



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

JA 1700
JA 1700
JA 2000
CAT 4043

PROCUREMENT AND SYSTEMS
ACQUISITION DIVISION

B-179665

JAN 27 1975

~~25-0064~~

097112

The Honorable James C. Fletcher
Administrator, National Aeronautics
and Space Administration



Dear Dr. Fletcher:

GAO is examining the Earth Resources Technology Satellite (ERTS) program to identify issues of primary interest to the Congress concerning the implementation, status, and future of the program. Although our work is continuing, we are bringing to your attention at this time matters concerning planned procurements by the Departments of Agriculture, Commerce, and the Interior which we believe should be avoided or deferred until the future of the ERTS program has been clearly established.

2.
4

42.7
33

The objectives of the ERTS program are to (1) obtain information concerning the earth's surface, (2) determine the feasibility of remote sensing from space and (3) provide experience for a decision on developing an operational earth resources system. The initial satellite was placed in orbit in July 1972 and has provided valuable data toward accomplishing these objectives. However, improvements are needed in sensor resolution and data processing and interpretation for potential users.

Bills have been introduced in the Congress to implement an operational system, either in the National Aeronautics and Space Administration (NASA) or the Department of the Interior. NASA and the Interior are on record as favoring a continuing program of research and development and, if this is justified, then gradually phasing in some applications to operational uses. At this time, however, there is no certainty of a future operational system.

INCREASED COSTS DUE TO DECENTRALIZATION
OF ERTS DATA PROCESSING

NASA's Goddard Space Flight Center provided all data from the satellite needed by the scientific investigators to carry out their experiments. NASA decided that data from the ERTS-B satellite--to be launched in early 1975--

PSAD-75-51

PSAD-75-51

BEST DOCUMENT AVAILABLE

702219

097112

should be supplied from some other outlet to lessen the workload at Goddard. Initially, NASA contemplated a single source of ERTS-B data for all investigators at the Earth Resources Observation Systems (EROS) Data Center, Department of the Interior, Sioux Falls, South Dakota.

NASA reconsidered this plan and, to permit a greater degree of participation by the other agencies involved in the program, decided to have the investigators obtain their data from several sources. Under this new plan, 23 investigators will obtain data from the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce Data Center, Suitland, Maryland; 57 from the EROS Data Center, and 13 from Western Laboratory, Department of Agriculture, Salt Lake City, Utah. Agriculture will need equipment costing about \$170,000 to enable its Salt Lake City facility to provide data for the assigned investigators. In addition, the increased workload will call for hiring four more employees.

In accordance with previously established practices, all three facilities will continue to provide data to the public.

We made preliminary inquiries concerning costs for supplying data products to the 23 ERTS investigators assigned to NOAA. We were told that some additional costs would be incurred to service the needs of NOAA investigators. We were also told that data for 14 NOAA investigators required a special processing technique currently available at NOAA for oceanographic work. Data requirements for the remaining 9 investigators do not require special processing.

We were informed that the EROS Data Center at Sioux Falls was designed to process more data than it is currently handling. It is capable of supplying data to the 57 investigators currently assigned, the 13 investigators assigned to the Salt Lake City facility and 9 of the 23 investigators assigned to the NOAA facility, with no additional costs for equipment or personnel. Further, the Eastman Kodak Company recently completed a NASA-funded study which concluded that the quality of ERTS products produced at the EROS Center is superior to the products produced at the Salt Lake City facility.

OTHER PROCUREMENT

We noted that Interior is proposing to install a new receiving station at its EROS Data Center. This receiving station, which would cost about \$1 million, would enable the Center to process crude ERTS data in 2 to 3 days (referred to as "quick look") for use by rangeland and hydrological resources managers.

Interior officials informed us that this quick look capability already exists at a station in Prince Albert, Saskatchewan, Canada. Although there may be some minor problems involved in transporting the data from Canada, the Canadian facility reportedly has the capability to promptly provide U.S. resources managers with the required data at a lower cost.

CONCLUSIONS AND RECOMMENDATIONS

In our opinion, all expenditures for capital investments should be critically reviewed because of the uncertainties surrounding the ERTS program. A comprehensive plan for the program should be prepared and presented to the Congress for its consideration.

In the meantime, we believe that the investigators assigned to the Salt Lake City facility should obtain their data products from the EROS Data Center, since it has the capacity to absorb the added workload with no additional costs. This will allow Agriculture to avoid incurring costs of about \$170,000. Additionally, savings may be realized if the EROS Data Center processes the data requirements for the nine NOAA investigators not requiring special processing techniques.

We also believe that the \$1 million planned expenditure for a quick look capability at the EROS Data Center should be deferred because of the uncertain future of the ERTS program and the existing Canadian quick look products. Accordingly, we are recommending that NASA:

- In coordination with the Secretaries of Agriculture and the Interior, institute a system whereby the 13 investigators assigned to the Salt Lake City facility will be supplied data products from

the EROS Data Center, thus allowing Agriculture to avoid the planned procurement of \$170,000, and eliminate the need to hire four additional personnel.

--In coordination with the Secretaries of Commerce and the Interior, study the economic and technical feasibility of assigning to the EROS Data Center investigators currently assigned to the Suitland, NOAA facility.

--Coordinate with Agriculture, Commerce, and the Interior in studying the economic and technical feasibility of designating the EROS Data Center as the source of all ERTS data products to the public as well as to the investigators while the program is in the experimental stage.

--Assist Interior in making arrangements to obtain the needed quick look data from Canada, thus deferring Interior's \$1 million planned expenditure at the EROS Data Center.

--Critically review all planned actions related to the ERTS program which may cause unnecessary procurements by other agencies.

We believe the above actions can be taken without affecting the viability of the ERTS program.

We have interviewed officials and reviewed documents at NASA, Agriculture, Commerce, Interior, State, and the Environmental Protection Agency. We have also interviewed officials of the National Academy of Sciences, National Science Foundation, and World Bank.

We are bringing our observations and recommendations to the attention of the Secretaries of Agriculture, Commerce, and the Interior. We are also sending copies of this letter to the Office of Management and Budget; House and Senate Committees on Government Operations and Appropriations; House Committee on Science and Technology; and Senate Committee on Aeronautical and Space Sciences.

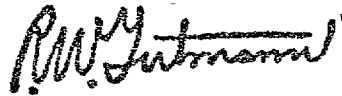
We invite your attention to the fact that this letter contains recommendations to you. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the

B-179665

head of a Federal agency to submit a written statement on actions he has taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of this letter and the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of this letter.

We would be glad to discuss the matters in this letter with you or your staff if you wish. Please contact Assistant Director J. N. Stafford of this Division on code 129, extension 3323.

Sincerely yours,



R. W. Gutmann
Director