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MICHAEL D. BOPP, STAFF DIRECTOR AND CHIEF COUNSEL JOYCE A. RECHTSCHAFFEN, MINORITY STAFF DIRECTOR AND COUNSEL

United States Senate

COMMITTEE ON GOVERNMENTAL AFFAIRS WASHINGTON, DC 20510-6250

July 7, 2004

Andrew M. Saul Chairman Federal Retirement Thrift Investment Board 1250 H Street, N.W. Washington, DC 20005

VIA FACSIMILE: (202) 942-1676

Dear Chairman Saul:

The Committee on Governmental Affairs has conducted a review of the circumstances surrounding the contract between American Management Systems ("AMS")¹ and the Federal Retirement Thrift Investment Board ("the Board") for the creation of an automated record keeping system ("the project"), focusing in particular on the Board's management of the contract. This letter is intended to report the results of the Committee's inquiry to the Board as well as to the federal workers, retirees and beneficiaries who rely on the Thrift Savings Plan administered by the Board as a key component of their retirement income.

The failure of the project led the Board to terminate AMS, file suit against the company, and hire a replacement contractor to complete the project. However, since the Board later chose to settle its lawsuit against AMS, both parties to the contract have largely avoided accountability for their share of the project's failure. The burden of that failure was borne by Thrift Savings Plan participants and beneficiaries, who have yet to receive an adequate explanation of what happened and why. This letter examines what caused the project to fail and what lessons can be learned from this failure. After Committee staff interviewed witnesses from both the Board and AMS, reviewed documents produced by both parties, and studied reports prepared by other outside observers, we have reached the following conclusions:

 Much of the time and money the Board spent on the project from 1998 to 2001 was wasted. Thrift Savings Plan participants and beneficiaries should have received the benefits of the new record keeping system beginning in May 2000, but the new system was not implemented until the summer of 2003. Board staff and AMS spent four years

¹ AMS has announced its planned merger with CGI Group, Inc., a Canadian company, and CACI International. CACI International is purchasing AMS's defense and intelligence business, while CGI is acquiring the remainder of AMS's assets and will do business in the U.S. as "CGI-AMS." Letter from David R. Fontaine, Executive Vice President and General Counsel, AMS, to Chairman Susan M. Collins, Committee on Governmental Affairs, U.S. Senate (March 16, 2004) (Exhibit 1).

unsuccessfully trying to implement the system. The bill for all of that work was passed on to plan participants and beneficiaries. They had their retirement accounts debited more than \$36 million to pay for years of project costs and legal battles. In return for the increased administrative expenses, participants and beneficiaries primarily received delays and excuses. AMS delivered volumes of design documents and over a million lines of software code. Board staff spent countless hours in meetings, reviewing and commenting on AMS work product. However, what AMS delivered did not constitute a working system and provided only a minor contribution to the ultimate completion of the project by the subsequent contractor, Materials, Communications and Computers, Inc. ("MATCOM").²

- Responsibility for the wasted time and money rests with both AMS and the Board. While it is clear that AMS failed to produce a workable system and repeatedly missed its own deadlines and cost estimates, the Board should have taken more steps early on to prevent this failure and to protect plan participants and beneficiaries from paying the tab. After the contract termination, the Board's effort to recover damages through its lawsuit was largely unsuccessful, forcing participants and beneficiaries to make up the losses through significantly increased administrative expense assessments. The increased administrative expenses might have been avoided if Board staff had recognized earlier that AMS was deviating from the proposed design by creating a much more complex and customized system than originally envisioned. AMS did not adequately communicate the consequences of this fundamental design shift, and Board staff failed to appreciate its significance.
- AMS deviated significantly from the original design, causing repeated delays and cost overruns. The AMS proposal called for relatively minor customization of a commercial off-the-shelf ("COTS") software package rather than the development of a custom solution. The original plan was to maximize the use of a COTS software package called OmniPlus, which is manufactured by Sungard Data Systems Inc. OmniPlus is a suite of applications and tools that had been used successfully to manage retirement plans in the private sector. According to the contractor that replaced AMS, OmniPlus offered most of the basic functionality required by the Board. AMS originally estimated that modifying OmniPlus to suit the Board's needs would require 250,000 lines of code. However, AMS eventually drafted over one million lines of code. AMS drafted more code than necessary because it did not follow Sungard's best practices for customizing OmniPlus and because it failed to explain to Board staff how to minimize the need for customizing OmniPlus. Most of the AMS-drafted code was unnecessary and unworkable. The code failed system tests, and attempts to fix the errors caused further delays and increased costs. By contrast, MATCOM provided all of the custom functionality required by the Board using an unmodified version of OmniPlus and fewer than 210,000 lines of custom code, thereby keeping the project substantially on time and on budget while preserving the ability to upgrade to future versions of the core COTS software.

² On January 21, 2004, MATCOM was acquired by SI International.

• Both the Board and AMS failed to sufficiently staff the project, which contributed to the Board's failure to better manage the contract and AMS's failure to complete the project. The Board staff most intimately involved in the contract lacked sufficient information technology (IT) experience to effectively manage the contract, and one Board staff member with more IT and contract management experience was not sufficiently involved in the project even though he had managed IT contracts for other agencies on more than a dozen occasions. Given the size and scope of this project, the Board should have maximized the use of its existing staff to ensure that the team had sufficient experience to manage the contract effectively. If such expertise was not available on staff, the Board should have hired consultants to assist it in overseeing AMS's work. AMS documents show that throughout the project AMS also had significant staffing problems that contributed to AMS's failure to perform the contract.

I. Investigative Activities

The Board provided the Committee with electronic copies of all email in its possession related to the project. Committee staff reviewed more than 35,000 messages, including email among Board staff and AMS personnel. The Board also produced all requested paper documents³ and provided Committee staff and Government Accounting Office ("GAO") personnel access to its files. The Committee also requested records from AMS.⁴ Certain documents were reviewed after negotiation with the company.⁵ Specifically, Committee staff had access to the paper files of two of the AMS project managers as well as three of its more senior executives.⁶ In addition to reviewing these documents, Committee staff interviewed current and former employees of both AMS and the Board,⁷ as well as the Project Manager for the replacement contractor.⁸ GAO also reviewed all the invoices AMS sent to the Board and assisted Committee staff in analyzing the information in those invoices.

³ Letter from Susan M. Collins, Chairman, Committee on Governmental Affairs, U.S. Senate, to Elizabeth Woodruff, General Counsel, Federal Retirement Thrift Investment Board (Aug. 20, 2003) (Exhibit 2).

8 Committee staff interviewed MATCOM Project Manager Bill Smithson.

Motherway.

⁴ Letter from Susan M. Collins, Chairman, Committee on Governmental Affairs, U.S. Senate, to Alfred T. Mockett, Chairman and CEO, American Management Systems (Aug. 28, 2003) (Exhibit 3).

⁵ Because the Committee's investigation, driven by its jurisdiction over government procurement, concentrated largely on the Thrift Board's management of the contract, it focused its review on the Board's internal documents and memoranda. While the Committee reviewed thousands of pages of AMS documents from the files of the individuals noted in footnote 6, it did not, for example, review AMS's emails or personnel records.

⁶ AMS made available the paper files of AMS's third and fourth Project Managers on the Thrift Board contract, Larry Best and Rob Ball, as well as the paper files of three members of the Executive Steering Committee within AMS that was responsible for oversight of the project, Frank Bianchi, Harry Barchdorf, and George Schindler.

⁷ Committee staff interviewed the following Thrift Board staff: former Executive Director Roger Mehle, Project Manager James Petrick, Automated Systems Director Larry Stiffler, TSP System Manager Susan Smith, and General Counsel Elizabeth Woodruff. Committee staff also interviewed the following AMS personnel: Project Manager Larry Best, Project Manager Rob Ball, Reports Manager Nancy Neal, and former AMS employee Ed

II. Four Years and More than \$36 Million Largely Wasted

On May 20, 1997, the Board entered into a contract with AMS for the design, development, and implementation of an automated daily-valued record keeping system based on a commercial product created by SunGard Employee Benefit Systems called "OmniPlus." Work commenced in 1997. The project was supposed to be completed by May 2000. The total cost of the project was to be \$29.7 million. However, after four years, repeated implementation delays, and \$65 million worth of AMS invoices and internal Board costs and AMS projections that it would cost a total of \$90 million to finish the project, AMS was unable to implement a working system. According to financial statements audited by Ernst & Young, MATCOM and the Board later determined that the value of the usable AMS work product was only about \$1 million. The other \$64 million of capitalized costs had no ongoing value. The Board rejected about \$25 million in AMS invoices, and terminated its contract for default. The then Executive Director, Roger Mehle, filed a lawsuit against AMS on behalf of the TSP.

On June 20, 2003, the parties reached a settlement.¹² The settlement required a net payment of \$5 million from AMS to the Thrift Savings Plan. On June 23, 2003, the Board charged \$36 million to TSP participants' accounts. The \$36 million consisted of the remaining capitalized costs incurred by the Board on the AMS contract between 1998 and 2001. The costs had been capitalized rather than charged to participants as they were incurred. This one-time charge amounted to approximately three basis points, which increased administrative charges for 2003 to eleven basis points. In previous years, the expense ratio had been as low as seven or eight basis points.¹³ It represented the direct cost to plan participants of the failed efforts of AMS and the Board from 1997 to 2001. Two reasons given for the decision to settle include: (1) the continued litigation would have left the Thrift Savings Plan participants and beneficiaries open to AMS claims as much as \$58 million¹⁴ and (2) the agency already had spent approximately \$2.7 million in attorney fees, and continuing the litigation would have cost much more.¹⁵

Unfortunately, for their four years and \$36 million, plan participants appear to have received little of value. As a contingency against the failure of AMS to deliver a working

⁹ GAO analysis provided to Committee staff (Exhibit 4). GAO also noted that other services including various addons were also completed during the project.

¹⁰ Financial statements of the Thrift Savings Fund – 2002 and 2001, Ernst & Young, LLP. (Exhibit 5).

¹¹ GAO analysis provided to Committee staff (Exhibit 4).

¹² Settlement Agreement, June 20, 2003 (Exhibit 6). This agreement settled the litigation between the Board and AMS originally brought by then Executive Director Roger Mehle, *Mehle v. AMS*. Mehle continues to pursue legal actions to challenge the settlement. At least one action is still pending. The Committee takes no position on the merits of those claims.

¹³ "Oversight of the Thrift Savings Plan: Ensuring the Integrity of Federal Employee Retirement Savings," *Hearing before the Senate Governmental Affairs Subcommittee on Financial Management, the Budget, and International Security*, 108th Congress (March 1, 2004).

¹⁴ "The Thrift Savings Plan: Putting Customers First?" Hearing before the House Committee on Government Reform, 108th Cong. 29-30 (July 24, 2003).

¹⁵ Memorandum from Gary A. Amelio to the Chairman and Members of the Federal Retirement Thrift Investment Board, June 19, 2003 (Exhibit 7).

system, the Board awarded a contract to MATCOM on December 8, 2000.¹⁶ Under the terms of the contract, MATCOM was to develop an automated record-keeping system using the same requirements and commercial product, OmniPlus, developed by Sungard Data Systems, Inc. The MATCOM engagement went largely according to plan with the exception of one delay to make adjustments so that the large volume of TSP data could be processed in an overnight window.¹⁷ MATCOM began work in January 2001 and delivered a daily-valued recordkeeping system eighteen months later, on June 16, 2003. It did so for a total cost of about \$33 million.¹⁸ MATCOM was able to deliver the system at that cost and in that timeframe despite being able to use little of the work product created by AMS.

Before the Board terminated AMS in July 2001, MATCOM was able to look at the written materials developed by AMS, but not at source code. Project Manager Bill Smithson indicated that MATCOM briefly reviewed the materials prepared by AMS, but obtained a majority of their understanding of the requirements for the new system via meetings with Board personnel. Smithson stated that MATCOM "wanted to get it right quickly," because the contract ensured that MATCOM bore the risk of failure.¹⁹ After AMS's termination, MATCOM also had access to AMS-drafted code. However, MATCOM determined that only 44,000 lines of AMS code could be used.²⁰ Board staff informed then Executive Director Roger Mehle that very little of the AMS developed custom software or design elements could be used in the new system because MATCOM had determined that the code was "poorly done, not documented, and, in some cases, nonfunctional."²¹

Even if the deliverables produced under the AMS contract had been usable by MATCOM, plan participants paid much more for them than originally estimated. The cost overruns are even more troubling given that AMS was unable to produce a working system. One example of extreme cost overruns occurred in the area of reimbursement for AMS travel costs during the life of the contract. The contract included four phases: Phase I - Design, Phase II - Development, Phase III - Testing, and Phase IV - Implementation. Phases I and II were firm, fixed price. Phases III and IV were cost-plus-incentive-fee. However, travel costs were reimbursable in all phases of the contract. For Phases I and II the estimated travel costs were identified separately from the firm, fixed price elements. The GAO assisted Committee staff in analyzing the travel costs associated with the contract and found that invoiced travel costs exceeded estimates by four times for Phases I and II and more than seven times for Phases III and IV. GAO found that during Phase II, the Board rejected two invoices totaling more than \$29,000, comprised entirely of travel expenditures. During Phase III, GAO found that a large number of AMS staff was traveling from New Jersey, Boston, and Florida to work on the

¹⁶ Memorandum from Jim Petrick to Elizabeth Woodruff, September 21, 2001 (Exhibit 8).

¹⁷ Interview with Bill Smithson, Project Manager, MATCOM (April 20, 2004) (herinafter "Smithson Interview"). ¹⁸ Interview with Larry Stiffler, Director of Automated Systems, FRTIB (January 23, 2004) (herinafter "Stiffler Interview").

¹⁹ Smithson Interview.

²⁰ Stiffler Interview. Both Stiffler and Smithson stated that ultimately even this code had to be rewritten.

²¹ Memo from Lawrence E. Stiffler to Executive Director, December 7, 2001. (Exhibit 9).

²² GAO Analysis. (Exhibit 4).

²³ Id.

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project.²⁴ In total, the Board rejected \$742,663 in travel invoices from AMS. Because of the high travel costs, the Board negotiated a ceiling for travel costs – thus if AMS went over the amount fixed by the ceiling, AMS would not be reimbursed by the Board for the travel overruns.²⁵ The Board ultimately paid \$2,381,789 more in travel expenses than was originally estimated under the contract.²⁶ The amount of paid travel exceeded estimates by 487%, and the amount of invoiced travel exceeded estimates by 606%.

A July 1997 internal AMS document suggests that AMS understood very early that its "[b]idding strategy underestimated travel for Phase 1."²⁷ According to the document, AMS was aware that it would need an additional \$225,000 for Phase I and noted that the Board staff was "already scrutinizing" the contract invoices.²⁸ On July 15, 1999, the Board sent AMS a letter expressing concern with the revised travel projections for Phases III and IV. In the letter, the Board stated that the new travel estimates were "more than nine times the travel amounts estimated in the contract," and characterized the revised estimates as "a truly surprising and unwelcome development."²⁹ Although AMS stated it did not agree with the Board's position in the July 15 letter, AMS made changes to reduce the Board's risk associated with Phase III and IV travel. In early 2000, AMS instituted a new travel policy for personnel assigned to the project, which stated that most Thrift team members would work out of home offices in lieu of travel to Fairfax, Virginia.³⁰ Even with the new policy, travel costs continued to grow. At the time of the contract award, Phase III travel was estimated at \$66,330. As of February 1, 2001, AMS had billed \$1,834,000 in Phase III travel, a 2,765% increase.³¹

In addition to the actual travel costs, the contract allowed for a General and Administrative ("G&A") expense surcharge of 26.75%, to cover AMS's overhead.³² The Board became increasingly concerned that the flat surcharge on travel costs bore no reasonable relationship to the general and administrative expenses actually incurred by AMS to administer the additional travel. The Board noted:

These travel increases are far beyond the original contemplation of either of the parties to the contract, and a flat G&A surcharge on these increases—acceptable though it may have been on basic travel payments that were only 14% of the current estimates—is clearly unreasonable and inequitable; they bear no relationship to any additional costs incurred by AMS in administering the

²⁴ Id.

²⁵ <u>See, e.g.</u>, Letter from Strat D. Valakis, Contracting Officer, to Jean M. Ehreth, Senior Principal, Contracts, AMS (July 15, 1999) (Exhibit 10); and Letter from Jean M. Ehreth, Senior Principal, Contracts, AMS to Strat D. Valakis, Contracting Officer, Thrift Board (August 12, 1999) (Exhibit 11).

²⁶ GAO Analysis (Exhibit 4).

²⁷ "Thrift Project Review: Honeymoon," July 29, 1997, p. 12 (Exhibit 12)

²⁸ Id.

²⁹ Letter from Strat D. Valakis, Contracting Officer, to Jean M. Ehreth, Senior Principal, Contracts, AMS (July 15, 1999) (Exhibit 10).

³⁰ Thrift Team Meeting, February 7, 2000 (Exhibit 13).

³¹ GAO Analysis (Exhibit 4).

³²Letter from Strat D. Valakis, Contracting Officer, to Jean M. Ehreth, Senior Principal, Contracts, AMS (July 15, 1999) (Exhibit 10).

additional travel. Moreover, payment of such a surcharge has (and may well have had) the perverse effect of stimulating travel because of its effective production of net income.³³

AMS responded that there was "no factual basis for the notion that AMS has somehow received a 'windfall' from the reimbursement of its provisional G&A expense rate on its actual incurred costs to date." The Board subsequently issued a contract modification to prevent any further G&A payments for travel that exceeded the original AMS estimates of travel costs. An effective overall travel management plan that aims to reduce the number of trips taken through the increased use of video and teleconferencing and the use of targets for contractors to achieve could assist the Board in preventing substantial overruns in travel expenses during future contracts. Moreover, in the future the Board should also consider negotiating contract structures that provide disincentives for excessive travel.

III. Reasons the Project Failed

A. Excessive and Improper Customization of the Commercial Software

As originally envisioned, the project entailed using OmniPlus, a proven COTS software package manufactured by Sungard, to provide most of the functionality required for the new recordkeeping system. While AMS and the Board anticipated some customization, the primary work would consist of configuring OmniPlus, building some additional automated systems around it, and helping Board staff learn how to use the new system while adjusting some of its processes where necessary. Where customization was required, the OmniPlus suite of products included tools to help facilitate the needed changes. This approach ultimately proved to be workable when implemented by MATCOM after the Board terminated AMS. For a number of reasons, however, the project deviated from this approach significantly, which appears to be the primary reason that the project experienced delays and cost increases. Instead of maximizing the value of the COTS software, AMS spent most of its time making substantial changes to OmniPlus to add custom functionality. AMS did not properly use the tools provided by Sungard to add custom functionality, which would have caused the system to be incompatible with future releases of the software. The excessive customization also increased the complexity and cost of the project significantly.

In hindsight, Board staff and AMS both acknowledge that the system, as developed by the firm, was essentially a custom system, as opposed to a COTS system with some customization. However, they disagree over how and why a design shift occurred. According to AMS, it occurred because the Board was unwilling to change its processes to match the COTS software, and thus, Board staff demanded excessive customization. Board staff argued that AMS

³³ Id.

³⁴ Letter from Alex D. Tomaszczuk, Counsel for AMS, to Roger W. Mehle (March 2, 2000) (Exhibit 14).

³⁵ Interview with James Petrick, Project Manager, FRTIB (January 23, 2004) (hereinafter "Petrick Interview"); Stiffler Interview; and Interview with Roger Mehle, former Executive Director, FRTIB (February 24, 2004) (herinafter "Mehle Interview"). *See also*, "Proposal to the FRTIB," Executive Summary, p. ES-15-17 (Exhibit 15). ³⁶ Petrick, Stiffler, and Mehle Interviews.

informed them neither that it was excessively customizing the software, nor about the effect such customization would have on the project's schedule and budget. Both former Executive Director Roger Mehle and the Project Manager, James Petrick, indicated that they were shocked during the later stages of the project when AMS attempted to justify its increasing cost estimates by explaining that it had drafted over a million lines of custom code.³⁷ Board staff said they were unaware that AMS was drafting that much code,³⁸ and that AMS was secretive about its contract performance and would not let it look at the code it was writing.³⁹ If this was the case, we question why Board staff did not demand to see the code prior to making payments, or take other measures to ensure access if this happened after the Board stopped paying AMS. Moreover, if Board staff was indeed unaware of the amount of custom code being drafted, then either they failed to oversee the contract properly, AMS misrepresented its activities, or both sides utterly failed to communicate with one another.

AMS Executives said that the delays and cost increases occurred because the Board had requested more than 450 "last-minute" design changes during the development phase of the project. However, according to one internal AMS document, the need for increased customization was clear to AMS much earlier, during the requirements and design phases:

The Board drove the project away from a [COTS] product based solution – requirements and design could not be constrained and, therefore, current project scope is essentially a custom systems project – inherently more cost, schedule slippage and risk. They were not willing to discipline themselves in the early stage of the project.⁴¹

For their part, Board staff argued that the 450 "changes" referred to by AMS were actually corrections to AMS work product to reconcile it with the design documents created earlier in the project. ⁴² Although if the system design required substantially more customization than originally contemplated, it appears that neither AMS nor the Board ever questioned whether the basic approach of using a COTS package needed to be reevaluated. Late in the project, in May 2001, AMS prepared a document describing how the system being built was very different from what was originally contemplated. ⁴³ However, Board staff stated that they never consciously abandoned the concept of minimal COTS customization and that AMS failed to advise them it was doing so. ⁴⁴

³⁷ Petrick and Mehle Interviews.

³⁸ Id

³⁹ Stiffler Interview.

⁴⁰ Interview with Rob Ball, Project Manager, AMS (October 9, 2003). In the summer of 2000, AMS executives told the press that the delays were caused by last-minute changes from the Board. The press statements prompted Board staff to demand that the AMS send a letter retracting the statement, which AMS refused to do. *See*, "Agency, Contractor Point Fingers Over TSP Delays," *Federal Times*, June 26, 2000. *See also*, fax from James Petrick to Rob Ball (June 20, 2000) (Exhibit 16).

^{41 &}quot;Practices on Thrift Project to Mitigate Risk," (Exhibit 17).

⁴² Memorandum from Jim Petrick, Federal Retirement Thrift Investment Board, to Elizabeth Woodruff, General Counsel, Federal Retirement Thrift Investment Board (June 26, 2002) (Exhibit 18).

^{43 &}quot;TSP System Evolution," (May 25, 2001) (Exhibit 19).

⁴⁴ Petrick Interview.

In its findings and recommendations to the Board, MATCOM identified some of the problems caused by excessively modifying a COTS package. According to MATCOM, a common rule of thumb is that 80 percent of the functionality should be provided by the COTS package with no more than 20 percent requiring custom development. Otherwise, the project should not be conducted as a COTS modification, but as a custom development, which means higher costs and a longer schedule. Bill Smithson, the MATCOM Project Manager, indicated that the AMS system was more than 50 percent custom and less than half COTS software. According to Smithson, another problem with altering the OmniPlus source code was that it ensured that the Board could not upgrade to future releases of OmniPlus without having AMS rewrite those portions it had modified with each new release. Even though AMS was so highly customizing the code, Board staff told the Committee that they were not aware of the degree of customization. In its findings, MATCOM said this highly customized approach "brings into question the reason for selecting a COTS package in the first place, which is to eliminate the need to build and maintain a custom system."

The customization caused problems not only because there was too much of it, but also because it was not done in ways recommended by Sungard, the manufacturer of OmniPlus. After terminating AMS, the Board commissioned an expert review of what went wrong with the project. The consultants hired to conduct the review, Integrated Benefit Solutions, Inc. ("IBS"), prepared a 76-page report detailing the problems that caused the project to fail. IBS concluded that the manner in which AMS implemented custom changes did not conform to Sungard's preferred customization methods. AMS "redefined standard OmniPlus records and created new record types," which "compromise[d] the use of various functions and reports in OmniPlus[.]" AMS's method of customizing OmniPlus created inefficiencies and increased processing time, which was critical given the number of TSP participants and the requirement for daily processing of all transactions. According to the IBS report, AMS failed to customize OmniPlus properly because the personnel assigned to the project were not familiar with Sungard's preferred methods of customization. IBS concluded that "[m]uch unnecessary custom programming could have been avoided had AMS used a knowledgeable OmniPlus staff to create and implement a design using the capabilities offered within base OmniPlus[.]"

After MATCOM had been hired as a backup contractor, but before AMS was terminated, Board staff began asking questions that indicated some awareness that AMS was not maximizing the value of OmniPlus. For example, James Petrick wrote to AMS Project Manager Rob Ball in

⁴⁵ "Findings and Recommendations," MATCOM, October 10, 2001 (Exhibit 20).

⁴⁶ Id at 2.

⁴⁷ Id.

⁴⁸ Smithson Interview.

⁴⁹ Smithson Interview.

⁵⁰ "Findings and Recommendations," MATCOM, p. 1, October 10, 2001 (Exhibit 20).

⁵¹ "Findings Relating to the Review of the TSP System Development Project," Integrated Benefit Solutions, Inc., p. 29, March 5, 2003.

⁵² Id.

⁵³ *Id*.

⁵⁴ Id at 32.

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May 2001, asking for an explanation of why AMS was not using three specific tools created by Sungard to customize OmniPlus: OmniScript, OmniVBA, and OmniPlus report strings. 55 Petrick wrote:

We recently learned from Sungard about a number of OmniPlus features that appear to not have been used by AMS in coding the TSP system. We would like to understand whether we are correct in our understanding that these features have not been used, and if not, why they were not used . . . ⁵⁶

The response from AMS twice referred to the fact that these features were "Sungard proprietary" and that "special training" would be required for AMS to use them. ⁵⁷ However, the Board's license to OmniPlus included the right to use these features. Given representations by AMS about its expertise in implementing OmniPlus, Board staff was right to expect that AMS would be sufficiently familiar with the product to use these features correctly. At a minimum, AMS should have known to use the preferred tools provided by the manufacturer to customize OmniPlus.

Unlike AMS, MATCOM used the preferred methods of customization and helped the Board keep the amount of customization to a minimum. MATCOM made no modifications to the OmniPlus source code. Smithson indicated that on the few occasions where the Board needed a level of customization beyond what the Sungard-provided tools could accomplish, he asked Sungard to incorporate the change into the official version of its software. Thus, the Board's change would be available to other Sungard customers and would be supported in all future releases. This approach avoided locking the Board into a unique version of OmniPlus that could not be upgraded without custom development for each future version of the software.

Board staff failed to recognize that a fundamental design shift had occurred until after it hired MATCOM as the backup contractor. Likewise, AMS failed to explicitly inform Board staff that it was taking a fundamentally different approach than originally planned and that this approach would result in greatly increased costs and development time. If AMS had maintained the original approach of relying primarily on the COTS package and if AMS had customized OmniPlus in ways approved by Sungard, then the project might have been completed in a timely and cost effective manner.

B. Failure to Communicate Effectively

Another major problem with the project was the failure of both parties to effectively communicate with one another. This problem was evident in the emails provided to this Committee by the Board. It was also identified in the IBS review mentioned earlier, as well as

⁵⁵ Email from James Petrick to Rob Ball (May 2, 2001) (Exhibit 21).

⁵⁶ Id.

⁵⁷ Memo from Rob Ball to Jim Petrick (May 8, 2001) (Exhibit 22).

⁵⁸ Smithson Interview.

⁵⁹ Id.

⁶⁰ *Id*.

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an audit by the Defense Contracting Management Agency ("DCMA"). According to the IBS review:

During the TSP project, the communication between Federal Thrift (the system user) and AMS (the system developer) was below the acceptable threshold. A system design was never officially agreed upon, both parties vacillated between priorities over the course of the project and the project status reports produced by AMS were not meaningful to Federal Thrift. Poor communication between the parties led to faulty designs and project delays, which contributed to the failure to complete the project.⁶¹

An independent review conducted by the DCMA also pointed to ineffective communication as a major problem. As the first scheduled implementation date approached, AMS executives failed to inform the Board that it was unlikely to meet the deadline. According to the DCMA report:

[M]embers of the AMS Executive Steering Council were aware they probably would not make the May 1, 2000, implementation date several months [before telling the Board]. . . . Approximately three months prior to their announcement to the Board, the Steering Council believed the probability of meeting the delivery schedule was 50%, one month later their confidence level dropped to 25%, and before the December holiday break it was at 0%. There were no indications that the AMS Executive Steering Council conclusions were communicated to the Board.62

The AMS Project Manager during this timeframe was Larry Best. Best told Committee staff that he had grave doubts about being able to meet the May 1, 2000, implementation deadline early on, but was not allowed to tell the Board until there was a "management consensus" that AMS could not meet the deadline. 63 The contract required AMS, if it was aware of any actual or potential situation that might delay the timely performance of the contract, to notify the Board within three days of becoming aware of such a situation.⁶⁴ According to former Executive Director Roger Mehle, AMS CEO Paul Brands told him that the company fired Larry Best because of his failure to communicate adequately with the Board. 65 Actually, Best remained with the company and received a substantial bonus.⁶⁶

Witness interviews and emails provided by the Board to this Committee confirm the IBS and DCMA conclusions that communication between the parties was poor and a major factor in the failure of the project. One issue identified by IBS as particularly problematic was the lack of

^{61 &}quot;Findings Relating to the Review of the TSP System Development Project," Integrated Benefit Solutions, Inc.,

p. 2, March 5, 2003.

62 Letter from Major General Timothy P. Malishenko, Director, Defense Contract Management Agency to Strat D. Valakis, Chief Operating Officer and Director of Administration, Federal Retirement Thrift Investment Board, p. 9 (August 29, 2000) (hereinafter "DCMA Audit") (Exhibit 23).

⁶³ Interview with Larry Best, former Project Manager, AMS (November 5, 2003) (hereinafter "Best Interview").

⁶⁴ Section F of contract. (Exhibit 24).

⁶⁵ Mehle Interview.

⁶⁶ Best Interview.

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an officially agreed upon system design. Without a final, approved detailed design document, both parties were confused about exactly what AMS was supposed to build during the development phase. The Director of the Board's Office of Automated Systems, Larry Stiffler, described the situation as chaotic. He said that at one point he discovered that AMS programmers were writing code from handwritten notes of their meetings with Board staff.⁶⁷ Stiffler was appalled at this because programmers should normally be working from approved, detailed design specifications.⁶⁸

Confusion about the content of the system design led to disagreements between AMS and Board staff over what constituted a change. AMS created a change management database to track changes, but disputes continued over whether issues were properly entered into the database and whether issues had been resolved. The continual misunderstandings caused the relationship between Board staff and AMS to deteriorate. An exchange of emails between James Petrick and Bill Yoder, AMS Process Manager, illustrates how the confusion eventually created hostility. Yoder wrote to Petrick about a list of 45 items that AMS believed the Board had agreed not to include in the system. Yoder complained that Board staff had "reopened" 19 of the items for further discussion and argued that the items should be considered closed:

AMS and the Board have already discussed these 45 items at length and agreed that they are not needed[.] ... Accordingly, in the interest of trying to complete this process so that we can finish development and go live on schedule, Rob [Ball] has instructed me to consider these 19 items closed and remove them from the agenda for next week's meeting.⁷⁰

Petrick replied, "This was not my agreement with Rob [Ball]. Specifically, my agreement was that items could be closed only with specific written agreement from a Board staff member[.] . . . I would also appreciate a less combative tone." Yoder replied to Petrick explaining that the items had been closed in the change management database:

I assume that certification in the database is the equivalent of an agreement in writing[.] . . . I am frustrated that instead of telling us which items you wanted to examine, so that we could prepare for that discussion, you insisted on "reopening" and discussing ALL of these items during our Friday meeting. Nobody was prepared for this discussion, and I did not feel that it was a productive use of anyone's time.⁷²

Petrick replied:

⁶⁷ Stiffler Interview.

⁶⁸ Ld

⁶⁹ Email from Bill Yoder to James Petrick (May 12, 2000) (Exhibit 25).

⁷¹ Email from James Petrick to Bill Yoder (May 15, 2000) (Exhibit 25).
⁷² Email from Bill Yoder to James Petrick (May 15, 2000) (Exhibit 26).

If all these items have been approved in the [change management] database, then why are they still open? As far as being productive, if AMS had acted like a productive and professional organization at any time during this project, we wouldn't be where we are and the client wouldn't have to be spending inordinate amounts of time trying to bail your [expletive deleted] out of this. So don't lecture me. I stand by my position.⁷³

Three months later, the confusion had not been resolved. Petrick wrote to AMS Project Manager Rob Ball, "It seems like we have some real control problems on this [change management] stuff. I think we . . . need to get a handle on this ASAP. . . . [I]t seems that there is confusion all around."⁷⁴

By March 2001, Petrick was also complaining that AMS personnel had assigned issues to Board staff in the issue tracking database, but had failed to communicate with him about them directly. He wrote to Ball, "We are finding that AMS is assigning multiple issues to the Board without notifying Board staff (or me) [and] without making any attempt to resolve the issue first on the telephone." Petrick also complained that AMS had made major design changes without first obtaining his approval:

This is precisely the type of situation you need to inform me of before AMS makes a decision. We know nothing about a decision to eliminate use of OmniStation, which surely has a huge effect on the designs, documentation, technical architecture, etc. . . . If AMS wants to change the entire design of the data entry function, they need to consult with the Board first. ⁷⁶

These emails support the conclusions reached by the IBS review—namely, that both sides failed to communicate adequately, leading to an increasingly adversarial relationship between AMS and Board staff, which was counterproductive and crippled the project.

C. Failure to Assign Appropriate Staff

Board staffing: Given the size and scope of this project, it was obviously important that the Board have sufficient expertise overseeing the project. The Board should have involved Board staff members with more IT experience and hired outside consultants to help oversee the project. Additionally, the Board could have more effectively used its rights under the software licensing agreement for the software AMS was modifying in performance of the contract; for example, the Board should have been able to get some limited assistance from the makers of the software that AMS was customizing in order to better oversee AMS's contract performance.

Roger Mehle was ultimately responsible for staffing the project, and he selected James Petrick to run it. Petrick asked Roger Mehle to make sure that on project-related matters, the rest

⁷³ Email from James Petrick to Bill Yoder (May 16, 2000) (Exhibit 26).

⁷⁴ Email from James Petrick to Rob Ball (August 18, 2000) (Exhibit 27).

⁷⁵ Email from James Petrick to Rob Ball (March 27, 2001) (Exhibit 28).

⁷⁶ Email from James Petrick to Rob Ball (March 5, 2001) (Exhibit 29).

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of the Board staff knew that he was in charge. He wrote a memo to Mehle explaining that because of the many tasks proceeding simultaneously that it was important that project management structure be observed by the Board's team. He therefore asked that Mehle remind the staff that Petrick was the Program Manager and that it was "unacceptable to me for staff to schedule meetings . . . without the Project Manager's prior knowledge or approval". 77 According to Mehle, he did as Petrick asked. ⁷⁸ Mehle said that he knew that there was some tension between Petrick and Stiffler, but that he did not believe that it prevented them from working together effectively on the project. 79 Close cooperation between them was essential for the project to succeed, because Petrick had little contract experience and no information technology expertise. By contrast, Stiffler had significant experience in both contract management and information technology. Mehle said he was well aware of the differences in their backgrounds but he wanted a policy expert with experience with the Board's record-keeping system to be in charge rather than a technology expert. Mehle believed that Petrick had the ability to call on Stiffler's expertise when necessary and that he did so. 80 In contrast, Stiffler told staff he was not being sufficiently consulted. 81 Stiffler said that when he came to the Board, he knew that they were beginning this major project, and he believed he would be given a leadership role in overseeing the effort. 82 However, Stiffler said that it soon became clear to him that it was not his project and that Petrick preferred to work directly with Mehle rather than with him. 83

After AMS had repeatedly missed deadlines and increased its cost estimates, Stiffler developed a plan to choose a backup contractor in case AMS had to be terminated. ⁸⁴ Stiffler presented his plan to Mehle despite his belief that Mehle would not react well to the idea. ⁸⁵ To his surprise, Mehle not only approved the idea, but also put Stiffler in charge of executing the plan and, eventually, managing the new contract with MATCOM. ⁸⁶ Ultimately, the MATCOM project accomplished more in a year-and-a-half than the AMS project was able to accomplish in four years.

AMS staffing: In winning the contract, AMS promised that it would assemble the necessary staff on short notice and that its staff was highly qualified and had directly relevant expertise. AMS's internal documents, however, show that AMS continuously experienced shortages of personnel with the necessary skills to complete the project, 88 changed project managers three

⁷⁷ Memorandum from James Petrick to Roger Mehle (May 22, 1998) (Exhibit 30).

⁷⁸ Mehle Interview.

⁷⁹ Id.

⁸⁰ *Id*.

⁸¹ Stiffler Interview.

⁸² *Id*.

⁸³ *Id*.

⁸⁴ *Id*.

⁸⁵ *Id*.

⁸⁶ Id.

⁸⁷ See, e.g., "Proposal to the FRTIB," Executive Summary, p. ES-19-21 (Exhibit 15); "Proposal to the Federal Retirement Thrift Investment Board, In Response to Solicitation Number, RFP-TIB-96-01, Technical Proposal Part 1 (October 16, 1996) (Exhibit 31).

⁸⁸ See, e.g., "Eight Months . . . So Far, So Good" January 28, 1998, p. 13 "significant project risk due to dearth of technical leadership" (Exhibit 32); "Thrift Development Status", December 7, 2000, "We need more mainframe and Omni talent" (Exhibit 33); February 26, 2001, memorandum from Rob Ball to Bill Purdy and other management,

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times during the project⁸⁹ and had other staff turnover issues. AMS also continuously failed to have enough personnel working on the project.⁹⁰ Moreover, there is evidence that in at least one case AMS did not comply with a contractual obligation requiring individuals designated as "key personnel" to work on the project. In the contract, AMS obligated a specific AMS Vice President to be the project manager. In its proposal to the Board, AMS committed 100% of this individual's time to managing the project.⁹¹ However, an internal AMS document dated July 29, 1997, identifies a different person as the project manager.⁹² AMS did not seek permission to replace the individual contractually obligated to be project manager until December 1, 1997.⁹³ These shortcomings prevented the Board from receiving part of what it had bargained for in awarding the contract to AMS.

IV. Recommendations

The federal government awarded more than \$115 billion in information technology-related contracts in 2003, almost double the amount contracted for in 2002. Unfortunately, delays and cost overruns have plagued many of the planned improvements in information technology. By placing a higher priority on the effective management of information technology contracts, in a manner that minimizes risk, similar failures can be avoided in the future. Further, without appropriate attention to the reasons for the implementation delays, agencies may not be prepared to successfully meet future information technology needs in a timely manner. The Board and other federal agencies should examine carefully the events that led to the termination of its contract with AMS and apply lessons learned to future procurements.

Because the jurisdiction of this Committee is focused on oversight of the federal government and especially its procurement policies, throughout the course of the investigation,

[&]quot;WE ARE STILL CRITICALLY SHORT OF COBOL PROGRAMMERS" (Exhibit 34); "Thrift Testing Risks", undated AMS document "There is nobody on the [AMS testing] team that has a solid grasp of the Thrift system design, and the COTS design documentation is not finalized. There is a lack of OMNI knowledge on the team. . . more expertise is still needed" (Exhibit 35).

⁸⁹ The Board approved the changes of project managers, except as explained below, where AMS replaced Silverman as project manager before obtaining the Board's permission.

⁹⁰ See, e.g., "Annotated Agenda, Thrift Team Leaders Meeting," June 22, 1998 noting that overall status of technical designs and imaging design was "[b]ehind schedule, needs more staff on technical side"; September 24, 1998, (Exhibit 36); Email from Bill Yoder to James Fong and Nick Agrios "We are generally short of staff in all areas – we are particularly short on technical staff" (September 24, 1998) (Exhibit 37); "18 Months Phase 2 – Detailed Design, Only 36 Shopping Days Left," November 18, 1998, p. 16-22 (discussing staff shortages) (Exhibit 38); "Client Review; Federal Thrift Retirement Board" January 19, 1998, p. 3, 5-6 "several due dates are threatened, primarily due to understaffing. Of greatest concern is the potential effect of delays on the Board's target implementation date in May, 2000." (Although the cover page of this exhibit provides the date of January 19, 1998, the remainder of the pages correctly provide the date as January 19, 1999) (Exhibit 39); "Client Review", April 8, 1999, p. 14 "[d]evelopment staffing is a grave concern; we seem to be ending up with a heavy preponderance of very junior staff." (Exhibit 40); February 26, 2001, memorandum from Rob Ball to Bill Purdy and other management, noting that AMS needed 47 more full time employees for the project. (Exhibit 34).

⁹¹ "Proposal to the Federal Retirement Thrift Investment Board, In Response to Solicitation Number, RFP-TIB-96-01, Technical Proposal Part 1 (October 16, 1996) (Exhibit 31).

^{92 &}quot;Thrift Project Review: Honeymoon," July 29, 1997 (Exhibit 12).

⁹³ Letter from Jean M. Ehreth, Senior Principal, Contracts, AMS to Strat D. Valakis, Contracting Officer, Thrift Board (December 1, 1997) (Exhibit 41).

the Committee sought to identify measures that could help the Board avoid similar failures in the future. Although the Board did take some steps to mitigate the damage caused by the contract's failure, 94 its management failures outweighed those steps. The application of best practices could have assisted the Board in predicting and avoiding problems that arose during the Board's contract with AMS. The Board should develop a series of best practices to apply to future procurements, and in doing so, it should particularly consider the following issues:

A. Qualified Staff

The Board should select qualified, experienced staff to direct future contracts, in order to help ensure that the participants and beneficiaries are receiving the best value. As discussed earlier, a background in information technology and larger scale IT project management could have led Board staff to identify earlier that AMS was drafting an inordinate amount of custom code. If the Board lacks the necessary expertise, then it should seek outside assistance.

B. Importance of Independent Evaluation

Hiring an independent expert to augment the Board's knowledge of the Thrift Savings Plan policies could have provided a continuous, objective evaluation of AMS's performance. The independent expert could have supported the Executive Director and the Board and provided guidance on key technical decisions. Such guidance could have ensured that project metrics were developed and followed and that proper oversight was given to key personnel assigned to the project. The larger and more expensive a project is, the more important it becomes to incorporate independent verification and validation. 95

Going forward, the use of independent experts may provide the Board the perspective necessary to avoid becoming too dependent on any one contractor. With larger contracts, the Board should consider hiring independent contractors to assist in evaluating the primary contractor throughout the course of the project. When Committee staff discussed the use of independent experts with Smithson, he agreed that, "you must have some way to validate that the contractor is doing their job."96 Committee staff found no indication that Board staff contemplated this option. AMS's significant deviation from the original design, combined with the overarching lack of effective communication, highlights the importance of having the necessary expertise to aggressively monitor such a major project. An outside entity could have assisted the Board by using like data from past projects to predict future schedules and improve cost estimates. Given the importance of the system to the daily operation of the Thrift Savings Plan, independent verification by another contractor would have been prudent and might have avoided millions of dollars and years worth of wasted efforts.

⁹⁶ Id.

⁹⁴ These steps included: (1) attempting to limit AMS's travel expense overruns; (2) pitching in to help AMS with testing of the software; (3) issuing a cure letter putting AMS on notice that it was failing in its contract performance and demanding a plan to finish the contract; (4) agreeing to allow AMS to implement the system's functionality in stages in order to help keep the project as much on time as possible; (5) obtaining outside auditors to assess what was going wrong with the contract; and (6) retaining a back-up contractor when AMS's performance looked questionable to ensure that more time would not be lost if the Board had to eventually cancel the contract. Smithson Interview.

C. Risk Management

Any set of best practices should place a strong emphasis on risk management. The absence of a true risk management strategy or a focus on quality assurance represented a serious obstacle to effective management of the project. The Committee is aware that AMS led a risk management session in March 1999, but, according to AMS, the Board was not interested in the recommended course of action for risk management. In contrast, Board staff expressed grave disappointment with the risk management meeting. Roger Mehle characterized the meeting as "canned," and described the presentation as generic. Mehle stated further that when he asked Project Manager Larry Best whether any of the general risks appeared to be a threat to the Thrift Board project, Best replied "No, no, we're doing fine." Rather than merely relying on the contractor's own assessments, however, the Board should have independently evaluated and mitigated risk from the beginning.

Even after the record-keeping project continued to experience delays, it appears that the Board did not seek a shared strategy for risk management. AMS did provide monthly snapshots of risk; however, the reports did not provide enough information about changes to the project that would have reduced the level of risk. ⁹⁹ Another related contract management failure identified by DCMA was the failure to complete the design phase of the contract or to manage the additional project risk that resulted from not completing the design. The DCMA audit concluded that freezing the baseline design would have allowed for the development and delivery of a system in controlled increments, and would have increased the chance of achieving workable solutions not dependent on any subsequent increment in order to perform its principal functions. ¹⁰⁰ AMS Project Manager Rob Ball also agreed that the lack of a finalized design document was a major hindrance to a successful project. He compared the situation to beginning construction on a building before the blueprints have been completed. ¹⁰¹ Appropriate risk management could have assisted Board staff in the identification and resolution of system defects earlier in the contract.

D. Selection of Alternate Contract Structures

Without sufficient financial incentives for AMS to deliver a final product by a date certain, the Board placed too much of the risk on plan participants and beneficiaries without any apparent strategy to mitigate that risk. According to AMS, Board staff lacked a basic understanding of the different types of business models that are available for government contracts and the impact that certain incentives could have. In essence, AMS claimed that Board staff acted as if the contract placed all the risk on AMS. In response, Board staff stated their strong belief that they "hired the experts," and thus were entitled to rely on AMS expertise for the life of the project. It appears that the Board did not understand the inherent risk associated

⁹⁷ Best Interview. See also, DCMA audit, p. 10 (Exhibit 23).

⁹⁸ Mehle Interview.

⁹⁹ Id.

¹⁰⁰ DCMA audit, p. 13 (Exhibit 23).

¹⁰¹ Ball Interview.

¹⁰² Ball, Best Interviews.

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with the system that was being designed by AMS under a contract structure that allowed the company to recover part of its costs without any obligation to deliver a working system by a date certain.

Future contracts should be negotiated with a clear understanding of what risks the Board will be accepting on behalf of plan participants and beneficiaries. Moreover, future contracts should be structured to support strong contract administration and minimize the risk to Thrift Savings Plan participants and beneficiaries.

Clear agreement on the scope of work is essential to the successful completion of future projects. The Board should ensure that future contracts not only specify the types of systems and other relevant requirements to be developed or acquired to support TSP functions, but outline procedures for resolving differences in scope that might arise during the course of a project. A clearly defined, written blueprint for IT projects will result in future systems that are well-integrated without the added burden of unnecessary administrative costs being passed on to participants.

In the future, the Board should also consider the use of contract vehicles to better tailor the level of financial risk to the level of technological risk, including more effective incentives to control costs to TSP participants. Larger projects, in particular, may benefit from independent verification. If the Board had better focused on its contract management responsibilities early on, including ensuring that it had adequate IT expertise on its staff, seeking expert evaluation of the contractor's work product, and negotiating a contract that better protected the interests of Thrift Savings Plan participants, then the time and money wasted on the record-keeping project could have been reduced.

Sincerely,

Susan M. Collins

Chairman

Joseph I. Lieberman Ranking Member