OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE
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WASHINGTON, DC 20511

APR 15 2009

Ms. Wendy Payne
Executive Director, Federal Accounting
Standards Advisory Board
Accounting and Auditing Policy Committee
441 G Street, NW
Room 6814
Mail Stop 6K17V
Washington, DC 20548

Dear Ms. Payne:

The Intelligence Community's (IC) Accounting Standards Working Group requests the Accounting and Auditing Policy Committee (AAPC) review the National Security Agency (NSA)'s interpretation of internally developed software (IDS) as it relates to the internal use software definitions outlined in Financial Accounting Standards Advisory Board Statement of Federal Financial Accounting Standard (SFFAS) No. 10, *Accounting for Internal Use Software.*

Specifically, NSA requests to direct expense internal software development for unique operational and mission-related software development that predominately does not meet the useful-life timelines and definitions necessary to accumulate and capitalize costs. The enclosed report describes NSA's business challenges and proposed financial accounting and reporting treatment for mission-related IDS; defines what constitutes mission-related IDS; and documents the rationale for direct expenditure of these costs. The IC Accounting Standards Working Group reviewed this report and approved NSA's request to seek an independent, external review of their interpretation of SFFAS No. 10.

My point of contact for this action is Barbara Jones, Acting Director of the Financial Improvement Group. She can be reached at (703) 275-3405 or email barbara.b.jones@ugov.gov. Please advise Barbara when the AAPC will review this accounting issue. Representatives from my office or the NSA are available to answer any questions and brief the AAPC in either unclassified or classified forum.

Sincerely,

Marilyn A. Vacca

Enclosure

ACCOUNTING ISSUE SUBMISSION

1.0 (U) Title

(U) The National Security Agency's (NSA) proposed accounting treatment for a unique class of developed software to comply with Statement of Federal Financial Accounting Standard (SFFAS) No. 10, *Accounting for Internal Use Software (IUS).*

2.0 (U) Issue

(U//FOUO) NSA has a number of unique conditions with internally developed software[1] used to produce intelligence or provide information assurance[2] that impedes our ability to determine on a consistent, reliable, and cost-effective basis the useful life of the software; or the beginning and end of the software development phase without impacting our mission operations. As a result, NSA has taken the position that mission-related software development costs will be expensed when incurred. The following paragraphs provide support for this position.

2.1 (U) Useful Life Determinations

(U//FOUO) NSA cannot estimate in a consistent, reliable, and cost-effective manner the useful life of mission-related software at the time it enters the "development phase" of the project. The rapid pace of technological advancements and sophistication of our adversaries to develop solutions that counter advances made by NSA often reduces the utility of our mission-related developed software solutions from years to months.

(U//FOUO) NSA has determined that 54 percent of the mission-related systems in operation at the beginning of fiscal year (FY) 2008 were retired from operation during the fiscal year because the capability no longer meets the needs of the Agency. This indicates that NSA's mission-related systems will be replaced, on average, at least once every two years. The pace at which technological advancements reduce the utility of NSA's mission-related systems does not permit our program managers to develop a reliable and cost-effective estimate of mission-related system useful life.

(U//FOUO) NSA also assessed whether prior mission-related system development projects would be useful in determining the useful life of new development projects. We determined that 93 percent of the total number of system projects retired in FY 2008 were replaced with another system capability, which indicates that mission-related system development projects provide new capabilities that are needed to replace outdated capabilities. In effect, the new projects are a "first of its kind" system development that renders the prior system useful life essentially meaningless in determining the useful life of new system development projects.

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[1] (U) For purposes of this paper, developed software includes both Government and contractor software development activities.

[2] (U/FOUO) Software that is used to produce, or assists in producing, Foreign Signals Intelligence (SIGINT), or protects the United States' information systems from outside threats (Information Assurance or IA), and requires National Security protection of the sources and methods.

(U//FOUO) NSA contacted a number of Federal agencies (see Section 8.0) to determine if there were best practices currently being used in the Federal government that could be applied to NSA's unique mission-related system development projects. We determined that most Federal agencies internal system development efforts were designed to meet specific agency mission needs, and the development projects did not provide mission-related capabilities similar to NSA's that could be used to estimate the useful life of NSA's development projects. The other Federal agencies standard life-cycle includes easily identifiable milestones that trigger the start and end period of the software development phase, the period for which development costs should be capitalized in accordance with SFFAS No. 10. We were unable to identify another Federal agency whose mission-related internal software development life-cycle requires a condensed development schedule, and/or a mixture of design and development activities in the same phase, as NSA must perform to meet end-users immediate technological needs.

(U//FOUO) Our mission program managers project that technology will continue to advance at the rapid pace it has over the last several years for the foreseeable future. As a result, the uncertainty with the useful life of mission-related developed software does not warrant an investment of significant resources to determine on a case-by-case basis what would be at best an unreliable projection of mission-related useful life.

2.2 (U) Software Development Phase Determinations

(U//FOUO) NSA is not able to accumulate in a consistent, reliable and cost-effective manner software development costs related to mission-related projects. This is a direct result of NSA's need to rapidly deploy our software solutions to meet our end-users immediate military and homeland security needs.

(U//FOUO) A "standard" software development life-cycle usually begins with the receipt of a capability need and the development of requirements that will define what the software is required to do; as well as an evaluation and test of alternatives. Once a final solution is determined, software configuration control boards and other oversight organizations will approve the solution and funding is provided to begin software development activities. The software development phase will end when user testing is complete and the software is deployed into operation. The software development lifecycle is consistent with SFFAS No. 10.

(U//FOUO) NSA's mission-related development activities do not follow a "standard" software development life-cycle because our development activities must be responsive to our end users immediate requests for emerging and advanced technological capabilities. NSA's mission-related development life-cycle requires development activities, such as coding of software, be performed in conjunction with the design of the solution, making mission-related software design and development activities indistinguishable.

(U//FOUO) For example, NSA often receives urgent requests from customers to monitor communications of adversaries who often use new technology to escape detection. To meet the immediate need of the end user, our technical managers begin writing software code while the final solution is still being developed. This dual tracked effort is performed to significantly

reduce the development schedule. NSA does not have time to evaluate and test alternative solutions; and as a result, NSA's mission-related internally developed software life-cycle must be flexible and condensed to meet end-user immediate needs.

(U//FOUO) Mission-related software projects are often deployed directly into operations before product testing is completed and formal user acceptance has occurred, making the consistent and reliable determination of whether mission-related software development activities are complete virtually impossible. In many instances, software deployed directly into operation does not always meet the capability of the end-user; and therefore, NSA must either abandon the software project or return it to NSA's developers for further design activities. This process may occur several times throughout NSA's mission-related development life-cycle, further impeding the determination of whether the software project is in the development phase as defined by SFFAS No. 10.

2.3 (U) Cost Benefit Determinations

(U//FOUO) It is cost prohibitive for NSA to determine in a consistent and reliable manner, the useful life or capitalized development costs for mission-related systems/software. We expect technological advancements to occur at the current rapid pace, so it is reasonable to conclude that NSA will initiate a significant number of mission-related system development projects in FY 2009 and beyond; and as a result, NSA believes that it is cost-prohibitive to determine, on a case-by-case basis, whether these mission-related system development projects will meet the capitalization requirements of SFFAS No. 10.

(U//FOUO) While NSA cannot determine an actual cost should the FASAB's Accounting and Auditing Policy Committee (AAPC) reject our position to expense mission-related development costs when incurred, we have identified some of the additional costs that would have to be borne by NSA:

- (U) Re-configuration of Management Information Systems – additional hardware, software, and contractor implementation costs to re-configure management information systems (e.g., project costing, time and labor, etc.) that will allow the Agency to accumulate costs incurred during the software development phase.

- (U) Modification to existing processes and controls – costs associated with the development and implementation of business processes and controls to accumulate reliable financial information on mission-related software development costs.

- (U//FOUO) Impact on mission service delivery – cost to our customers of delaying the delivery of our mission capabilities.

(U//FOUO) Considering the uncertainties with the utility of mission-related software and the cost benefits of tracking system development phase costs for a significant number of system projects each year, our request to expense mission-related system development project costs when they occur is appropriate and in compliance with SFFAS No. 10.

2.4 (U) Conclusion

(U//FOUO) The persuasive uncertainties that exist around the utility of NSA's mission-related developed systems and the determination of when the projects enter or leave the development phase, combined with the costs that would be required to accumulate mission-related system development project costs on a project-by-project basis, supports our position that these development costs should be expensed when occurred.

3.0 (U) Relevant Literature

(U) The following literature was used in the development of our proposed accounting and financial reporting treatment of mission-related software project costs.

- (U) Statement of Federal Financial Accounting Standards No.10, *Accounting for Internal Use Software,* dated June 1998; Paragraphs: all.

- (U) FASAB Technical Release No. 5, *Implementation Guidance on Statement of Federal Financial Accounting Standards 10: Accounting for Internal Use Software,* dated May 2001; Pages 3 and 5, Questions and Responses.

- (U) FASAB Statement of Federal Financial Accounting Concept (SFFAC) No. 5, *Definitions of Elements and Basic Recognition Criteria for Accrual-Basis Financial Statements,* dated December 2007, Paragraphs No. 57 through No. 59.

- (U) Office of Management and Budget (OMB) Circular A-130, *Management of Information Resources,* dated November 2000, Appendix IV, Analysis of Key Sections

(U//FOUO) There is nothing in the above literature that contradicts our position to expense all mission-related software project costs when incurred. The persuasive uncertainties that exist with NSA's mission-related software useful life and development phase determinations prevent the development of an estimable measurement of capitalized software development costs. Measurement is a key criterion for asset recognition as defined in SFFAC No. 5.

(U//FOUO) OMB Circular A-130, also recognizes that life cycle development varies by information system and that there are only two phases that are common to all information system projects – a beginning and an end. The complexity of our mission-related software development projects and its software development life cycle path is unique and requires special consideration when applying the provisions within SFFAS No. 10.

4.0 (U) Audit Findings

(U) NSA's need to revise our accounting treatment for IUS was derived from an audit finding as identified below:

- (U) Type of review – the Agency performed an audit readiness self-assessment in accordance with its Financial Management Solutions (FMS) Program. The review included Internal Use Software which is a sub-component of the Agency's Property, Plant and Equipment (PPE) financial statement line.

- (U) Who Conducted Review – the audit assessment was performed by PricewaterhouseCoopers LLP, as a subcontractor to NSA's FMS Prime Contractor, Accenture National Security Services LLC.

- (U) Date of Review – A final PPE Assessment Report was delivered to NSA on February 15, 2005.

- (U//FOUO) Findings – The report stated the following: "The Agency does not account for the direct and indirect costs associated with Internal Use Software, as defined in SFFAS No. 10 *Accounting for Internal Use Software.* Additionally, no process exists to perform an inventory or determine the value of Internal Use Software."

- (U) Status of Findings

  - (U//FOUO) NSA established an IUS Working Group to address the conditions identified in the contractor's PPE Assessment Report.

  - (U//FOUO) The IUS Working Group segregated the IUS Audit Remediation Project into three distinct classes of IUS: (1) Commercial Off-the-Shelf (COTS) software purchases; (2) software projects related to signals intelligence and information assurance activities; and (3) software projects for all other NSA activities.

  - (U//FOUO) NSA developed a position that development costs related to mission-related system software should be expensed when incurred because of the conditions discussed in Section 2 of this paper. All COTS and other software project costs would be capitalized in accordance with the criteria outlined in SFFAS No. 10.

  - (U//FOUO) NSA is in the initial phases of developing processes and controls around the accounting and financial reporting of COTS and non-mission developed software. At this time, there are no significant issues that would impede NSA's ability to complete remediation activities in accordance with its audit readiness objective.

5.0 (U) Current Practice

(U//FOUO) NSA's current practice with respect to all developed software is to expense costs when incurred. NSA's audit compliance contractor determined that this practice was not in compliance with SFFAS No. 10, and that this would impede an audit of NSA's financial statements. To resolve these impediments, NSA developed and is implementing an audit remediation plan for IUS with a planned remediation date of December 31, 2010.

6.0 (U) NSA Position

(U//FOUO) NSA will capitalize in accordance with the criteria set-forth in SFFAS No. 10; COTS purchases; non-mission-related[3] software development costs; and mission-related software project costs that are integral to fixed-asset development projects, provided that the capitalized costs exceed NSA's materiality thresholds. Capitalized costs will be amortized over the useful life of the software or the fixed asset.

(U//FOUO) Other mission-related software development costs will be expensed when incurred. The rapid pace of technological advancements that are being made by our adversaries imbeds too much uncertainty as to whether software projects will have a useful life equal to or exceeding two years. In addition, NSA's mandate to meet our customers intelligence and information assurance needs in real-time requires a condensed software development life-cycle that prohibits a reliable, consistent and cost effective determination of whether software projects are in the software development phase as defined by SFFAS No. 10; and therefore, when the accumulation of capitalized software development costs should occur.

(U//FOUO) NSA's IUS Working Group also believes that the cost to re-configure management information systems to accumulate mission-related software development costs on a project-by-project basis, and that would not affect the delivery of our mission program capabilities, would far exceed the benefits that would be derived from the capitalization and amortization of software costs in NSA's financial statements.

6.1 (U) Analysis Performed

(U//FOUO) NSA's Financial Improvement Audit Team (FIAT) interviewed over 75 individuals in 26 mission-related organizations to explain the financial statement reporting requirements of SFFAS No. 10, and to obtain an understanding of the uniqueness of NSA's mission software development life-cycle. NSA derived its position by asking the following:

- (U//FOUO) How do you determine the useful life of mission software in a constantly changing technological environment?

- (U//FOUO) How do you determine when software development begins and ends in a development life-cycle that includes spiral development activities that constantly change the form and substance of our mission-related software every 90 days?

- (U//FOUO) How do you determine whether changes made to established mission-software are enhancements that significantly improve the software capabilities, or permit the continued use of the developed software?

- (U//FOUO What are the triggering mechanisms to determine that mission-related software is "impaired" and no longer serves the primary purpose for which the software was developed.

[3] Non-mission related software development costs include, but are not limited to, development activities in areas such as Human Resources, Finance, Acquisition, Asset Management, Information Technology Management, Project Management, Budgeting Formulation, and Security.

- (U//FOUO) How do you ensure that accumulating the costs of mission-related software development costs would not impact the timely delivery of our software solutions or divert resources away from program delivery?

(U//FOUO) In summary, numerous discussions with program managers and staff were held on how to mitigate these concerns. It was evident to the FIAT that the uncertainty around useful life and software development phase determinations would prevent NSA from accumulating the cost of mission-related software development costs in a consistent and reliable manner in accordance with SFFAS No. 10.

(U) Non-mission organizations such as Finance, Acquisitions, or Human Resources, that purchase or develop software, were not involved in these discussions because their non-mission software development projects are not unique to NSA and follow a standard software development life-cycle. NSA will capitalize these software development costs in accordance with SFFAS No. 10.

7.0 (U) Reassessment

(U//FOUO) NSA will periodically revisit its IUS position to assess whether technological advancements have driven a change in the way NSA must operate to accomplish our mission objectives. If NSA determines at any point in the future that mission-related software useful life and software development costs can be determined in a consistent and reliable manner, NSA will capitalize these costs in accordance with SFFAS No. 10, provided that the cost to do so does not exceed the benefits that would be derived.

(U//FOUO) Our reassessment will include the determination of whether it is viable to reconfigure management information systems to allow NSA to accumulate software development costs; however, re-configuring management information systems will not resolve the uncertainties around software useful life and software development phase determinations. Reconfiguring management information systems with new capabilities could reduce the labor intensive processes that would otherwise be required to accumulate software development costs on a project-by-project basis.

8.0 (U) Benchmarking

(U//FOUO) NSA contacted the following Federal agencies to determine whether they had similar IUS issues as NSA and how those agencies resolved those issues. The results of our inquiries are documented below:

8.1 (U) National Institute of Health (NIH)

(U//FOUO) In December 2008, a conference call was held with Dave Keller, finance officer, to discuss NIH's accounting and reporting of IUS. The following points were discussed:

- (U) NIH does not have a high volume of internally developed software projects in any given year. NIH is tracking 3 major system implementations with approximately 15 modules that

have software development components embedded in the implementations, for an average of less than 1.5 IUS projects a year since FY 2000.

- (U) Most of NIH's IUS projects center around the implementation of COTS products. There are a minimal number of internally developed software projects at NIH and none have exceeded the capitalization threshold.
- (U) NIH software development uses a standard life-cycle process that is equivalent to OMB rules. Although there is no one milestone or event that defines when the software development begins, NIH generally does not have difficulty determining when to begin or end the accumulation of software development costs.
- (U) NIH capitalizes IUS costs when they exceed $1,000,000. This amount was determined by NIH's "parent" entity, the Department of Health and Human Services. NIH does not have a stand-alone audit requirement.
- (U) NIH uses an IUS useful life of 3 years, and this was determined through discussions with CIO's of other Federal agencies with similar software development projects.

(U//FOUO) The NIH's implementation of the FASAB No. 10 should not be used as a benchmark for NSA because of the following comparisons:

National Institute of Health	National Security Agency
IUS projects are low volume and high investment, and can be easily tracked and monitored by NIH management. Most software development projects are visible internally (NIH CIO) and externally (e.g., OMB).	Mission-related software development projects tend to be high volume and lower investment relative to the Agency's COTS implementations, and thus, cost prohibitive to track and monitor on a project-by-project basis.
Most development projects are COTS related and are widely available in the commercial market.	Mission-related development projects are mostly internally developed because there are no COTS solutions available to NSA to achieve its objectives.
Two of the three system implementation tracked by management support NIH's mission, accordingly, implementing the IUS reporting requirements had a minimal impact on NIH's mission service delivery.	All of NSA's mission-related software development projects have a direct impact on mission objectives; therefore, implementing the IUS reporting requirements for mission-related software development would have a direct impact on NSA's mission service delivery.
Standard software development life-cycle with defined milestones to move through each phase of the development process.	As a result of the rapid pace of technology, mission-related software development life-cycles are unique for each project. Software development activities are often performed concurrently with no specific development milestones. Small incremental advances in capabilities are often the only measure of whether a mission-related software project will continue, and makes this determination cost prohibitive.

8.2 (U) Federal Bureau of Investigation (FBI)

(U//FOUO) In February 2009, a conference call was held with Mr. Mike Miguel, Acting Deputy Chief of Finance Section, to discuss FBI's accounting and reporting of IUS. The following points were discussed:

- (U) FBI does not have a high volume of internally developed software projects in any given year. FBI is monitoring 17 major internal development efforts/assets in FY 2008 with a total value of approximately $400 million. This represents approximately 5% of the total funding received during FY 2008.
- (U) All of the 17 IUS projects were custom development projects designed to meet the specific mission needs of the FBI.
- (U) FBI uses a standard life-cycle process with clearly defined milestones that designate when software development begins and ends. Software configuration control boards are used to authorize major software development projects.
- (U) FBI capitalizes IUS costs when they exceed $500,000; this amount was determined by FBI's "parent" entity, the Department of Justice.
- (U) FBI does not have a stand-alone CFO Act audit requirement, although it does develop FBI financial statements that are audited on a yearly basis.
- (U) FBI uses an IUS useful life of 5 years, and this was determined by the consolidated Department of Justice.

(U//FOUO) The FBI's implementation of the FASAB No. 10 should not be used as a benchmark for NSA because of the following comparisons:

(U//FOUO)

Federal Bureau of Investigation	National Security Agency
IUS projects are low volume and high investment, and can be easily tracked and monitored by FBI management. Software development is monitored by CIO and software configuration control boards that approve essentially all software development projects.	Mission-related software development projects tend to be high volume and lower investment relative to the Agency's COTS implementations, and thus, cost prohibitive to track and monitor on a project-by-project basis.
Most development projects are mission related and designed to meet a specific capability.	Comparable. Mission-related development projects are mostly internally developed because they must meet specific mission-related capabilities not available in the commercial market.
Most internal development projects are mission-related, but compliance with SFFAS No. 10 has had only a minimal impact on FBI's mission service delivery.	All of NSA's mission-related software development projects have a direct impact on mission objectives; therefore, implementing the IUS reporting requirements for mission-related software development would have a direct impact on NSA's mission service delivery.
Standard software development life-cycle with clearly defined milestones to move through each phase of the development process.	Mission-related software development life-cycles are unique for each project. Software development activities are often performed concurrently with no consistent and easily identifiable development milestones.

8.3 (U) National Aeronautics and Space Administration (NASA)

(U//FOUO) In March 2009, a conference call was held with Ms. Ramona Thomas of NASA to discuss their accounting and reporting of IUS. The following points were discussed:

- (U) NASA does not have a high volume of internally developed software projects in any given year (less than 5 per year). NASA currently holds 15 IUS capitalized assets, of which 5 have been fully depreciated. The total value of 15 IUS capitalized assets is less than 1% of NASA's total assets.
- (U) All of the 15 IUS projects were derived from COTS software and all support non-mission activities (e.g., finance activities).
- (U) NASA uses a standard life-cycle process with defined milestones that designate when software development begins and ends. Project managers have been trained to track development costs through the software development phase.
- (U) NASA capitalizes IUS costs when they exceed $1,000,000, and this was determined through historical analysis and benchmarking of other entities similar to NASA's IUS projects.
- (U) NASA uses an IUS useful life of 5 years, and this was also determined through historical analysis and benchmarking of other entities similar to NASA.

(U//FOUO) The NASA's implementation of the FASAB No. 10 should not be used as a benchmark for NSA because of the following comparisons:

(U//FOUO)

NASA	National Security Agency
IUS projects are low volume and low high investment, but immaterial to NASA's overall total assets. IUS projects are easily tracked and monitored by NASA management.	Mission-related software development projects tend to be high volume and lower investment relative to the Agency's COTS implementations, and thus, cost prohibitive to track and monitor on a project-by-project basis.
All IUS projects currently being tracked are for support functions such as finance and administration, and usually are configured from a COTS product. All mission software development is embedded into the fixed asset that runs the software.	Mission-related development projects are mostly internally developed because they must meet specific mission-related capabilities not available in the commercial market.
There is no impact of NASA's IUS development on mission operations.	All of NSA's mission-related software development projects have a direct impact on mission objectives; therefore, implementing the IUS reporting requirements for mission-related software development would have a direct impact on NSA's mission service delivery.
Standard software development life-cycle with defined milestones to move through each phase of the development process. Project managers are trained on cost recognition in each phase.	Mission-related software development life-cycles are unique for each project. Software development activities are often performed concurrently with no consistent and easily identifiable development milestones.

9.0 (U) NSA Points of Contact

(U//FOUO) NSA's primary point of contract for this submission is Mr. James Plews, Chief of the Financial Improvement and Audit Team: Unsecured 410-854-3859, email jplews@nsa.gov.

Table of Changes to IUS Paper

Page	Change	Reason for Change
Page 3 – Section 2.3, first bullet	Clarified that NSA would have to incur additional costs to reconfigure management information systems to capture mission-related software development costs	Avoids ASWG confusion that NSA's implementation of Time & Labor and Project Costing modules would, by itself, be the only cost incurred by NSA to capture development costs
Page 6 – Section 6.0, first paragraph	Added statement that NSA will capitalize mission-related software costs that are integral to a fixed-asset development project	Addresses the concerns of the ODNI Acting CFO and ASWG about whether a material amount of software development costs would not be capitalized. Does not require NSA to determine useful life or development phase costs. Leaves to NSA's discretion of what software is integral to a fixed-asset project
Page 7 – Section 6.1, new section	Added a section on the analysis that was performed to arrive at NSA's position. References interviews of 75 staff in 26 mission organizations; lists 5 main issues raised during the interviews, which support how NSA derived its position	Provides support to ASWG on how NSA derived its position. Supports that we discussed with mission organizations the issues implementing the standard would have and the changes that would be required
Page 8 – Section 7.0 new section	States that NSA will revisit its position should changes occur in NSA's mission operations; states that NSA will assess whether re-configuring information systems will help NSAaccumulate IUS costs; however, firmly states that re-configuring systems alone will not resolve NSA's IUS issues	Addresses ODNI CFO and ASWG's concerns that there was nothing in the paper that stated NSA would revisit its position if changes in operations occurred Address the ASWG's misconception that NSA's implementation of Project Costing and Time & Labor by itself will solve NSA's IUS issues.
All	Minor grammar changes; minor changes to make paragraphs consistent with changes above	Better flow of paper