United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

In Reply Refer To:
WGS-900510
Mail Stop 590

JUN 15 1990

Mr. C. P. Williams
EOSAT Corporation
4300 Forbes Boulevard
Lanham, Maryland 20706

Dear Mr. Williams:

Thank you for your letter of May 21, 1990, advising us on the status of Landsat 4 and 5 operations. We were interested to hear about the steps you have taken to extend the service life of Landsats 4 and 5, thus reducing and perhaps avoiding a data gap between the demise of the existing Landsats and the launch of Landsat 6.

However, we are concerned about one aspect of these efforts in which "data collections are matched to requests, and very little speculative data is acquired." While this may reduce overall operating costs and help extend the life of the Landsat satellites, it has a negative effect on the collection of repetitive coverage of the Earth's land surface, which has been a guiding principle of the Landsat program since its inception. Your data collection practices have the effect of minimizing the availability of historical coverage for future studies of processes and phenomena whose locations cannot be predicted at present, such as volcanic eruptions (like Mt. St. Helens) and nuclear power plant accidents (like Chernobyl) for which pre-event data was essential to impact assessment.

Extensive historical coverage is also needed to monitor long-term environmental changes on the Earth. The image of the Aral Sea in the Soviet Union that you released on Earth Day (Space News, v. 1, no. 16, p. 10, April 30-May 6, 1990, issue) clearly illustrates the value of acquiring repetitive coverage over periods of years.

We hope that you will consider the impact of your data collection strategy on these important applications of Landsat data.

Sincerely yours,

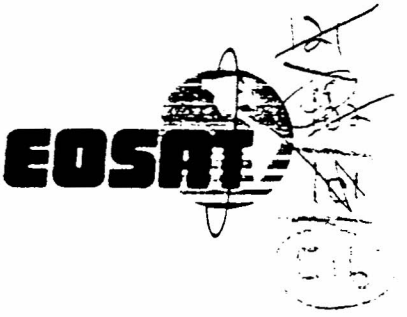
Dallas L. Peck

Director

cc: General Files--MS114
Dir. Chron--MS114
NMD Files--MS518
CR Chron--MS590
~~CR~~ (Pettinger)--MS590
NMD:590:LPettinger:sm:6/7/90
RETYPED:sm:6/11/90 (f:\landsat.ltr)

CR (Pettinger)--590

C.P. WILLIAMS President and Chief Executive Officer



May 21, 1990

Mr. Dallas L. Peck
Director
U. S. Geological Survey
John W. Powell Federal Bldg.
Room 7A412
12201 Sunrise Valley Drive
Reston, VA 22092

Dear Mr. Peck:

The continued funding of Landsat 4 and 5 operations has been an issue between the Administration and Congress for the past two years. The Administration's solution for Fiscal Year 1990 was to augment NOAA's funding with donations from three user agencies. As we become involved with the Fiscal Year 1991 Appropriations process, I thought that it would be valuable to update the donor agencies on the status of Landsat 4 and 5 operations.

As you know, Landsats 4 and 5 have continued to operate well beyond their stated engineering design life of three years. In fact, since EOSAT assumed control of the spacecraft in November 1985, we have been able to extend the Landsat mission to include data from both spacecraft, improve data throughput, and reduce dramatically the cost of operations.

The continued operation of Landsats 4 and 5 is due in part to the design and engineering of these spacecraft and payloads. But it is also due in part to a rigorous life extension program that we at EOSAT established in late 1987 to extend their service life and support the user community when Landsat 6 funding was delayed. The first part of this program involved the revitalization of a Landsat 4 data link which NOAA had declared unusable in 1983. The second activity revolves around closer monitoring of all onboard system components and controlled scheduling of spacecraft acquisitions to limit the on-time of sensitive transmitter elements.

9CCE10

Earth Observation Satellite Company
4300 Forbes Boulevard • Lanham, Maryland 20706 USA • 301) 552-0310 • (800) 344-9933 • RCA TELEX 277685 EOSAT UR

Based on the information from our continuous monitoring of spacecraft status, and barring any catastrophic failure, we believe that both spacecraft will be operating and capable of returning usable data through Calendar Year 1991. In order to assure that Landsat resources will be available to support operational U. S. government and civilian programs, we have initiated a further change in our sensor life extension program, which in effect reduces Landsat daily data collections through TDRSS. Under the current operating scenario, data collections are matched to requests, and very little speculative data is acquired. We have implemented this program specifically to retain a U. S. remote sensing capability, and delay or reduce any void created by the delayed funding and availability of the Landsat 6 replacement spacecraft, which is currently scheduled for launch in December 1991.

At this time, we are planning to operate Landsats 4 and 5 at the same reduced level of fiscal resources which were available during FY 1989 and 1990, or approximately $19,000,000, half supplied by NOAA and the balance from other sources. We have asked NOAA to confirm their plans for continued funding of Landsats 4 and 5, and, I am sorry to report, that we have no answer to our requests. Furthermore, we understand that NOAA is promulgating the position that Landsats 4 and 5 will cease operating in 1990. We have no idea what this is based upon. Again, let me reiterate that based on all the engineering data which we are able to collect daily from the spacecraft that this is not the case. NOAA has on-site representatives who participate in all spacecraft reviews.

Lastly, let me remind you the President, through the National Space Council, has endorsed the continued funding of the program as long as the Landsats 4 and 5 spacecraft continue to function. This position is consistent with EOSAT's current NOAA contract. And a position which we expect the Department of Commerce to honor since the revised "commercialization contract" which is dated 1 April 1988 specifically outlines the Department of Commerce's obligations with regard to funding operations of Landsats 4 and 5, and EOSAT's responsibility for funding of Landsat 6 operations.

I would be happy to personally brief your personnel on the current status of Landsats 4, 5, and 6 if you think such a briefing would be beneficial. If you have additional questions, or wish to arrange a briefing, please contact Mr. Richard Mroczynski at 552-0545.

Sincerely,

C. P. Williams

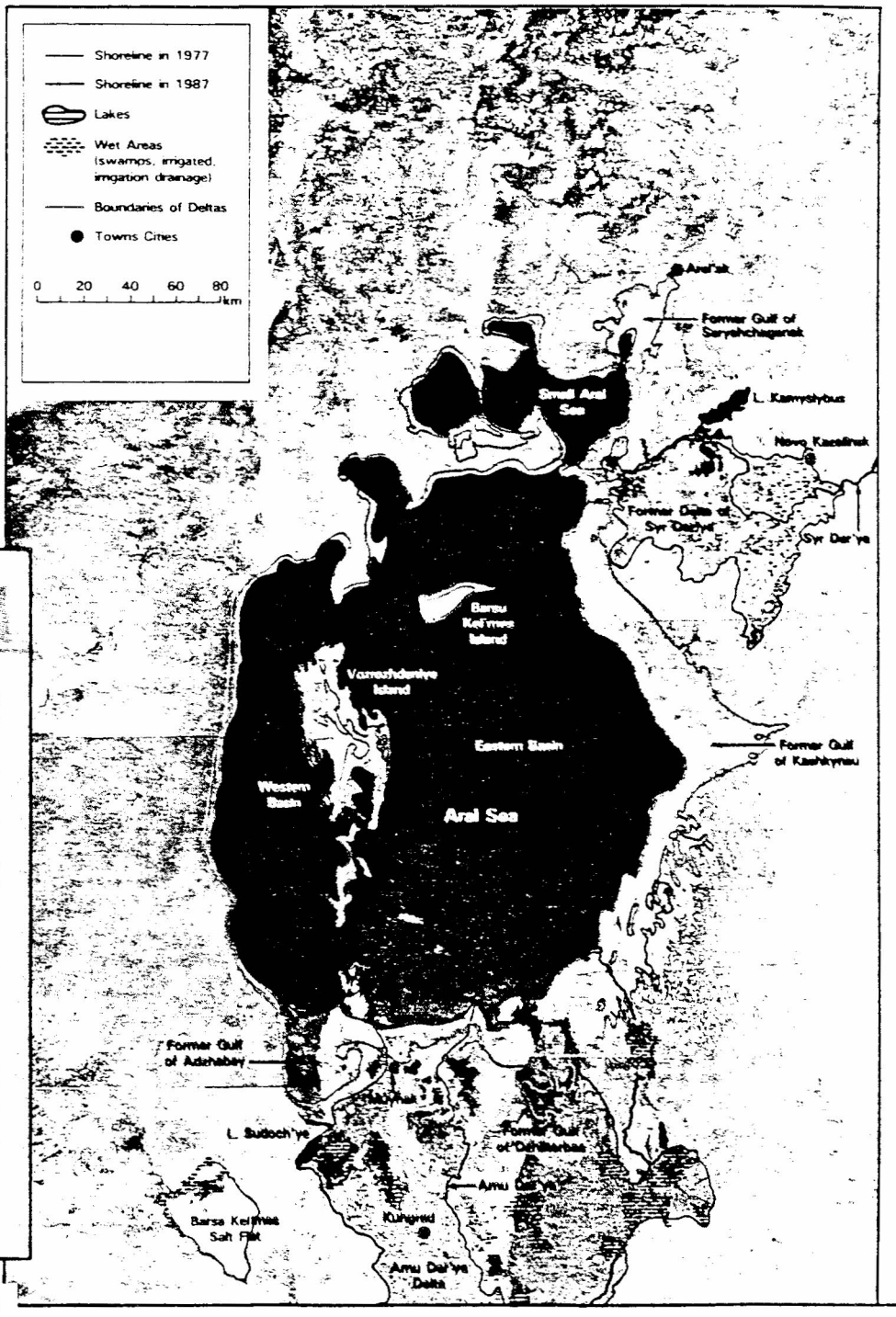
CPW/as

Landsat Images Reveal Man-Made Decay of Aral

The Earth Observation Satellite Co., Lanham, Md., to commemorate Earth Day, has released images created by the Landsat remote-sensing satellites that illustrate man-made environmental disasters affecting the Earth today.

The satellite imagery, each of which has a resolution of 80 meters (264 feet), shows that unrestricted agricultural development in the south-central region of the Soviet Union is depleting water supplies in the Aral Sea. The drop in sea level is creating toxic dust storms, destruction of the local fishing industry and a sharp rise in infant mortality, according to a release from the company.

The photograph shown at right, taken in 1987, shows a receding eastern shoreline with exposed salt deposits, swept up to create toxic dust storms that poison crops in the delta regions. Also shown are the emergence of Vozhrozdeniye Island and the closure of the passage to the Small Aral Sea.



EOSAT PHOTO