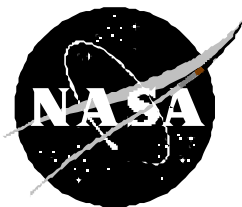


**REVIEW
REPORT**

**PROCUREMENT MODULE TESTING OF
NASA'S INTEGRATED FINANCIAL
MANAGEMENT PROGRAM**

March 17, 2000



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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Reader Survey

Please complete the reader survey at the end of this report or at <http://www.hq.nasa.gov/office/oig/hq/audits.html>.

Acronyms

FAR	Federal Acquisition Regulation
IFMP	Integrated Financial Management Program
OMB	Office of Management and Budget

W

March 17, 2000

TO: A/Administrator

FROM: W/Inspector General

SUBJECT: INFORMATION: Review of the Procurement Module Testing of NASA's Integrated Financial Management Program
Report Number IG-00-016

The NASA Office of Inspector General has completed a review of the Procurement Module Testing of NASA's Integrated Financial Management Program (IFMP). The audit was completed prior to recent NASA actions to critically examine continuation of the IFMP contract. The IFMP procurement module was intended to provide NASA with a comprehensive system of acquisition management tools encompassing requisition, bid, purchase order, and contract management. The Associate Administrator for Procurement requested that we review NASA's validation testing of the procurement module. We reviewed three procurement subprocess activities¹ in detail and found that the NASA procurement process test team had adequately developed validation tests for determining whether the IFMP procurement module can properly process valid data.² The validation tests also adequately addressed applicable Federal Acquisition Regulation (FAR), NASA FAR Supplement, and functional requirements.³ However, we found that the procurement process test team did not include adequate testing of controls over erroneous inputs. Erroneous data includes data that is inaccurate, was improperly authorized, or has incomplete data fields. This occurred because (1) NASA did not specifically require tests using transactions with erroneous data in the validation phase and (2) the test team has not documented the specific tests and data to process during internal control testing. Without adequate testing of controls over processing of erroneous data, NASA had less assurance that the procurement module would adequately identify, reject, and report erroneous data that could corrupt the database.

¹ The three subprocess activities we reviewed in detail are, initiate acquisition request, award contract, and close-out contract

² Valid data is accurate, authorized, and complete (contains no blank data fields).

³ The NASA Grants and Cooperative Agreement Handbook (Handbook) states requirements, policies, and procedures applicable to the IFMP procurement module. The Handbook corresponds to requirements, policies, and procedures contained in the FAR and NASA FAR Supplement. Therefore, we did not assess compliance with Handbook requirements, policies, and procedures for the three reviewed activities. The testing objective was to determine whether the procurement module met NASA's functional requirements.

Background

NASA was testing the IFMP system in three phases, system and integration, data conversion, and validation. The system and integration phase demonstrates that the IFMP system functions as a single logical system from a system user's perspective. The data conversion phase was intended to demonstrate that the IFMP system accurately converts data from existing computer systems into IFMP system data. The validation phase was intended to determine whether the IFMP system's software meets requirements before management proceeds with IFMP system implementation.

In December 1998, NASA began validation testing of the procurement module at the Marshall Space Flight Center with NASA and contractor representatives, the procurement process test team. The test team followed the IFMP testing approach in "The Agency-Level Validation Test Plan." The plan specifies tests and data the test team will process during the validation phase.

The procurement process test team was responsible for developing the test components for the procurement module. The components are test scenarios, scripts, cycles, and data. In the initial development of the test scenarios, the procurement process test team used functional requirements listed in the IFMP contract. The test team broke the requirements down further into test conditions to determine the individual items to be tested. The team also used procurement process flow diagrams, system configuration information, and NASA documents and transactions as input to the test scenarios. Each of the scenarios consists of a series of inputs and expected outcomes that confirm that a requirement or variation of a requirement has been met.

Recommendations, Management's Response, and OIG Evaluation

Management concurred in principle with our recommendation that the Associate Administrator for Procurement should ensure that internal control testing includes adequate tests of erroneous data. The Agency stated that the responsible contractor will document the revised internal control testing strategy to identify the types of erroneous data the team will process during internal control testing. However, the schedule for validation testing has become less predictable in the current IFMP contract environment.

The actions taken by management are responsive to the recommendation. We consider the recommendation resolved for reporting purposes and will continue to monitor the recommendation until it is dispositioned.

[Original signed by]

Roberta L. Gross

Enclosure

Final Report on the Review of the Procurement Module Testing
of NASA's Integrated Financial Management Program

FINAL REPORT
REVIEW OF THE PROCUREMENT MODULE TESTING OF NASA'S
INTEGRATED FINANCIAL MANAGEMENT PROGRAM

W

March 17, 2000

TO: B/Chief Financial Officer
H/Associate Administrator for Procurement

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Review of the Procurement Module Testing of NASA's
Integrated Financial Management Program
Assignment Number A9901700
Report Number IG-00-016

The subject final report is provided for your use. Please refer to the Results in Brief section for the overall review results. Our evaluation of your response is incorporated into the body of the report. The recommendation will remain open for reporting purposes until corrective action is completed. Please notify us when action has been completed on the recommendation, including the extent of testing performed to ensure corrective actions are effective.

If you have questions concerning the report, please contact Mr. Lorne A. Dear, Program Director, Procurement Audits, at (818) 354-3360; Ms. Nora Thompson, Program Manager, Procurement Audits, at (757) 864-3268; or Mr. Mark Zielinski, Auditor-in-Charge, at (216) 433-5414. We appreciate the courtesies extended to the review staff. The report distribution is in Appendix F.

[Original signed by]

Russell A. Rau

Enclosure

cc:

AO/Chief Information Officer

B/Comptroller

BF/Director, Financial Management Division

G/General Counsel

JM/Director, Management Assessment Division

bcc:

AIGA, IG, Reading Chrons

H/Mr. Horvath

H/Ms. Thompson

W/Mr. Dear

W/Ms. Thompson

W/Mr. Zielinski

NASA Office of Inspector General

IG-00-016
A9901700

March 17, 2000

Procurement Module Testing of NASA's Integrated Financial Management Program

Introduction

Office of Management and Budget (OMB) Circular A-127, "Financial Management Systems," requires Federal agencies to maintain a single, integrated financial management system. The Circular requires integrated financial management systems to apply consistent internal controls over data entry, transaction processing, and reporting to ensure the validity of information and protection of Federal Government resources. The General Accounting Office, "Standards for Internal Control in the Federal Government,"⁴ states that controls in a computerized system ensure the system processes transactions that are accurate, properly authorized, and complete. Management is responsible for developing the controls and for making them an integral part of operations.

In response to OMB Circular A-127 requirements, NASA established the Integrated Financial Management Program (IFMP). The IFMP procurement module will provide NASA with a comprehensive system of acquisition management tools encompassing requisition, bid, purchase order, and contract management. The module will comply with Federal Acquisition Regulation (FAR) and NASA FAR Supplement requirements (see Appendix B). The IFMP procurement module incorporates three major procurement subprocesses (presolicitation; solicitation and award; and contract administration). The three subprocesses consist of eight subprocess activities. We judgmentally selected one activity (see Appendix C) in each of the three subprocesses and reviewed testing of the selected activities.

NASA is testing the IFMP system in three phases, system and integration, data conversion, and validation. The system and integration phase demonstrates that the IFMP system functions as a single logical system from a system user's perspective. The data conversion phase demonstrates that the IFMP system accurately converts data from existing computer systems into IFMP system data. The validation phase determines whether the IFMP system's software meets requirements before management proceeds with IFMP system implementation. Validation testing should include the processing of valid data⁵ and erroneous data.⁶ Processing erroneous data determines whether the software identifies, rejects, and reports data that is inaccurate, invalid, or incomplete.

⁴ The General Accounting Office issued the standards in November 1999.

⁵ Valid data is accurate, authorized, and complete (contains no blank data fields).

⁶ Erroneous data includes data that is inaccurate, was improperly authorized, or has incomplete data fields.

NASA is testing the IFMP system with support from two contractors, KPMG Peat Marwick⁷ and PricewaterhouseCoopers.⁸ KPMG Peat Marwick is responsible for system and integration testing and data conversion testing. PricewaterhouseCoopers will provide a variety of services including validation testing support and independent verification and validation activities designed to ensure system quality and integrity. NASA also tasked PricewaterhouseCoopers with assessing the internal controls for NASA's reengineered business processes⁹ and the IFMP system. PricewaterhouseCoopers will perform internal control testing activities in all phases of the IFMP system project. During validation testing, PricewaterhouseCoopers will perform assessments to identify critical internal control objectives.

The Associate Administrator for Procurement requested that the Office of Inspector General review NASA's validation testing of the procurement module. See Appendix A for a discussion of the review's objectives, scope, and methodology.

Results in Brief

For the three procurement subprocess activities reviewed, the NASA procurement process test team had adequately developed validation tests for determining whether the IFMP procurement module can properly process valid data. The validation tests also adequately addressed applicable FAR, NASA FAR Supplement, and functional requirements.¹⁰ However, procurement module testing did not include adequate testing of controls over erroneous inputs. Consequently, NASA has less assurance that such controls adequately identify, reject, and report erroneous input.

Background

In December 1998, NASA began validation testing of the procurement module at the Marshall Space Flight Center with NASA and contractor representatives,¹¹ the procurement process test team. The test team followed the IFMP testing approach in "The Agency-Level Validation Test Plan."¹² The plan specifies tests and data the test team will process during the validation phase.

⁷ NASA contract NAS5-97237 outlines KPMG Peat Marwick's responsibilities.

⁸ The contract with PricewaterhouseCoopers is the General Services Administration contract GS-35F-4351G (NASA task W-91584).

⁹ Business process reengineering is the streamlining of business processes, most often through different and better information technology, in order to produce more efficient and effective operations. NASA completed the reengineering of its business processes in April 1998.

¹⁰ The NASA Grants and Cooperative Agreement Handbook (Handbook) states requirements, policies, and procedures applicable to the IFMP procurement module. The Handbook corresponds to requirements, policies, and procedures contained in the FAR and NASA FAR Supplement. Therefore, we did not assess compliance with Handbook requirements, policies, and procedures for the three reviewed activities.

¹¹ The contractors were KPMG Peat Marwick and PricewaterhouseCoopers.

¹² NASA and PricewaterhouseCoopers revise the "Agency-Level Validation Test Plan" as testing progresses. We reviewed the December 4, 1998, draft and revisions to the draft effected through October 1999.

Validation testing involves Agency-level tests and Center-level tests. Agency-level tests help ensure the procurement module will execute Agency-level functional and data requirements that resulted from business process reengineering. Initially, the test team conducted Agency-level executability tests designed to give assurance that no critical defects existed in the procurement module. After completing the executability tests, the test team began integration tests. Integration tests ensure overall integration among the IFMP system modules, the data entered into the modules, and the modules' interfaces with external systems. The test team must successfully complete all Agency-level tests, including all integration tests, before beginning the Center-level tests.

The procurement process test team is responsible for developing the test components for the procurement module. The components are test scenarios, scripts, cycles, and data (all are defined in Appendix D). In the initial development of the test scenarios, the procurement process test team used functional requirements listed in the IFMP contract. The test team broke the requirements down further into test conditions to determine the individual items to be tested. The team also used procurement process flow diagrams, system configuration information, and NASA documents and transactions as input to the test scenarios. Each of the scenarios consists of a series of inputs and expected outcomes that confirm a requirement or variation of a requirement has been met.

Validation Testing of the IFMP Procurement Module

Finding. For the three subprocess activities we reviewed (see Appendix C for the specific activities reviewed), the procurement process test team developed adequate test scripts using transactions with valid data.¹³ However, validation testing of the procurement module does not include adequate testing of controls over transactions with erroneous data. This occurred because (1) NASA did not specifically require tests using transactions with erroneous data in the validation phase and (2) the test team has not documented specific tests and data to process during internal control testing. Without adequate testing of controls over processing of erroneous data, NASA has less assurance that the procurement module will adequately identify, reject, and report erroneous data that could corrupt the database.

Testing to Date. The procurement process test team is performing the integration testing portion of Agency-level validation tests. As of December 1999, the test team executed 494 of 505 planned integration test scripts. Of the 494 executed test scripts, 87 percent met the expected outcomes and passed the test. In addition, PricewaterhouseCoopers has performed preliminary assessments of the procurement module internal controls and is developing a detailed internal control test plan.¹⁴

¹³ The testing objective was to determine whether the procurement module met NASA's functional requirements.

¹⁴ Internal control testing, generally, includes tests of data integrity. However, NASA management and PricewaterhouseCoopers had not completed the detailed test plan for internal control testing at the time of our review.

Control and Testing Requirements. OMB Circular A-127 requires the effective use of controls over data entered into, processed by, and output from a computer system. Effective controls include the ability to identify, reject, and report erroneous data that may be introduced into the IFMP procurement module. Additionally, “Standards for Internal Control in Federal Government,” states that management should install controls at an application’s interfaces with other systems to ensure that all inputs are received and are valid and that outputs are correct and properly distributed. An example of such a control is a computerized edit check built into the system to review the format, existence, and reasonableness of data.

Tests of Erroneous Data. For the three subprocess activities we reviewed, the procurement process test team did not include erroneous data in the test scripts throughout validation testing.¹⁵ The test scripts included only valid data. The test team leader described informal tests of erroneous data the test team performed at various points throughout validation testing. For example, the team attempted to save, or post, a record with incomplete data. Also, the team made attempts to award a contract by an individual not having the authority to award a contract. The test team leader stated that although the informal tests were not formalized in a test script, any type of error found through the informal testing was documented in accordance with the Validation Test Plan.

In addition to the informal tests, the test team performed and documented destructive testing on contract modifications; the destructive testing was not within the three reviewed subprocess activities. During the destructive testing, the team attempted to save an existing record after the test team edited various data fields.

The informal tests, as described by the test team leader, gave management a preliminary indication that the procurement module rejected various elements of erroneous data. However, the informal tests were not a structured, comprehensive approach to testing erroneous data. As a result, NASA cannot be assured that informal testing adequately detected and disclosed problems in the processing of erroneous data. Formal scripted tests of erroneous data are necessary to ensure edit checks in the procurement module identify and reject erroneous data.

Erroneous Data Not Included in Test Plans. The “Agency-Level Validation Test Plan” does not specifically require the procurement test team to incorporate tests of erroneous data in its validation testing. Although the test plan identifies the types of data needed to conduct validation tests, the plan does not address the inclusion of erroneous data in validation testing and states that internal control testing is not part of validation testing. During validation testing, NASA planned to test the overall functionality of the IFMP system and compliance with FAR and the NASA FAR Supplement.

¹⁵ We made this determination based on our review of the executability and integration test scripts provided to us by October 1999.

Internal Control Test Plan. PricewaterhouseCoopers developed a comprehensive multiphased approach¹⁶ to internal control testing. The contractor is developing an internal control test plan to document specific tests that will be performed. The plan has been delayed because IFMP schedule slips made system documentation and test results unavailable to the contractor. PricewaterhouseCoopers has documented a revised internal control testing strategy. The strategy lists data integrity as an internal control requirement that will be included in actual testing. However, the strategy provides no description of the types of tests or data that would be processed in data integrity tests. For example, data input or interfaces with other IFMP modules can produce erroneous data in the procurement module. To ensure the procurement module identifies, rejects, and reports erroneous data, internal control tests must adequately identify, reject, and report erroneous data. Therefore, the internal control test plan should identify erroneous data the test team will process during internal control testing.

Recommendations, Management's Response, and Evaluation of Response

The Associate Administrator for Procurement should ensure internal control testing includes adequate tests of erroneous data.

Management's Comments. Concur in principle. Management stated that PricewaterhouseCoopers will document the revised internal control testing strategy to identify the types of erroneous data the team will process during internal control testing. However, the schedule for validation testing has become less predictable in the current IFMP contract environment. Therefore, the projected closure date for this action is at best a realistic estimate.

The complete text of management's response is in Appendix E.

Evaluation of Response. The actions planned by management are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until agreed-to corrective actions are completed.

¹⁶ The multiphased approach assesses the potential impact of the Agency's reengineered business processes and new financial management system on NASA's compliance, financial reporting, and operational control objectives.

Appendix A. Objectives, Scope, and Methodology

Objectives

Our overall objective was to review NASA's testing of the IFMP system procurement module. Specifically, we reviewed the:

- validation test plan,
- test scripts and scenarios, and
- executability and integration tests planned or previously performed.

Scope and Methodology

We interviewed NASA IFMP staff from various locations including NASA Headquarters and Marshall Space Flight Center. We reviewed planning and testing documents developed by NASA and the contractors. We examined IFMP test plans, test scenarios, test scripts, and procurement process flow diagrams related to NASA's validation tests. Specifically, we:

- Reviewed the test plans, scenarios, and scripts to determine the strategy NASA used for the executability and integration phases of validation testing.
- Reviewed the process flow diagrams for the three major subprocesses in the procurement environment and judgmentally selected one key activity in each of the three major subprocesses.¹⁷
- Identified test scripts that incorporated the selected activities to determine how the test team tested the activity and its key decision points and interfaces.
- Reviewed the test scripts data input to determine the type of data the test team processed during validation testing.
- Identified the FAR or NASA FAR Supplement functional requirements in the key tasks (see Appendix B) and traced them to the test scripts to determine whether the test team included them in the tests.

Review Field Work

We performed our field work for this report from July through November 1999.

¹⁷ We based the selection on the existence of (1) FAR or NASA FAR Supplement requirements, (2) key control or decision points, and (3) interfaces with other modules.

Appendix B. FAR and NASA FAR Supplement Requirements in Subprocess Activities

The following three tables show FAR and NASA FAR Supplement requirements for the three reviewed activities (initiate acquisition request, award contract, and close-out contract). Each table lists the requirements by task within each activity. Some of the requirements are not incorporated within the procurement module activities, but are either incorporated with the procurement module or interface modules or are stand-alone activities that are part of the procurement process. For requirements involving interface modules, we determined that the procurement module permitted compliance with the requirements.

**Table B-1 Presolicitation Subprocess
“Initiate Acquisition Request”**

Task Within the Activity	FAR Requirement	NASA FAR Supplement Requirement
<p>Support Documents: Justification for Other than Full and Open Competition (if necessary)</p> <p>Government-furnished Property Listing</p> <p>Evaluation Criteria</p>	<p>Part 6 – requires written justification and formal approvals to utilize other than full and open competition or to exclude sources from competition.</p> <p>Part 45 – requires the contracting officer to identify Government-furnished property in solicitations and contracts, if appropriate, and include the appropriate clauses.</p> <p>Parts 15.304 – requires the solicitation to state all factors that will affect the evaluation of offers and contract award and the significance of the factors.</p> <p>Clause 52.212-2 – requires solicitations for commercial items to include evaluation factors, as appropriate.</p>	<p>Part 1806 – requires the contracting officer to prepare a written justification and to document specific reasons for noncompetitive procurements and/or exclusion of sources from competition.</p> <p>Part 1845 – requires each solicitation and contract to identify Government-furnished property and applicable NASA contract clauses</p> <p>Part 1815.3 – requires the use of three evaluation factors (mission suitability, cost or price, and past performance) to evaluate proposals.</p> <p>Part 1871 –requires the request for offers.</p>
<p>Acquisition Request: Certify Funds</p> <p>Identify Accounting Data</p>	<p>No specific requirement.</p> <p>Part 32.702 – requires the contracting officer to obtain written verification that funds are available.</p>	<p>Part 1804.7301 – requires contracting officers to obtain an approved procurement request with a certification that funds are available before issuing a solicitation, except in unusual circumstances.</p> <p>No specific requirement.</p>

Appendix B

**Table B-2 Solicitation and Award Subprocess
“Award Contract”**

Task Within the Activity	FAR Requirement	NASA FAR Supplement Requirement
Verify Funds	Part 32.702 – requires the contracting officer to obtain written verification that funds are available.	Part 1804.7301 – requires the contracting officer to obtain an approved procurement request with a certification that funds are available before issuing a solicitation, except in unusual circumstances.
Approvals	No specific requirement.	Part 1804.72 – requires 15 days for review of requests for approval of contracts and supplemental agreements by the Associate Administrator for Procurement on those contracts that require Headquarters review.
Process Award Documents	<p>Part 13.106-3 - requires the contracting officer to maintain the minimum documentation in the contract file sufficient to reflect the basis for award and procedures utilized.</p> <p>Part 14.408-1 - requires that appropriate approvals be obtained prior to award.</p> <p>Part 15.503 -requires that all offerors within the competitive range be notified within 3 days of award.</p> <p>Part 15.504 - requires the contracting officer to notify the successful offeror either through a notice of award or an executed contract.</p>	<p>Part 1813-106-3 - requires the contracting officer to briefly annotate files under \$50,000 as the basis for selection.</p> <p>Part 1814.408 - requires the contracting officer to notify the successful bidder either through a notice of award or an executed contract. (Sealed bidding)</p> <p>Part 1871.505 - requires that preaward notices be electronically transmitted to offerors if the solicitation was posted electronically.</p> <p>Part 1871.504 - requires the contracting officer to provide a paper copy of the contract to the successful offeror.</p>
Announcements	No specific requirement.	<p>Part 1805.3 – requires a NASA Headquarters public announcement for contract actions with total expected value of \$25 million or more.</p> <p>Part 1805.4 – requires that responses to congressional inquiries be forwarded to Headquarters Legal Affairs Office for approval and release.</p>

**Table B-2 Solicitation and Award Subprocess
“Award Contract” (Cont.)**

Task Within the Activity	FAR Requirement	NASA FAR Supplement Requirement
		Part 1871.506 – requires the contracting officer to electronically post contract award notice for 7 calendar days if the contract offers subcontracting opportunities or is subject to the Trade Agreements Act.
Post Award Synopsis	<p>Parts 5.301 – requires the contracting officer to synopsise awards in the <i>Commerce Business Daily</i> if they exceed \$25,000; fall under the Trade Agreements Act; or offer subcontracting opportunities.</p> <p>Part 15.503 – requires that all offerors within the competitive range be notified within 3 days of contract award.</p>	Part 1805.3 – requires a NASA Headquarters public announcement for contract actions with total expected value of \$25 million or more.
Management Reports	Part 4.602 – requires the contracting officer to report contract data to the Federal Procurement Data Center.	Part 1804.6 – requires the contracting officer to submit contract data on Individual Procurement Action Reports, (Form 507 series).
Distribution	<p>Part 4.201 – requires the contracting officer to distribute copies of the contract or modifications within 10 working days after all parties execute the contract.</p> <p>Part 4.202 – requires the contracting officer to coordinate distribution to the contract administration office with a representative of that office, when applicable.</p>	Part 1804.2 – requires the contracting officer to distribute one copy of each research and development contract to the NASA Center for Aerospace Information.

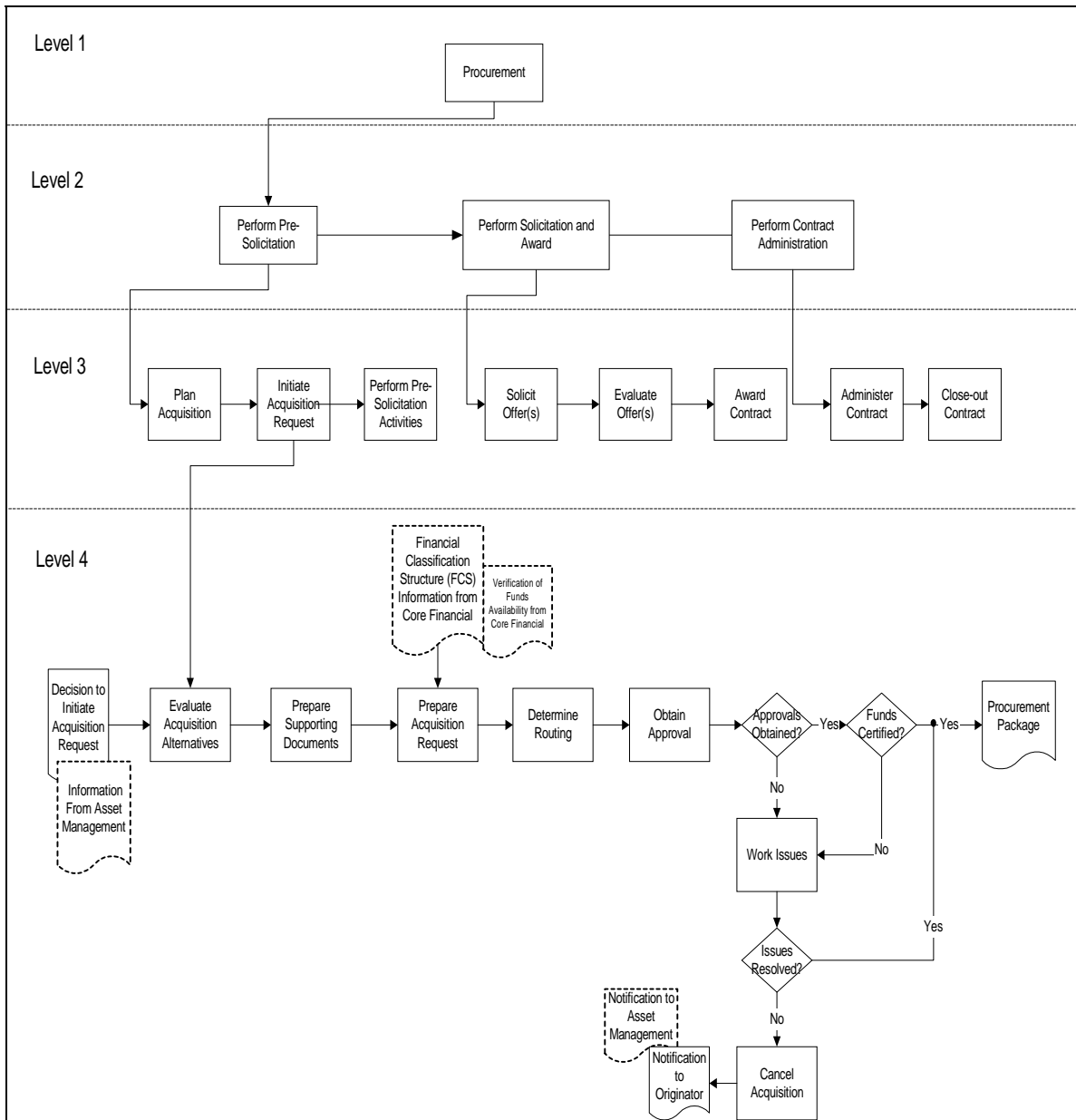
Appendix B

**Table B-3 Contract Administration Subprocess
“Close-out Contract”**

Task Within the Activity	FAR Requirement	NASA FAR Supplement Requirement
Close-out Documentation	Part 4.804 – requires the contracting officer to meet time standards for closing contract files.	Part 1804.804 – requires the contracting officer to complete NASA forms 1611 and/or 1612, or Department of Defense form 1594 to close out the contract files.
Quick Close-out Procedures	Part 42.708 – permits the contracting officer to negotiate settlement of indirect costs before final indirect cost rates are determined. To negotiate, the contracting officer must determine whether 1) the contract is physically complete, 2) unsettled indirect cost is insignificant, and 3) agreement can be reached with the contractor on a reasonable estimate of allocable cost.	Part 1842.708 – to use quick close-out procedures, the contracting officer must obtain a written agreement from the contractor, a final voucher, a summary of all costs by cost element and fiscal year, and a copy of the final indirect cost rate proposal for each fiscal year. The contracting officer also must request indirect cost information from the cognizant audit activity.
DCAA Audit Data	Part 42.705 – requires the establishment of the final indirect cost rates by contracting officer or auditor determination within 120 days of settlement of the final indirect cost rates.	Part 1842.705 – requires the cognizant NASA contracting officer to make the final rate determination when NASA is assigned that authority.
	<p>Part 32.905 – requires the agency payment office to pay the contractor’s invoice within 30 days after receipt or acceptance of supplies or services.</p> <p>Clause 52.216-7 – requires the contracting officer to promptly pay the balance of allowable costs and fees after the contractor complies with all the contract terms and approval of the completion invoice or voucher.</p>	Part 1827.305-370 – requires the contracting officer to furnish a copy of the contract, final technical report, and interim technical progress reports to the New Technology Representative and Patent Representative when patents rights or New Technology clauses are included in the contract.

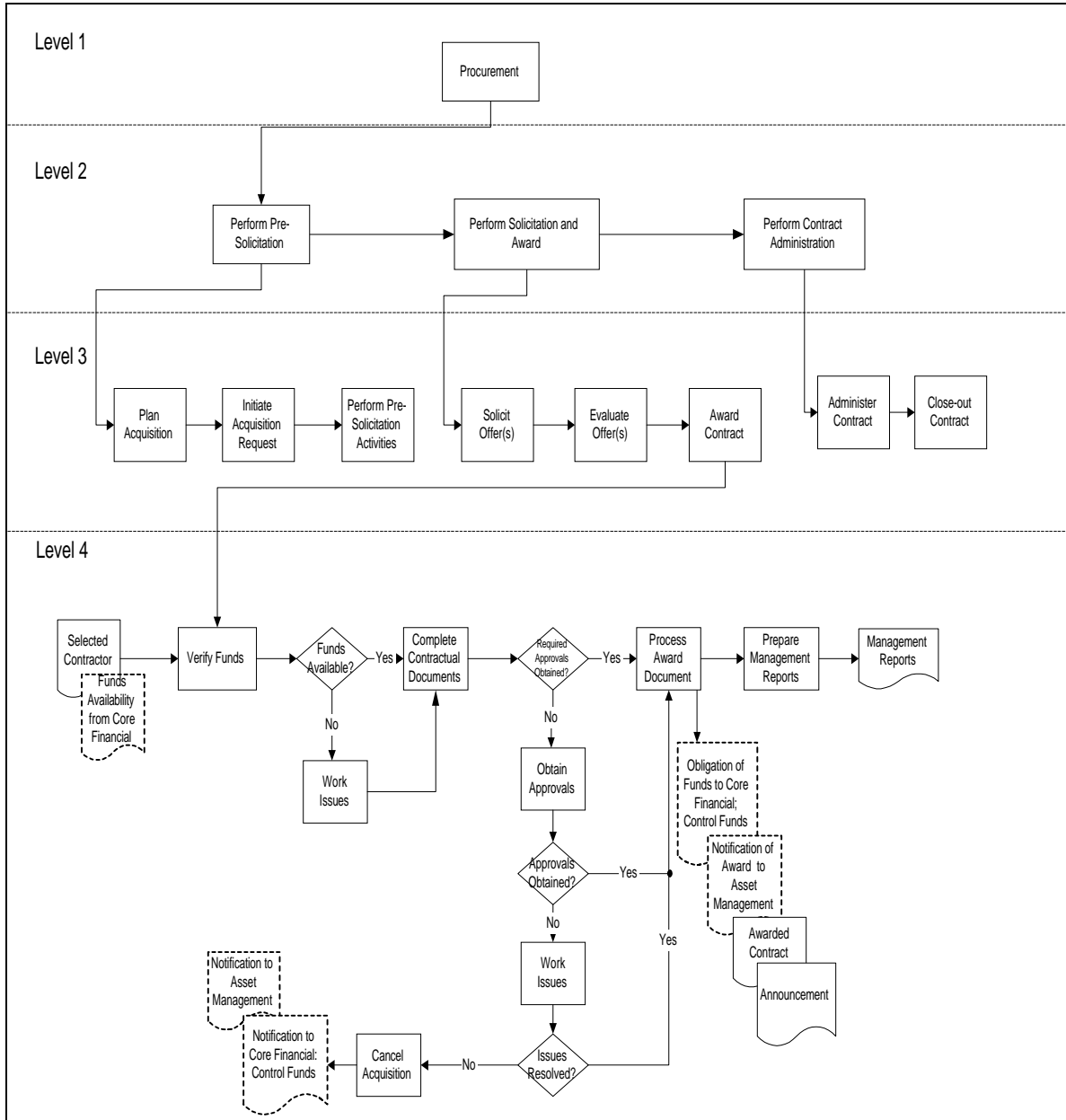
Appendix C. Subprocess Flow Diagrams

For the presolicitation subprocess, we reviewed one activity, “Initiate Acquisition Request.” The following subprocess flow diagram shows the tasks in the activity. See Appendix B for FAR and NASA FAR requirements in the activity.

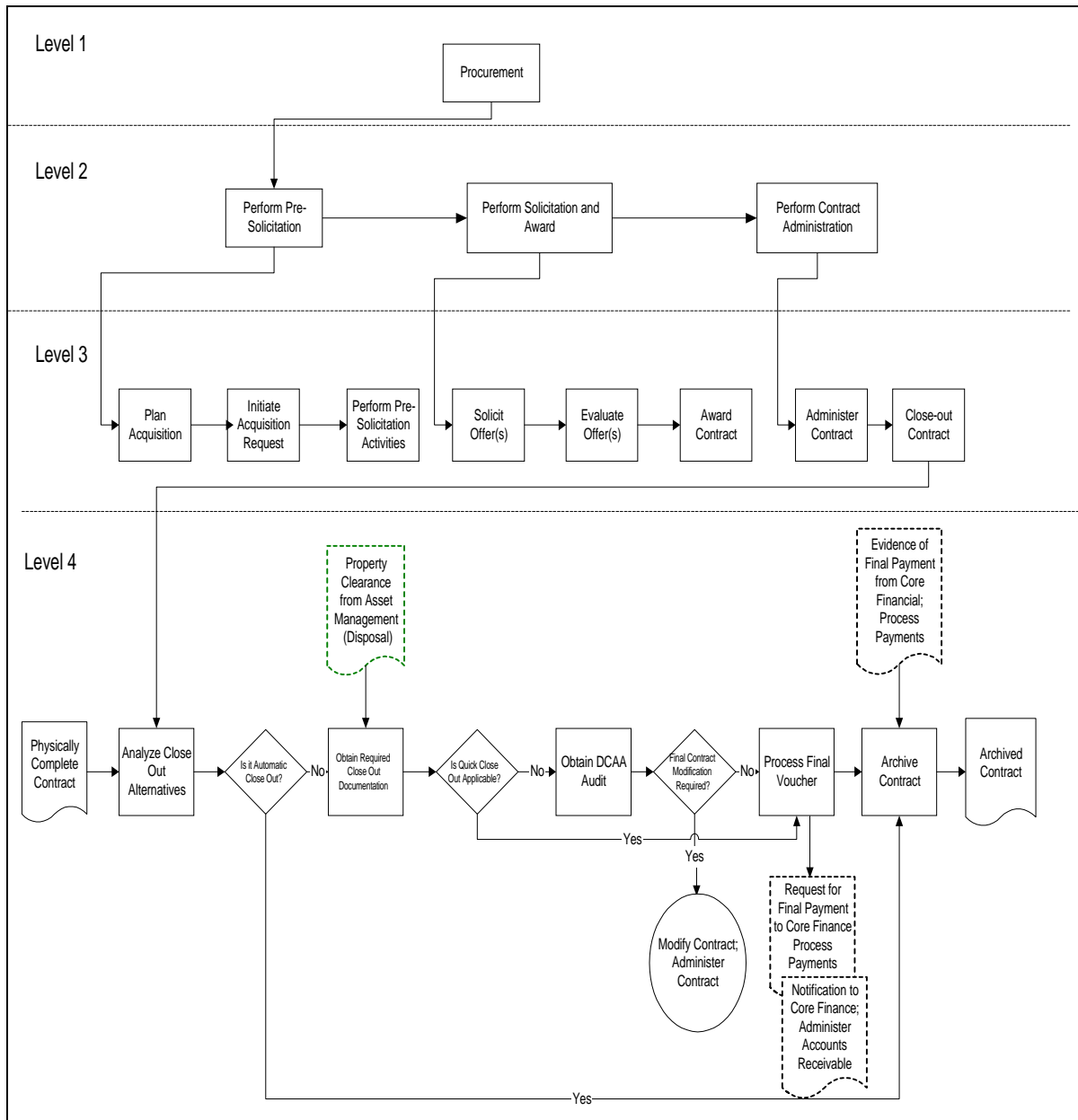


Appendix C

For the solicitation and award subprocess, we reviewed one activity, “Award Contract.” The following process flow diagram shows the tasks in the activity. See Appendix B for FAR and NASA FAR requirements in the activity.



For the contract administration subprocess, we reviewed one activity, “Close-out Contract.” The following process flow diagram shows the tasks in the activity. See Appendix B for FAR and NASA FAR requirements in the activity.



DCAA - Defense Contract Audit Agency

Appendix D. Test Component Definitions

NASA and contractor test managers make up the procurement process test team, which is responsible for developing the test components for the procurement module. The four components are defined below:

- **Test Scenario** - a series of inputs and expected results that confirm that a variation of a functional requirement has been met.
- **Test Script** - a set of detailed test procedures to perform a business process including specific keystrokes and entry screens used to accomplish a necessary action.
- **Test Cycle** - a logical series of test scenarios that test a specific segment of functionality within a system.
- **Test Data** - data needed to execute validation test scripts. The data consists of:
 - **Reference data** - data needed to configure the procurement module and data that is accessed by transactions entered into the system. Reference data was prepared by NASA and incorporated into the configured system by KPMG Peat Marwick. Examples of reference data include: vendors, classification structure elements, payment terms, and beginning balances.
 - **Transaction data** - data that is contained in the test scripts and entered into the database when the script is executed.

Appendix E. Management's Response

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001



Reply to Attn of:

HC

FEB 23 2000

TO: W/Assistant Inspector General for Auditing

VIA: B/Chief Financial Officer

FROM: HC/Director, Analysis Division

SUBJECT: Code H Response to OIG Draft Audit Report on the Review of the
Procurement Module Testing of NASA's Integrated Financial
Management Program, Assignment No. A9901700

Enclosed is our response to the subject report dated January 24, 2000.

Please call Diane Thompson at 202-358-0514 or Jack Horvath at 202-358-0456
if you have any questions or need further coordination on this matter.

A handwritten signature in cursive script that reads "Anne Guenther".

Anne Guenther

Enclosure

HEADQUARTERS OFFICE OF PROCUREMENT
RESPONSE TO
OFFICE OF INSPECTOR GENERAL (OIG)
DRAFT REPORT ASSIGNMENT NUMBER A9901700
DATED JANUARY 24, 2000
PROCUREMENT MODULE TESTING OF NASA'S INTEGRATED FINANCIAL
MANAGEMENT PROGRAM

DATE: FEB 23 2000

ENCLOSURE

Code H Response to OIG
1/24/00 Draft Report,
A9901700
Page 2

Code H's narrative response is provided as follows:

OIG RECOMMENDATION 1:

The Associate Administrator for Procurement should ensure internal control testing includes adequate tests of erroneous data.

CODE H AND CODE B RESPONSE TO RECOMMENDATION : CONCUR

NASA Code H concurs in principle with this recommendation, and plans to take action. PriceWaterhouseCoopers will document the revised internal control testing strategy to identify types of erroneous data the test team will process during internal control testing. The schedule for the progression of validation testing has become less predictable, given the current environment under the IFMP contract. Therefore, the projected closure date for this action is at best a realistic estimate.

CORRECTIVE ACTION OFFICIAL:	Code HC/D. Thompson
CORRECTIVE ACTION CLOSURE OFFICIAL:	Code HC/A. Guenther
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	September 30, 2000

Appendix F. Report Distribution

National Aeronautics and Space Administration (NASA) Headquarters

A/Administrator
AI/Associate Deputy Administrator
AO/Chief Information Officer
B/Chief Financial Officer
B/Comptroller
BF/Director, Financial Management Division
C/Associate Administrator for Headquarters Operations
G/General Counsel
H/Associate Administrator for Procurement
J/Associate Administrator for Management Systems
JM/Director, Management Assessment Division
L/Associate Administrator for Legislative Affairs
M/Associate Administrator for Space Flight
Q/Associate Administrator for Safety and Mission Assurance
R/Associate Administrator for Aero-Space Technology
S/Associate Administrator for Space Science
U/Associate Administrator for Life and Microgravity Sciences and Applications
Y/Associate Administrator for Earth Science
Z/Associate Administrator for Policy and Plans

NASA Centers

Director, Ames Research Center
Director, Dryden Flight Research Center
Director, Glenn Research Center at Lewis Field
Director, Goddard Space Flight Center
Director, Lyndon B. Johnson Space Center
Director, NASA Management Office, Jet Propulsion Laboratory
Director, John F. Kennedy Space Center
Director, Langley Research Center
Director, George C. Marshall Space Flight Center
Director, Stennis Space Center
Chief Counsel, John F. Kennedy Space Center

Non-NASA Federal Organizations and Individuals

Assistant to the President for Science and Technology Policy
Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Branch Chief, Science and Space Programs Branch, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, Defense Acquisition Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Chairman and Ranking Minority Member -- Congressional Committees and Subcommittees

Senate Committee on Appropriations
Senate Subcommittee on VA, HUD, and Independent Agencies
Senate Committee on Commerce, Science, and Transportation
Senate Subcommittee on Science, Technology, and Space
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on VA, HUD, and Independent Agencies
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information, and Technology
House Subcommittee on National Security, Veterans Affairs, and International Relations
House Committee on Science
House Subcommittee on Space and Aeronautics

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

NASA Assistant Inspector General for Auditing Reader Survey

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Report Title: Procurement Module Testing of NASA's Integrated Financial Management Program

Report Number:

Report Date:

Circle the appropriate rating for the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
1. The report was clear, readable, and logically organized.	5	4	3	2	1	N/A
2. The report was concise and to the point.	5	4	3	2	1	N/A
3. We effectively communicated the audit objectives, scope, and methodology.	5	4	3	2	1	N/A
4. The report contained sufficient information to support the finding(s) in a balanced and objective manner.	5	4	3	2	1	N/A

Overall, how would you rate the report?

Excellent	Fair
Very Good	Poor
Good	

If you have any additional comments or wish to elaborate on any of the above responses, please write them here. Use additional paper if necessary. _____

How did you use the report? _____

How could we improve our report? _____

How would you identify yourself? (Select one)

Congressional Staff

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Government: _____ Federal: _____ State: _____ Local: _____

Media

Public Interest

Other: _____

May we contact you about your comments?

Yes: _____

No: _____

Name: _____

Telephone: _____

Thank you for your cooperation in completing this survey.

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