National Aeronautics and
Space Administration

Office of Inspector General
Washington, DC 20546-0001

AUG 29 2006

TO: Associate Administrator for Space Operations
Assistant Administrator for Procurement
Director, Ames Research Center
Director, Glenn Research Center
Director, Goddard Space Flight Center
Director, Kennedy Space Center
Director, Marshall Space Flight Center
Director, Stennis Space Center
Chief Operating Officer, Michoud Assembly Facility

FROM: Assistant Inspector General for Auditing

SUBJECT: Final Memorandum on the Audit of the Management of Hurricane Katrina Disaster Relief Efforts (Report No. ML-06-009; Assignment No. A-05-030-01)

Executive Summary

The President's Council on Integrity and Efficiency's (PCIE) Homeland Security Roundtable was established to coordinate reviews from Offices of Inspector General (OIGs) auditing Federal relief efforts in the aftermath of Hurricane Katrina. In conjunction with the PCIE, our audit focused on two objectives:

1. Determining whether NASA established the necessary internal controls to manage Hurricane Katrina recovery and reconstruction efforts.

2. Evaluating NASA's estimation and execution of Hurricane Katrina funds and the processes used to ensure that those funds were used for their intended purposes.

We found that NASA established adequate internal controls for segregating, accumulating, and accounting for FY 2005 funds used for Hurricane Katrina recovery and reconstruction efforts. We also found that NASA's estimation of funding needed as a result of Hurricane Katrina was reasonable and the procedures and processes used for execution of funds, in general, were adequate to ensure that those funds were used for their intended purposes. As part of our audit process, we reviewed Katrina relief and recovery procurement actions. The procurement actions consisted of several newly executed contracts; contract actions issued on behalf of NASA by an existing Center-base operations facilities support contractor and by other Government agencies through interagency agreements; orders placed by NASA against existing task/delivery order contracts; and by purchase orders and Government purchase cards. We found these procurement methods to be appropriate for expeditiously providing vitally needed

products and services in response to the emergency situation; however, we identified deficiencies in contract administration activities during our review of procurement actions at Marshall Space Flight Center (Marshall). Specifically,

- contracting officers did not include in contract files information required by Federal Acquisition Regulations (FAR) for placing orders under indefinite-delivery contracts;
- contacting officials did not provide sufficient parameters to ensure costs would be controlled when authorizing a contractor to initiate work under an existing contract;
- contracting officials did not conduct procurement oversight sufficient to ensure that the Army Corps of Engineers (COE) completely and accurately documented the price reasonableness of the selected site investigation line item, as required by FAR, given the significant disparity of the prices received from offerors; and
- NASA lacked policies, procedures, and internal controls for gift cards used to purchase emergency items.

To address these issues, we are recommending that the Marshall Procurement Officer

- direct contracting officers to write a memorandum for record for all orders placed or to be placed against an existing indefinite-delivery contract for Katrina-related products or services;
- provide written procedural guidance and training to Marshall contracting officials to ensure that (1) in future emergencies, applicable FAR 16.505(a)(6) order placement requirements are met and (2) future "turn on" letter authorizations issued by Marshall for emergencies include necessary cost controls; and
- ensure that price reasonableness determinations are completely and accurately documented, as required by the FAR, on contracts awarded on NASA's behalf by another agency.

We also recommend that the cognizant Marshall Contracting Officer and Program Manager coordinate with their COE counterparts to closely monitor contractor performance under Vanguard contract DACA87-03-D-0006 and review interim Vanguard-generated "estimate to complete" reports to ensure that all tasks under the contract are completed within schedule, costs, and at the required contract performance levels.

Lastly, we recommend that the Assistant Administrator for Procurement develop policies and procedures for using Government purchase cards to purchase gift cards and also develop internal controls to ensure reconciliation of gift card transactions and the treatment of balances remaining on gift cards.

In commenting on a draft of this memorandum, NASA management concurred with our recommendations and proposed responsive corrective actions (see Enclosure 2). We will close the six recommendations upon completion and verification of management's corrective actions.

This memorandum provides our audit results as of August 2006. See enclosure 1 for details on the audit's scope and methodology and our review of internal controls. In a separate final report, "NASA's Implementation of the National Incident Management System" (IG-06-016, August 29, 2006), we addressed the adequacy of NASA's emergency preparedness plans. A copy of the report and this memorandum will be provided to the PCIE Homeland Security Roundtable. In addition, we will issue a separate memorandum to address the status of NASA's reimbursable records for the Federal Emergency Management Agency's mission assignment funds.

Background

On August 29, 2005, Hurricane Katrina came ashore the Gulf Coast at the Louisiana/Mississippi border. Damage at the Stennis Space Center (Stennis) and the Michoud Assembly Facility (Michoud) was sufficient to disrupt normal operations for more than 2 months. At Stennis, NASA's primary Center for Rocket Propulsion Testing, part of the roof of a headquarters building was destroyed and the building sustained water damage. Approximately 25 percent of Stennis employees were displaced from their homes. Stennis provided shelter for about 3,700 employees and area residents. At Michoud, where the most intensive work on the Space Shuttle's External Tanks for Return to Flight Part 2 occurred, the storm's surge swamped the facility with as much as 2 feet of water. Approximately 50 percent of Michoud's workers lost their homes. It took approximately 9 weeks after Hurricane Katrina for both locations to achieve a functional capability. In the aftermath of Katrina, NASA reprogrammed approximately $100 million of FY 2005 ($85 million from the Explorations Systems Mission Directorate and $15 million from the Space Shuttle Program) funds to meet immediate, emergency relief needs at Stennis and Michoud.

Public Law 109-62, Section 101, "Second Emergency Supplemental Appropriations Act to Meet Immediate Needs Arising from the Consequences of Hurricane Katrina," dated and effective September 8, 2005, raised the micro-purchase threshold from $2,500 to $250,000 for Katrina rescue and recovery procurements. NASA Headquarters issued Procurement Information Circular (PIC) 05-12, "Emergency Procurement Authority," dated September 28, 2005, to notify NASA procurement offices of the increased threshold and encourage procurement offices to take advantage of the new threshold flexibilities, ensure that use of the authority is in direct support of Katrina rescue and relief operations, and ensure adherence to Office of Management and Budget (OMB) management control guidance in "Implementing Management Controls to Support Increased Micro-purchase Threshold for Hurricane Rescue and Relief Operations," dated September 13, 2005. PIC 05-13, "Cancellation of PIC 05-12," dated October 11, 2005, was issued to notify procurement offices that the emergency authority was cancelled, as a result of OMB rescinding the rule, restoring the micro-purchase threshold to $2,500 for normal purchases and $15,000 for contingency operations, effective October 3, 2005.

Since 1997, NASA has had decentralized procurement functions. Each Center and component facility, including Marshall and Stennis, has its own procurement officers/buyers. Normally, Marshall executes procurement actions for Michoud. However, due to the extent of physical damage to Stennis and Michoud and the surrounding areas, and the increased workload on the Marshall Procurement Office as a result of Katrina's destruction, other NASA Centers provided emergency procurement support during NASA's Katrina recovery and reconstruction efforts.

Processes Used to Ensure Funds Were Used for Intended Purposes

Cost Estimation Processes. When we began our audit, undefined variables, including unsupported damage estimates and escalation factors, had a significant impact on our review. Initial damage estimates were developed on the basis of incomplete or anecdotal information because the extent of damage and debris allowed only limited access to Stennis and Michoud. Therefore, estimates provided to us at that time were unauditable. Subsequent estimates also contained unknowns and included escalation factors for anticipated material and labor increases, reserves for unknown contingencies, and estimates for "mitigation" projects to protect against future natural disasters. Most of those estimates had no documentation to support the cost figures. However, over the following 5 months and through consultations with OMB, wherein NASA disclosed its escalation factors, contingency figures, revised damage assessments, and "mitigation" projects, all these variables were disallowed. After additional consultations with OMB, NASA was later allowed to use funds for mitigation projects. Therefore, our questions regarding unsupported damage assessments and associated cost estimates for Katrina repairs and recovery were resolved.

Accounting Processes. NASA's budget does not generally contain programmed funds to address natural catastrophes. Thus, to segregate, accumulate, and account for FY 2005 funds used for Katrina recovery and reconstruction efforts, NASA established Katrina-specific accounting processes and corresponding accounts. We reviewed the processes and accounts NASA established in response to the emergency. NASA reprogrammed approximately $100 million in FY 2005 funds and established an account, Unique Project Number (UPN 095), in the Core Financial System to segregate and collect costs exclusively associated with Katrina recovery and reconstruction efforts. Subaccounts were created to align with the Work Breakdown Structure to accumulate cost for Center Recovery Operations Support, Programmatic Recovery/Workarounds, Real Property Repair, Information Technology/Communications Infrastructure, Environmental Remediation, Other General Support, NASA Shared Service Center Relocation and Equipment, and the Federal Emergency Management Agency (FEMA) Volunteers Program. Costs for each of these categories were captured using unique identifiers for each Center.

We queried NASA's Core Financial System, to obtain test data, using NASA's Core Financial Business Warehouse. The queries pulled data from October 2005 through March 2006. The queries generated reports that identified Katrina-incurred costs by individual Center, by NASA Financial Management Manual full-cost accounting codes (labor, travel, procurements, etc.), and by each subaccount category. The queries also generated procurement purchase order and purchase card identifiers that were used to test transactions.

On the basis of our work performed through August 2006, we determined that internal controls associated with the Core Financial System were adequate for segregating, accumulating, and accounting for NASA FY 2005 funds used for Katrina recovery and reconstruction efforts. However, NASA did not establish reimbursable accounts in the Core Financial System for FEMA mission assignment funds related to three mission assignments FEMA sent directly to Stennis. We are reviewing this issue and will address our findings in a separate memorandum to management. A copy of the memorandum will be provided to the PCIE Homeland Security Roundtable.

Procurement Processes. Using the Katrina-specific queries we generated from the Core Financial System, we identified individual procurement transactions and were able to verify that all procurements we reviewed were executed for Katrina recovery and reconstruction efforts. In most instances, we were able to track Katrina funding to individual procurements by UPN 095 combined with the Center designator on the purchase request. However, we also identified some verbal orders placed under existing contracts that initially had no Katrina identifiers or traceability. As discussed below, our follow-up work revealed these orders were subsequently modified to incorporate Center designated Katrina funding.

<u>Contract Actions</u>. We reviewed several newly executed contracts. However, most contract actions we reviewed were issued on behalf of NASA by an existing Center-base operations facilities support contractor; issued on behalf of NASA by another Government agency via Inter-Agency Agreement; or were placed by NASA against an existing task/delivery order contract. Although we found these procurement methods to be appropriate for expeditiously providing vitally needed products and services under the emergency situation, we identified deficiencies during our procurement review at Marshall.

<u>Information required by FAR was not in contract files</u>. For work related to Katrina relief and reconstruction efforts, Marshall placed orders under indefinite-delivery contracts, however, some of the information required by FAR 16.505 was not locatable in the contract files. For example, there was no identification of contract line items, date of order, description of the supply or service, quantity ordered, unit price, or delivery or performance schedule. We found no contract modification or any supporting documentation describing the Katrina work efforts. When we noted this to Center officials, a Marshall contracting official responded,

> At the time that the contractor's were turned on for the Katrina effort, the Procurement office did not issue a modification, task order, or delivery order. No action was required

> because the scope of the contracts were broad enough so that the required Katrina support could be initiated by technical personnel using existing funding on the contract.

Subsequent to our fieldwork, Marshall modified existing contracts to distinguish funding reprogrammed specifically for Katrina efforts by identifying funding added to the contract with the Katrina-specific funds code for Marshall (62-095). However, the modifications were simply described as contract funding increases rather than as funding for any specific transaction or work effort.

Although we found the Katrina work effort as described in Marshall's spreadsheets to be within scope, having placed verbal orders, with none of the FAR-required supporting documentation, hampers the traceability of Katrina funding commitments to Katrina obligations, work effort, expenditures, and payments. The traceability of funds for Katrina contract actions is important to ensure that funds appropriated by Congress for NASA recovery and reconstruction efforts are accounted for and expended as intended under appropriations law.

Recommendation 1. We recommended that the Marshall Procurement Officer direct Contracting Officers to write a memorandum for record for each contract action/order placed or to be placed against an existing indefinite-delivery contract for Katrina-related products or services, to include, as applicable, a summary of the ordering information required by FAR 16.505(a)(6) and detail on the execution and purpose of Katrina-related funds.

> **Management's Response.** Management concurred, stating that the MSFC procurement office will issue written direction to all contracting personnel specifying the requirements from the recommendation not later than December 31, 2006.

> **Evaluation of Management's Response.** Management's planned action is responsive to the recommendation. The recommendation is resolved and will be closed upon completion and verification of management's corrective action.

Recommendation 2. We recommended that the Marshall Procurement Officer provide written procedural guidance and provide training to Marshall contracting officials to ensure that, in future emergencies, applicable FAR 16.505(a)(6) order placement requirements are met and written detail on the execution of emergency-related funds is provided.

> **Management's Response.** Management concurred, stating that the MSFC procurement office will issue written direction and provide training to all contracting personnel specifying the requirements from the recommendation not later than December 31, 2006.

Evaluation of Management's Response. Management's planned action is responsive to the recommendation. The recommendation is resolved and will be closed upon completion and verification of management's corrective action.

Marshall's instructions to Lockheed lacked specifics. Another deficiency was Marshall's "turn on" letter, PS42C-05-09-02, issued to Lockheed Martin Space Systems Company (Lockheed) under contracts NAS8-00016 and NNM04AA02F on September 22, 2005, which authorized Lockheed to "initiate whatever actions are needed to effect temporary repairs to MAF [Michoud]." Marshall estimated the effort at $991,000. Marshall subsequently issued a "turn off" letter, PS42C-05-11-09, directing Lockheed to cease issuing tasks for the effort effective November 28, 2005. Marshall did not include a Not-to-Exceed (NTE) amount in the original "turn on" letter and did not direct Lockheed, in the "turn off" letter, on how Lockheed should proceed with the tasks already in place. On February 9, 2006, the Marshall contracting officer informed us that Lockheed reported that they had incurred at least $7 million of work effort under the original "turn on" letter. The contracting officer described the situation as a discrepancy with Lockheed and stated that Lockheed is "insistent on [tying] Katrina costs to the letter that are unrelated to the types of charges cited in the letter." Marshall planned to have the Defense Contract Audit Agency review Lockheed's Katrina costs[1] and was in the process of providing Lockheed with a letter directing them on how to charge Katrina costs for both contracts; however, the issue was unresolved as of June 17, 2006. We found that Marshall's directions in the authorization letter did not provide sufficient parameters, such as an NTE amount or the FAR 52.232-22 Limitation of Funds clause, to ensure Lockheed would control costs.

Recommendation 3. We recommended that the Marshall Procurement Officer provide written procedural guidance and provide training to Marshall contracting officials that will ensure that future "turn on" letter authorizations issued by Marshall for emergencies include cost controls, such as the FAR 52.232-22 Limitation of Funds clause for incrementally funded cost-reimbursement contracts (or a reference to a Limitation of Funds clause already in the contract), an NTE dollar amount, and the contract line item the authorized work should be charged under.

Management's Response. Management concurred, stating that the MSFC procurement office will issue written direction and provide training to all contracting personnel specifying the requirements from the recommendation not later than December 31, 2006.

Evaluation of Management's Response. Management's planned action is responsive to the recommendation. The recommendation is resolved and will be closed upon completion and verification of management's corrective action.

COE did not completely and accurately document its price reasonableness determination relative to the price disparity of offers received. We reviewed COE's

[1] Marshall informed us that upon receipt of the audit results, Marshall will make a determination about the acceptability of charges against the letters.

multiple award indefinite-delivery/indefinite-quantity contract used to award a task order contract (DACA87-03-D-0006) to Vanguard Contractors, Inc., on NASA's behalf under an interagency agreement. The task order was competed among four vendors and awarded on a "best value" basis to Vanguard for a total estimated amount of $45 million. The task order award included a site investigation (task 1) awarded at a fixed price of $16,065; the remainder of the estimated $45 million was encompassed by undefinitized options for a work plan (task 2) and repair and renewal action (task 3). Competitive profit, labor, and overhead rates were also awarded under the contract and were to be applied to tasks 2 and 3. As of May 2006, all option tasks under the contract had been exercised and the task order had been funded incrementally for a total of $23,346,418 through contract modification 16, dated May 17, 2006.

For task 1, the site investigation, the competitive prices received from four vendors were $16,065, $62,732, $64,948, and $398,444—a clear and significant price disparity. COE did not have an independent government estimate to use as a basis for comparison but could have used other FAR 15.4 cost or price analysis techniques to determine if the prices received were realistic and reasonable.

In determining price reasonableness, COE performed a comparative evaluation of the site investigation prices. That evaluation, however, did not address the price disparity among the task 1 total fixed prices or draw conclusions about the reasonableness of each of the nonselected proposals. For example, COE documented in its price evaluation that the highest price ($398,444) included subcontract work to an architectural and engineering (A&E) firm and excessive labor hours and duration when compared to the other proposals, but COE did not conclude that the price was unreasonably high and did not address the necessity or price impact of the proposed A&E subcontractor. Of the other two nonselected prices, COE did note that the $64,948 proposal included a detailed cost breakout but did not analyze the proposed labor hours, as it did with the highest proposal's labor hours, to determine whether they realistically represented the site investigation requirement. Unlike the proposal that provided the detailed cost breakout, COE noted that Vanguard's $16,065 price "did not include any cost breakout and it is not clear what level of services are being provided."

We reviewed COE's documented teleconference with Vanguard about the proposal; issues of subcontractor capabilities, key personnel, and roofing were discussed, but we found no discussion about price-related issues. Vanguard's significantly lower proposed task 1 price warranted that COE provide documented assurance of price reasonableness—either that the selected price was not significantly understated or the nonselected prices were significantly overstated.

We also found that the award of approximately $45 million in undefinitized tasks that include time-and-materials[2] line items expose NASA to costs and performance risks identified at FAR 16.601. Project management should include close monitoring of

[2] FAR 16.601(b)(1) Government surveillance. A time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, appropriate Government surveillance of contractor performance is required to give reasonable assurance that efficient methods and effective cost controls are being used.

contractor performance, including the review of interim contractor-generated "estimate to complete" reports, to protect NASA from paying unreasonably high prices.

Management's Comments on the Finding. NASA management disagreed with the basis of our draft finding with regard to cost and performance risks and referred to comments provided by COE. COE stated that unbalanced pricing as defined by FAR 15.404-1(g) does not require the comparison of line items of competitors but rather "assesses the *internal* consistency of a particular offeror's prices and the proportional nature of that offeror's contract line items." COE also stated that FAR 16.505(b)(4) is the applicable pricing standard and simply requires the contracting officer to document the rationale for placement and price of each order. NASA management stated that, while they do not necessarily agree with all of the rationale and observations in COE's comments to the draft report, NASA does not believe there is evidence of unbalanced pricing.

With regard to COE's determination of price reasonableness, COE stated that Vanguard persuasively explained why its task 1 price was realistic and that COE determined the price to be fair and reasonable and conducted an informal assessment which showed that a fair and reasonable site investigation cost was $23,400. COE also stated that, contrary to our finding, "Vanguard *did* provide a breakdown of its site investigation costs."

With regard to the issue of a lack of NASA oversight and/or monitoring, NASA management took exception and stated, "NASA actively monitored and participated in the selection process which resulted in the award of this contract" and that "participation and monitoring continued throughout the execution of task 1 . . .." NASA stated that when contracting through another agency, the requiring agency [NASA] is to a large degree reliant upon the processes of the servicing agency [COE]. NASA stated that in performing its oversight, there was no evidence of costs and performance risks.

Evaluation of Management's Comments on the Finding. With regard to FAR pricing requirements, we view the applicable pricing criteria to be FAR 16.505(b)(3), which states, "If the contract did not establish the price for the supply or service, the contracting officer must establish prices for each order using the policies and methods in Subpart 15.4." However, in response to management's comments, we removed all reference to unbalanced pricing and revised the finding and Recommendation 4 to reflect price reasonableness determination deficiencies relative to significant price disparity.

COE's documented price reasonableness determination was deficient in that it did not include significant and relevant facts and contained inaccurate statements from Government evaluators. For example, in the price reasonableness determination, COE did not state that it found Vanguard's rationale for its low price to be reasonable and acceptable, neither did it mention the informal assessment. Rather, the determination states that COE did not find it feasible to develop an independent Government estimate. Further, with regard to the breakout, COE's statement is inconsistent with its evaluation documentation, which states "Vanguard *did not* provide a breakout of its site investigation costs."

With regard to management's comments about the implication of lack of NASA oversight, all oversight related to costs and performance risks associated with unbalanced pricing has been deleted from the memorandum. In the final memorandum, NASA oversight specifically pertains to procurement oversight needed to ensure that price reasonableness determinations are completely and accurately documented, and the oversight required by FAR 16.601(b)(1) relative to time and material line items.

Revised Recommendation 4. We recommended that the Marshall Procurement Officer ensure, during future emergencies involving contracts awarded by another agency on NASA's behalf, that NASA's procurement oversight is sufficient to ensure that a determination of price reasonableness is performed in accordance with FAR 15.305(a)(1).

Recommendation 5. We recommended that the cognizant Marshall Contracting Officer and Program Manager coordinate with their COE counterparts to closely monitor contractor performance under Vanguard contract DACA87-03-D-0006 and review interim Vanguard-generated "estimate to complete" reports to ensure that all tasks under the contract are completed within schedule, costs, and at the required contract performance levels.

Management's Response. Management concurred with Recommendations 4 and 5 contained in the draft report, but disagreed that the bases for the recommendations should be unbalanced pricing. With regard to Recommendation 4, the Marshall Procurement Officer stated there were lessons learned from Katrina and that the Procurement Office will issue written direction to all contracting personnel specifying the concerns from the recommendation no later than December 31, 2006. With regard to Recommendation 5, the Marshall Procurement Officer stated they will continue to coordinate with COE and diligently monitor and oversee all tasks performed under Vanguard Contract DACA87-03-D-0006 (or any other Katrina-related contract) to ensure that all tasks are completed within schedule, costs, and the required contract performance levels. Management requested closure of Recommendation 5.

Evaluation of Management's Response. We revised Recommendation 4 to remove reference to unbalanced pricing. Management's planned action is responsive to the recommendation. The recommendation is resolved and will be closed upon completion and verification of management's corrective action. With regard to Recommendation 5, we believe the recommendation remains relevant to cost and performance risks associated with $45 million in undefinitized tasks, which include time-and-material line items, and the requisite Government oversight of contractor performance. However, Marshall Procurement Officer's planned action is responsive to the recommendation. The recommendation will remain open pending Marshall providing us with written verification that tasks were completed within schedule and costs and at the required contract performance levels upon contract completion.

Purchase Card Transactions. We reviewed a universe of 55 purchase card transactions totaling $123,313.72. In general, all transactions we reviewed were in compliance with the relevant Center-specific purchase card policies and procedures. Moreover, the dollar amount for each transaction was significantly less than the $250,000 authorized by Section 101 of Public Law 109-62. NASA did not use the increased purchase authority under Section 101. The largest single transaction was for $23,826.39 made by a procurement official with $25,000 purchase authority. All purchase card transactions were made by procurement officials and nonprocurement purchase card holders under their normal purchase authority.

To respond quickly to needs of those taking shelter at Stennis and Michoud, Marshall used Government purchase cards to buy 22 Wal-Mart Stores, Inc., gift cards totaling $22,825. The gift cards were, in turn, used to purchase from Wal-Mart and Sam's Club (a retail division of Wal-Mart Stores, Inc.) urgently needed items that had been requested by Stennis and Michoud. Both NASA locations provided shelter to a combined total of more than 3,700 employees, area residents, and/or other Federal agency personnel, thus requiring immediate delivery of large quantities of perishable and nonperishable food and supplies. Marshall determined that the purchase of gift cards was necessary because Sam's Club was the only store that could readily provide sufficient quantities of the needed items, but Sam's Club refused to accept a Government purchase card, Government purchase order, or Government check.

Marshall Work Instruction (MWI) 5113.1, "Governmentwide Commercial Purchase Card Operating Procedures," dated October 15, 2004, does not list "gift cards" as an unauthorized purchase; thus, the purchase of gift cards is not prohibited. Marshall reconciled all purchase card transactions, including purchase of the gift cards, to the monthly bank statement, as required by MWI 5113.1.

Our discussions with Marshall Procurement Office Policy and Information Management personnel during May 2006 led Marshall to generate three spreadsheets on May 31, 2006—one spreadsheet for each of the three contracting officials who purchased a gift card. The purpose of the spreadsheets was to reconcile the receipts for individual items purchased with gift cards to the appropriate gift card. Marshall's reconciliations showed that two gift cards had a remaining balance of nearly $900; the Marshall procurement employee responsible for purchase cards previously stated that only one gift card had a remaining balance. Also, the reconciliation showed that some receipts, although immaterial in amount, were not accounted for. Further, approximately $530 in items purchased with the gift cards were returned to the store and credited to the gift card, but Marshall did not provide documented justification for the credits/returns.

Although Marshall ultimately accounted for and reconciled gift card purchases, we found that NASA lacked policies, procedures, and internal controls to ensure that gift cards purchased with Government purchase cards during emergency situations were adequately controlled.

Recommendation 6. We recommended that the Assistant Administrator for Procurement should develop policies, procedures, and internal controls for using gift cards purchased with Government purchase cards during emergency situations, to include authorized purchases, authorized users, reconciliation of transactions from the receipts to the gift cards, justification for credit return items, and the treatment of remaining gift card balances.

Management's Response. Management concurred, stating that the Office of Procurement will develop the recommended policies, procedures, and internal controls and will issue associated direction to the Procurement Officers not later than December 31, 2006. This topic will also be discussed at the next Procurement Officers Conference.

Evaluation of Management's Response. Management's planned action is responsive to the recommendation. The recommendation is resolved and will be closed upon completion and verification of management's corrective action.

Other Matters

In December 2005, NASA was appropriated $349.8 million supplemental funds for "expenses related to the consequences of hurricanes in the Gulf of Mexico in calendar year 2005." Those funds do not expire, are for consequences from hurricanes in addition to Katrina, and are captured in a separate no-year accounting code. In addition, of the original $100 million in FY 2005 funds reprogrammed to meet immediate recovery needs, $20 million, as disclosed in the Agency's initial FY 2006 Operating Plan, February 6, 2006, was returned to the International Space Station Cargo and Crew Services on May 9, 2006. As a result, current funding availability is estimated to be $429.8 million ($100 million from FY 2005 reprogrammed funds plus $349.8 million from FY 2006 Hurricane Supplemental, minus $20 million initial FY 2006 Operating Plan reductions).

In addition to the $429.8 million of current funding available, NASA estimates additional recovery requirements of $54 million for revised total funding requirements of $483.8 million. The additional funds are considered necessary for asset protection projects for future emergencies.

We appreciate the courtesies and cooperation provided to the staff during the review. If you have questions, or need additional information, please contact Mr. Tony Lawson, Science and Aeronautics Research Project Manager, at 301-286-6524 or tony.a.lawson@nasa.gov.

Evelyn R. Klemstine

Evelyn R. Klemstine

2 Enclosures

cc:
Chief Financial Officer
Director, Management Systems Division
Procurement Officer, Marshall Space Flight Center
Chair, Homeland Security Roundtable, President's Council on Integrity and Efficiency

Scope and Methodology

We performed this audit at NASA Headquarters, the Ames Research Center (Ames), Glenn Research Center (Glenn), Goddard Space Flight Center (Goddard), Kennedy Space Center (Kennedy), Marshall, and Stennis from October 2005 through June 2006, in accordance with generally accepted government auditing standards. We evaluated NASA's estimates of funding needed for recovery and reconstruction efforts. We also evaluated NASA's execution of procedures and processes developed and implemented for administering the $100 million FY 2005 funding provided for emergency recovery and reconstruction efforts. To make our evaluations, we tracked Hurricane Katrina funds through NASA's Core Financial System to the actual procurements awarded.

We reviewed NASA's Procurement Information Circular (PIC) 05-12, "Emergency Procurement Authority," dated September 28, 2005, which raised the micro-purchase threshold from $2,500 to $250,000 for Katrina rescue and recovery procurements in accordance with Public Law 109-62, Section 101, "Second Emergency Supplemental Appropriations Act to Meet Immediate Needs Arising from the Consequences of Hurricane Katrina," dated September 8, 2005. We also reviewed PIC 05-13, "Cancellation of PIC 05-12," dated October 11, 2005, which was issued to notify procurement offices that the emergency authority was cancelled as a result of OMB rescinding the rule, which restored the micro-purchase threshold to $2,500 for normal purchases and $15,000 for contingency operations, effective October 3, 2006. We also reviewed Center's purchase card operating procedures and FAR guidance applicable to unbalanced pricing and indefinite-delivery contracts. We reviewed applicable sections of Mississippi Space Services (MSS) Procurement Manual Doc. No. DP 990030, effective through December 2009.

Computer-Processed Data

To identify Katrina procurement transactions, we queried the Core Financial System using NASA's Core Financial Business Warehouse. Those queries generated reports that identified Katrina-incurred costs by individual Center, by NASA Financial Management Manual full-cost accounting codes (labor, travel, procurements, etc.), and by each subaccount category. We verified Katrina contract actions and purchase card transactions on the reports to supporting documentation for individual transactions at the centers where work was performed. We reviewed all procurements identified on the reports for Ames, Glenn, Goddard, Kennedy, and Marshall and over $15,000 for Stennis. We also interviewed a CFO employee at one Center to discuss how costs at the Centers are entered into the Core Financial System and had the employee display on the computer costs by Center, by category, and by subaccount category for FEMA-related costs and time charges for employees.

Internal Controls

We reviewed and evaluated information obtained from the queries, discussed the accounting and cost estimating processes with Headquarters Chief Financial Office and Facilities Office employees and reviewed NASA and Center-level reports and documentation to evaluate internal controls associated with the accounting and cost estimating processes. We obtained listings of contracting officer warrants to determine purchase authority limits and verified that those limits were not exceeded for Katrina purchases.

Prior Coverage

Within the past year, the Comptroller of the United States has provided testimony to Congress that has particular relevance to the subject of this report. The testimony, "Statement by Comptroller General David M. Walker on GAO's Preliminary Observations Regarding Preparedness and Response to Hurricanes Katrina and Rita" (GAO-06-365R, February 1, 2006), is available over the Internet on the Government Accountability Office's Web site at http://www.gao.gov.

In our report, "NASA's Implementation of the National Incident Management System" (IG-06-016, August 29, 2006), we reported the results of our audit of the emergency preparedness plans of the NASA facilities identified in the NIMS Implementation Plan. The report is available at http://www.hq.nasa.gov/office/oig/hq/audits/reports/FY06/index.html.

Our overall audit was conducted in conjunction with the PCIE as part of its examination of relief efforts provided by the Federal Government in the aftermath of Hurricanes Katrina and Rita. The PCIE Homeland Security Roundtable, which is coordinating Inspector General (IG) reviews of this important subject, receives copies of all relevant IG products. For an overview of IG activities, see the Roundtable's Web site at http://www.ignet.gov/pande/hsr1.html#relief.

Management's Comments

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

July 21, 2006

Reply to Attn of: Deputy Chief Acquisition Officer/Assistant Administrator for Procurement

TO: W/Assistant Inspector General for Auditing

FROM: HK/Director, Contract Management Division

SUBJECT: Agency Response to OIG Draft Memorandum on the Audit of the Management of Hurricane Katrina Disaster Relief Efforts (Assignment No. A-05-030-01)

Enclosed is the Agency response to the subject draft memorandum dated June 30, 2006. The response includes unedited comments from MSFS, the Army Corps of Engineers (COE) and from HQ Space Operations Mission Directorate, as well as responses to the six recommendations included in the memorandum.

Please call Lou Becker at 202-358-4593 if you have any questions or need further coordination on this matter.

Lou Becker

Enclosure

General Comments from HQ Space Operations Mission Directorate:
Reference page 4, Cost Estimation Processes paragraph, next to last sentence, "However, over the following 5 months and through consultations with OMB, wherein NASA disclosed its escalation factors, contingency figures, revised damage assessments, and "mitigation" projects, these variables were disallowed.":

Only comment is that OMB has allowed us to use funds for mitigation projects now. IG makes it sounds like it was disallowed. While it was initially disallowed, additional consultations allowed us to proceed.

Suggest the following re-write:

However, over the following 5 months and through consultations with OMB, wherein NASA disclosed its escalation factors, contingency figures, revised damage assessments, and "mitigation" projects, all these variables were initially disallowed. After additional consultations with OMB, NASA was later allowed to use funds for mitigation projects.

In response to this suggestion for rewrite, we added this text on page 4.

General Comments from MSFC:
Page 6, section *"Contract Actions".* The memorandum states that "The traceability of funds for Katrina contract actions is important because the reprogrammed funds used will have to be replaced with funds specifically appropriated by Congress for Katrina relief and reconstruction efforts." This statement implies that NASA has transfer authority with the Congressional appropriation, whereby the programs from which funds were pulled (Shuttle and International Space Station) could be reimbursed with some of the appropriated funds. Per the latest communication with NASA Headquarters, the appropriated funds did not come with transfer authority. If our reading of this statement is not the intended interpretation, we recommend that the memorandum be reworded to make it clearer.

In response to this comment, we revised the sentence to remove the implication that NASA had transfer authority. (See pages 5-6.)

Pages 7-8, section *"COE did not conduct an analysis to determine unbalanced pricing".* This section infers that that there was evidence of unbalanced pricing with regard to the COE procurement activity. The COE Contracting Officer (CO), with input from the COE legal counsel, provided a response to this section of the OIG draft memorandum (see Enclosure 2). While we do not necessarily agree with all of the rationale and observations in the COE response, based on our assessment we do not believe there is evidence of unbalanced pricing in this situation.

In response to this comment, we removed all reference to unbalanced pricing and revised the section to focus on price reasonableness.

We also take exception to the implication in the recommendations associated with this section regarding the lack of NASA oversight and/or monitoring of the acquisition and/or execution of Vanguard Contract DAC87-03-D-0006. When contracting through another agency, the requiring agency is to a large degree reliant upon the processes of the servicing agency (in this case COE). However, NASA actively monitored and participated in the selection process which resulted in the award of this contract. This participation and monitoring continued throughout the execution of Task 1 of this contract whereby Vanguard successfully performed the scope of work in Task 1 for the price stated in their proposal. In this oversight, there was no evidence of excessive performance or cost risks. In subsequent work awarded under Tasks 2 and 3, the Marshall CO and Program Manager have provided adequate oversight and monitoring of contractor performance and will continue to diligently monitor and oversee all future tasks performed under Vanguard Contract DAC87-03-D-0006 (or any other Katrina-related contract) to ensure these tasks are completed within schedule, costs, and at the required contract performance levels.

Page 9, section *"Purchase Card Transactions".* We agree that emphasis must be placed on internal controls, and the use of gift cards is not considered a normal business practice. However, the use of gift cards has proven to be an effective acquisition approach for handling unique acquisitions during emergency situations. This acquisition approach will only be authorized in unique procurement situations by the Marshall Procurement Officer. Furthermore, the following process is recommended for future acquisitions of this nature: (1) Generate a spreadsheet that records the gift card purchase amount and will require each receipt to be deducted until a $0 balance is reached. Also, any returns will be documented in order to track all transactions on each gift card; (2) the gift card will be returned to the buyer and filed with the order log; and (3) a separate spreadsheet will be utilized to associate a gift card number with the actual purchaser. The Marshall Procurement Officer, will advise all contracting personnel of the recommended procedures for future gift card purchases during unique acquisition situations and will coordinate with the Assistant Administrator for Procurement for the development of similar procedures across the agency.

General Comments for the COE:

I have several observations about the IG's Report that the Corps violated FAR requirements by not conducting an analysis for unbalancing.

The Report states that the Corps violated FAR 15.404-1(g). By its terms, this regulation applies to FAR Part 15 procurements. I do acknowledge, however, that under FAR 16.505(b)(3), where the contract does not establish the price for the supply or service, then the contracting officer must establish the prices for each order using the policies and methods in subpart 15.4. The unbalancing rules do appear in FAR subpart 15.4. Even recognizing the applicability of the unbalancing prohibition to task order competitions, I do not see any deficiencies in our analysis or documentation.

The major problem with the IG Report is that it misapprehends the nature of unbalanced pricing. The Report states, "For task 1, the site investigation, the competitive prices received from four other vendors were $16,065, $62,732, $64,948, and $398,444—a clear and significant price disparity suggesting unbalanced pricing." Unbalancing under FAR 15.404-1(g), however, does *not* compare competitors' line item prices to those of the awardee. Instead, unbalancing assesses the *internal* consistency of a particular offeror's prices and the proportional nature of that offeror's contract line items. As stated by the regulation, "Unbalanced pricing exists when, despite an acceptable total

In response to COE's comments, we made the changes noted above—i.e., we removed all reference to unbalanced pricing and revised the section to focus on price reasonableness.

evaluated price, the price of one or more contract line items is significantly over or understated as indicated by the application of cost or price analysis techniques." The greatest risks of unbalanced pricing occur with such situations as where the base year quantities and option quantities are separate line items. See FAR 15.404-1(g) (1) (ii).

The regulation explicitly acknowledges that unbalancing is internal to a particular offeror when it states in FAR 15.404-1(g) (2), "All offers with separately priced line items or sub line items shall be analyzed to determine if the prices are unbalanced." Further, as provided in FAR 15.404-1(g) (3), "An offer *may* be rejected if the contracting officer determines that the lack of balance poses an unacceptable risk to the Government (emphasis supplied)."

GAO case law also confines its analysis of unbalancing to a particular offeror's prices. E.g., *Semont Travel, Inc.*, Comp. Gen. Dec. B-291179, 2002 CPD 200. Taking the logic of the Report to its full extent, if one offeror's CLIN pricing structure were fully acceptable, it could still be unbalanced because other offerors had deficient pricing. No regulation or case decision would support this outcome. GAO case law further holds that no unbalancing is present where the offer did not pose an unacceptable risk to the Government. *Enco Dredging*, Comp. Gen. Dec. B-284107, 2000 CPD 44.

The Report does not find any unbalance in Vanguard's offer as between Tasks 1, 2 and 3 – which would be the correct framework for considering unbalancing. Indeed, tasks 2 and 3 were unpriced, which was legitimate under the circumstances, and so a balancing analysis to this extent was not feasible. Notably, the Report does not conclude that Vanguard poses any specific risk to the Government with its pricing structure, but simply concludes that Vanguard's task order should be closely monitored to minimize cost and performance risks. Because the Report used the incorrect analysis regarding unbalancing, its conclusion is not supportable under the FAR and GAO case decisions.

The Report further overlooks that even assuming that Vanguard's' price for Task 1 was below cost, this fact is irrelevant to the agency's risk analysis here. The potential risk associated with unbalanced pricing arises from those line items with overstated prices, not from under priced ones. Semont Travel, Inc.., Comp. Gen. Dec. B-291179, 2002 CPD 200; HSG Philipp Holzmann Technischer Serv. GmbH, Comp. Gen. Dec. B-289607, Mar. 22, 2002, 2002 CPD ¶ 67 at 6.

I think the Report's real concern is that Vanguard's Task 1 price is unrealistically low, based on the above comparison to the other contractors. The Corps was concerned from the beginning of the acquisition of the potential problems associated with unduly low prices. The RFP letter, p. 2, stated,

> Your proposed price shall reflect a clear understanding of the requirements outlined in the Data Item Description and Scope of Work. Be informed that your proposed price is to be realistic. . . .

Explain why you consider your price to be . . . realistic, i.e., sufficient to execute your technical/management plan for the task order.

Vanguard's proposal persuasively explained why its Task 1 price was realistic, i.e., commensurate with its technical and management approach, even though the price was on the low side. According to Vanguard, it was applying the "maximum benefits of Economies of Scale to this initial Site Investigation action. This is possible based on the current volume of work Vanguard has associated with our ongoing FRR [Facility Repair and Renewal] efforts." Vanguard also cited the range of costs provided on the efforts associated with the Michoud Facility Repair Project, the team member economy of scale cost mitigation associated with IC Thomasson, Vanguard's strong and loyal subcontractor team, and its reduced labor rates on key personnel. See Vanguard Proposal, p. 10. Further, Vanguard's detailed technical approach for the site investigation fully complied with the Scope of Work for the Task Order, which also supported the validity of its cost approach. See Vanguard Proposal, pp. 5-6.

The Corps always has found Vanguard to be a credible contractor – when Vanguard makes a performance claim in its proposal, Vanguard properly discharges those promises. The Corps had no reason to disbelieve Vanguard when it said in this proposal it would apply economies of scale in conducting the site investigation or that it could perform the site investigation for the claimed costs. Vanguard's proposed site investigation costs on this task order were in line with its site investigation costs on prior task orders , for example several Langley AFB task orders. Contrary to the implication of the Report, and even the views of the government evaluators, which the Report has quoted, Vanguard *did* provide a breakdown of its site investigation costs (see Vanguard site visit cost proposal summary dated 9/24/2005). These constituent costs were all fair and reasonable. All told, Vanguard's price approach met all requirements from the basic contract and for this task order.

Throughout this program, the Corps has had no adverse issues with Vanguard on its site investigation costs, such as unjustified change order requests for compensation above the firm fixed price. No evidence exists that Vanguard has sought to buy in (see FAR 3.501) on this task order or on any other one. Vanguard's performance on this Michoud task order has been rated as excellent by the customer. A fully qualified COR has been on-site for this task order and is monitoring not only performance but all costs incurred and invoiced to the Government.

I am fully satisfied that no excessive performance or cost risks exist on this project. Recent audits requested by the contractor and conducted by DCAA have shown that Vanguard has acceptable accounting and purchasing systems that will enable Vanguard to process time and material orders with no undue risk to the Government.

The Contracting Offer correctly found no unbalancing in Vanguard's offer; she was not required to document the absence of a price deficiency. Please note further that in the documentation requirements for a task order competition, the agency is simply required to cite the "rationale for the price of each order." See FAR 16.505(b) (4). Here, the

Contracting Officer in the Price Reasonableness determination, p. 2, para. 9. B, concluded that Vanguard's price was fair and reasonable, and that "The cost proposal submitted by the contractor displays evidence that he fully understands the Scope of Work." Another way of putting this last comment was that Vanguard's site investigation costs were deemed realistic. Lastly, another document in the file, executed on 27 September 2005 by the Program Manager, Kent Criswell, prior to the task order award on 30 September 2005, found that Vanguard's site investigation costs compared favorably with the Government's informal assessment that a fair and reasonable site investigation cost was $23,400. The record shows that the Government carefully and correctly accepted Vanguard's price.

Based on the foregoing, the following conclusions result:

No evidence exists that Vanguard submitted an unbalanced offer or that the Corps failed to conduct the requisite unbalancing analysis.

The RFP required the contractors to justify the realism of their price, and Vanguard specifically and persuasively explained why its costs were sufficient to perform its technical/management approach.

The Contracting Officer properly explained or relied upon the realism of Vanguard's proposed price in the task order award documentation.

No FAR violations occurred with the award of this Michoud task order.

Respectfully,

Donna Parker
Contracting Officer

Responses to Recommendations:

Recommendation 1:
The Marshall Procurement Officer should direct Contracting Officers to write a memorandum for record for each contract action/order placed or to be placed against an existing indefinite quantity contract for Katrina-related products or services, to include, as applicable, a summary of the ordering information required by FAR 16.505(a) (6) and detail on the execution and purpose of Katrina-related funds.

Response:
Concur. The MSFC procurement office will issue written direction to all contracting personnel specifying the requirements from the recommendation NLT December 31, 2006.

Recommendation 2:
The Marshall Procurement Officer should provide written procedural guidance and provide training to Marshall contracting officials to ensure that, in future emergencies, applicable FAR 16.505(a) (6) order placement requirements are met and written detail on the execution of emergency-related funds is provided.

Response:
Concur. The MSFC procurement office will issue written direction and provide training to all contracting personnel specifying the requirements from the recommendation NLT December 31, 2006.

Recommendation 3:
The Marshall Procurement Officer should provide written procedural guidance and provide training to Marshall contracting officials that will ensure that future "turn on" letter authorizations issued by Marshall for emergencies include cost controls, such as the FAR 52.232-22 Limitation of Funds clause for incrementally funded cost-reimbursement contracts (or a reference to a Limitation of Funds clause already in the contract), and NTE dollar amount, and the contract line item the authorized work should be charged under.

Response:
Concur. The MSFC procurement office will issue written direction and provide training to all contracting personnel specifying the requirements from the recommendation NLT December 31, 2006.

Recommendation 4:
The Marshall Procurement Officer should ensure during future emergencies involving contracts awarded by another agency on NASA's behalf, that NASA's procurement oversight is sufficient to ensure that an analysis of unbalanced pricing is performed in accordance with FAR 15.404(1) (g) when the structure of a solicitation and the prices received in response meet FAR criteria and conditions.

Response:
Concur. While we do not non-concur with the recommendation in and of itself; we do not agree with the basis for which the recommendation is based (see Specific Comments under "Pages 7-8, section *"COE did not conduct an analysis to determine unbalanced pricing"* and Enclosure 2). There were lessons learned from the Katrina effort and we will issue written direction to all contracting personnel specifying the concerns from the recommendation. Direction will be issued NLT December 31, 2006.

Recommendation 5:
The cognizant Marshall Contracting Officer and Program Manager should coordinate with their COE counterparts to closely monitor contractor performance under Vanguard contract DACA87-03-D-0006 and review interim Vanguard-generated "estimate to complete" memorandums to ensure that all tasks under the contract are completed within schedule, costs, and at the required contract performance levels.

Response:
Concur. While we do not non-concur with the recommendation in and of itself; we do not agree with the conclusion that adequate oversight was not provided (see Specific Comments under "Pages 7-8, section *"COE did not conduct an analysis to determine unbalanced pricing"*). We will continue to coordinate with the COE and diligently monitor and oversee all tasks performed under Vanguard Contract DACA87-03-D-0006 (or any other Katrina related contract) to ensure these tasks are completed within schedule, costs, and at the required contract performance levels. Coordination with the COE and monitoring of all tasks performed under the Vanguard contract will be ongoing. Request closure of this recommendation.

Recommendation 6:

The Assistant Administrator for Procurement should develop policies, procedures, and internal controls for using gift cards purchased with Government purchase cards during emergency situations, to include authorized purchases, authorized users, reconciliation of transactions from the receipt to the gift cards, justification for credit return items, and the treatment of remaining gift card balances.

Response:
Concur. The Office of Procurement will develop the recommended policies, procedures, and internal controls and will issue associated direction to the Procurement Officers NLT December 31, 2006. This topic will also be discussed at the next Procurement Officers Conference.