

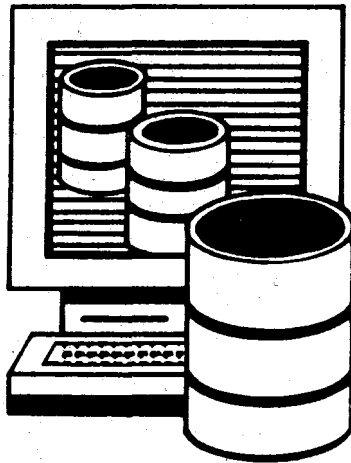


United States
Environmental Protection
Agency

Office of
Solid Waste
Washington, DC 20460

July 1988

PLANNING FOR RCRIS IMPLEMENTATION: AN EXECUTIVE SUMMARY



RCRIS

**RESOURCE CONSERVATION
AND
RECOVERY INFORMATION SYSTEM
(RCRIS)**

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AN INTRODUCTION TO RCRIS

RCRIS, the Resource Conservation and Recovery Information System, is EPA's new computerized management information system for managing the hazardous waste program mandated by the Resources Conservation and Recovery Act (RCRA).

RCRIS is the result of an extensive and continuing development effort whose goal is to meet the information management needs of both EPA and the states in carrying out RCRA.

RCRA requires EPA to administer a national program to control hazardous waste. However, it was the intent of Congress that, where possible, the states assume responsibility for controlling such waste within their borders, with federal financial and technical assistance. The success of RCRA in regulating hazardous waste disposal activities therefore depends largely upon the close cooperation of EPA and the states.

RCRIS is being designed through a cooperative effort between EPA and the states to support state and EPA hazardous waste activities. It will do so by providing a system that is both broad and flexible, and thereby able to meet both EPA's and the states' individual and shared information processing requirements.

This executive summary presents an overview of RCRIS, including:

- RCRIS objectives
- Key RCRIS features and functions
- Major RCRIS software modules
- EPA/State cooperation in RCRIS's development
- RCRIS installation cost information
- Implementation approach and schedule

RCRIS OBJECTIVES

The overall goal of this new system is to help EPA and the states carry out the RCRA program more effectively by providing:

- Capability to respond to the diverse information tracking requirements of EPA headquarters, EPA regions, and the states;
- A mechanism for ensuring highly accurate data;
- A user friendly system;
- A system that can be modified to carry out future changes in RCRA; and
- Access to information in other related EPA data bases.

RCRIS FEATURES AND FUNCTIONS

RCRIS will offer its users an impressive array of features and functions. The most significant of these are:

- **Two Levels of Information Tracking.** RCRIS is designed to meet the information requirements of two levels of management, those associated with the day-to-day implementer activities of carrying out RCRA, and those needed to support the broader oversight responsibilities of the EPA regions and headquarters.

This design is referred to as the "Two-Domain

Concept" in RCRIS, and is described more fully in the next section. It enables RCRIS to meet state, EPA regional, and EPA headquarters RCRA information management needs.

- **Compatibility with Mainframes and PCs.** RCRIS is designed to run on either mainframes or PCs that have FOCUS software installed. This flexibility will allow RCRIS to be used by states or state offices that prefer PC to mainframe systems.
- **Compatibility with IBM Equipment.** RCRIS is implemented in a single data base (FOCUS) language, and can be installed on most IBM or IBM-compatible PCs and mainframes.
- **Compatibility with Non-IBM/Non-RCRIS Systems.** States committed to non-IBM hardware or non-RCRIS software can continue to use those systems. These states would use a special software program to convert or "translate" non-RCRIS data into the proper format for monthly transfers of data to the RCRIS system at the EPA regional offices.
- **Tracks a Broad Range of Information.** RCRIS contains seven major modules that track a variety of RCRA-related information, including Handler Identification (basic information about hazardous waste generators, transporters and treatment, storage and disposal facilities), Compliance Monitoring and Enforcement (which tracks inspections, violations, and enforcement actions) and Permitting (the status of actions on a hazardous waste facility permit application). Other modules address corrective action, facility management planning, and program management.

- **Enables States to Carry Out RCRA More Effectively.** The two-domain design provides states that adopt RCRIS with a complete in-house RCRA management information system that will enable them to carry out the RCRA program more effectively.

The Responsibilities. Accompanying the benefits of RCRIS are new responsibilities for both EPA and the states, and new or enhanced software tools to help fulfill those responsibilities:

- **Maintenance of Data.** As owners of the data that they generate, the states and EPA regions (in their capacity as implementers), will be responsible for storing and maintaining that data. The RCRIS software provides a complete system for maintaining a large quantity of detailed information about hazardous waste generators, transporters and treatment, storage and disposal facilities.
- **Quality of Data.** As implementers, states and EPA regions will be responsible for ensuring the accuracy and completeness of the data that they maintain. RCRIS provides software tools to assist in this process.
- **Timeliness of Data.** As implementers, states and EPA regions will be required to meet the deadlines for transferring high quality data to the EPA oversight domain. States will also be required to respond in a timely fashion to EPA requests for special reports. RCRIS provides software tools to quickly and easily produce such reports.

- **Cooperation in Resolving Data Differences.** EPA regions and the states will be responsible for working together to reconcile data differences regarding particular hazardous waste firms. RCRIS software identifies data that require attention.

RCRIS OFFERS CHOICES

The two-domain design and other key features of RCRIS contribute to a system that provides each state with several choices in implementing RCRIS.

The Manual Option. Implementers with RCRA programs that manage a very small amount of data may opt to continue maintaining manual records. These states would simply furnish paper records containing RCRIS information to the EPA Regions.

The PC Option. Implementers may choose to adopt the PC version of RCRIS by purchasing a single or multiple IBM or IBM-compatible PC AT system(s) with PC FOCUS software, depending on the size of their database.

The Mainframe Option. Implementers also have the option of adopting the mainframe version of RCRIS using an in-house mainframe system with mainframe FOCUS software.

The Translator Option. In addition to accommodating small or large amounts of data, RCRIS also allows states to retain their existing hardware and software and still provide information needed by RCRIS. This is accomplished by furnishing data that has been translated into RCRIS format. The translation will be performed electronically, using a special translator function that must be

added to the state's existing software. The transfer to the EPA region of the resulting oversight data will be done monthly.

Note: EPA is also currently investigating the ability to implement RCRIS on a local area network.

RCRIS CONTAINS SEVEN MAJOR MODULES

RCRIS tracks a wide range of information related to firms that generate, transport, and/or treat, store, and dispose of hazardous waste. This information is managed by RCRIS' seven major modules, or applications (see Figure 1):

- **Handler Identification (HID).** Tracks and maintains descriptive information on regulated hazardous waste facilities, generators, and transporters.
- **Permitting, Closure, Post-Closure (PMT/CL/PC).** Tracks information on the status of permit applications for hazardous waste facilities.
- **Compliance Monitoring & Enforcement (CM&E).** Tracks and maintains data for handler compliance evaluations, violations, enforcement actions, and return to compliance.
- **Data Quality/Data Management (DQ/DM).** Provides automated software controls to ensure the accuracy of data.
- **Corrective Action (CA).** Supports the permit-writing and program-enforcement coordination necessary for an effective corrective action program.

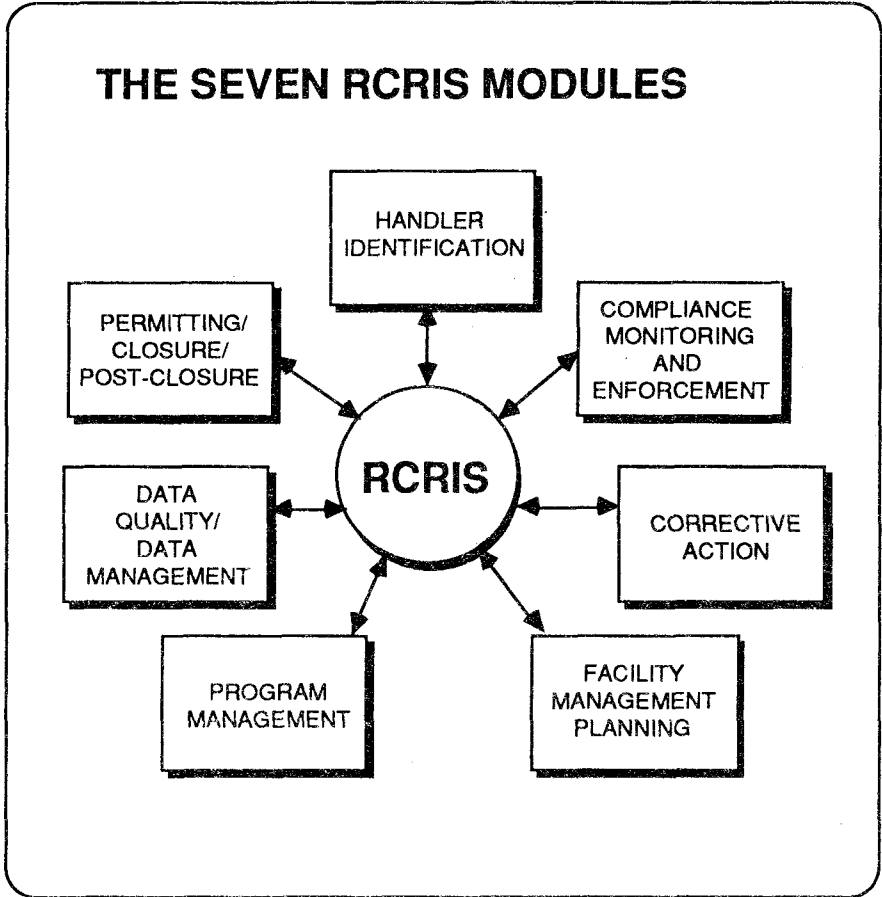


Figure 1 - The Seven RCRIS Modules

- **Program Management (PM).** Supports the state, regional, and national management and evaluation needs of the RCRA program.
- **Facility Management Planning (FMP).** Supports the development and analysis of facility management plans.

RCRIS EMBODIES EPA/STATE COOPERATION

One of the key attributes of RCRIS is that it responds to the RCRA information management requirements of both EPA and the states. This has been realized through the high degree of EPA/State cooperation during the development of the system:

- **RCRIS Resource Group.** Both EPA and state representatives have been involved in the RCRIS design process (via a Resource Group made up of 5 state, 5 headquarters, and 5 regional representatives), including the development, testing, and evaluation of the 7 RCRIS modules.
- **National Governors Association.** State representation has been both coordinated and augmented by the National Governors Association and its RCRIS State Advisory Council.

WHAT WILL IT COST?

RCRIS will be able to run on a broad spectrum of hardware options, from IBM mainframes to IBM PC-compatible hardware. Therefore, the cost of installing RCRIS will vary from state to state, depending on the amount of hardware and software to be purchased and the amount of data to be managed.

Some preliminary hardware and software cost estimates are:

- **Single PC System.** A complete minimum IBM PC-compatible system (hardware and software) can cost as little as \$7500.
- **Multiple PC Systems.** Additional IBM PC compatible systems will cost approximately \$6800 each, because the \$700 data backup unit included with the initial system serves multiple PCs.
- **RCRIS for Mainframes.** To use RCRIS on an implementer IBM mainframe, a FOCUS software license will be required, costing approximately \$55,000.
- **Translators for Non-RCRIS Mainframes.** To develop translator software, the cost may range from \$120,000 to \$150,000. This figure is based on preliminary estimates for translating a total number of 94 oversight data elements.
- **Additional Costs.** These estimates do not include:
 - Personnel costs associated with cleaning up HWDMS data and loading it into RCRIS, will vary depending upon the amount of data and the extent to which it must be researched and corrected.

- Annual operating and maintenance costs, which will also vary according to the size and complexity of the system.

APPROACH AND SCHEDULE FOR IMPLEMENTING RCRIS

Because RCRIS implementation will involve numerous organizations over an extended period of time (57 states and territories, 10 EPA regions and headquarters), the implementation must be carefully planned and orchestrated.

EPA national, regional, and state level implementation plans will be developed to guide the process. These plans will detail the approach and schedule of events, from hardware acquisition to RCRIS data base initialization (creation of the data base for the first time), to training. The state plans will be negotiated with EPA regions.

The schedule for RCRIS implementation is:

- **Field Testing.** Field testing of key RCRIS components — Summer, 1988.
- **Pilot.** To be conducted in EPA Region IV — March through June, 1989.
- **Software Modifications.** Pilot evaluation report and consequent RCRIS software modifications — July through August, 1989.
- **National Implementation.** Beginning in Fall of 1989.