF THESE IS WATER: WATER SUPPLY, USE OF RESOURCES, QUALITY CONTROL, AND WATER POLLUTION. UNDER THE LATTER, IT DESCRIBES SEWAGE DISPOSAL IN THE MAJOR CITIES, NATIONAL STANDARDS AND GOVERNMENTAL ORGANIZATIONS, AND INTERNATIONAL PROBLEMS ARISING IN CONNECTION WITH THE RHINE. THE SECOND POINT IS AIR: IN A SIMILAR FRAMEWORK SUCH ORGANIZATIONS AS THE AIR POLLUTION COUNCIL AND LEGAL MEASURES SUCH AS THE AIR POLLUTION ACT OF 1970 ARE DISCUSSED. RADIATION POLLUTION IS PRESENTED BRIEFLY IN TERMS OF RESEARCH ORGANIZATIONS AND LEGAL MEASURES, AS ARE SOLID WASTES. FOUNDATIONS AND LEGAL MEASURES AGAINST NOISE ARE ALSO GIVEN, IN PARTICULAR THE PUBLIC NUISANCE ACT WHICH AFFECTS ALL THE ABOVE PROBLEMS. THE BOOK THEN PROCEEDS TO DISCUSS PROBLEMS ARISING FROM RECREATION AND HOUSING AND THE POSSIBILITIES OF ANTI-POLLUTION TRAINING AND STUDY.

-13-73  
ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
CATEGORY/COUNTRY REPORT  
PROG: DIA-CATS

## CATEGORY:

LP

EUR  
SWEDEN

ENVIRONMENT PROTECTION ACT MARINE DUMPING ACT WITH COMMENTARIES  
NAT. ENVIR. PROT. BOARD. EPA  
ENGLISH 4/00/72 PGS 85 ID# 00129  
INFO FOR U.N. CONF. ON ENVIRONMEN NOISE  
GENERAL AIR NOISE WATER

THE FIRST PART OF THIS BOOKLET REVIEWS THE SCOPE OF THE ENVIRONMENT PROTECTION ACT OF 1969, A LEGISLATIVE LANDMARK IN SWEDEN'S ANTI-POLLUTION PROGRAM. IT SETS FORTH CRITERIA FOR CONTROL OF AIR AND WATER POLLUTION, NOISE, AND OTHER NUISANCES, AND CITES CASE DECISIONS OF EXAMINING BOARDS TO SHOW THE LAW'S APPLICATION, COMPENSATION GRANTED, OR PENALTIES IMPOSED. UNDER THE ACT, PERSONS OR FIRMS PLANNING TO ENGAGE IN SPECIFIED INDUSTRIAL ACTIVITIES ARE REQUIRED TO APPLY TO A FRANCHISE BOARD FOR A PERMIT TO OPERATE. THIS BOARD MUST BE FULLY APPRAISED OF POSSIBLE POLLUTING EFFECTS OF THE ENTERPRISE, AND WHAT CONTROL DEVICES ARE TO BE USED TO COUNTERACT THE POLLUTION. THE SECOND PART CONTAINS A BRIEF COMMENTARY ON THE MARINE DUMPING PROHIBITION ACT, WHICH CAME INTO FORCE ON JANUARY 1, 1972.

SWEDEN

ENVIRONMENT PLANNING AND CONSERVATION IN SWEDEN  
SWEDISH INFORMATION SERVICE EPA  
ENGLISH 6/00/72 PGS 4 ID# 00118  
WATER

RECENT SWEDISH ENVIRONMENTAL LEGISLATION IS HIGHLIGHTED IN THIS PUBLIC INFORMATION BROCHURE. SINCE JANUARY 1, 1972, ALL DUMPING FROM SWEDISH SHIPS AND AIRCRAFT IS PROHIBITED IN TERRITORIAL WATERS AND THE HIGH SEAS. THE LAW ALSO BANS DUMPING BY FOREIGN VESSELS IN SWEDISH TERRITORIAL WATERS, AND IT IS ILLEGAL FOR THEM TO EXPORT WASTES FROM SWEDEN FOR THE PURPOSE OF DUMPING IN THE HIGH SEAS. ANOTHER LAW, EFFECTIVE JUNE 1, 1972, STIPULATES THAT PCB'S AND MATERIALS CONTAINING PCB'S MAY NOT BE MANUFACTURED, SOLD, OR USED WITHOUT LICENSE.

3-73 ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
CONTINENT/COUNTRY/CATEGORY REPORT  
PROG: OIA-CONTINENT

## CONTINENT:

EUR SWEDEN  
LR

ENVIRONMENT PROTECTION ACT MARINE DUMPING ACT WITH COMMENTARIES  
NAT. ENVIR. PROT. BOARD. EPA  
ENGLISH 4/00/72 PGS 85 IO# 00129  
INFO FOR U.N. CONF. ON ENVIRONMEN NOISE  
GENERAL AIR WATER

THE FIRST PART OF THIS BOOKLET REVIEWS THE SCOPE OF THE ENVIRONMENT PROTECTION ACT OF 1969, A LEGISLATIVE LANDMARK IN SWEDEN'S ANTI-POLLUTION PROGRAM. IT SETS FORTH CRITERIA FOR CONTROL OF AIR AND WATER POLLUTION, NOISE AND OTHER NUISANCES, AND CITES CASE DECISIONS OF EXAMINING BOARDS TO SHOW THE LAW'S APPLICATION, COMPENSATION GRANTED OR PENALTIES IMPOSED. UNDER THE ACT, PERSONS OR FIRMS PLANNING TO ENGAGE IN SPECIFIED INDUSTRIAL ACTIVITIES ARE REQUIRED TO APPLY TO A FRANCHISE BOARD FOR A PERMIT TO OPERATE. THIS BOARD MUST BE FULLY APPRAISED OF POSSIBLE POLLUTING EFFECTS OF THE ENTERPRISE, AND WHAT CONTROL DEVICES ARE TO BE USED TO COUNTERACT THE POLLUTION. THE SECOND PART CONTAINS A BRIEF COMMENTARY ON THE MARINE DUMPING PROHIBITION ACT, WHICH CAME INTO FORCE ON JANUARY 1, 1972.

SWEDEN  
LR

ENVIRONMENT PLANNING AND CONSERVATION IN SWEDEN  
SWEDISH INFORMATION SERVICE EPA  
ENGLISH 6/00/72 PGS 4 IO# 00118  
WATER

RECENT SWEDISH ENVIRONMENTAL LEGISLATION IS HIGHLIGHTED IN THIS PUBLIC INFORMATION BROCHURE. SINCE JANUARY 1, 1972, ALL DUMPING FROM SWEDISH SHIPS AND AIRCRAFT IS PROHIBITED IN TERRITORIAL WATERS AND THE HIGH SEAS. THE LAW ALSO BANS DUMPING BY FOREIGN VESSELS IN SWEDISH TERRITORIAL WATERS, AND IT IS ILLEGAL FOR THEM TO EXPORT WASTES FROM SWEDEN FOR THE PURPOSE OF DUMPING IN THE HIGH SEAS. ANOTHER LAW, EFFECTIVE JUNE 1, 1972, STIPULATES THAT PCB'S AND MATERIALS CONTAINING PCB'S MAY NOT BE MANUFACTURED, SOLD, OR USED WITHOUT LICENSE.

13-73  
ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INTERNATIONAL ACTIVITIES  
CONTINENT/COUNTRY/CATEGORY REPORT  
PROG: DIA.CONTINENT

## CONTINENT:

FUR  
SWEDEN  
LR

PUBLIC HEALTH SERVICE  
STOCKHOLM CENTRAL BOARD OF ADMINISTRATION INFO. COMMITTEE EPA  
ENGLISH 72 PGS 28 ID# 00111  
NOISE

SEVERAL ANTINOISE MEASURES HAVE BEEN INITIATED BY STOCKHOLM'S PUBLIC HEALTH COMMITTEE. JET AIRCRAFT NOISE WAS REDUCED BY DESIGNATING NEARBY BRONMA AIRPORT EXCLUSIVELY FOR PISTON-ENGINE AIRCRAFT WHILE DIVERTING JET TRAFFIC TO ARLANDA AIRPORT 40 MILES AWAY. THE REQUIRED WARMUP OF PISTON ENGINES BEFORE TAKEOFF HAS BEEN HELD TO A MINIMUM SINCE SWEDEN'S DOMESTIC AIRLINES WERE URGED TO FIT THEIR AIRCRAFT WITH ENGINE HEATERS. A RECENT ORDINANCE PROHIBITS IDLING OF MOTOR VEHICLE ENGINES OUTDOORS FOR LONGER THAN THREE MINUTES EXCEPT DURING TRAFFIC DELAY. THE SOUND LEVEL FROM A REFUSE COLLECTION TRUCK MUST NOT EXCEED 70 DB (DECIBELS) MEASURED THREE METERS AWAY, AND COMPRESSORS ON CONSTRUCTION SITES MUST NOT EMIT NOISE EXCEEDING 70 DB AT A DISTANCE OF SEVEN METERS.

U.S.-S.-R.  
LR

PREVENTION OF OIL POLLUTION IN OCEANS  
NUNUPAROV S.-Y. EPA  
RUSSIAN 71 PGS 164 ID# 00168  
WATER

THE BOOK DISCUSSES REASONS FOR OCEAN POLLUTION AS A RESULT OF TRANSPORT OPERATIONS AND WAYS TO DECREASE THE HARMFUL EFFECTS OF THIS POLLUTION ON NATURE AND MAN. A SURVEY IS GIVEN OF BASIC INTERNATIONAL AND USSR LEGISLATION FOR PREVENTION OF OIL POLLUTION.

PRACTICAL METHODS APPLIED IN THE USSR FOR DECREASING THE PROBABILITY OF ACCIDENTAL SPILLAGE OF OIL AND FOR PROHIBITING THE DUMPING OF OIL-POLLUTED WATER INTO THE OCEAN ARE PRESENTED. THERE ARE DESCRIPTIONS OF THE MOST EFFECTIVE ARRANGEMENTS AND DEVICES FOR LOCALIZING OIL SPILLS, THEIR REMOVAL, CONSTRUCTIONS FOR UNLOADING TANKERS, AND PURIFICATION.

DOCUMENT CONTROL SYSTEM

## Document Control System

## Purpose and Scope

This system gathers data on documents not covered by any other library system. A major component of this system is the vast environmental state and local report collection held by the EPA library network. From the resulting master file, various bibliographies can be generated by document title, shelf list number, primary author, corporate author, subject areas, and geographic area.

## Data Elements

All of the bibliographic information is contained in a single file format. Data elements include shelf number (which identifies library and document shelf location); document title; up to three authors; date of publication; contract number; two corporate sources; up to five subjects (with subject class numbers); city area; state area; NIS number; original report number; sponsoring report number; and a remarks field. Document #45 (page 94) is a sample file format.

## Status

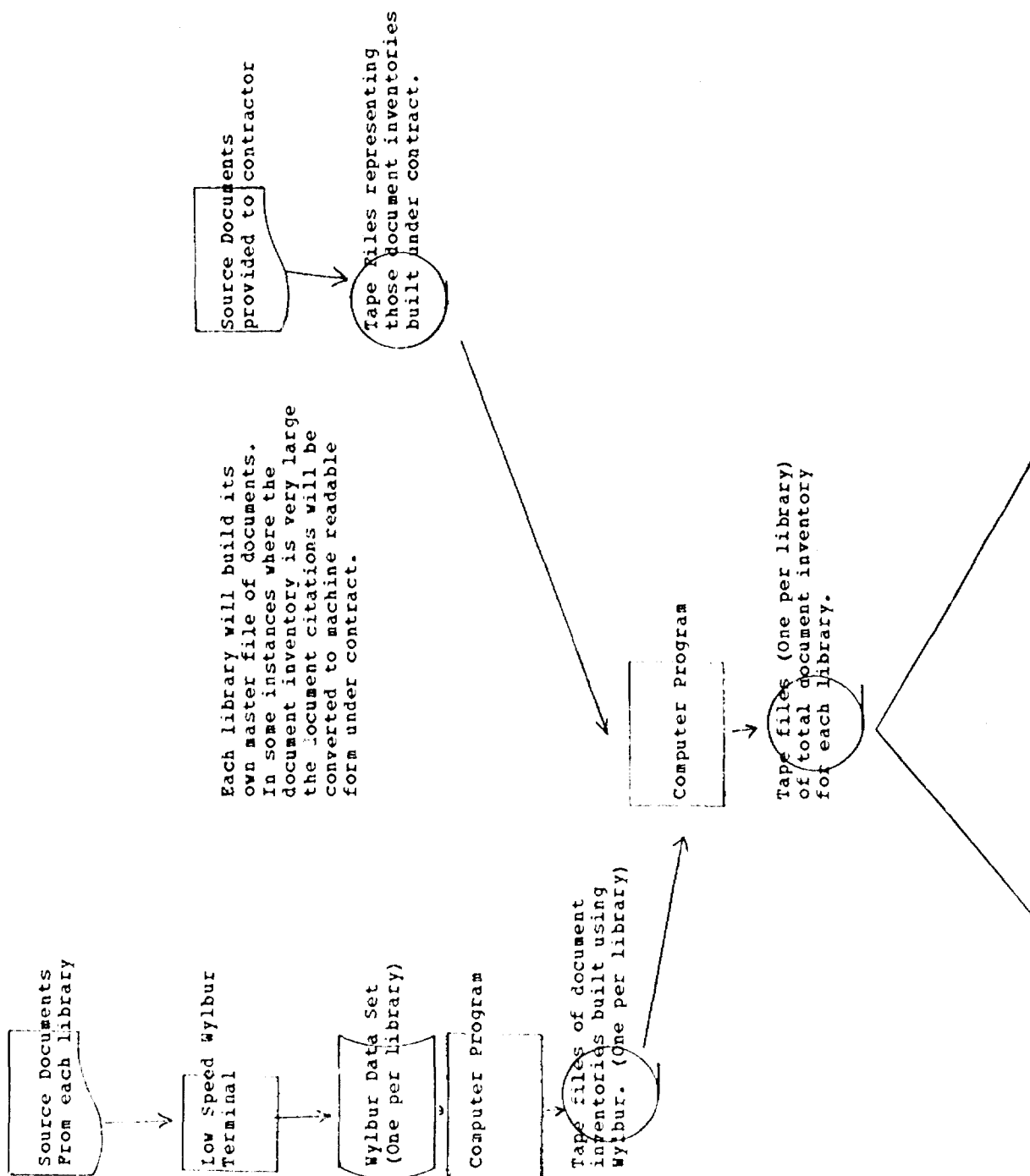
All of the computer programs are operational. Currently, the system has been made available to three EPA libraries. These libraries are now developing the document data base. Because of the large number of reports in each location, the library will be responsible for developing its data base meeting the same exact system specifications.

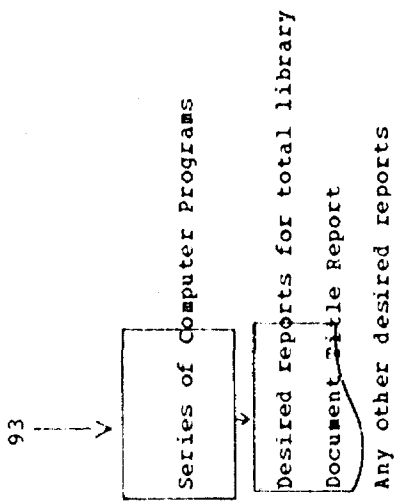
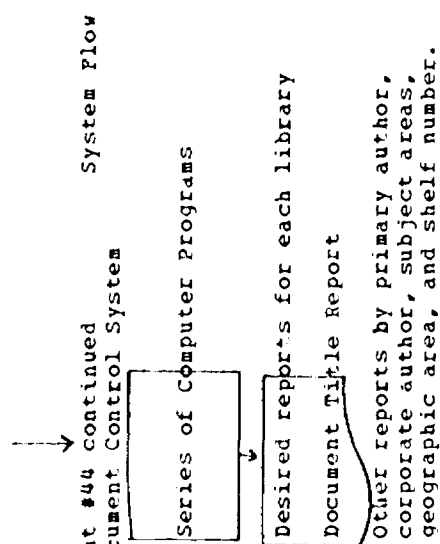
## Plans

As libraries complete their data bases, they will have access to all of the report outputs. As the data base grows, certain combined outputs will be generated. As time allows, all other EPA librarians will be instructed on the system allowing each to build an appropriate master file.

Document #44 (pages 92-93) is a system flow.  
Document #46 (pages 95-96) is a sample of the document title report.  
Document #47 (pages 97-98) is a sample of the primary author report.  
Document #48 (pages 99-100) is a sample of the primary corporate author report.  
Document #49 (pages 101-102) is a sample of the subject report.  
Document #50 (pages 103-104) is a sample of the geographic area report.  
Document #51 (page 105) is a sample of the shelf list report.

# System Flow





## Document #45

| Shelf Number                                        | Document ID Number                              | Title                                                                         | Author(s)                        | Publication Date | City Area        | State |
|-----------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------|------------------|------------------|-------|
| Corporate Source(s)                                 | Subject Area(s)                                 |                                                                               | Subject Class(s)                 | Contract Number  | (if applicable)  |       |
| 03B000001                                           |                                                 | SEVENTH TECHNICAL PROGRESS REPORT                                             |                                  | 0361             |                  |       |
| FAITH W L<br>AIR POLLUTION FOUNDATION               |                                                 | RENZETTI N A                                                                  |                                  |                  |                  |       |
| ATMOSPHERIC PHOTOCHEMISTRY                          | MOTOR VEHICLE EMISSIONS                         |                                                                               | INSTRUMENTATION<br>01            |                  | SAN MARINO       | CA    |
| 33                                                  |                                                 | THERMAL EFFECTS OF THE SURREY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA | PART III                         |                  |                  |       |
| 03B000002                                           |                                                 | HARGIS JR W J                                                                 | 0273                             |                  |                  |       |
| SPEARLS Z A<br>VIRGINIA INSTITUTE OF MARINE SCIENCE | JAMES RIVER<br>INFRA-RED SCANNING<br>OPD-4067-4 |                                                                               | NUCLEAR POWER PLANT<br>06        |                  | CLOUCESTER POINT | VA    |
| THERMAL EFFECTS<br>INSTRUMENT CALIBRATION           |                                                 |                                                                               |                                  |                  |                  |       |
| 33                                                  |                                                 |                                                                               |                                  |                  |                  |       |
| NTIS Report Number<br>(if applicable)               | Original Report Number<br>(if applicable)       | Sponsoring Report Number<br>(if applicable)                                   | Remarks Field<br>(if applicable) |                  |                  |       |

61-08-74  
 ENVIRONMENTAL PROTECTION AGENCY  
 LIBRARY SYSTEM REPORT  
 DOCUMENT CONTROL SYSTEM  
 PROG: DOCU.TITLE

## TITLE SCHEDULE

CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES V 1-2  
 TILTON SCHOOL WATER POLLUTION PROGRAM NH  
 GEO AREA TILTON DATE: CONTRACT NO: 1TT1-WP-41-01  
 03800009 SUBJ CLASS: 04 WATER POLLUTION  
 SUBJ: ENVIRONMENTAL EDUCATION CURRICULUM DEVELOPMENT

ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN  
 KOHN R F  
 UNITED STATES NATIONAL COMMISSION FOR UNESCO  
 GEO AREA ATLANTA DATE: 11/71 CONTRACT NO:  
 03800006 SUBJ CLASS: 10 STUDY OF HUMAN ECOLOGICAL EFFECTS  
 SUBJ: ENVIRONMENTAL EDUCATION HUMAN ECOLOGY

EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT  
 MARINE TECHNOLOGY SOCIETY  
 GEO AREA WASHINGTON DC DATE: 6/66 CONTRACT NO:  
 03800008 SUBJ CLASS: 04 10 OCEAN DUMPING  
 SUBJ: MARINE TECHNOLOGY OCEAN EXPLOITATION  
 UNDERSEA MINING MINING INDUSTRY

OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING  
 EARTHQUAKE RISK 1973 CONTRIBUTIONS  
 DUKE C M JACOBSEN S E  
 UNIVERSITY OF CALIFORNIA WATER RESOURCES CENTER  
 GEO AREA BOSTON CA DATE: 6/73 CONTRACT NO: UCAL-WRC-W-339  
 03800010 SUBJ CLASS: 04 EARTHQUAKES  
 SUBJ: WATER RESOURCE SYSTEMS

RESOURCES OF NEW ENGLAND NEW YORK REGION PT 2 CH 1  
 NEW ENGLAND NEW YORK INTER-AGENCY COMMITTEE  
 GEO AREA BOSTON MA DATE: 3/55 CONTRACT NO:  
 03800005 SUBJ CLASS: 04 14 WATER POLLUTION  
 SUBJ: NORTHEAST DRAINAGE BASIN

SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION  
 TRANSPORTATION AND EMPLOYMENT WESTERN STATES CONFERENCE  
 FEDERATION OF ROCKY MOUNTAIN STATES INC  
 WESTERN GOVERNORS CONFERENCE  
 GEO AREA SALT LAKE CITY UT DATE: 3/70 CONTRACT NO:  
 03800007 SUBJ CLASS: 13 10 HUMAN ECOLOGY  
 SUBJ: HUMAN RESOURCES

## TITLE SCHEDULE

-08-74  
 ENVIRONMENTAL PROTECTION AGENCY  
 BRARY SYSTEM REPORT  
 DOCUMENT CONTROL SYSTEM  
 PROG: DOCU.TITLE

## SEVENTH TECHNICAL PROGRESS REPORT

FAITH W L RENZETTI N A  
 AIR POLLUTION FOUNDATION  
 GEO AREA SAN MARINO CA  
 03B00001 SUBJ CLASS: 01  
 SUBJ: ATMOSPHERIC PHOTOCHEMISTRY MOTOR VEHICLE EMISSIONS INSTRUMENTATION

33

THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA PART III  
 SHEARLS E A CHIA S N HARGIS JR W J  
 VIRGINIA INSTITUTE OF MARINE SCIENCE  
 GEO AREA CLOUCESTER POINT VA  
 03B00002 SUBJ CLASS: 06  
 SUBJ: THERMAL EFFECTS JAMES RIVER NUCLEAR POWER PLANT  
 INSTRUMENT CALIBRATION INFRA-RED SCANNING  
 ORO-4067-4

33

TRANSFER OF TECHNOLOGY TO DEVELOPING NATIONS  
 PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE APRIL 28 30 1966  
 SPENCER D L WORONIAK A  
 HOWARD UNIVERSITY  
 U S AIR FORCE OFFICE OF AEROSPACE RESEARCH  
 GEO AREA WARRENTON VA  
 03B00011 SUBJ CLASS: 10  
 SUBJ: TECHNOLOGY TRANSFER ECONOMIC THEORY

DATE: 12/66 CONTRACT NO: APOS865

WASTE WATER RENOVATION AND CONSERVATION THE PENNSYLVANIA STATE UNIVERSITY STUDIES NO 23  
 PARIZEK R R KARDOS L T SOPPER W E  
 PENNSYLVANIA STATE UNIVERSITY  
 GEO AREA UNIVERSITY PARK PA  
 03B00003 SUBJ CLASS: 04  
 SUBJ: WASTE WATER RENOVATION

DATE: 67 CONTRACT NO:

21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS  
 AMERICAN PUBLIC POWER ASSOCIATION  
 GEO AREA JACKSONVILLE FL  
 03B00004 SUBJ CLASS: 04  
 SUBJ: POWER INDUSTRY PUBLIC POWER ATOMIC POWER

DATE: 5/64 CONTRACT NO:

8-74  
ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DOCU.AUTH

## AUTHOR SCHEDULE

DUKE C M

JACOBSEN S E  
OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING  
EARTHQUAKE RISK 1973 CONTRIBUTIONS  
UNIVERSITY OF CALIFORNIA WATER RESOURCES CENTER  
GEO AREA CA  
03B00001C SUBJ CLASS: 04  
SUBJ: WATER RESOURCE SYSTEMS EARTHQUAKES  
141

DATE: 6/73 CONTRACT NO: UCAL-WRC-W-339

FAITH W L

RENZETTI N A  
SEVENTH TECHNICAL PROGRESS REPORT  
AIR POLLUTION FOUNDATION  
GEO AREA SAN MARINO CA  
03B000001 SUBJ CLASS: 01  
SUBJ: ATMOSPHERIC PHOTOCHEMISTRY MOTOR VEHICLE EMISSIONS INSTRUMENTATION  
33

DATE: 3/61 CONTRACT NO:

KOHN R F

ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN  
UNITED STATES NATIONAL COMMISSION FOR UNESCO  
GEO AREA ATLANTA GA  
03B000006 SUBJ CLASS: 10  
SUBJ: ENVIRONMENTAL EDUCATION STUDY OF HANKIND ECOLOGICAL EFFECTS  
HUMAN ECOLOGY

DATE: 11/71 CONTRACT NO:

PIETZKE R R

KARDOS L T SOPPER W E  
WASTE WATER RENOVATION AND CONSERVATION THE PENNSYLVANIA STATE UNIVERSITY STUDIES NO 23  
PENNSYLVANIA STATE UNIVERSITY  
GEO AREA UNIVERSITY PARK PA  
03B000003 SUBJ CLASS: 04  
SUBJ: WASTE WATER RENOVATION

DATE: 67 CONTRACT NO:

SHEARLS E A

CHIA S N HARGIS JR G J  
THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA PART III  
VIRGINIA INSTITUTE OF MARINE SCIENCE  
GEO AREA CLOUCESTER POINT VA  
03B000002 SUBJ CLASS: 06  
SUBJ: THERMAL EFFECTS JAMES RIVER NUCLEAR POWER PLANT  
INSTRUMENT CALIBRATION INFRA-RED SCANNING  
33

DATE: 2/73 CONTRACT NO:

ORO-4067-4

08-74  
 ENVIRONMENTAL PROTECTION AGENCY  
 LIBRARY SYSTEM REPORT  
 DOCUMENT CONTROL SYSTEM  
 PROG: DOCS.AUTH

AUTHOR SCHEDULE

SPENCER D L      WORONIAK A  
 TRANSFER OF TECHNOLOGY TO DEVELOPING NATIONS  
 PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE APRIL 28 30 1966  
 HOWARD UNIVERSITY  
 U S AIR FORCE OFFICE OF AEROSPACE RESEARCH  
 GEO AREA WARRENTON VA      DATE: 12/66 CONTRACT NO: AFOSR66  
 038000011      SUBJ CLASS: 10  
 SUBJ: TECHNOLOGY TRANSFER      ECONOMIC THEORY

8-74  
ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DOCU.CORP

PRIMARY CORPORATE AUTHOR SCHEDULE

AIE POLLUTION FOUNDATION  
SEVENTH TECHNICAL PROGRESS REPORT  
FAITH W L RENZETTI N A  
GEO AREA SAN MARINO CA  
C3800C001 SUBJ CLASS: 01 DATE: 3/61 CONTRACT NO:  
SUBJ: ATMOSPHERIC PHOTOCHEMISTRY MOTOR VEHICLE EMISSIONS INSTRUMENTATION

33

AMERICAN PUBLIC POWER ASSOCIATION  
21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS  
GEO AREA JACKSONVILLE FL  
C390C004 SUBJ CLASS: 04 DATE: 5/64 CONTRACT NO:  
SUBJ: POWER INDUSTRY PUBLIC POWER ATOMIC POWER

FEDERATION OF ROCKY MOUNTAIN STATES INC  
SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION  
TRANSPORTATION AND EMPLOYMENT WESTERN STATES CONFERENCE  
WESTERN GOVERNORS CONFERENCE  
GEO AREA SALT LAKE CITY UT  
C3900C007 SUBJ CLASS: 13 10 DATE: 3/70 CONTRACT NO:  
SUBJ: HUMAN RESOURCES HUMAN ECOLOGY

HOWARD UNIVERSITY  
TRANSFER OF TECHNOLOGY TO DEVELOPING NATIONS  
PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE APRIL 28 30 1966  
SPENCER D L WIRONIAK A  
U S AIR FORCE OFFICE OF AEROSPACE RESEARCH  
GEO AREA WARRENTON VA  
C3900C011 SUBJ CLASS: 10 DATE: 12/66 CONTRACT NO: AFOSR66  
SUBJ: TECHNOLOGY TRANSFER ECONOMIC THEORY

MARINE TECHNOLOGY SOCIETY  
EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT  
GEO AREA WASHINGTON DC  
C3900C008 SUBJ CLASS: 04 10 DATE: 6/66 CONTRACT NO:  
SUBJ: MARINE TECHNOLOGY OCEAN EXPLOITATION OCEAN DUMPING  
UNDERSEA MINING MINING INDUSTRY

NEW ENGLAND NEW YORK INTER-AGENCY COMMITTEE  
RESOURCES OF NEW ENGLAND NEW YORK REGION PT 2 CH 1  
GEO AREA BOSTON MA  
C3900C005 SUBJ CLASS: 04 14 DATE: 3/55 CONTRACT NO:  
SUBJ: NORTHEAST DRAINAGE BASIN WATER POLLUTION

08-74  
ENVIRONMENTAL PROTECTION AGENCY  
SECONDARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DDCU-CORP

## PRIMARY CORPORATE AUTHOR SCHEDULE

PENNSYLVANIA STATE UNIVERSITY  
WASTE WATER RENOVATION AND CONSERVATION THE PENNSYLVANIA STATE UNIVERSITY STUDIES NO 23  
PARIZEK R R KARDOS L T SOPPER W E  
GEO AREA UNIVERSITY PARK PA DATE: 67 CONTRACT NO:  
038C0C003 SUBJ CLASS: 04  
SUBJ: WASTE WATER RENOVATION

TILTON SCHOOL WATER POLLUTION PROGRAM  
CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES V 1-2  
GEO AREA TILTON NH DATE: CONTRACT NO: 1TT1-WP-41-01  
038030009 SUBJ CLASS: 04  
SUBJ: ENVIRONMENTAL EDUCATION WATER POLLUTION CURRICULUM DEVELOPMENT

UNITED STATES NATIONAL COMMISSION FOR UNESCO  
ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN  
KOHN R F GA DATE: 11/71 CONTRACT NO:  
GEO AREA ATLANTA SUBJ CLASS: 10  
038C0C006 SUBJ: ENVIRONMENTAL EDUCATION STUDY OF MANKIND ECOLOGICAL EFFECTS

UNIVERSITY OF CALIFORNIA WATER RESOURCES CENTER  
OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING  
EARTHQUAKE RISK 1973 CONTRIBUTIONS  
DUKE C W JACOBSEN S F CA DATE: 6/73 CONTRACT NO: UCAL-WRC-W-339  
GEO AREA SUBJ CLASS: 04  
038C0C010 SUBJ: WATER RESOURCE SYSTEMS EARTHQUAKES

VIRGINIA INSTITUTE OF MARINE SCIENCE  
THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA PART III  
SHEARIS E A CHIA S N HARGIS JR W J  
GEO AREA CLOUCESTER POINT VA DATE: 2/73 CONTRACT NO:  
038C0C002 SUBJ CLASS: 06  
SUBJ: THERMAL EFFECTS JAMES RIVER NUCLEAR POWER PLANT  
INSTRUMENT CALIBRATION INFRA-RED SCANNING  
ORO-4067-4

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DOCU.SUBJNO

## SUBJECT LISTING

|                                         |       |                                                                                                                                    |       |
|-----------------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------|-------|
| ATMOSPHERIC PHOTOCHEMISTRY<br>03B000001 | 01    | SEVENTH TECHNICAL PROGRESS REPORT                                                                                                  |       |
| ATOMIC POWER<br>03B000004               | 04    | 21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS                                                              |       |
| CURRICULUM DEVELOPMENT<br>03B000009     | 04    | CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES                                                           | 7 1-2 |
| EARTHQUAKES<br>03EC00010                | 04    | OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING<br>EARTHQUAKE RISK 1973 CONTRIBUTIONS                                         |       |
| ECOLOGICAL EFFECTS<br>03B000006         | 10    | ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN                                                                                    |       |
| ECONOMIC THEORY<br>03B000011            | 10    | TRANSFER OF TECHNOLOGY TO DEVELOPING NATIONS<br>PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE APRIL 28 30 1966       |       |
| ENVIRONMENTAL EDUCATION<br>03B000009    | 04    | CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES                                                           | 7 1-2 |
|                                         | 10    | ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN                                                                                    |       |
| HUMAN ECOLOGY<br>03B000006              | 10    | ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN                                                                                    |       |
|                                         | 13 10 | SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION<br>TRANSPORTATION AND EMPLOYMENT WESTERN STATES CONFERENCE |       |
| HUMAN RESOURCES<br>03B000007            | 13 10 | SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION<br>TRANSPORTATION AND EMPLOYMENT WESTERN STATES CONFERENCE |       |

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DOCU.SURJNO

## SUBJECT LISTING

|                                       |       |                                                                                 |           |
|---------------------------------------|-------|---------------------------------------------------------------------------------|-----------|
| INPRA-RED SCANNING<br>03B000002       | 06    | THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA    | PART III  |
| INSTRUMENT CALIBRATION<br>03B000002   | 06    | THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA    | PART III  |
| INSTRUMENTATION<br>03B000001          | 01    | SEVENTH TECHNICAL PROGRESS REPORT                                               |           |
| JAMES RIVER<br>03B000002              | 06    | THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA    | PART III  |
| MARINE TECHNOLOGY<br>03B000008        | 04 10 | EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT |           |
| MINING INDUSTRY<br>03B000008          | 04 10 | EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT |           |
| MOTOR VEHICLE EMISSIONS<br>03B000001  | 01    | SEVENTH TECHNICAL PROGRESS REPORT                                               |           |
| NORTHEAST DRAINAGE BASIN<br>03B000005 | 04 14 | RESOURCES OF NEW ENGLAND NEW YORK REGION                                        | PT 2 CH 1 |
| NUCLEAR POWER PLANT<br>03B000002      | 06    | THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA    | PART III  |
| OCEAN DUMPING<br>03B000008            | 04 10 | EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT |           |
| OCEAN EXPLOITATION<br>03B000008       | 04 10 | EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT |           |
| POWER INDUSTRY<br>03B000004           | 04    | 21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS           |           |

8-74  
ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
DOCUMENT CONTROL SYSTEM  
PROG: DOCU.GEO

## GEOGRAPHIC SCHEDULE

CA

## OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING

EARTHQUAKE RISK 1973 CONTRIBUTIONS  
DUKE C H JACOBSEN S E  
UNIVERSITY OF CALIFORNIA WATER RESOURCES CENTER  
DATE: 6/73 CONTRACT NO: UCAL-WRC-W-339  
03B000010 SUBJ CLASS: 04 EARTHQUAKES  
SUBJ: WATER RESOURCE SYSTEMS 141

SAN MARINO

SEVENTH TECHNICAL PROGRESS REPORT

FAITH W L RENZETTI N A

AIR POLLUTION FOUNDATION

DATE: 3/61

CONTRACT NO:

SUBJ CLASS: 01

SUBJ: ATMOSPHERIC PHOTOCHEMISTRY

MOTOR VEHICLE EMISSIONS

INSTRUMENTATION

33

DC

WASHINGTON

EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT

MARINE TECHNOLOGY SOCIETY

DATE: 6/66

03B000008

SUBJ: MARINE TECHNOLOGY

UNDERSEA MINING

SUBJ CLASS: 04 10

OCEAN EXPLOITATION

MINING INDUSTRY

OCEAN DUMPING

FL

JACKSONVILLE

21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS

AMERICAN PUBLIC POWER ASSOCIATION

DATE: 5/64

03B000004

SUBJ: POWER INDUSTRY

CONTRACT NO:

SUBJ CLASS: 04

PUBLIC POWER

ATOMIC POWER

GA

ATLANTA

ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN

KOHN R F

UNITED STATES NATIONAL COMMISSION FOR UNESCO

DATE: 11/71

03B000006

SUBJ: ENVIRONMENTAL EDUCATION

SUBJ CLASS: 10

HUMAN ECOLOGY

STUDY OF HANKIND

ECOLOGICAL EFFECTS

1-08-74 ENVIRONMENTAL PROTECTION AGENCY GEOGRAPHIC SCHEDULE  
LIBRARY SYSTEM REPORT  
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MA BOSTON RESOURCES OF NEW ENGLAND NEW YORK REGION PT 2 CH 1

NEW ENGLAND NEW YORK INTER-AGENCY COMMITTEE  
DATE: 3/55 CONTRACT NO:  
038000005 SUBJ CLASS: 04 14  
SUBJ: NORTHEAST DRAINAGE BASIN WATER POLLUTION

NH TILTON CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES V 1-2

TILTON SCHOOL WATER POLLUTION PROGRAM CONTRACT NO: 1TT1-WP-41-01  
DATE: 038000009 SUBJ CLASS: 04  
SUBJ: ENVIRONMENTAL EDUCATION WATER POLLUTION CURRICULUM DEVELOPMENT

PA UNIVERSITY PARK WASTE WATER RENOVATION AND CONSERVATION THE PENNSYLVANIA STATE UNIVERSITY STUDIES NO 23  
PARIZEK R R KARDOS L T SOPPER W E  
DATE: 038000003 SUBJ CLASS: 04 CONTRACT NO: 67  
SUBJ: WASTE WATER RENOVATION

UT SALT LAKE CITY SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION  
TRANSPORTATION AND EMPLOYMENT WESTERN STATES CONFERENCE

FEDERATION OF ROCKY MOUNTAIN STATES INC  
WESTERN GOVERNORS CONFERENCE  
DATE: 038000007 SUBJ CLASS: 13 10 CONTRACT NO:  
SUBJ: HUMAN RESOURCES HUMAN ECOLOGY

VA CLOUCESTER POINT THERMAL EFFECTS OF THE SURRY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA PART III  
SHEARLS E A CHIA S N HARGIS JR W J  
VIRGINIA INSTITUTE OF MARINE SCIENCE  
DATE: 038000002 SUBJ CLASS: 06 CONTRACT NO:  
SUBJ: THERMAL EFFECTS JAMES RIVER  
INSTRUMENT CALIBRATION INFRA-RED SCANNING  
ORO-4067-4  
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NUCLEAR POWER PLANT

## SHELF LISTING

ENVIRONMENTAL PROTECTION AGENCY  
LIBRARY SYSTEM REPORT  
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PROG: DOCU.SHELF

|           |                                                                                                                                                                             |                    |                |            |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|------------|
| 03B000001 | SEVENTH TECHNICAL PROGRESS REPORT<br>FAITH W L<br>AIR POLLUTION FOUNDATION                                                                                                  | DATE: 3/61 PB NO:  | REPORT NO: 33  |            |
| 03B000002 | THERMAL EFFECTS OF THE SURREY NUCLEAR POWER PLANT ON THE JAMES RIVER VIRGINIA PART III<br>SHEARIS E A<br>VIRGINIA INSTITUTE OF MARINE SCIENCE                               | DATE: 2/73 PB NO:  | REPORT NO: 33  | ORO-4067-4 |
| 03B000003 | WASTE WATER RENOVATION AND CONSERVATION THE PENNSYLVANIA STATE UNIVERSITY STUDIES NO 23<br>PARIZEK R R<br>PENNSYLVANIA STATE UNIVERSITY                                     | DATE: 67 PB NO:    | REPORT NO:     |            |
| 03B000004 | 21 ST ANNUAL CONVENTION AMERICAN PUBLIC POWER ASSOCIATION PROCEEDINGS<br>AMERICAN PUBLIC POWER ASSOCIATION                                                                  | DATE: 5/64 PB NO:  | REPORT NO:     |            |
| 03B000005 | RESOURCES OF NEW ENGLAND NEW YORK REGION PT 2 CH 1<br>NEW ENGLAN NEW YORK INTER-AGENCY COMMITTEE                                                                            | DATE: 3/55 PB NO:  | REPORT NO:     |            |
| 03B000006 | ENVIRONMENTAL EDUCATION THE LAST MEASURE OF MAN<br>KOHN R F<br>UNITED STATES NATIONAL COMMISSION FOR UNESCO                                                                 | DATE: 11/71 PB NO: | REPORT NO:     |            |
| 03B000007 | SCIENCE AND TECHNOLOGY AND ITS APPLICATION TO THE PROBLEMS OF POLLUTION<br>TRANS TATION AND EMPLOYMENT WESTERN STATES CONFERENCE<br>FEDERATION OF ROCKY MOUNTAIN STATES INC | DATE: 3/70 PB NO:  | REPORT NO:     |            |
| 03B000008 | EXPLOITING THE OCEAN TRANSACTIONS OF THE 2 ND ANNUAL MTS CONFERENCE AND EXHIBIT<br>MARINE TECHNOLOGY SOCIETY                                                                | DATE: 6/66 PB NO:  | REPORT NO:     |            |
| 03B000009 | CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION AND ENVIRONMENTAL STUDIES V 1-2<br>TILTON SCHOOL WATER POLLUTION PROGRAM                                                     | DATE: PB NO:       | REPORT NO:     |            |
| 03B000010 | OPTIMIZATION OF WATER RESOURCE SYSTEMS INCORPORATING<br>EARTHQUAKE RISK 1973 CONTRIBUTIONS<br>DUKE C M<br>UNIVERSITY OF CALIFORNIA WATER RESOURCES CENTER                   | DATE: 6/73 PB NO:  | REPORT NO: 141 |            |
| 03B000011 | TRANSFER OF TECHNOLOGY TO DEVELOPING NATIONS<br>PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE APRIL 28 30 1966<br>SPENCER D L<br>HOWARD UNIVERSITY            | DATE: 12/66 PB NO: | REPORT NO:     |            |

## em Comparisons

This table briefly compares some of the common aspects of the library systems.

The operation cost comparisons are based on the execution of a computer program that generates a standard report.

In all instances, the hardware is NIH's IBM 370/165's and the software is the Inquiry and Reporting System language.

| The System                                    | .System Development<br>.Time * | .Comp' er Program<br>.Executed                                                                              | .Execution Time (CPU SEC)<br>.Dollar Cost/Turn Around | .Size of Master<br>.File                                                                                | .Type of Storage |
|-----------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------|
| The Journal<br>System                         | .160 Working Hours             | .Generates a Journal<br>.Inventory report for<br>.a single library-<br>.HQ's Library in this<br>.execution. | .4.84 sec/\$7.25/<br>.2 hr turn around**              | .Journal holdings<br>.file-6262 120 ch<br>.records/Journal<br>.title file-2656<br>.120 ch records       | .On-line Disk*** |
| Hard Bound<br>Book System                     | .360 Working Hours             | .Generates a subject<br>.Report for the total<br>.Library network.                                          | .19.65 sec/\$32.62/<br>.2 hr turn around**            | .Book holdings file<br>.of 9098 130 ch<br>.records/Book title<br>.file of 2667 130 ch<br>.records.      | .On-line disk*** |
| The Circulation<br>System                     | .120 Working Hours             | .Generates a daily<br>.Report (alpha by<br>.title) of all library<br>.material on loan.                     | .2.31 sec/\$3.12/<br>.2 hr turn around**              | .Circulation master<br>.containing 589<br>.120 ch records.                                              | .On-line disk    |
| The Pesticides<br>Literature<br>Search System | .360 Working Hours             | .Generates an author<br>.Report representing<br>.all citations to date..                                    | .10.53 sec/\$15.36/<br>.2 hr turn around**            | .Single Master file<br>.containing 1000<br>.900 ch records.<br>(This is a sample<br>of the total file.) | .Magnetic Tape   |

\* The total combined time of the functional and technical staffs necessary to develop the application to an operational status using test files.

\*\* Under normal conditions, a lower job class priority would have been used (12-14 hour turn around). A 20% discount would have resulted.

\*\*\*The permanent storage used is magnetic tape. The cost of on-line storage is approximately 1.2 cents to 2 cents/day/track depending on whether public or private disk space is used.

## Item Comparisons Continued

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| The System                                                     | .System Development<br>.Time * | .Computer Program<br>.Executed                                                              | .Execution Time (CPU SEC)<br>.Dollar Cost/Turn Around                             | .Size of Master<br>.File                                                                                | .Type of Storage |
|----------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------|
| The Ecological<br>Air Pollutant<br>Literature<br>Search System | .280 Working Hours             | .Generates an author<br>.report representing<br>.all citations to date..                    | .3.82 sec/\$4.52<br>.12-14 hr turn around                                         | .Single Master file<br>.containing 500<br>.1080 ch records.<br>(This is a sample<br>of the total file.) | .Magnetic Tape   |
| The EPA Reports<br>Reporting System                            | .560 Working Hours             | .Generates an abstract<br>.report for the total<br>.master file.                            | .17.06 sec/\$18.95/<br>.12-14 hr turn around                                      | .Single Master file<br>.containing 1231<br>.4800 ch records.                                            | .Magnetic Tape   |
| International<br>Environmental<br>Reports System               | .280 Working Hours             | .Generates a multiple<br>.subject index (with<br>.abstracts) for the<br>.total master file. | .9.54 sec/\$11.53/<br>.12-14 hr turn around                                       | .Single Master file<br>.containing 518<br>.1600 ch records.                                             | .Magnetic Tape   |
| The EPA Document<br>Control System                             | .160 Working Hours             | .Not applicable as<br>.the system is<br>.developed only to the<br>.test phase.              | .Not applicable as<br>.as the system is<br>.developed only to the<br>.test phase. | .Single Master file<br>.containing 900 ch<br>.records.                                                  | .Magnetic Tape   |

\* The total combined time of the functional and technical staffs necessary to develop the application to an operational status using test files.

\*\* Under normal conditions, a lower job class priority would have been used (12-14 hour turn around). A 20% discount would have resulted.

\*\*\*The permanent storage used is magnetic tape. The cost of on-line storage is approximately 1.2¢ to 2¢/day/track depending on whether public or private disk space is used.