

U.S. DEPARTMENT OF COMMERCE Office of Inspector General



TECHNOLOGY ADMINISTRATION

NTIS Operations Jeopardized By Revenue Shortfall

Audit Report No. STD-10592-08-0001/September 1998

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Office of Audits, Science and Technology Audits Division

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EXECUTIVE SUMMARY

Established in 1945 to collect and declassify World War II technical data for dissemination to industry, the mission of the National Technical Information Service (NTIS) is to operate a central clearinghouse that collects and disseminates scientific, technical, and engineering information from international and domestic sources. NTIS funds its operations from revenue earned through the sales of publications and services. However, in fiscal year 1993 it received an appropriation of \$7.8 million to increase its working capital, and in fiscal year 1995 it received another appropriation of \$7 million to modernize its computer systems. NTIS is located in Springfield, Virginia and has 336 employees. In fiscal year 1997, it generated revenue of \$39.5 million, and incurred costs of \$43.2 million, for a net loss of \$3.8 million.

The purpose of our audit was to determine if NTIS would have sufficient revenue and cash reserves to cover the costs of operations for fiscal year 1998 and beyond. This issue was raised when, at the request of the Department, we evaluated NTIS's August 1997 proposal requesting that it become a performance-based organization (PBO). Our evaluation found that NTIS was experiencing serious financial difficulties to the extent that we questioned whether it could remain self-sustaining. Although the Department withdrew the PBO proposal, the question remained concerning NTIS's ability to be self-sustaining.

NTIS's operations include three core lines of business: clearinghouse operations; FedWorld on-line services; and production and brokerage services for other federal agencies. NTIS is required by law to cover its costs of these business through revenue generated by sales of its products and services. Our review found that because of the decline in sales for its clearinghouse products and services and relatively constant costs, the fees collected no longer are sufficient to cover costs. Consequently, NTIS has incurred shortfalls in revenue for two of the past three fiscal years. For fiscal year 1997, this loss was almost \$4 million. For the first seven months of fiscal year 1998, the loss is over \$1 million. Moreover, because of questions identified by NTIS's independent auditors concerning the accuracy of NTIS's inventory records, the accuracy of the costs reported is uncertain.

To help eliminate its operating loss, NTIS has developed new products and services, raised prices, and taken cost-cutting steps such as reducing staffing levels and closing its second warehouse. In the short-run, these steps may help reduce the size of the loss. However, in the long-run we do not believe these actions will be effective because they do not address fundamental problems associated with the clearinghouse business. The most serious problem facing NTIS is the decline in sales of its government publications. The decline is the result of a general decrease in the number of technical publications issued by federal agencies, and an increasing tendency among federal agencies to disseminate information at no charge over the Internet.

While we believe the organization has sufficient cash reserves to carry it through the remainder of fiscal year 1998, we question whether it will have enough cash to operate in fiscal year 1999. Yet, because it has a legislative mandate to provide clearinghouse services, it cannot simply close its

doors when the money runs out. Last year, in a September 8, 1997 memorandum providing our comments on NTIS's draft PBO legislation, we recommended that NTIS senior managers develop a business plan to address NTIS's short-term and long-term program and financial operations. However, we have been told that NTIS officials have been unable to agree on a course of action. Consequently, we believe that the Technology Administration should step in to assist the organization in addressing its problems.

Recommendation

We recommend that the Under Secretary for Technology initiate an independent review of NTIS's operations with an emphasis on, but not restricted to, (1) developing a business plan for NTIS that addresses both its short and long-term financial and business problems, and (2) seeking relief from legislative mandates as required. This business plan should be completed by the end of 1998 to ensure that NTIS will have sufficient funds to pay its liabilities for fiscal year 1999.

Technology Administration Response

In responding to our draft report, Technology Administration agreed with our finding, and stated that it has initiated an independent review of NTIS's operations as we recommended. However, Technology Administration expressed concern that the tone of the report portrayed NTIS as reactive as opposed to proactive in responding to its problems. It also questioned why we did not refer to its Strategic View covering 1998 through 2003.

OIG Comments

We commend Technology Administration for its prompt reaction to the report recommendation. Regarding our portrayal of NTIS as being reactive rather than proactive, that was not our intention. While we agree that the Strategic View was a thoughtful guide on NTIS's reactions to changing market conditions, we did not refer to it in our draft report because the Strategic View did not adequately address NTIS's problems or provide sufficient solutions for correcting them.

INTRODUCTION

NTIS was established in 1945 to collect and declassify World War II technical data for dissemination to industry. Its mission is to operate as a central clearinghouse that collects and disseminates scientific, technical, and engineering information from international and domestic sources. It also develops electronic and other methods for information dissemination, and provides information processing services to other federal agencies. NTIS funds its operations through fees charged for its products and services rather than from appropriations. However, it has received two recent appropriations. In fiscal year 1993, Public Law 102-395 authorized the establishment of the agency's revolving fund and provided a \$7.8 million appropriation corpus to augment their working capital. NTIS also received \$7 million in fiscal year 1995 to modernize its computer systems. NTIS has a staff of 336 employees and is located in Springfield, Virginia. In fiscal year 1997, it generated revenue of \$39.5 million, and incurred costs of \$43.2 million, for a net loss of \$3.8 million.

NTIS's operations include three core lines of business:

- Clearinghouse Operations: NTIS collects and disseminates scientific, technical, and engineering information from U.S. government agencies and their grantees and contractors, and foreign sources, primarily governmental. The majority of NTIS's customers are researchers and business managers in the private sector.
- FedWorld: This is an on-line Internet information network system that allows users to identify and gain access to government information products, and allows NTIS to offer other agencies an Internet vehicle to meet their information dissemination requirements.
- Production and Brokerage Services: NTIS provides clearinghouse services to other federal agencies on a cost reimbursable basis. These services also include billing, collecting, and financial management services.

Our office began reviewing NTIS's operations in fiscal year 1997. At that time, we issued two reports. The first report was a program evaluation of how NTIS performed its traditional mission of collecting and disseminating information. The report concluded that the agency was successfully managing most of its traditional activities, and was responsive to its customers. However, we expressed concerns that NTIS was undertaking activities based on a very broad interpretation of its mission and authority. The second report evaluated NTIS's performance on a one-time special project for the IRS, called CyberFile. The report was critical of NTIS's performance, finding that NTIS lacked the in-house technical and management expertise to handle

¹ NTIS: Traditional Missions Are Well Run, but Management Attention Is Needed for Its Expansionary Activities, IPE-8497, March 1997.

² NTIS: Management and Procurement Deficiencies Related to the CyberFile Project, IPE-9364, March 1997.

a project of the size and magnitude of CyberFile. NTIS's role in the project also was criticized by the General Accounting Office (GAO).³

In August 1997, the Department asked us to comment on proposed legislation to convert NTIS to a performance-based organization (PBO). The PBO concept is designed to provide certain agencies with greater flexibility in procurement and more control over their finances and personnel, in exchange for stricter accountability over performance. To become a PBO, an agency must meet two key prerequisites: (1) it must have a clearly defined mission, and (2) it must have the ability to generate sufficient revenues to support business operations. We expressed our doubts that NTIS could meet these two prerequisites. Our response was based on our March 1997 reports, and an internal OIG analysis of the agency's business operations that concluded that NTIS was not self-sufficient. We requested that the Department suspend the proposed legislation until NTIS was able to define an appropriate mission and demonstrate that it could generate sufficient revenues to remain financially self-supporting.

In January 1998, we identified the conversion of NTIS to a PBO as one of the top 10 management problems facing the Department. In addition, we began an audit to determine if NTIS would be able to meet the PBO prerequisites in the future. Before we completed our work, the Department withdrew its proposed legislation. Although NTIS is no longer a PBO candidate, the issues we were evaluating still remain as significant problems that require the Department's attention.

Purpose and Scope of Audit

The purpose of this audit was to evaluate NTIS's financial condition and determine its ability to support its operations through fees. The findings and recommendations contained in this report are based on our evaluation of NTIS's operating results from fiscal year 1993 through the first seven months of fiscal year 1998. We reviewed NTIS's accounting and budgetary records and its financial statements. We also reviewed audit and inspection reports prepared by our office and GAO. Financial information for fiscal years 1993 through 1997 is mostly based upon audited financial statements. However, the allocation of revenue and costs among NTIS's businesses for those years is unaudited. Reports addressing the results of these financial audits have been issued by our office. For fiscal year 1998, we relied upon unaudited financial information supplied by NTIS.

In addition, we interviewed NTIS management officials to (1) gain an understanding of how NTIS accounts for its revenue and costs, (2) discuss possible causes of the agency's revenue shortfalls,

³Tax Systems Modernization: CyberFile Project Was Poorly Planned and Managed, GAO/AIMD-96-140, August 1996.

⁴ NTIS: Financial Statements, Fiscal Year 1993, FSD-6084, June 1994;

NTIS: Financial Statements, Fiscal Year 1994, FSD-6786, March 1995;

NTIS: Financial Statements, Fiscal Year 1995, FSD-7838, March 1996;

NTIS: Financial Statements, Fiscal Year 1996; FSC-8843, March 1997;

NTIS: Financial Statements, Fiscal Year 1997; FSC-9867, March 1998

and (3) identify the actions NTIS has taken and is planning to take to address its financial problems. We coordinated our work with the OIG's Financial Statements Audits Division, which is responsible for audits of NTIS's financial statements pursuant to the Chief Financial Officers Act of 1990 (31 U.S.C. 3515 (b)). Our work was performed from December 1997 through June 1998.

Opinions on NTIS's internal controls and compliance with laws and regulations, as well as the results of tests on the reliability of computer data, are included in the financial statement audit reports and no additional testing in these areas was done as part of this review. Fiscal year 1996 and 1997 financial statements disclosed a material weakness in controls over inventory that needs to be improved to ensure that its inventory balance and cost of goods sold are correctly stated. As a consequence, NTIS received a disclaimer of opinion on its Statements of Operations and Changes in Net Position and Cashflow for fiscal years 1996 and 1997. The reports did not disclose any non-compliance issues.

Our work was conducted in accordance with generally accepted government auditing standards (1994 revision) issued by the Comptroller General of the United States. We performed our work under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended.

NTIS OPERATIONS JEOPARDIZED BY REVENUE SHORTFALL

NTIS is required by its legislation to use fees charged for its publications to cover its costs. However, we found that because of the decline in sales for its clearinghouse products and services, the fees collected no longer are sufficient to cover costs. Consequently, NTIS has incurred shortfalls in revenue for two of the past three fiscal years and is operating at a loss in fiscal year 1998. While we believe the organization has sufficient cash to carry it through the remainder of fiscal year 1998, we question whether it will have enough cash to cover its operations in fiscal year 1999 and beyond. We are recommending that the Under Secretary for Technology commission an independent review of NTIS's operations to use in (1) developing a business plan that addresses NTIS's short-term and long-term financial and business problems, and (2) seeking relief from any of its legislative mandates.

A. NTIS Is Operating at a Loss

For fiscal year 1997, NTIS lost \$3.8 million. For the first seven months of fiscal year 1998, NTIS reported a shortfall of more than \$1 million. NTIS is required by law to be self-sustaining. In establishing NTIS, Title 15, U.S.C. section 1153 states that "to the fullest extent feasible...each of the services and functions provided herein shall be self- sustaining or self-liquidating, and that the general public shall not bear the cost of publications and other services." In accordance with its legislation, NTIS sells its publications and charges for its services. These fees generate the revenue that NTIS uses to cover its costs. However, as shown in Table 1, the revenue generated by these fees no longer covers NTIS's costs.

Table 1: Results of Operations
(\$\mathbb{R}\text{millions})

	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998*
Clearinghouse	\$ 23.7	\$ 23.3	\$ 21.8	\$ 21.6	\$ 19.9	\$ 11.3
FedWorld	na	na	1.8	21.4	7.4	9.0
Production & Brokerage Services	7.7	8.9	10.8	9.8	8.5	3.4
Total Revenue	\$ 31.4	\$ 32.2	\$ 34.4	\$ 52.8	\$ 35.8	\$ 23.0
Total Costs	\$ 30.1	\$ 31.4	\$ 35.5	\$ 51.6	\$ 39.6	\$ 24.8
Income/(Loss)	\$ 1.3	\$ 0.8	\$ (1.1)	\$ 1.2	\$ (3.8)	\$ (1.1)

^{*} Data through April 30, 1998.

In addition, NTIS's net income for fiscal year 1996 includes \$18.6 million of revenue and \$17 million of costs from a one-time special project (CyberFile) for an on-line tax filing system that NTIS was developing for IRS. Without the CyberFile project, which was subsequently

determined to be an inappropriate project for NTIS and was canceled due to project difficulties, NTIS would have had revenue of \$34.2 million, costs of \$34.6 million, and a shortfall of \$400,000 in FY 1996. It should also be noted that since NTIS received a disclaimer of opinion for its Statement of Operations for fiscal years 1996 and 1997 because of a material weakness affecting the cost of goods sold, the exact amount of NTIS's losses for those years is uncertain.

NTIS managers attributed the losses in its clearinghouse functions to reduced demand for NTIS clearinghouse services, and the high cost of NTIS's bibliographic and archiving functions that can no longer be fully covered through fees.

B. Need for Clearinghouse Services Declining

As shown in Figures 1 and 2, total clearinghouse sales have decreased from almost 2.3 million units in fiscal year 1993, to 1.5 million units in fiscal year 1997, with a corresponding decrease in revenue of \$3.6 million.

Figure 1

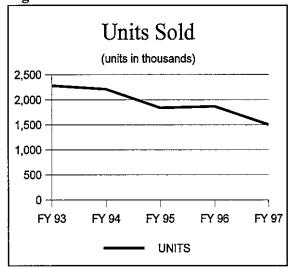
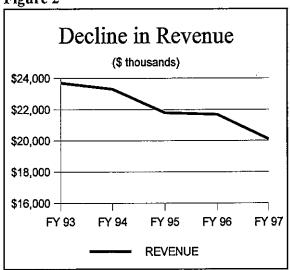


Figure 2



Sales have continued to decline in the first six months of fiscal year 1998. At the current rate, we estimate that sales could drop another 300,000 units from the fiscal year 1997 level to about 1.2 million units, and revenue could decrease by as much as \$800,000 (from \$20.1 million in fiscal year 1997 to an estimated \$19.3 million for fiscal year 1998).

NTIS managers attribute the decline in clearinghouse sales to the following reasons:

- Federal agencies use the Internet for free dissemination of information that previously would have been purchased from NTIS. Consequently, NTIS is no longer the primary source of the federal publications.
- Budget cuts and management changes have reduced the quantity and quality of
 information provided to NTIS by federal agencies such as the National Aeronautical and
 Space Administration (NASA), the Department of Defense, and the Department of
 Energy. For example, NASA has dramatically reduced the amount of material it sells
 through NTIS over the past five years.
- As the amount of science and technology materials handled by NTIS has declined, they have been replaced by broader business information materials from a variety of agencies that represents a different mix of content than NTIS has offered in the past. NTIS has found it difficult to market these materials to their traditional customers.

C. Cost of Bibliographic and Archiving Functions Can No Longer Be Covered Through Fees

A primary reason that NTIS no longer can cover its clearinghouse operating costs through fees is that \$4 million is spent each year in performing its bibliographic and archiving functions. NTIS is required by law to maintain a permanent repository of nonclassified scientific, technical, and engineering information. To fulfill this requirement, NTIS actively seeks publications. For each publication obtained, NTIS catalogs it by preparing and entering an abstract into a database. The cost of the bibliographic function alone is about \$3 million a year. In fiscal year 1995, it acquired and processed more than 104,000 titles. In fiscal year 1996, this amount increased to almost 166,000, including 10,000 publications from the Bureau of Mines and 70,000 military publications. In total, NTIS has a permanent repository of more than 3 million publications.

Prior to fiscal year 1996, NTIS would lease its database to resellers and other customers at a price that would recover the full amount of bibliographic costs. Pricing was based in part on how extensively customers used the database. However, due to the Paperwork Reduction Act of 1995, NTIS was prevented from charging fees or royalties for the resale of public information. Consequently, they were forced to change their pricing methods so that resellers are charged without regard to the usage of their customers. NTIS believes that this loss of pricing flexibility has caused them to incur significant losses. According to NTIS's March 31, 1998 financial status report, \$866,000 of NTIS's \$1.4 million clearinghouse loss was attributed to excess costs incurred by its bibliographic function.

D. NTIS Plans for Improving Operations Did Not Materialize

Despite plans stating that NTIS's operations would show a profit of \$1.3 million for fiscal year 1998, we found that as of April 1998, NTIS reported an operating loss of over \$1 million for the

first seven months of fiscal year 1998, and is losing money at about the same rate as it in fiscal year 1997. For Fiscal year 1998, NTIS managers expected that income from its other businesses (FedWorld, and production and brokerage services) would offset a small loss in its clearinghouse operations. However, as shown by the following tables, these plans have not materialized. Actual sales of Clearinghouse products and services were ten percent less than expected through the first 7 months of FY 1998.

Table 2: Comparison of FY1997-98 Operating Results
October -April
(\$ thousands)

	FY 1997			FY 1998			
	Revenue	Cost	Net	Revenue	Cost	Net	
Clearinghouse	\$ 11,785	\$ 13,431	\$(1,646)	\$11,344	\$12,972	\$(1,628)	
FedWorld	2,431	2,328	103	9,017	8,734	283	
Production & Brokerage Services	4,939	4,624	315	3,402	3,136	266	
Total	\$ 19,155	\$ 20,383	\$(1,228)	\$23,763	\$24,842	\$(1,079)	

Table 3: Comparison of Planned vs. Actual Operating Results October 1997 - April 1998

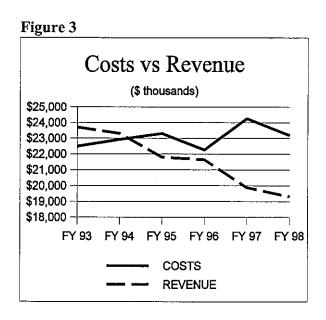
(\$ thousands)

	Planned			Actual			
	Revenue	Cost	Net	Revenue	Cost	Net	
Clearinghouse	\$ 12,651	\$ 13,078	\$ (427)	\$11,344	\$12,972	\$(1,628)	
FedWorld	9,017	8,683	334	9,017	8,734	283	
Production & Brokerage Services	4,161	3,640	521	3,402	3,136	266	
Total	\$ 25,829	\$ 25,401	\$ 428	\$23,763	\$24,842	\$(1,079)	

Moreover, as discussed in the following section, because of the sharp decline in clearinghouse revenue relative to costs, NTIS's fiscal year 1998 results of operations are about the same as in fiscal year 1997.

E. High Clearinghouse Costs Persist Despite Falling Revenue

Although NTIS's clearinghouse revenue fell almost \$4 million between fiscal years 1993 and 1997, costs have remained relatively constant. As shown in Figure 3, clearinghouse costs fluctuated only slightly, from \$22.5 million in fiscal year 1993, to \$24.3 million in fiscal year 1997, which includes an inventory write-off of \$1.7 million. Since much of the clearinghouse costs are attributable to fixed costs such as salary, benefits, depreciation, amortization, and rent, the costs remain relatively constant, even as revenue decreases.



F. Ability to Remain Self-Sustaining Questionable

As a result of decreasing sales and fairly constant costs, NTIS's ability to remain self-sustaining is questionable. If NTIS continues to incur losses at the same rate for the remaining five months of fiscal year 1998, it will have a revenue shortfall of about \$1.9 million, reducing NTIS's cumulative results of operations for its nonappropriated funds from its current \$2.2 million to just under \$300,000. In our opinion, this amount is not sufficient to sustain NTIS's operations if it continues to incur shortfalls during fiscal year 1999. Moreover, this opinion is shared by NTIS management, who informed us that NTIS currently has less than \$1.8 million in operating cash, monthly expenses of approximately \$2.9 million, and average monthly revenue of less than \$2.7 million.

To forestall financial difficulties, NTIS managers have taken steps to increase revenue and cut costs. They have developed new products, such as Fed World, which have generated millions of dollars in revenue. In April, NTIS raised prices by 15-20 percent, a move that they estimate will add \$615,000 in revenue. They also eliminated excess warehouse space and reduced staffing levels from 369 to 336. These actions should have an immediate positive impact on operating

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results. However, the effectiveness of other efforts will not be known for months. For example, NTIS has agreed to operate an international trade bookstore in the new Ronald Reagan World Trade Center, but the opening has been delayed until fiscal year 1999. They have also entered into a joint venture to produce a new version of a popular publication, U.S. Industry and Trade Outlook '98, that recently went on sale. In addition, NTIS is trying to expand its FedWorld service. By working with the Department of Defense, standards organizations, and businesses to provide prospective DOD contractors with Internet access to technical specifications necessary to prepare bids.

While these actions may be promising, we believe they will not be sufficient to overcome the fundamental problem facing NTIS's core clearinghouse business—the changes in the market place. Since many federal agencies now provide copies of their own publications, NTIS is no longer the primary source of government publications. A General Accounting Office report that NTIS sells for \$23 can be obtained for free from GAO. The national Medical Library, one of its largest government customers, has opened its own clearinghouse, and thus no longer needs NTIS's services. Also, the agency has lost sales from several popular publications that are now available directly from the publisher. Until problems with the clearinghouse business are addressed, we believe NTIS will continue to experience revenue shortfalls.

Conclusion

Problems related to NTIS' clearinghouse business threaten the agency's future ability to fund its operations through fee revenue. NTIS lost almost \$4 million in fiscal year 1997, and has reported fiscal year 1998 losses (unaudited) of more than \$1.5 million through August 31, 1998. Sales of clearinghouse services have decreased from 2.5 million units in 1993 to 1.5 million units in 1997. We believe that NTIS may have to restructure, or even eliminate certain services to remain self-sustaining. This may require legislative changes to its mandate. In a September 8, 1997 memorandum providing our comments on NTIS's draft PBO legislation, we recommended NTIS senior management prepare a business plan to address its short term and long-term financial and business operations. But according to senior managers, they have been unable to agree on a course of action. Accordingly, we believe that the Technology Administration must provide the direction and oversight for developing a viable business plan.

RECOMMENDATION

We recommend that the Under Secretary for Technology initiate an independent review of NTIS's operations with an emphasis on, but not restricted to, (1) developing a business plan for NTIS that addresses both its short-term and long-term financial and business problems, and (2) seeking relief from legislative mandates as required. This plan should be completed by the end of 1998 to ensure that NTIS will have sufficient funds to pay its liabilities for fiscal year 1999.

Technology Administration Response

In responding to our draft report, Technology Administration agreed with our finding. It also agreed that initiating an independent review of NTIS's businesses operations would be helpful. Accordingly, Technology Administration has taken action to implement our recommendation by contracting for an independent review of NTIS's operations. However, Technology Administration also expressed concern that we did portrayed NTIS's actions to its problems as reactive rather than proactive, and questioned why we did not refer to its Strategic View covering 1998 through 2003.

OIG Comments

We commend Technology Administration for taking such prompt action to our report recommendation. Regarding Technology Administration's concern that we portrayed NTIS as being reactive rather than proactive, we did not intend to do either. Our intent was to show that NTIS's problems were caused by changing market conditions that could not be solved solely by developing new products or reducing costs. As to why we did not refer to the Strategic View in our draft report, we offer the following. The Strategic View was a thoughtful guide on NTIS's reaction to changing market conditions; however, we concluded that it did not adequately address NTIS's problems or provide sufficient solutions for resolving them. Consequently, we chose not to refer to the Strategic View in the audit report.

SEP 30 1998

MEMORANDUM FOR

George E. Ross

Assistant Inspector General for Auditing

From:

Acting Under Secretary for Technology

Subject:

Draft report entitled: NTIS Operations Jeopardized by

Revenue Shortfall

Thank you for the opportunity to review your draft audit report questioning whether NTIS will be able to generate sufficient revenue to recover its cost of operations in the coming years. NTIS has a long and proud history of meeting the information needs of industry; its ability to continue performing its mission must be a matter of concern to any agency charged with promoting America's technological competitiveness.

I agree that a major problem facing NTIS is a decline in sales of scientific and technical reports and the increasing tendency of agencies to disseminate their scientific and technical products at no charge over the Internet. Your draft also properly credits NTIS management with responding by developing new products and services, adjusting prices, and taking cost-cutting steps.

Despite these positive steps, I share your concern that broader trends may prove too powerful to overcome, given NTIS' statutory mandates and constraints. Accordingly, NTIS' senior management and I agree that an independent review of NTIS' business strategy and legislative constraints could provide useful guidance. An NTIS marketing study contract has awarded to Anderson Consulting to provide the additional information.

At the same time, I am concerned that the bleak picture you paint could, if the report is released, seriously compromise NTIS' ability to attract new business and could even cause it to lose business. For that reason, I request that the report be modified to reflect two developments that demonstrate NTIS' responsiveness to changing circumstances.

• First, although the draft describes actions NTIS has taken to reduce costs and increase revenue, the tone of the report depicts NTIS as reactive, rather than proactive. As your draft indicates, in just a few years NTIS' FedWorld progressed from an idea to a revenue-center that generates almost as much money as the Clearinghouse itself. That would not have been possible but for sophisticated analyses of likely trends in the information industry that NTIS undertook in the early 1990's. This should be reflected in the report.

• Similarly, the report either overlooks or discounts NTIS' recently issued Strategic View covering 1998-2003. I am not suggesting that it is a substitute for the independent analysis you are requesting. However, it is a thoughtful guide for shifting NTIS from a past that focused on providing services to other agencies to a future that calls for the use of computer-based technologies to develop a new generation of products yielding a more stable, annuity-like revenue stream.

These changes would more accurately present NTIS as an agency that understands the challenges before it without compromising your report's underlying concern about the long-term financial health of NTIS, with which I am in agreement.

cc: W. Scott Gould