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Note: See following pages for list of included NASA IG Investigation records
Additional material added at the end of this file

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January 5, 2007

REPORT OF INVESTIGATION

**Dart – Hazmat
Ames Research Center
Mountain View, California
95682**

CASE CLOSING: This case is predicated on an anonymous letter sent to AMES ^{b7c} Counsel ^{b7c} and the AMES Research Center (AMES). The Anonymous author stated there had been a multitude of improprieties practiced at AMES over the last several years involving several members of the DART Hazmat team, Johnson Controls Inc. (JCI) as well as the leadership of the team.

These actions included falsifying time cards, using U.S. Government equipment to facilitate work on private property, purchasing equipment under the guise of use by the U.S. Government but then using said equipment for work on private property. The writer also stated there have been cases of allowing U.S. Government sub-contractors to secure favorable contracts at AMES in exchange for personal services.

The anonymous author stated that the following individuals would be willing to give statements regarding the above:

- b7c (DART Hazmat)
- b7c (DART Hazmat)
- b7c (JCI)
- b7c (DART Hazmat)
- b7c (Federal fire-fighter; Stockton Area; former JCI, Dart Hazmat.

Subsequently all of the above named individuals were interviewed and gave statements of limited culpability. All of the individuals denied being the author of the anonymous letter and gave various reasons why they thought one of the other members had authored it. It became very apparent that there was personal discourse among the above named members and their supervisors.

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None of the aforementioned subjects interviewed were able to provide corroborating evidence of alleged wrongdoing except for b7c, who provided a one time use camera found on the nineteen (19) foot DART Hazmat Boston Whaler. These pictures were developed and showed the boat in (personal) use on Trinity Lake in Northern CA. In the Interview of b7c the U.S. Civil Servant in charge of Hazmat, b7c readily admitted to the use of said boat on Trinity Lake and explained that it was done for familiarization training which b7c did on his own time and expense.

b7c was interviewed and advised b7c is employed at AMES as the b7c
b7c is the subject
of some of the allegations of illegal activity.

When interviewed, b7c advised the following:

b7c is the b7c and b7c is the supervisor for DART Hazmat and reports to b7c. There are four (4) employees under b7c and they are b7c
b7c

-DART is a voluntary group and b7c is a member.

b7c

b7c is a personal friend whom b7c met when b7c was also a contract employee at AMES and has known b7c for at least six (6) or seven (7) years. b7c is currently a sub-contractor at AMES
b7c

b7c did some electrical work on b7c house when b7c first purchased it several years ago and b7c has worked on the entire house with b7c mostly weekends but some weekdays. b7c worked on the house and refurbished the bathroom for b7c and installed a tub on a weekend. Work was performed as a friend and without pay.

-The Hazmat crew b7c worked on the backyard four (4) or five (5) times, digging some fence posts and cleaned the yard up. Work was performed on weekends and some weekdays.

b7c did get some mulch but could not recall who b7c had made the request too. Construction rubble was removed from b7c house by b7c but b7c did not recall how, when or where it was removed to.

b7c gave b7c a hot tub from b7c house that b7c did not use and wanted to get rid of. b7c removed the tub from b7c residence and re-placed b7c old tub with it. Again, work was done as a friend and without payment.

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b7c further advised the only work done on b7c house was the refurbishing of b7c bathroom and the clean up of her backyard. The only other work was the interior painting of the house, which b7c did b7c. At the time this work was done (1998 -1999), b7c and b7c were friends of b7c and if someone helped b7c at the house and they were not there, they wanted to know why they had not been asked to work.

b7c advised b7c wanted to be promoted about three (3) years ago after finishing school but b7c did poorly on the interview and was not hired. b7c had many medical issues and would not wear a respirator. b7c only wanted to do inspections and paper work, and was un-happy with b7c job. b7c subsequently went to another contractor.

b7c was then asked if Hazmat had any boats and if b7c had been on them. b7c advised b7c had been on the (Hazmat) Boston Whaler and it was work related as well as personal. The boat's work function was to deploy a boom for oil containment and b7c could only recall being on the boat twice. The first time was with b7c and b7c on Anderson Lake (2000 or 2001). The second (2) time was on a camping trip to Trinity Lake with b7c friends (NFD) and b7c. This trip was taken while b7c was on vacation but b7c did not water ski behind the DART boat but did behind b7c friend's boat. They did pull some of the kids behind the DART Hazmat boat and official policy at DART Hazmat was to use it and become proficient with equipment.

b7c was interviewed and made the following statements in response to questions regarding b7c and b7c house:

-Never directed any contract employees to work at b7c residence, directly or indirectly. did work on the house b7c but only on weekends and nights.

-Did use a U.S. Government "jackhammer" at the residence but that was the only tool to the best of b7c knowledge.

-Most of the work done on the house was maintenance type work, fixing a water leak etc. There were no major renovations done to the residence and most of what b7c did was yard work.

-Did not direct any employee to deliver "mulch, gravel" from AMES to the residence nor did direct any employee to remove rubble or any other type of construction material from the site and dispose it at AMES.

-At no time did b7c ever discuss with b7c that any contract work to be done at b7c residence would be paid for by awarding a reciprocal(s) contract at AMES to b7c and at no time has b7c ever received any funds from b7c regarding any contracts.

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b7c was then asked the following questions regarding the DART Hazmat Boston Whaler and the other owned Rigid Inflatable Boat:

-The Boston Whaler was obtained thru the U.S. Navy for the deployment of containment booms in case of an oil spill etc. This boat was obtained a few years ago when there was a plan at AMES to re-open an oil pipeline on the bay at AMES. The oil pipeline was refurbished but was never used. However, the boat and the equipment would also be utilized for any type of containment in the marsh's and canals running through AMES into the bay.

-All the hazmat employees are trained in the use of this equipment and certified under 40CFR. The boat was taken to Redwood City and put into the water, as the facility (boat landing) at AMES needs to be dredged to be made operable. When the boat was run in the bay at Redwood City the engine was found to have numerous problems and a new engine was subsequently purchased to replace it. The boat was brought up to U.S. Coast Guard certification and is registered every year through the motor pool.

b7c and b7c took the boat to Anderson Lake (San Jose) on a weekend after it was refitted with the new engine and the boat ran fine.

b7c and b7c also took the boat to Trinity Lake on a long weekend where they met some of b7c friends. b7c explained the personal use of the boat as being in accordance with the official policies at AMES during that time. "That policy was for individuals to become as proficient as they could with equipment that they used."

-The Rigid Inflatable boat was also received through the U.S. Navy, as the Water Rescue shop did not have the needed resources to refit it. They b7c asked b7c if b7c could help b7c out with this boat. b7c agreed to help with the boat, obtain a new engine as well as worked on the trailer and some electrical wiring was done. To the best of b7c knowledge, this boat has not yet been in the water.

b7c when questioned about the purchase of self-propelled personal underwater towing devices (Dolphins) advised b7c did purchase said units, as they would be used for water rescue and boom deployment.

b7c was advised of the audit of the Purchase Card acquisitions as well as the construction contract reviews for DART Hazmat and b7c would most likely be interviewed again at the conclusion of this audit.

On August 15, 2005, the Reporting Agent (RA) interviewed b7c IAP (World Systems Services). IAP bought out the U.S. Government maintenance contract from Johnson Controls. b7c was interviewed at the offices of the NASA Inspector General, AMES Research Center and is the b7c the Hazmat shop on a daily basis.

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b7c was questioned in regards to work he performed at the home of b7c b7c advised b7c replaced a shower with a bathtub for b7c when b7c had first purchased the residence about six (6) or seven (7) years ago. b7c did this work on a weekend and evenings and this is the only work b7c personally did for b7c. Said work was done as a friend and without charge.

b7c stated that b7c was aware of other Hazmat employees performing work at the b7c residence but b7c was not familiar with any of the details and was not aware of any work being done there during regular AMES' work hours.

b7c was also aware that mulch from AMES was delivered to b7c residence by some of the Hazmat employees but as there was an overabundance of mulch at the Center, b7c did not see that as a problem. b7c also recalled that some concrete rubble was removed from the residence and dumped at the DART Hazmat training site and b7c thought this was ok as they (DART) were always looking for rubble to practice in. b7c denied giving anyone instructions to deliver the mulch or dispose of the rubble and thought that was done on an individual incentive.

In regards to boats used by Hazmat, b7c advised the only two (2) boats b7c was aware of were a Boston Whaler and a rigid inflatable. Both of these boats were secured by the DART Hazmat team as U.S. Navy surplus and were given to them by b7c (AMES Water Rescue). The boats were to be used for the deployment of booms in case of a hazmat spill on the bay at AMES. Both of the boats were in very poor condition and had to be refurbished in order to be made usable.

b7c further stated that b7c has only been on the Boston Whaler once when they first put it in the water at Anderson Lake for a float test and there found the engine was in such bad shape that it needed to be replaced. b7c advised b7c has never been on the inflatable boat and did not think it has ever been on the water since being at AMES.

b7c stated that b7c had heard the Boston Whaler had been used for personal use but was unaware of who had used it or when or where. b7c also had no recall of sending any employee(s) to b7c residence in b7c to get the boat and bring it back to AMES.

b7c was then questioned in regards to his relationship with b7c and stated the following:

b7c has known b7c for at least ten yrs (10). b7c was also a contract employee at AMES with specialty is in fabrication and welding although b7c does general construction too.

b7c does work for b7c on the weekends and evenings when work is available and b7c employer has been made aware of this work. b7c advised b7c has also hired some of the other

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DART Hazmat employees for weekend work but b7c has never heard of b7c requesting "tips" for b7c when paying employees.

In regards to b7c relationship with b7c advise b7c has known b7c for approximately fourteen (14) years and b7c can be a very hard person to work for. b7c advised that b7c wants work to be done right away and wants it done right. b7c again reiterated that b7c is not easygoing or personal.

NASA OIG Investigative Auditor b7c compiled an audit of DART Hazmat and Cypress Construction contracts and related Purchase Card payments. This review provided the following:

-Allegation of time card fraud. Findings, a determination of fraud could not be determined as the known hours of abuse could not be determined.

-Allegation of misuse of U.S. Government property for personal use. Findings could not assign a value to this abuse, as the extent of misuse could not be determined.

-Allegation of purchase of tools/equipment for the U.S. Government but converting same for personal use. Findings could not separate the purchases as for legitimate U.S. Government use or for personal use.

-Allegation of contract awards for personal service and contract kickbacks. Findings could not identify by the invoices what were legitimate contracts and which were false.

A prosecutive review by Assistant U.S. Attorney (AUSA) b7c determined that the investigative audit of the construction contracts involving DART Hazmat and Cypress Construction, as well as other various construction companies did not establish a pattern of fraud or abuse of the contracts issued by individuals at DART Hazmat. Therefore, this case lacks prosecutive merit and was subsequently declined by AUSA b7c for federal prosecution.

A separate and non-related purchase card audit of contracts at AMES was conducted by the NASA OIG Office of Audits. This audit headed by b7c Kennedy Space Center also did not develop any indication of fraud regarding Cypress construction and DART Hazmat.

To date, no other information has been developed in this investigation. Thus, this case is being closed without any Criminal or Administrative action due to the age of the infractions, the declination by the assigned AUSA, final results of the NASA OIG Office of Audits and relocation of the subjects due to job terminations and transfers.

b7c
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b2

April 23, 2007

BIRD STRIKE SAFETY PRECAUTIONS AT KSC

Kennedy Space Center, FL

INFORMATION MEMORANDUM/CLOSING: The Office of Inspector General received a hotline complaint from b7c a former b7c alleging that NASA has not taken adequate steps to alleviate the risk of bird strikes to the Space Shuttle and to aircraft taking off or landing at the KSC runway, the Shuttle Landing Facility.

This information was reviewed by the Senior Staff Referral Review Committee on February 16, 2006, and referred to the OIG Office of Audits for review and response. The OA responded to the complaint with an opinion from an Aerospace Technologist. The ASTs reported that NASA has created a Shuttle LCC concerning birds and has revised its guidance to require that NASA-owned airfields have a wild life management program. We are also advised that the OIG ASTs have been involved in this issue from the receipt of the hotline complaint and believe that NASA's responses to the bird strike issues are adequate. See Attached.

Based on a review of the information provided, this matter does not warrant further investigative or administrative action. This case is closed.

Attachment

1. Memorandum from OA dtd.2/16/06

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SSRRC #3 - 2/16/06
Bird Strike
Update: February 6, 2007

Summary of Issue: IG office received a hotline complaint from 67c on February 12, 2006 (Attachment 1). Complainant alleged NASA had not taken adequate steps to alleviate the risk of bird strikes to the Space Shuttle and to aircraft taking off or landing at the KSC runway, the Shuttle Landing Facility (SLF). The complainant also alleged that NASA allowed a civilian pilot (67c) to decline the use of bird abatement precautions during a takeoff and landing at the SLF. Date referred to Space Operations and Exploration Directorate: February 23, 2006.

Background Information: Bird strikes are an inherent problem at many airports around the world as evidenced by bird strikes causing numerous aircraft crashes over the years. To try to mitigate this problem various tactics are used to harass birds with noise, visual, and electromagnetic hazards in an attempt to reduce the bird population around runways. The bird strike problem is particularly acute at Kennedy's SLF and the Space Shuttle launch pads because they are located in the middle of a Fish and Wildlife protected sanctuary.

Work Completed by OIG: We addressed 67c complaint in two parts. First, we reviewed the action taken by the Space Shuttle Program (SSP) in response to the STS-114 bird strike (buzzard). Second, we addressed the SLF bird strikes.

SSP

The SSP considered the STS-114 Bird Strike to be an in-flight anomaly and created an "Avian Abatement Resolution Team" to address the issue. That team presented a status report to the SSP's Program Requirements Control Board on April 27, 2006 (Attachment 2), which provided the results of bird detection actions, bird abatement studies, and operations implementation. Because the studies indicated that sound deterrents were more effective than olfactory deterrents, additional deterrent sounds have been incorporated into the existing predatory bird recordings at the SSP launch pads. In addition, KSC initiated an awareness campaign on reporting road kill; removal of that road kill is intended to encourage the vultures (buzzards) to move elsewhere.

The SSP has also begun radar and video monitoring of bird activity starting at the External Tank load. During the launch activities, the Chief Test Director (CTD) monitors the radar and tracking cameras starting at L-30 minutes for situational awareness. From T-9 minutes to T-31 seconds, the CTD evaluates birds within a pre-established perimeter that have the potential to interfere by T-0. The CTD also employs active sound deterrent measures as required. At T-1 minute, the CTD can recommend hold at T-31 seconds if bird conditions warrant and the Launch Director makes the decision to hold or continue based on that CTD recommendation. A launch commit criteria (LCC) is in place that requires the launch countdown be stopped if large birds are detected within close proximity of the launch pad.

SLF

To address the overall problem with SLF bird strikes, we reviewed whether a Wildlife Management program was in place at the SLF in conjunction with audit work performed on project A-05-027, Audit of the Management of NASA Aircraft Operations. During a site visit to KSC as part of that audit, we shadowed an ongoing Intercenter Aircraft Operations Panel (IAOP) review of KSC aircraft operations. We noted the IAOP did not ask about wildlife management during its audit. We met with the IAOP team lead and officials from the HQ Aircraft Management Division and Safety and Mission Assurance, and briefed them on the hotline complaint and our observation that a formal Wildlife Management program was not in place. All present agreed that a program was an important safety measure. During the March 29, 2006 IAOP out-briefing to Jim Kennedy, KSC Center Director, the IAOP team lead recommended that a Wildlife Management program be implemented.

NASA responded by forming a tiger team consisting of a representative from the Aircraft Management Division and the airfield managers from the three NASA-owned airfields at Wallops, Ames, and KSC. The tiger team was tasked to review Federal guidance (FAA/Air Force) concerning wildlife management and recommend changes to NASA guidance. As a result of the tiger team's efforts, NASA revised NPR 7900.3A, "Aircraft Operations Management", revising Chapter 13, (see 13.2.2.x, Attachment 3), which codifies the requirement for each NASA airfield to have a wildlife program (including bird abatement) and for periodic confirmation and validity of this plan during IAOP visits. NASA's wildlife management guidance is in line with FAA guidance. Although the revised guidance has not yet been issued, the SLF is developing the following briefings and procedures to address the bird strike issue.

- standard field briefing for all SLF users to review and sign acknowledgement of all field operating procedures and hazards at the SLF and local area,
- bird watch process to alert crews of the level of potential bird activity,
- reporting procedure over the input of bird strikes in the Incident Reporting Information System,
- procedure for a periodic review of SLF bird hazards modeled after a process used at Patrick Air Force Base,

The SLF is also coordinating with the aircraft management office at Wallops and Ames because those Center's have a Federal wildlife management specialist on staff.

Regarding the specific complaint that NASA allowed a civilian pilot **b7c** to refuse bird abatement precautions, we found this complaint to be unfounded. OIG AST personnel interviewed the personnel responsible for bird watch and determined that they had been present on the airfield well before the scheduled 0700 launch. Those personnel reported that no birds were observed on the airfield during the runway inspection. The bird watch personnel remained on the airfield to identify birds in **b7c** planned take-off path. No birds were noted on the airfield until just seconds before they impacted **b7c** aircraft. The bird watch personnel stated the birds seemed to appear out of nowhere and there was no time to take action to prevent the birds from flying over the runway and hitting the aircraft. A potential contributing factor (although not validated) was that **b7c** team used a chase helicopter to video the take off. The chase

helicopter flew alongside the Global Flyer aircraft during its take-off roll and was eventually passed by the aircraft as it gained speed. It is possible that the vibration and noise from the helicopter caused excitement in birds that were unable to be seen by the bird watch observer and those excited birds flew across the runway into the path of the Global Flyer aircraft.

AST Opinion: OIG AST's have been involved in this issue from the receipt of the hotline complaint and believe that NASA's responses to the bird strike issues are adequate. Since the hotline complaint was received, NASA has created a Shuttle LCC concerning birds and has revised its guidance to require that NASA-owned airfields have a wildlife management program. We do not believe that inaction by the SLF bird watch personnel led to the 6/7/00 bird strike, birds have been and will always be a problem at airfields, a fact which is exacerbated at an airfield that sits within a wildlife refuge. The specific requirements for a wildlife management program (such as a hazard assessment to be performed by a wildlife damage management biologist, a standard pre-brief to all users of the SLF concerning wildlife, training, and annual review of the program's effectiveness) should help to identify and mitigate SLF bird strike risks. We will be addressing the bird strikes and new requirement for a wildlife management plan in our report on the Management of Aircraft Operations (project A-05-027). We will followup on the actions taken by the SLF in conjunction with that report.

We recommend this SSRRC action be closed.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
OFFICE OF INSPECTOR GENERAL
OFFICE OF INVESTIGATIONS**

MAY 11 2006

TO: Office of Audits
FROM: Assistant Inspector General for Investigations
SUBJECT: Case Referral
b2
Bird Strike Safety Precautions at KSC
b2

The Office of Inspector General received a complaint regarding an aircraft that was declined the use of bird strike safety precautions (a safety precaution to frighten birds away during return shuttle flight landings on the Kennedy Space Center runway). Complainant alleges that NASA has yet to seriously address the safety issues that NASA executives had agreed to deal with after the Columbia disaster. We have reviewed the above referenced complaint (enclosed) and am referring it to your office for appropriate action.

b7c

Enclosure



b2

May 23, 2007

REPORT OF INVESTIGATION

RECOVERY OF SUSPECTED NASA MANNED SPACE PROGRAM PROPERTY

Langley Research Center
Hampton, VA 23681-2199

CASE CLOSING: This administrative investigation was predicated upon the receipt of information from [redacted] Office of Chief Counsel (OCC), Langley Research Center (LaRC), regarding the identification of possible NASA manned space program property outside of NASA control.

[redacted] reported that [redacted] Portsmouth, VA, contacted the LaRC Public Inquiry Office, Office of Strategic Communications and Education, regarding a pair of "space gloves" she encountered while acting as the executor for the estate of John R. "Randy" Wagner (deceased), Chesapeake, VA. [redacted] reported that Wagner worked as a volunteer docent for LaRC in the early 1980's (presumably at the former LaRC Visitor's Center). [redacted] reported that both gloves appeared used and bore the names "CARR" and "MC CANDLESS." Subsequent inquiries disclosed that Col. Gerald P. Carr, USMC, was an astronaut who flew with the Skylab program circa 1973; Capt. Bruce McCandless, USN, was an astronaut who flew on Space Shuttle missions in 1984 and 1990. [redacted] voluntarily provided the two gloves to the NASA OIG. Each glove was contained inside a Plexiglas-style tube with a wood base and was standing upright supported by a piece of wide plastic pipe.

On February 21, 2007, the NASA OIG interviewed [redacted], contractor employee, Logistics Supervisor, MRI, Inc., Johnson Space Center (JSC), TX, to verify the authenticity of the gloves and track the gloves to a last known custodian and/or location. [redacted] related that these particular gloves were used during the Apollo, Skylab, and Apollo-Soyuz Test Programs. Gloves of this type were usually returned to JSC, reclassified as condition Class "III" and taken out of service as being "no longer serviceable for flight." Class III gloves were sent to the JSC equipment "Training Pool" and used by other astronauts for training purposes. A review of available JSC records to ascertain where the subject gloves were last located and to whom they were loaned revealed both sets of gloves were last documented as being in NASA control on June 25, 1974, when they were transferred/shipped to Bldg. 420, JSC, for storage. There were no other records or documentation beyond that date indicating any further transfers, loans, or disposal actions regarding the gloves.

b7c

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During April 2007, the NASA OIG coordinated this matter with Louis A. Parker, Public Affairs Officer and Exhibits Manager, Office of Communications & Public Affairs (Code AP161), JSC, and Allen R. Hoilman, Exhibits Director, Virginia Air and Space Center (VASC), Hampton, VA, to arrange for permanent loan of these gloves to VASC from JSC.

On April 18, 2007, an "Exhibit Loan Agreement" (NASA Form 1429) was executed between Parker (on the behalf of JSC) and Hoilman (on the behalf of VASC). The agreement listed both gloves by their nomenclatures, part numbers, serial numbers, and associated astronauts. The gloves were given a total value of \$18,614.16. On April 30, 2007, the NASA OIG remanded custody of the gloves to Hoilman.

Based on the recovery and return of the gloves, and no apparent evidence to suggest criminality, this investigation is closed.

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b2

May 24, 2007

SALE OF FLOWN ITEMS BY NASA CIVIL SERVANT

Johnson Space Center
Houston, TX 77053

INFORMATION MEMORANDUM/CLOSING: The OIG initiated this case based on information received from the Johnson Space Center (JSC) Legal Office that JSC employee, b7c allegedly owned and operated a business that sold flown space hardware. Although b7c reported the business, b7c to the JSC Legal Office on Confidential Financial Disclosure form OGE 450, b7c failed to mention or discuss with Legal that the business engaged in this activity.

The investigation confirmed that b7c was the owner and operator of b7c a b7c store that sold NASA related paraphernalia and to a limited extent, space hardware. b7c also owned a physical store location named b7c that was closed due to cost considerations around February of 2007.

On April 20, 2007, the OIG interviewed b7c stated that the sale of space hardware comprised only a small portion of b7c total business. b7c provided documentation that disclosed the business sold 79 items for a value of \$42,612. b7c purchased 60 of these items and consigned for other sellers the remaining 19. b7c received a net profit of \$7297.49 after consideration for purchase costs, marketing costs, and commissions. b7c stated that in October of 2006, b7c Counsel for General Legal Matters, requested b7c file form 1713 with the legal office, but that b7c just "never got around to it." b7c stated that b7c would fully inform JSC Legal about the nature of b7c business and submit the appropriate paperwork required for the approval of b7c outside business activity.

On May 23, 2007, the OIG coordinated with b7c confirmed that b7c completed and filed form 1713, Approval For Outside Employment, with her office. b7c reviewed the form and informed b7c of the cautionary items related to this outside employment.

b7c

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Since no evidence of criminal, civil or administrative violations exist, and [redacted] has complied fully with his responsibilities regarding the disclosure and approval for his outside business activity, this case is closed.

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June 12, 2007

b2

SALE OF NASA EQUIPMENT BY SOTHEBY'S
Astronaut Omega Watch

INFORMATION MEMORANDUM/CLOSING: On May 31, 2007, the National Air and Space Museum (NASM), notified NASA that on June 13, 2007, Sotheby's, Auction House, New York, NY, was auctioning two Omega chronograph wristwatches (lots 107 and 108) from the estate of Donn F. Eisele, Astronaut, NASA/United States Air Force (USAF) (Attachment 1 & 2). NASM alleged that the Omega stainless steel watch, serial number 38, lot 107, may be NASA property.

Lot 107

Sotheby's documented lot number 107 represented a watch that was issued by NASA to Eisele and flown aboard Apollo VII. This watch bears the serial number 38. NASM contends that Eisele was actually issued a watch bearing serial number 34. NASM advised this watch (s/n 34) was in its collection; however, it was stolen in Ecuador in 1989. NASM further commented that since there was no documentation in its possession which indicated that Eisele wore the watch bearing serial number 38 they were not interested in adding it to its collection.

Investigation disclosed that In October 1968, Donn F. Eisele, Astronaut, NASA/United States Air Force (USAF), was a command module pilot on Apollo VII. In July 1972, Eisele retired from the USAF and left the space program to become Country Director of the U.S. Peace Corps in Thailand. On December 2, 1987, Eisele died in Tokyo, Japan.

Research of Memorandums (Attachment 3 thru 5) authored by NASA senior management in the 1970s reflected the following:

1. Memorandum, dtd April 4, 1973, Subject: Ownership and Disposition of Personal Preference Kit/Items. This memorandum was sent from the NASA Administrator to Associate Administrator (AA) for Manned Space Flight, Johnson Space Center. In part the memorandum reflects the Administrators directive that current and former astronauts be made fully aware that items which were purchased with Government funds are Government property and will be delivered to the Director, JSC, for appropriate disposition by NASA; such items will henceforth be considered as official Flight Kit materials.
2. Letter, dtd January 22, 1974, to Dale Myers, AA for Manned Space Flight from Director Christopher Kraft. Kraft's letter advises that he is attaching a receipt to be used for the loan of

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b7c

items associated with space missions and for the flight watches. Receipt reflects that Astronaut's acknowledge that when they leave Government service they have three choices. One of these choices is that they can take advantage of the loan for an indefinite period of time; the maximum period may not exceed their life with no right of assignment or loan to others.

3. Memorandum, dtd January 2, 1974, Subject: Distribution and Loan of Items Flown in Space. This memorandum was sent from the AA Manned Space Flight to Director, JSC. The memorandum provides a list of items which includes flight watches that can be loaned to Astronauts.

The NASA OIG was unable to recover any documentation reflecting any NASA management directives concerning personnel or official flight kit materials that pre-dated Eisele's departure from NASA in July 1972.

Lot 108

NASM's advised lot number 108 represented a gold watch that was given to Astronauts. Sotheby's confirms this information by documenting that in October 1969, gold watches were presented to Astronauts at a reception in Houston, TX.

On June 11, 2007, this matter was discussed with [redacted] Counsel, NASA Office of Inspector General, [redacted] opined that since NASA did not have adequate property management control over items flown on space missions in the 1960s it would be doubtful if it could be established that Eisele was ever directed to return the watch. Many items flown in space during the 1960's were given to Astronauts by unofficial means and NASA did nothing to recover these items at that time. [redacted] opined it was not in NASA's best interests to attempt to recover the watch from Sotheby.

Based on the aforementioned this matter is closed. There is no administrative or judicial action pending.

Attachments:

1. Electronic mail correspondence from Allan Needell, NASM, to NASA, dtd May 31, 2007.
2. Sotheby's Internet descriptions and providence for Lots 107 and 108, downloaded June 11, 2007.
3. Memorandum, dtd April 4, 1973
4. Letter, dtd January 22, 1974
5. Memorandum, dtd January 2, 1974

[redacted]
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National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

**REPORT OF
INVESTIGATION**

HUBBLE SPACE TELESCOPE

Hughes Danbury Optical Systems, Inc.

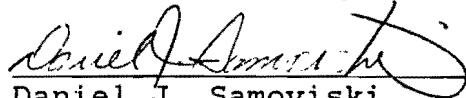

I-GO-90-259

REPORT OF INVESTIGATION
NASA OFFICE OF INSPECTOR GENERAL

TITLE: Hughes Danbury Optical Systems, Inc. Danbury, CT	(INVESTIGATIVE PERIOD:
	(August, 1989 - January, 1991
	(
Fraud Against the Government-Contractor	(INVESTIGATIVE TEAM:
	(Daniel Samoviski, Albert Scrip,
	(Debra Miller
	(
	(CASE NUMBER: I-GO-90-259

REFERENCES: NONE

SYNOPSIS: SEE ATTACHED REPORT

DISTRIBUTION:	(CONCURRENCES:
Assistant Inspector General for Investigations	(
Department of Justice Civil Division	(Daniel J. Samoviski
	(OIG Center Director, GSFC
	(
	(
	(William D. Hager
	(Assistant Inspector General for Investigations
	(
	(
	(DATE OF ISSUE: 1/8/91

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REPORT OF INVESTIGATION

HUBBLE SPACE TELESCOPE

I-GO-90-259

SECTION I	Synopsis
SECTION II	Background
SECTION III	Details of Investigation
SECTION IV	Organizational Charts Perkin-Elmer Corporation NASA
SECTION V	Chronology of Events
SECTION VI	False Claims Act
SECTION VII	Facts Supporting Pursuit of Civil Remedy
SECTION VIII	Possible Defenses
SECTION IX	Discussion of Damages
SECTION X	Exhibit List

THIS REPORT IS SUBJECT TO THE ATTORNEY-CLIENT PRIVILEGE

SECTION I

SYNOPSIS

On August 20, 1990, this office received a memorandum from the NASA Office of Inspector General (OIG), Assistant Inspector General for Investigations (AIGI), directing that an investigation be initiated into allegations surrounding the spherical aberration observed in the Hubble Space Telescope (HST) primary mirror, fabricated by Perkin-Elmer Corporation (PE), Danbury, CT. The memorandum related that Dr. Charles J. Pellerin, Director, Astrophysics Division, Office of Space Science and Applications (Code S), NASA Headquarters, reported the Hubble Board of Investigation has concluded the cause of the flaw in the primary mirror was a spacing error in the reflective null corrector (RNC), a device used by PE to test the mirror. Dr. Pellerin questioned whether PE (optical group), now Hughes Danbury Optical Systems, Inc. (HDOS), had followed contractual procedures, as certified, for the manufacture of the reflective null corrector. Accordingly, an investigation was initiated into possible false statements and/or false claims to the government by HDOS. In September, 1990, Senator Barbara A. Mikulski of the Committee on Appropriations, directed NASA to seek a formal investigation by the NASA Inspector General on this matter and report the results of that inquiry to the committee no later than January 31, 1991.

This investigation has revealed that PE manufactured a mirror which, on-orbit data indicates, fails to meet NASA contract specifications. According to testimony and documentation (PR-237), PE had assured NASA representatives that the RNC, the primary device used to manufacture and test the mirror, would be recertified prior to final figuring of the mirror. Later documentation, PR-237 B, provided to NASA by PE, stated that the RNC assembly spacing and alignment were recertified prior to final figuring of the mirror. The RNC was not recertified and did in fact contained a spacing error which could have been detected upon remeasurement. Further, testimony has indicated that the PE Manager of OTA Optics for the HST, Ronald Rigby, and PE Manager of Manufacturing Optical Analysis, Lucian Montagnino, were aware of and failed to resolve discrepant test data resulting from auxiliary test devices. Testimony and documentation also show that Rigby and Montagnino failed to communicate their technical concerns to NASA and to PE managers and technical advisors. NASA and PE managers and technical advisors have stated they would have stopped the program to resolve the issue had they known of the discrepant test results.

Due to the apparent reckless disregard on the part of PE HST managers of the truth or falsity of information in support of claims to NASA for payment, this matter is being referred to the Department of Justice, Civil Division, for possible pursuit of a civil remedy under the False Claims Act.

SECTION II

BACKGROUND

Planned Mission of the HST

The HST was designed as a space-based telescope to provide the world's best views of the Universe. The HST has a life expectancy of approximately 15 years, with scientific instrument changeouts every 3 to 5 years. It was the first space telescope thought to be capable of overcoming the blurring of images caused by the atmosphere. The HST project has been managed and contracted by the NASA, Marshall Space Flight Center (MSFC), Huntsville, Alabama. Perkin-Elmer Corporation built the Optical Telescope Assembly (OTA) for the HST and Lockheed Missiles & Space Company provided the Support Systems Module (SSM) and Systems Engineering. The HST was launched April 24, 1990.

Contract Information

Review of contract files revealed that in October, 1977, NASA awarded a Cost Plus Award Fee contract to PE, valued at \$69 million, for the OTA of the HST. Launch of the HST was initially scheduled for December, 1983. By September, 1990, the contract value had increased to over \$475,000,000. Those interviewed estimated the cost of the OTA optics (primary and secondary mirror) at \$18 million. The contract is still on-going and \$30 million has been appropriated in Fiscal Year 1990 alone for the characterization of the mirror flaw. HDOS efforts toward the characterization and correction are being reimbursed under this contract. The contract has been novated to reflect the purchase by Hughes Aircraft Company, Inc.

How the Spacing Error Occurred

The primary mirror error, causing what is known as spherical aberration, occurred because the optical test equipment (the RNC) used in the fabrication process was incorrectly spaced, thus causing the surface of the mirror to be polished into the wrong shape. The Hubble Board of Investigation concluded that the most likely cause of the spacing error occurred while the RNC was being modified for the testing of the HST mirror. Referring to the long invar rod used for one of the critical RNC spacings, the Board stated, it appears that an "operator obtained reflection from the field cap where the nonreflecting material was absent, rather than the rod end, causing the 1.3 mm misspacing."

Definition of Spherical Aberration

The Board report explains that the term aberration is used to describe "an error within an optical system where a clear, sharp image does not appear at the image plane." Spherical aberration is a class of aberration which is more difficult to correct. It requires either a "change to the curved optical surfaces, which are figured into the solid glass, or the positioning of corrective lenses (similar to eye glasses) within the light path." The Board continued that "too much material was removed from the outer edges

of the primary mirror" resulting in a mirror which is too much flattened away from the mirror's center. Spherical aberration "distorts a point source image (e.g. distant star) by broadening the image and surrounding it with concentric deification rings. This broadening effect prevents distant, closely spaced objects from being separated in the image," according to the Hubble Board of Investigation.

Comments Regarding the PE/NASA Environment during Fabrication of the Primary Mirror

The Board report comments, as did those interviewed as a part of this investigation, that "during 1981 and continuing through early 1982, the HST program was beset by many difficulties. The estimated cost of the PE contract had increased several-fold and the schedule had slipped substantially. The fine guidance sensors were having serious technical problems...The program was threatened with cancellation, and management ability was questioned. All these factors appear to have contributed to a situation where NASA and PE management were likely to be distracted from supervision of mirror fabrication." Additionally, according to testimony, PE was in competition with Eastman-Kodak, which was fabricating a back-up primary mirror and appeared to be exceeding PE in schedule. Those interviewed related that had the Eastman-Kodak mirror been selected for integration into the OTA, it would have had a serious impact on PE's ability to win future government contracts.

SECTION III

DETAILS OF INVESTIGATION

Interviews were conducted of numerous current and former PE and NASA employees who had knowledge of the fabrication of the primary mirror. Also, interviews of those assisting the review by the HST Board of Investigation were conducted. Document reviews were performed to include contract files, Marshall Space Flight Center (MSFC) project files, PE records, and records in the personal custody of those interviewed. In order to insure the integrity of documentation, an Inspector General subpoena was issued in September, 1990, for records in the custody of HDOS pertaining to the HST optical system (Exhibit 9). A chronology of events described in this narrative is contained in Section V of this report.

Testimony and documentation revealed that NASA contracted with PE in October, 1977, to manufacture the Optical Telescope Assembly (OTA) for the HST, which included a primary mirror of certain specifications. In 1983 and 1984, PE submitted Certificates of Configuration Compliance to NASA for the primary mirror, primary mirror assembly, and OTA Module indicating that these end items were certified to be in compliance with the specified design specifications and requirements (Exhibit 46).

The HST was launched April 24, 1990, and during review of on-orbit data it was learned the telescope could not be properly focused due to a major flaw in the optics. NASA then formed the Hubble Space Telescope Optical Systems Board of Investigation, comprised of optical experts, to determine the cause of the flaw, how it occurred, and why it was not detected before launch. The Board presented its final report (Exhibit 1) on November 27, 1990, concluding that the surface of the primary mirror had been polished into the wrong shape due to a 1.3 mm spacing error in the reflective null corrector (RNC), special test equipment (STE) used in shaping and testing the mirror. The Board also stated that "there were clear indications of the problem from auxiliary optical tests made at the time, the results of which have been studied by the Board." The Board report continued that a PE inverse null corrector "clearly showed the error in the reflective null corrector" and a PE refractive null corrector used to measure the vertex radius of the mirror, also "clearly showed the error in the primary mirror. Both indicators of error were discounted at the time as being themselves flawed." The Board report stated that NASA was unaware the discrepant data existed. Additionally, the Board reported the "erroneous measurement of the spacing of the field lens of the RNC led to the need to install spacers to increase the separation of the field lens from the lower mirror." (Exhibit 1)

Interview of those involved in the OTA project disclosed that three NASA employees worked on-site at PE during the fabrication of the primary mirror, from approximately 1980 through March, 1982. Daniel Johnston, MSFC, Systems Engineering, performed as NASA's resident chief engineer providing oversight of the OTA project, including the primary mirror. Paul Schwindt, from the

MSFC project office, and Carl Fuller, MSFC Quality Assurance, who provided scheduling and safety oversight, respectively.

Johnston was interviewed and stated he was aware of the addition of spacers to the RNC, the need for which was explained by PE employees as a build up in tolerances, and the discrepant test results from the inverse null corrector, considered a less reliable device due to a manufacturing defect (Exhibits 39, 40, and 41). However, Johnston stated he was unaware of anomalous interferograms (photographs) resulting from the vertex radius (center) tests conducted during Phase II of the project in April and May, 1981 using the refractive null corrector. In fact, Johnston recalled receiving a copy of an internal PE memorandum discussing the results of the vertex radius test. The memorandum described the results in terms of vertex radius measurements and attached a center portion cut-out of the anomalous interferogram. Johnston stated the spherical aberration, or curved fringes, were not apparent from the cut-out portion he viewed, which showed only the straight fringed center of the interferogram. HDOS subpoenaed documentation includes an interferogram with a cut-out center portion from the HST primary mirror vertex radius tests (Exhibit 4). Although this investigation has been unable thus far to determine the reason for the cut-out or the person responsible, those interviewed have stated they are not familiar with such a practice.

Other NASA employees working at MSFC and monitoring the project have stated they do not recall being informed of or receiving any information regarding the discrepant test results from the vertex radius test. Charles Jones, chief optical expert at MSFC monitoring the HST project, described the anomalous interferograms as "horrible" and stated they would have gotten much project attention (Exhibit 42). He stated it is hard to believe anyone could disregard those interferograms. Donald Grinner, Jones' associate at the time, stated the discrepant test results were never disclosed to him. He added he felt comfortable with the primary mirror effort knowing that, according to procedures, the spacings of the RNC would be carefully measured and remeasured (Exhibit 47).

Interview of current and former PE employees responsible for fabricating the mirror disclosed that Ronald R. Rigby was the PE Manager of OTA Optics for the HST. His subordinate, Lucian A. Montagnino, then Manager of Manufacturing Optical Analysis, Space Telescope Optics Fabrication Projects Office, was the optical engineer supervising the effort to grind, polish, test, analyze test data, and coat the mirror. A small number of PE engineers, including Robert Arnold, Albert Slomba, and Joseph Magner, assisted Rigby and Montagnino in analyzing the test data.

Interviews of Rigby, Montagnino, Arnold, Slomba, and Magner revealed they all recalled the anomalous interferometric pattern from the vertex radius tests during Phase II, near mirror completion (Exhibits 14, 15, 16, 17, 18, 27, 28, 31, and 32). All

stated they had such high confidence in the RNC that they questioned what could be wrong with the refractive null corrector to produce such results. Because of the discrepant test data, Montagnino initiated and directed some activities to understand the refractive null design and potential for vulnerability. Montagnino added, however, this cross-check needed to be performed regardless of the anomaly. According to Montagnino, the "answers were not forthcoming" and all of the information he reviewed was "non-conclusive" and "non-satisfactory." Montagnino stated that at the completion of the primary mirror, he felt "pretty sure" the mirror met specifications and described his comfort level with the RNC and primary mirror at 90% (Exhibit 28). When interviewed Rigby denied any knowledge of investigative activities initiated because of the anomaly (Exhibits 14 and 15).

Montagnino stated the "only one real answer" to resolving the discrepancy was to check the RNC. He requested that his staff recertify the RNC but those efforts were prematurely terminated when the project was abruptly closed down. Rigby agreed that on at least a monthly basis, Montagnino reiterated to him the need to recertify the RNC and pursue the anomaly. According to Montagnino, he and Rigby both were uncomfortable that the project shut down so quickly since their opportunity to close out all issues was compromised. He recalled a meeting in March, 1982, where Rigby's superiors, Robert Jones and Kent Meserve, Deputy Program Manager and Program Manager, directed the two to close down the project without completing close out items, including the RNC recertification. Although Rigby stated he discussed the discrepant vertex radius results with Jones and Meserve, Montagnino stated he recalled the anomaly would have been described only as a need to recertify the RNC. Montagnino stated during the interview that any prudent man would check his parachute and he left that meeting thinking "it's your parachute." (Exhibit 28)

Jones, Meserve, and their superior, John Rehnberg, former Vice President of PE, all stated they had no knowledge of the discrepant vertex radius test results (Exhibits 33, 34, and 54). Jones stated he would have avalanched Montagnino with money to resolve the issue had he known of the anomalous interferograms. Jones, an engineer who also served on the PE Technical Advisory Group (TAG) which provided technical guidance on the HST project, also stated in that capacity he learned of no discrepant test data regarding the primary mirror. Other TAG members were interviewed and stated they were never informed of the technical concerns of the PE managers responsible for fabricating the primary mirror. The TAG members added they were never shown the discrepant vertex radius test results until 1990 when the error became widely known. (Exhibits 34, 36, 38, and 55)

This investigation also disclosed that in May, 1981, the primary mirror project was audited by the PE TAG (Exhibit 11). The group suggested a sanity check in order to preclude any gross errors, such as an "incorrect null corrector." This recommendation was

never implemented. Richard Babish, one of the technical advisors, was interviewed and stated he had no knowledge of the discrepant vertex radius test results, however, in the "real world" he was not sure he would have recommended investigating the anomalous results (Exhibit 38). Dr. Roderick Scott, another technical advisor, stated that if the discrepant results had been communicated to him he would have "raised holy hell." Scott continued there is no excuse for not reporting the discrepant results to the PE advisory board and he found that "hard to forgive." Scott believed there is no justification for not rechecking the RNC. Scott recalled how he had warned Rigby, Montagnino, and Slomba, during the fabrication process, of historical problems with null correctors, which resulted in gross errors. (Exhibit 36)

Interview of Robert Arnold disclosed that although he was Montagnino's "right hand man," he also never saw the discrepant interferograms from the vertex radius test, as Slomba was brought in to analyze the test results. Arnold stated, however, that he looked through the viewing scope while the test was being performed and noted the anomalous interferometric pattern. Arnold stated that the anomaly "bugged him for years" and, remembering his misgivings regarding the data nine years later, the day the HST was launched he commented to two co-workers in the HDOS cafeteria that he feared the primary mirror contained a latent defect. Arnold also stated although he had no knowledge of the addition of spacers to the RNC at the time, he had every confidence this kind of issue would have been on their "worry list." (Exhibits 16, 17, and 18)

Interview of Joseph Magner revealed he recalled the anomaly and was of the opinion they needed to find out the reason for it. He recalled telling Montagnino when discussing the discrepancy that if something goes wrong in the future "it could be bad." Magner stated Montagnino then initiated activities such as checking the refractive null plates, spacings, and type of glass used. Montagnino later reported to Magner that the discrepancy was the result of tolerances, or "metaphysical" problems when using the refractive null, such as sensitivity to temperature. Magner added Montagnino's explanation appeared reasonable at the time. (Exhibits 31 and 32)

Albert Slomba was interviewed and stated he assisted in conducting the vertex radius test and analyzing the results. Although some stated Slomba was the most concerned about the discrepancy, Slomba claims the spherical aberration was not surprising to him at all since the refractive null was very difficult to use. He stated he was satisfied with the explanation he received from Montagnino that the refractive null was an uncertified device and therefore less reliable than the RNC, which had been built by Montagnino's team. (Exhibit 27)

In fact, this investigation revealed evidence of PE Quality Assurance certification of spacings of the refractive null

corrector used to test the primary mirror (Exhibit 60). Several of those interviewed have stated the refractive null corrector should have been reliable as built and should have produced interferograms with straight line fringes (Exhibits 30 and 31). The Hubble Board of Investigation also concluded that the refractive null corrector was "easily accurate enough to detect the spherical aberration that existed, and its reliability should not have been discounted." (Exhibit 1, page 9-2) Additionally, PE was administering a subcontract, under NASA direction, with Eastman-Kodak (EK) to fabricate a back-up primary mirror. According to testimony, as a part of this effort PE actually required EK to compare test results from the EK RNC with those from the EK refractive null corrector (Exhibit 20).

Throughout 1981 and 1982, monthly and quarterly progress reports and briefings presented to NASA by PE executives, including Rigby and Montagnino, failed to communicate any potential problem relative to the primary mirror (Exhibit 61). None of the PE employees interviewed recalled discussing the discrepant vertex radius results with NASA employees, but according to Rigby and Montagnino, there was no effort to cover-up the discrepancy.

Interview of Michael Kasseris, a PE engineering aide on this project, stated once the refractive null corrector test (vertex radius) was performed the results were "kept under wraps" (Exhibit 35). He stated that earlier Montagnino had initiated a policy that the group was to "keep quiet" regarding their work because information generally could be misinterpreted by those outside the group. Kasseris stated he interpreted the policy to include non-disclosure of information to NASA representatives. Daniel R. P. Eastman, former Supervisor of the Metrology Laboratory at the PE Wilton, CT facility, managed several employees who were assigned to work on the primary mirror effort. Eastman was interviewed and stated that a former subordinate, Jeff Rogers, told him Montagnino had instructed Rogers to not discuss his work outside Montagnino's area and not to disclose any of the interferograms outside the group (Exhibit 56). Additionally, although some stated that several individuals in Eastman's area conducted investigative activities into the refractive null corrector at the direction of Montagnino, Eastman stated he had no knowledge of such activities. Most others interviewed disagreed that a non-disclosure policy existed within the primary mirror fabrication team. Rigby acknowledged such a policy existed but added it had been initiated by William Keathley, MSFC, who was concerned about speculation of project performance in the press (Exhibit 15).

Interview of John Humphreys, NASA Project Officer for the HST OTA from 1973 to 1986, revealed he travelled to PE for one to three day visits every four to six weeks during the period of mirror fabrication. Humphreys related he had no knowledge of discrepant vertex radius test results (Exhibits 23, 24, and 25). He provided professional diaries for the period April, 1980 to April, 1983 and stated he was assured by Rigby that the RNC would be, and later

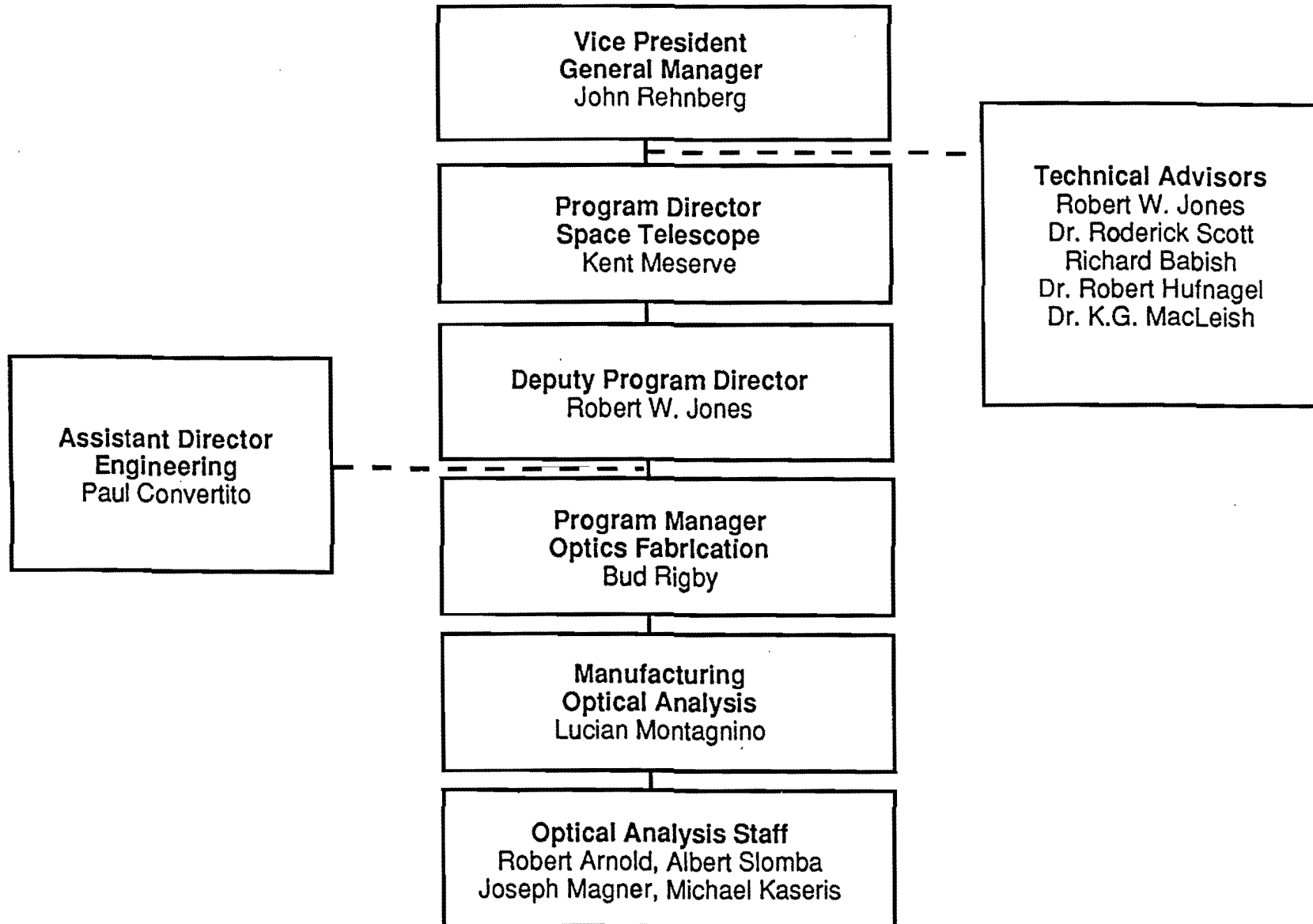
had been, recertified. His diaries corroborate that testimony (Exhibit 59).

Review of Project Reports submitted to NASA by PE disclosed PR-237A, Test Configuration Plan for Phase II Manufacture of ST Primary Mirror, signed by Rigby and Montagnino and dated June, 1980 (Exhibit 57). The report states on page 35 that the null corrector assembly spacing and alignment "will be re-certified prior to the final figuring of the Mirror" and outlines the procedure for this activity. A later version of this report, PR-237B, dated June, 1983, again signed by Rigby and Montagnino, states on page 59 that "the assembly spacing and alignment were re-certified prior to the final figuring of the Mirror" (Exhibit 58). The report outlined the procedure used. Interview of PE Quality Assurance Director, David Burch, revealed that the listed procedure included remeasurement of the spacing which is now known to be incorrect (Exhibit 20).

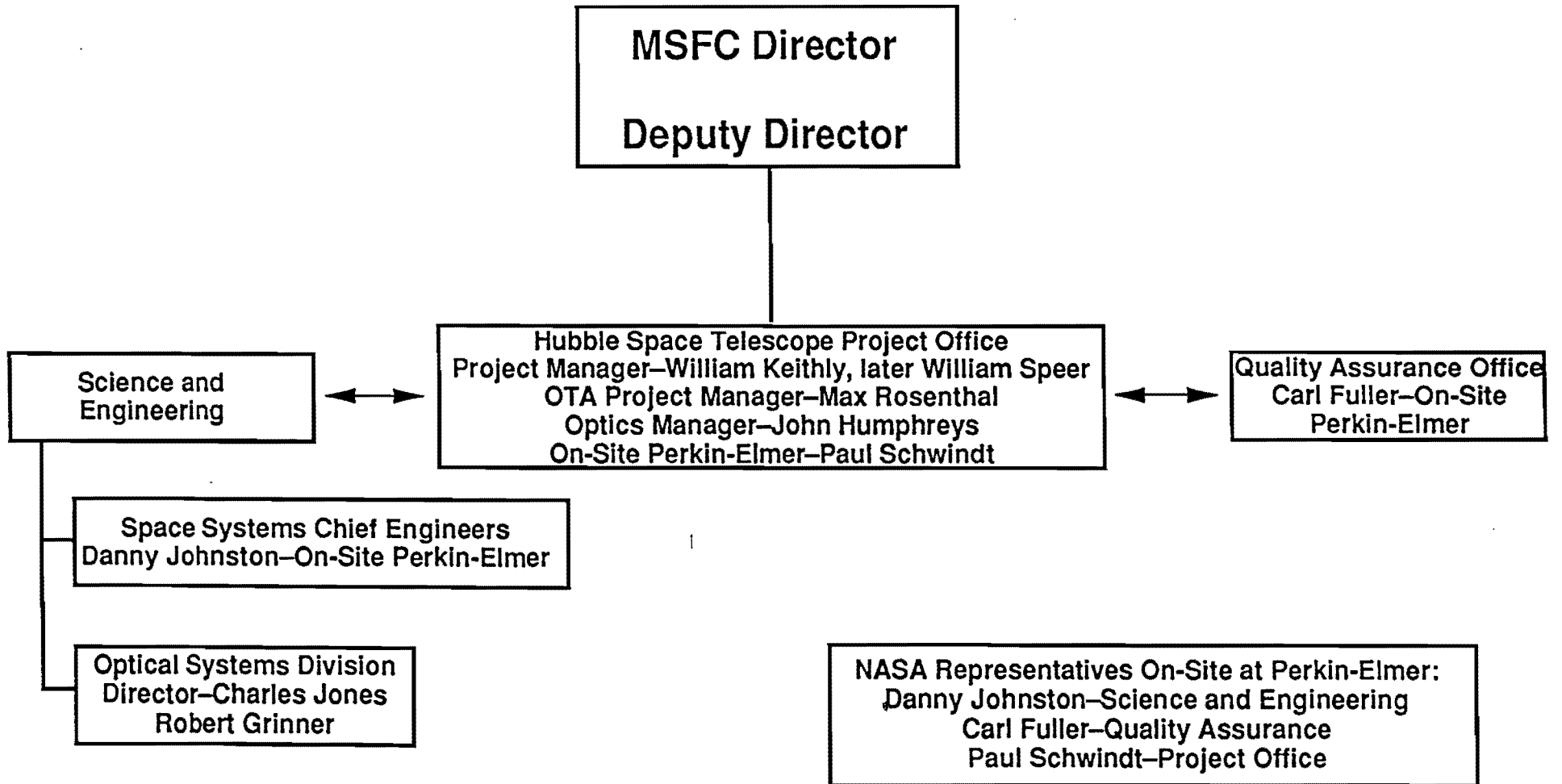
SECTION IV

ORGANIZATIONAL CHARTS
PERKIN-ELMER CORPORATION
NASA

Perkin-Elmer Corporation Space Science Division*



**National Aeronautics and Space Administration
Marshall Space Flight Center (MSFC)
Huntsville, Alabama**



SECTION V

CHRONOLOGY OF EVENTS

Chronology of Events—HST, OTA

	70's	Reflective null corrector built for R&D mirror
	10/77	Contract award to Perkin-Elmer (PE) for HST, OTA
	1/80	Refractive null corrector certified
• Phase I refractive null test shows aberration.	5/80	
• Spacers added to reflective null field lens.	5/80	
• Dr. Scott informs Montagnino that null correctors are prone to gross error (1980, 1981 approximately).	6/80	Primary mirror delivered to PE—Danbury from Wilton
	6/80	PR-237A generated by PE states assembly spacing will be recertified prior to final figuring of mirror
• Repeated tests with inverse null corrector throughout polishing indicate aberration.	8/80	Polishing of mirror began
• Humphreys (NASA) told PE planned to do major "cal." of null next week.	8/80	
• Humphreys told COR1/null being verified. Null spacing to follow. Later told all PM/STE certification data taken except COR1 to flat.	2/81	
• Phase II Vertex Radius test (refractive) indicates aberration	4/81	Polishing concluded, precoated mirror finished
• PE Technical Audit recommends sanity check to detect gross error such as an incorrect null corrector.	5/81	Monthly performance report to NASA.
• Montagnino initiates investigative activities relative to the discrepant vertex radius test. He is never satisfied with the results.	6/81	Project Report—Quarterly Review by NASA.
	7/81	Presentation to NASA optical experts.
	9/81	Project Report—Quarterly Review by NASA.
	12/81	Primary Mirror coated.
• On a monthly basis from May 1981 to March 1982, Montagnino reminds Rigby of importance of recertifying reflective null corrector.	3/82	R.W. Jones closes down Primary Mirror project.
	6/83	PR-237B states assembly spacing was recertified.
	11/83	PE submits Certificate of Configuration Compliance for end item—Primary Mirror (optic).
	3/84	PE submits Certificate for Primary Mirror assembly.
	10/84	PE submits Certificate for OTA module.
• Bob Arnold comments to coworkers that primary mirror possibly contains latent defect.	4/90	HST was launched.
	6/90	Focusing flaw disclosed—identified with the Primary Mirror
	11/90	Allen Board concludes a spacing error in the reflective null corrector caused the focusing flaw.

SECTION VI
FALSE CLAIMS ACT

FALSE CLAIMS ACT 31 USC 3729

a) Liability for certain acts

Any person who -

1) knowingly presents, or causes to be presented, to an officer or employee of the United States Government or a member of the Armed Forces of the United States a false or fraudulent claim for payment or approval;

2) knowingly makes, uses, or causes to be made or used, a false record or statement to get a false or fraudulent claim paid or approved by the Government;

3) conspires to defraud the Government by getting a false or fraudulent claim allowed or paid; ...

is liable to the United States Government for a civil penalty of not less than \$5,000 and not more than \$10,000, plus three times the amount of damages which the Government sustains because of the act of that person...

b) Knowing and knowingly defined

For purposes of this section, the terms "knowing" and "knowingly" mean that a person, with respect to information -

1) has actual knowledge of the information;

2) acts in deliberate ignorance of the truth or falsity of the information; or

3) acts in reckless disregard of the truth or falsity of the information,

and no proof of specific intent to defraud is required.

SECTION VII

FACTS SUPPORTING PURSUIT OF CIVIL REMEDY

- PE managers were aware that the Phase I (rough stage) refractive null corrector interferogram showed spherical aberration.
- The addition of spacers on the field lens assembly of the RNC should have been an indication of a problem.
- The inverse null corrector tests, taken throughout the fabrication of the primary mirror, also disclosed a potential problem with the RNC.
- Experts state that null correctors are susceptible to gross errors - showing a need for a sanity check and recertification.
- Dr. Scott, former PE technical advisor, told Montagnino, Rigby, and Slomba, during fabrication of the mirror, that null correctors were susceptible to gross error.
- The Phase II Vertex Radius, refractive null corrector tests, also showed spherical aberration.
- Although Rigby, Montagnino, and others on their staff, had technical concerns which were never resolved regarding the vertex radius results, those test results and concerns were never disclosed to NASA or PE technical advisors.
- The PE Technical Audit of the primary mirror project recommended that a sanity check be performed in case of a gross error such as an "incorrect null corrector." The recommendation was never implemented.
- Montagnino initiated off line tests and checks to determine why the vertex radius tests showed spherical aberration. He was never satisfied with the results of his review.
- Montagnino repeatedly, at least monthly, reiterated to Rigby the need to recertify the RNC and to pursue the anomalous test results.
- Montagnino initiated a non-disclosure policy which prohibited his staff from discussing their work outside the group.
- At completion of the mirror, Montagnino, the primary PE manager responsible for building the mirror, felt only 90% comfortable that the mirror met contract specifications.
- Reports and briefings to NASA failed to report any of these concerns.
- When fabricating the back-up primary mirror, PE generated procedures which required Eastman-Kodak (EK) to compare test results from the EK RNC with the EK refractive null corrector.
- PR-237 states the RNC would be, and later that it had been, recertified prior to final figuring of the mirror, when in fact the RNC was never recertified.

- Humphreys, NASA Project Officer, stated, and his diaries support the fact, that he was reassured the RNC would be, and later had been, recertified.

- Arnold, Montagnino's "right hand man" never saw the discrepant interferograms, but rather saw the anomalous interferometric pattern through the viewing scope during testing.

- Arnold stated the discrepant test results "bugged him for years" and, remembering his misgivings nine years later, at the time of launch he commented to two co-workers that the primary mirror may contain a latent defect.

SECTION VIII

POSSIBLE DEFENSES

1. NASA chief engineer on-site at PE, Daniel Johnston, was aware of the addition of spacers to the RNC, Phase I refractive null corrector test results, and inverse null corrector test results.
2. The Hubble Board of Investigation states NASA, as well as PE, failed to follow the fabrication process with reasonable diligence. Personal comments by the Board to the press speak of "shared blame."
3. The environment which included cost, schedule, and competition pressures on PE during the period of mirror fabrication.
4. Johnston was present for part of the vertex radius test set-up. He stated while PE employees were attempting to achieve white light fringes (necessary before switching to helium neon light and photographing) he looked through the viewing scope and saw the center portion of the interferometric pattern. Johnston denies seeing spherical aberration, or curved fringes, and he left the area prior to the test being conducted. Montagnino claims Johnston would have seen the anomaly under the white light fringe condition.
5. An Inspection and Correction of Defects clause is incorporated by reference into the HST contract with HDOS. The clause states that the "Government may require the Contractor to remedy by correction or replacement ... any failure by the Contractor to comply with the requirements of this contract ... no additional fee shall be payable with respect thereto." The clause continues, however, that "the Government may at any time require the Contractor to remedy by correction or replacement, without cost to the Government, any failure by the Contractor to comply with the requirements of this contract if such failure is due to fraud, lack of good faith, or willful misconduct on the part of any one of the Contractor's directors or officers, or on the part of any of its managers, superintendents, or other equivalent representatives ..." (Exhibit 62)

SECTION IX

DISCUSSION OF DAMAGES

Dr. Lennard A. Fisk, NASA Associate Administrator, Office of Space Science and Applications (Code S), has stated that the estimated cost of correcting the defective mirror is \$50 to \$60 million. He stated this estimate excludes the cost of the necessary shuttle mission during the summer of 1993, since that mission was already scheduled for HST maintenance. Dr. Fisk and his staff are preparing an analysis, for this investigation, of all costs resulting from the mirror defect.

SECTION X
EXHIBIT LIST

EXHIBIT LIST

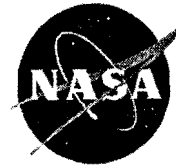
1. The Hubble Space Telescope Optical Systems Failure Report, dated November, 1990
2. Hubble Space Telescope SRM & QA Observations and Lessons Learned, dated October 1990 (without appendixes)
3. Interferogram from Reflective Null Corrector Test
4. Interferogram from Vertex Radius Test
5. Diagrams of Reflective Null Corrector, Refractive Null Corrector, and Inverse Null Corrector
6. Dunn and Bradstreet Reports on Hughes Aircraft Company, Inc. and Perkin-Elmer Corporation
7. Memorandum from Assistant Inspector General for Investigations to OIG Center Director, GSFC, dated August 20, 1990
8. Review of Contract Documentation by Daniel J. Samoviski
9. Request for NASA OIG Subpoena
10. Report of Interview of Dr. Charles J. Pellerin on August 23, 1990
11. Report of Interview of Robert E. Parks on August 27, 1990
12. Report of Interview of Jimmy R. Lee, Sr. on August 28, 1990
13. Report of Interview of Charles F. Robbert, Jr. on August 28, 1990
14. Report of Interview of Ronald R. Rigby on August 29, 1990
15. Report of Interview of Ronald R. Rigby on November 14, 1990
16. Report of Interview of Robert A. Arnold on August 29, 1990
17. Report of Interview of Robert A. Arnold on September 25, 1990
18. Report of Interview of Robert A. Arnold on November 14, 1990
19. Report of Interview of David L. Burch on August 30, 1990
20. Report of Interview of David L. Burch on November 16, 1990
21. Report of Interview of Peter L. Vallandigham on August 29,

1990

22. Report of Interview of William C. Boyce on August 30, 1990
23. Report of Interview of John T. Humphreys on August 30, 1990
24. Report of Interview of John T. Humphreys on October 19, 1990
25. Report of Interview of John T. Humphreys on November 26, 1990
26. Report of Interview of William S. Raiford on August 31, 1990
27. Report of Interview of Albert F. Slomba on September 19, 1990
28. Report of Interview of Lucian A. Montagnino on September 19, 1990
29. Report of Contact by Lucian A. Montagnino on October 1, 1990
30. Report of Interview of Abe Offner on September 25, 1990
31. Report of Interview of Joseph A. Magner on September 25, 1990
32. Report of Interview of Joseph A. Magner on September 27, 1990
33. Report of Interview of John D. Rehnberg on September 24, 1990
34. Report of Interview of Robert W. Jones on September 25, 1990
35. Report of Interview of Michael J. Kasseris on September 26, 1990
36. Report of Interview of Dr. Roderic M. Scott on September 26, 1990
37. Report of Interview of Robert D. Harned on September 27, 1990
38. Report of Interview of Richard C. Babish on September 27, 1990
39. Report of Interview of Daniel D. Johnston on September 28, 1990
40. Report of Contact with Daniel D. Johnston on October 18, 1990
41. Report of Interview of Daniel D. Johnston on November 26, 1990
42. Report of Interview of Charles O. Jones on October 17, 1990
43. Report of Interview of F. S. Wojtalik on October 17, 1990
44. Report of Contact of Libby Maddox, Contract Specialist, on October 18, 1990
45. Report of Contact of Libby Maddox, Contract Specialist,

on December 21, 1990

46. Report of Interview of Max E. Rosenthal on October 18, 1990 with attached Certificates of Configuration Compliance
47. Report of Interview of Donald B. Grinner on October 30, 1990
48. Report of Interview of George D. Cheney on November 13, 1990
49. Report of Interview of Daniel J. McCarthy on November 13, 1990
50. Report of Interview of Richard Kertez on November 15, 1990
51. Report of Interview of Terrence A. Facey on November 15, 1990
52. Report of Interview of Paul J. Convertito on November 16, 1990
53. Report of Interview of James H. Livingstone on November 16, 1990
54. Report of Contact of Kent Meserve on November 26, 1990
55. Report of Interview of Robert E. Hufnagel on November 29, 1990
56. Report of Interview of Daniel R. P. Eastman on November 29, 1990
57. PR-237A, Optical Telescope Assembly Project Report, Test Configuration Plan for Phase II Manufacture of ST Primary Mirror, dated June, 1980
58. PR-237B, Optical Telescope Assembly Project Report, Test Configuration Plan for Phase II Manufacture of ST Primary Mirror, dated June, 1983
59. Excerpts from the diaries of John Humphreys
60. Documentation relating to certification of the refractive null corrector
61. Various Excerpts from Project Reports Presented to NASA by PE
62. Contract Inspection and Correction Clause



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June 6, 2008

REPORT OF INVESTIGATION

ANOMALIES ON THE GOES-R PROGRAM

Goddard Space Flight Center
Greenbelt, MD 20771

CASE CLOSING: This investigation was initiated based on receipt of a NASA Office of Inspector General (OIG) Hotline complaint from **b7C & D** **7C & D** Goddard Space Flight Center, MD (GSFC), who alleged mismanagement of the Geostationary Operational Environmental Satellite-R (GOES-R) Program Office, specifically the Ground Segment Project (GSP). **7C & D** further alleged **7C** was denied **7C & D** because **7C** voiced **7C** concerns over the alleged mismanagement.

Personnel Issues

7 C & D

GSP Request for Proposals

7C alleged that project mismanagement of a \$1B Request for Proposals (RFP) during the drafting and preparation phases caused the RFP to be unclear in the definition of its requirements and performance measures. According to **7C & D** poor oversight during the preparation and drafting of this RFP caused lax security procedures for handling, posting, and transferring International Traffic in Arms Regulations (ITAR) data. While preparing the drafts of the RFP for final release, **7C & D** explained that GSP management was unaware of the policies for handling and releasing ITAR data to commercial industry. **7C** recounted an incident in which the GSP Deputy Project Manager instructed a support contractor to make otherwise restricted ITAR material available to uncleared parties. This decision was made contrary to directives that had been provided by Procurement Operations Division staff.

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Potential Integrity Issues

7C1D also raised concerns regarding the integrity of the GOES-R program based on the co-mingling of office space for senior government and contractor staff. 7C1D alleged that the GSP Program Manager and Deputy Program Manager share office space with contract support personnel from The Aerospace Corporation and Stinger Ghaffarian Technologies, Inc. (SGT). 7C1D stated that due to the sharing of office space between senior government staff and contractors that sensitive documents, to include staffing charts and procurement documents, could be compromised.

Additionally, 7C1D cited concerns that there was on-site storage of alcoholic beverages by GOES-R employees within government project suites and that GOES-R Program staff promoted the consumption of alcoholic beverages after work functions and during a January 2008 temporary duty trip to New Orleans, LA.

Coordination with the GSFC Office of Human Capital Management (OHCM)

7 C 1 D

GOES-R Program Audit

The NASA and Department of Commerce (DoC) OIGs reviewed the GOES-R Program to determine whether NASA was effectively reviewing program progress and whether processes were in place to adequately identify, mitigate, and report technical risks in accordance with NASA policy (NASA OIG Audit #IG-08-006, dated December 19, 2007).

As reported in the NASA OIG Semi-Annual Report (October 1, 2007 – March 31, 2008), the audit determined that the program was being effectively reviewed and that processes in place were in accordance with NASA policy. The audit also found, however, that NASA's ability to effectively procure for, manage, and execute the GOES-R Flight Project was impeded by management oversight by the DoC, which delayed the release of RFPs and increased risks to program development and the launch schedule.

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NASA management notified the DoC regarding the risks, and DoC OIG's report made recommendations that addressed the NASA OIG concerns about DoC's management oversight of the program.

Based on lack of actionable information from the complainant along with the recently completed NASA and DoC OIG review of the GOES-R Program, there is no further investigative activity warranted at this time. This matter is closed.

Prepared by: **b7c**
DISTR: File

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June 17, 2008

REPORT OF INVESTIGATION

CONCERNS INVOLVING COTS AND ISS CONTRACTS

NASA Headquarters
Washington, DC

CASE CLOSING: The Office of Inspector General received a hotline complaint from an anonymous individual regarding an alleged conversation between NASA Administrator Griffin and John Karas, Vice President, Space Exploration, Lockheed Martin involving not bidding on the pending International Space Station (ISS) services Request for Proposal (RFP). The complainant alleges Administrator Griffin told Lockheed Martin not to bid on the contract and that he is telling Boeing the same thing.

The anonymous complaint originated from an America Online (AOL) email address:

7c#D On April 8, 2008, the RA sent an email to the complainant requesting he/she contact the RA to further discuss and clarify the allegation. The RA did not receive any response from the complainant either via email or telephone.

On May 28, 2008, the Reporting Agent (RA), Long Beach Resident Agency (LBRA) interviewed Karas at the Lockheed Martin facility in Littleton, CO. Karas stated he telephonically spoke with Griffin on a weekly basis and last saw him at a breakfast around the last week of February, 2008 while attending the United Space Alliance (USA) user's conference in Washington, DC. About one hundred industry officials and NASA officials attended the breakfast, which was held at a location near the U.S. Capitol building. Karas, Griffin, and Boeing Vice President/General Manager of Space Exploration, Brewster Shaw shared a table at the breakfast, during which time Karas engaged in a "twenty-second, impromptu, casual at best" conversation regarding the Constellation crew Exploration Vehicle (CEV), going to Capitol Hill. Karas asked Griffin what he thought about the ISS RFP, to which Griffin replied it was politically risky and that Congress, not knowing the difference, could kill the CEV. Karas stated he actually agreed with Griffin in that the overlapping competition would jeopardize the Constellation project. Karas stated he specifically sought out an opinion from Griffin that day, described the breakfast conversation as "mutually agreeable," labeled any allegation Griffin told him not to bid on the RFP "a stretch," and in "no-way" categorized that conversation as wrongdoing or a contract integrity issue. Karas stated he probably told others "even Mike [Griffin] doesn't think we should bid on this thing," but could not remember the names of those

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individuals. Karas reiterated Griffin did not restrict him from bidding on the RFP and, consequently, he would not have told anyone about a conversation in which that was stated.

Continuing on same date, the RA interviewed ██████████ 7C Lockheed Martin, Littleton, CO. 7C stated 7C was unaware of any conversation between NASA Administrator Griffin and Karas discouraging Lockheed Martin from bidding on any NASA projects. 7C indicated Lockheed Martin was operating under an unfunded Space Act Agreement, which allows NASA to provide technical assistance on projects without providing funding. 7C stated there were two other large bidders who had funded space agreements, but NASA advised Lockheed Martin it would have no bearing on the decision process.

7C was familiar with the Commercial Orbital Transportation Services (COTS) ISS resupply services RFP from Johnson Space Center (JSC). 7C believed the RFP for COTS services was a free and open competition, and was in no way influenced by the NASA Administrator. 7C opined it would be difficult for Griffin to influence the selection process even if 7C wanted to because contracts passed through several reviewers before decisions were made.

On May 29, 2008, the RA interviewed ██████████ 7C Lockheed Martin, Littleton, CO. 7C stated 7C was familiar with the JSC RFP, and knew that Karas attended an industry day meeting with NASA in Washington, DC sometime in February or March, 2008. 7C thought Karas met with Administrator Griffin at the industry day event, but did not know if the meeting between Karas and Griffin took place, or the nature of any conversation which may have taken place.

7C stated Lockheed Martin had been evaluating whether or not to bid on the resupply as it may be in conflict with other Lockheed projects. 7C indicated Lockheed Martin would most likely not pursue the resupply project, but only because it was in the best interest of

██████████ 7C

7C had never heard anyone from NASA telling anyone from Lockheed Martin, or any other company not to bid on a project. 7C concluded by stating "I wish someone would tell us what we would win so we could save time and focus on the projects we will get."

Based on the findings gathered to date, this investigation is closed as the interviews of Lockheed Martin employees indicate a fair and unbiased RFP process.

Prepared by: ██████████ 7C
DISTR: ██████████ 7C

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June 18, 2008

Review of GAO's Audit on NASA Travel, Mission Management Aircrafts

CASE CLOSING: On October 3, 2006, the Reporting Agent (RA) and 7C 7C NASA Office of Audits, visited the U.S. Government Accountability Office (GAO), Washington D.C., to proactively review work papers related to GAO's August 2005 audit titled "NASA Travel, Passenger Aircraft Services Annually Cost Taxpayers Millions More Than Commercial Airlines." The RA and 7C specifically reviewed documents to identify potential fraud indicators associated with travel relevant to NASA's Mission Management Aircraft (MMA). The RA and 7C also interviewed various individuals at GAO who were associated with the NASA Travel audit. Based on this review, the RA was able to corroborate GAO's initial findings and found no indications of fraud relevant to travel on MMA.

However, during the course of GAO's audit, they related that several of Sean O'Keefe's (O'Keefe), former NASA Administrator, trips on MMA appeared to be questionable or improper. On December 5, 2006, the RA, 7C and the Assistant Inspector General for Investigations (AIGI) Kevin Winters, returned to GAO to obtain additional information regarding O'Keefe's travel on MMA. GAO related that they had specifically identified seven questionable trips, six in which they never fully investigated. By January 18, 2007, the RA as well identified five additional questionable or possibly improper flights in which O'Keefe was a passenger. On March 14, 2007, NASA OIG reduced the GAO/NASA list from twelve flights and selected three of the most questionable flights in which the NASA OIG deemed it necessary to further investigate. They were as follows: (1) *Washington D.C. to New York, NY, March 14, 2003*; (2) *Washington D.C. to New York, NY, February 7, 2005*; & (3) *Washington D.C. to Syracuse, NY, April 23, 2004*.

During the course of the administrative investigation into O'Keefe's travel on MMA, the RA and 7C reviewed multiple documents. The RA and 7C did find that many of O'Keefe's trips were appropriate and allowable under MMA policy. However, with respect to the three flights in question, the government purposes for use of MMA appeared to be tenuous, and it was necessary to further investigate whether or not these trips were in compliance with MMA policy. The RA, 7C and other NASA OIG personnel also interviewed several NASA employees associated with the MMA process to include the MMA Flight Requester, MMA Trip Coordinator, MMA Approving Officials, former Associate Deputy Administrator James Jennings (Jennings), former General Counsel Paul Pastorek (Pastorek), and O'Keefe.

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As pertaining to O'Keefe's flight from *Washington D.C. to New York, NY, March 14, 2003*, the NASA OIG specifically investigated whether or not the trip was for a legitimate government purpose. The NASA OIG also investigated why the flight departed without being cost justified.

According to MMA request documents, O'Keefe traveled on MMA only with his wife, Laura O'Keefe, to accept an award from the Irish American Magazine as one of the top hundred Irish Americans in the country. O'Keefe's executive itinerary originally showed that former NASA employee, Glen Mahone (Mahone), would also accompany O'Keefe and his wife, as a Public Affairs Representative. However, email records obtained in the investigation showed that one day prior to departure, O'Keefe was made aware by his assistant, **7C** that Mahone would not be attending the ceremony and would not be flying on MMA. As a consequence of Mahone dropping off MMA, the flight only contained two passengers, and immediately lost its cost justification status by \$222.70.

Although the flight departed on March 14, 2003, with only Laura O'Keefe and Sean O'Keefe as passengers, MMA policies and procedures implemented at the time did not allow for departure of such flights that were not cost justified. Furthermore, MMA request documents showed that this flight was never reviewed or approved by Pastorek or Jennings, until eleven days after the flight departed. On March 25, 2003, Pastorek subsequently checked the box "does not comply" on the MMA approval form and wrote a remark indicating that the flight had already left before he could speak to the Administrator. Jennings subsequently signed off on the flight.

On May 8, 2007, the RA and **7C** interviewed Jennings regarding his knowledge of O'Keefe's travel on MMA. Jennings related that he did not know why the flight departed without being cost justified. He did not review the documents any time prior to the flight departing and acknowledged that he approved the flight only after Pastorek wrote his remarks and checked the box "does not comply." Jennings also acknowledged the flight was not reviewed and approved in compliance with MMA policy.

On November 14, 2007, the RA and **7C** interviewed Pastorek regarding his knowledge of O'Keefe's travel on MMA. Pastorek related that he did not know the flight was not cost justified until after it departed. He was unsure as to why he was not informed by his staff about the cost justification problem. He believed there was a process failure by either O'Keefe's assistant or the trip coordinator as to why nobody was properly informed about the cost justification problem. Pastorek related that he had no knowledge that Mahone dropped off the flight one day prior, and no knowledge of the email O'Keefe received from **7C**. Pastorek told the NASA OIG that if he had known the flight was not cost justified before departure, he would have told O'Keefe to fly commercially. Pastorek acknowledged the flight could be perceived as inappropriate because of the cost justification problem.

On December 13, 2007, the RA and **7C** interviewed O'Keefe regarding his travel on MMA. O'Keefe related that the trip to New York City to receive the top one hundred Irish American award was for a legitimate NASA purpose. O'Keefe related that he spoke about NASA and the recent Columbia accident at the ceremony. He related that not only was there

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high visibility of NASA during the ceremony, but the Irish American Magazine held a fund raising event for the children of the deceased Columbia astronauts.

With respect to the cost justification status of the flight, O'Keefe related that he never knew the flight departed without being cost justified. He did not know why it took 11 days for Pastorek or Jennings to review the MMA documents. O'Keefe related that he should have been informed by his staff or Pastorek's staff about the cost justification problem a day before the aircraft departed. If he had known, O'Keefe said that he would have taken a commercial flight. O'Keefe related he was never asked by NASA to reimburse the government in the amount of the \$222.70 for the cost justification difference. If he was asked at the time, O'Keefe said that he would have paid the difference to avoid any appearances of impropriety.

As pertaining to O'Keefe's flight from *Washington D.C. to New York, NY, February 7, 2005*, the NASA OIG specifically investigated whether or not O'Keefe used the trip as a way to obtain post government employment with Fox News.

MMA request documents showed that O'Keefe traveled on MMA to meet with the New York Times Editorial Board. His executive itinerary also showed that he met with Fox News to discuss his possible role as Fox News Contributor for Return to Flight.

According to interviews with Pastorek and Jennings, it was common for O'Keefe to meet with editorial boards and news stations to talk about NASA. Both opined that the trip was for a legitimate government purpose and neither had knowledge of O'Keefe meeting with Fox News to secure post government employment.

During the interview with O'Keefe, he also related that the purpose of the trip was to discuss Return to Flight issues. He related the trip was for NASA business only, and not for personal business. He related that he never discussed any post government employment opportunities with Fox News and was never paid by Fox News to be a Return to Flight consultant. O'Keefe related that the nomenclature used in the executive itinerary to describe his meeting with Fox News was poorly worded.

As pertaining to O'Keefe's flight from *Washington D.C. to Syracuse, NY, April 23, 2004*, the NASA OIG specifically investigated whether O'Keefe's trip was for a legitimate government purpose, and whether O'Keefe used this trip as a way of obtaining post government employment with Syracuse University.

MMA request documents showed that O'Keefe traveled to Syracuse, NY, to attend an explorer school event, to speak at the National Security Management Course (NSMC), and to participate in a NSMC golf tournament. According to MMA request documents, the flight departed on April 23, 2004, from Washington D.C., with four passengers to include O'Keefe. The flight returned to Washington D.C. later that day with the same three passengers, but not O'Keefe. The aircraft subsequently flew to Syracuse University the next day, April 24, 2004, with no passengers on board, and returned to Washington D.C. later in the day with O'Keefe as the only

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passenger. Although the plane flew to Syracuse without any passengers to only pick up O'Keefe on April 24, 2004, all four legs of the flight were cost justified according to the cost justification calculations.

During the interviews with Pastorek and Jennings, both related they did not know whether or not O'Keefe was looking to obtain employment with Syracuse University. Neither knew about the purpose of the golf tournament and they did not see any problems with O'Keefe returning alone to Washington D.C. on MMA, as long as all four legs of the trip were cost justified.

During O'Keefe's interview, he related that the entire trip had a legitimate NASA purpose. He discussed the important roles that NASA serves in participating in explorer school events. He related that the speech at Syracuse University was given on behalf of the NSMC in which he discussed management issues and how they related to NASA. He also related that his attendance at the golf tournament was a good way to interact with other agency officials.

O'Keefe related that he did not have a role in deciding that he would fly home alone on MMA. He recalled having to leave the golf tournament early on April 24, 2004, in order to attend another engagement. He related that a commercial flight probably was not an option because he was in a rush to return to Washington D.C. He did not see an impropriety with the plane returning for him without passengers and then flying back to Washington D.C. alone. O'Keefe acknowledged that others could perceive this as a misuse of MMA, but re-emphasized that the trip was for a legitimate government purpose and all four legs of the flight were cost justified. O'Keefe also related that he never discussed or negotiated post government employment opportunities with Syracuse University.

On May 29, 2008, AIGI Winters, sent a management referred to the Chief Financial Officer, entitled "Results of Mission Management Aircraft Investigation." The referral letter summarized the above information, but also called into question, O'Keefe's trip to Syracuse in April of 2004, purporting that O'Keefe deadheaded the flight as a lone passenger, and that each round trip of the flight should have been treated separately in the cost justification formula. The letter concluded by stating that a legitimate government purpose underpinned the use of MMA, but the Agency failed to follow its MMA processes and procedures. Accordingly, the NASA OIG referred the above two flights, Washington D.C. to New York, NY, March 14, 2003; and Washington D.C. to Syracuse, NY, April 23, 2004, to the Chief Financial Office for appropriate action and possible recoupment consideration under the Federal Claims Collection Act.

On June 16, 2008, the Chief Financial Officer sent a response letter to AIGI Winters entitled "Agency Response to Results of Mission Management Aircraft Investigation." The letter stated that "the Agency reviewed the results and has decided not to take action against or seek to collect any costs from O'Keefe. Based on the OIG's findings, there was no criminal conduct, nor was there an intentional or knowing violation of any laws or Agency policies, on O'Keefe's part. Rather, the issues raised with respect to those trips appear to be the result of failures in the Agency's procedures and processes for the review and approval of Mission Management Aircraft flights at the time. Those procedural deficiencies have since been corrected."

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On June 24, 2008, AIGI Winters sent a letter back to the Chief Financial Officer stating that “based upon our assessment of the overall facts and circumstances of this matter, to include the information cited in your response, we consider this matter closed.”

Based on the Agency’s reply to the administrative referral, and AIGI Winters’ decision to officially close the matter, this case is closed.

Prepared by: b7c
DISTR: b7c

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July 15, 2008

IMPROPER LETTER TO HOUGHTON MIFFLIN COMPANY

Goddard Space Flight Center
Greenbelt, MD

INFORMATION MEMORANDUM/CLOSING: The Office of Inspector General received a complaint alerting the OIG that a letter was written by Dr. James Hansen, Director, NASA Goddard Institute for Space Studies, to the Houghton Mifflin Company to allegedly pressure the company to change its product to suit his view as a government representative. Dr. Hansen used NASA letter head and signed in his government capacity.

On May 20, 2008, the information was referred to Edward Weiler, the Associate Administrator for Science Mission Directorate for review and response.

On July 14, 2008, Weiler responded to the referral. Weiler stated that Dr. Hansen's letter does not support the conclusions of the complainant. He advised that Hansen's letter makes clear that it is his own opinion based on his scientific expertise and that he did not state or imply that the content of the letter represented NASA policy. NASA policy recognizes that a scientific lecture or scientific opinion presented by a NASA scientist represents the individual scientist's personal views and is not considered a position of NASA. In addition, NASA policy does permit the use of NASA information resources for various non-NASA activities.

Weiler stated that the Hansen's letter informed the textbook publisher of errors in the book and offered assistance to correct them. The letter did not indicate that Hansen pressured the publisher to correct errors in the textbook.

Based on the information provided by NASA management no further investigative activity will be conducted. This complaint is closed.

Attachment

1. Weiler Response, dtd July 14, 2008.

Prepared by: 7C
DISTR: 7C

1814
APPR: 7C

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National Aeronautics and
Space Administration



Office of Inspector General
Washington, DC 20546-0001

MAY 20 2008

TO: Associate Administrator for Science Mission Directorate
FROM: Assistant Inspector General for Investigations
SUBJECT: OIG Hotline Complaint
b2

The purpose of this memorandum is to request your comments in connection with the enclosed NASA OIG Hotline Complaint received by this office on April 17, 2008.

The Hotline Complaint refers to a March 28, 2008, letter (enclosed) apparently written by Dr. James E. Hansen, Director, Goddard Institute of Space Studies, to the Houghton Mifflin Company.

The complainant states that Dr. Hansen's letter attempts to "pressure" the publisher to change a textbook's wording pertaining to "Anthropogenic Global Warming." The complainant also poses questions – to include whether the letter's contents reflect NASA's position given the use of NASA letterhead stationary and that it was signed by Dr. Hansen with his title listed under his name.

We are requesting that you review the complaint and the enclosed letter and provide a response within 30 days of the date of this memorandum.

If you have any questions, please contact me at 202-358-2580 or my Deputy, Matt Kochanski at 202-358-2576.

7C

Kevin H. Winters

Enclosures

cc:
General Counsel/Mr. Wholley

National Aeronautics and
Space Administration
Goddard Space Flight Center
Goddard Institute for Space Studies
2880 Broadway
New York, NY 10025



Reply to Attn of:

March 28, 2008

Houghton Mifflin Company
222 Berkeley Street
Boston, MA 02116-3764

To Whom It May Concern:

Through the efforts of a public high school student, I recently became aware of the discussion of global warming and climate change in your textbook *American Government* (by James Q. Wilson and John DiIulio, Jr., Tenth Edition for Advanced High School Students). I am the Director of the NASA Goddard Institute for Space Studies, a member of the National Academy of Sciences, and an adjunct professor in the Department of Earth and Environmental Sciences at Columbia University.¹ For more than three decades, I have studied the effects of greenhouse gas emissions on the earth's climate system. On numerous occasions I have testified before Congress on the science of climate change. When I read the book's discussion of global warming (in chapter 21, on "Environmental Policy"), I was shocked to find a large number of clearly erroneous statements. These statements are aimed at giving students the mistaken impression that the scientific evidence of global warming is doubtful and uncertain. I hope that you will give significant and immediate attention to correcting these erroneous statements.

The textbook's authors repeatedly attempt to cast doubt on the accepted science of global warming. Among other things, the authors state that "scientists do not know how large the greenhouse effect is, whether it will lead to a harmful amount of global warming, or (if it will) what should be done about it" (p. 560); that "profound disagreements" about global warming exist within the scientific community (p. 560); that so-called "activist scientists" say that the earth's climate is warming (p. 560); that "science doesn't know whether we are experiencing a dangerous level of global warming or how bad the greenhouse effect is, if it exists at all" (p. 569); and that global warming is "enmeshed in scientific uncertainty" (p. 573).

Each of these statements is profoundly mistaken in ways that will mislead students about the facts and science of global warming. In recent decades the scientific community has gathered

¹ Please see the attached curriculum vitae for more information about my professional background.

overwhelming evidence that the earth's climate is undergoing a period of significant heating, of which human-induced greenhouse gas emissions are a major cause. The scientific community no longer doubts whether global warming is happening. Scientific academies from across the globe, including the National Academy of Sciences, have stated unambiguously that human generated greenhouse gases, including carbon dioxide, are the primary cause of well-documented global warming.

The most comprehensive scientific assessments of the causes and probable effects of global warming appear in the reports of the Intergovernmental Panel on Climate Change. The IPCC's most recent report is summarized in the attached Summary for Policymakers. The IPCC report concludes that global warming is "unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level." The IPCC report further concludes that there is greater than a 90% probability that "most of the observed increase in average global temperatures since the mid-20th century" has resulted not from natural causes, but from anthropogenic (i.e., human-induced) greenhouse gas concentrations. The report predicts that human-induced global warming will lead to rising sea levels, intensification of tropical cyclones (typhoons and hurricanes), further increases in surface temperatures, and other disruptive changes.

I find it alarming that a widely-used textbook from a respected publisher would contain so many gross errors. I strongly urge that you update the textbook to reflect the broad consensus of the scientific community. Failure to correct the book's errors will leave students gravely misinformed about the facts and science of global warming, one of the most serious problems that we as a society and as a species face.

Thank you for your attention to this matter. Please contact me if I can be of any further assistance.

Sincerely,



James E. Hansen, Ph.D.
Director, NASA Goddard Institute for Space Studies

National Aeronautics and Space Administration
Office of Inspector General
Washington, DC 20546-0001



AUG 6 2008

TO: Associate Administrator for Science Mission Directorate
FROM: Assistant Inspector General for Investigations
SUBJECT: OIG Hotline Complaint
b2

This is in reply to your July 14, 2008, response to our referral of allegations regarding recent letters written by Dr. James Hansen, Director, Goddard Institute for Space Studies, to the Houghton Mifflin Company and to the Governor of Minnesota.

We concur in your conclusion regarding Dr. Hansen's letter to the Governor of Minnesota and consider that matter closed. We disagree, however, with your conclusions pertaining to Dr. Hansen's letter to the Houghton Mifflin Company.

In particular, your reply states that Dr. Hansen's letter to the Houghton Mifflin Company "makes clear" that he was communicating his "own opinion" and not NASA's.

To the contrary, we believe that Dr. Hansen's letter is styled and presented to the Houghton Mifflin Company in a manner that reasonably suggests NASA's and the United States Government's sanction. Instead of using personal stationery (like he did in his letter to the Governor of Minnesota), Dr. Hansen chose to communicate with the Houghton Mifflin Company using official NASA letterhead stationery; he introduced himself in the opening paragraph as the Director of the NASA Goddard Institute of Space Studies; he delivered a scientific message related to his area of expertise as a Government official; and then he signed the letter as "Director, NASA Goddard Institute for Space Studies." Further, nowhere in his letter did Dr. Hansen opt to inform the Houghton Mifflin Company that he was expressing his personal opinion; that NASA doesn't take positions on scientific conclusions; and that, therefore, his letter was not the position of NASA or the United States Government.

Under these circumstances, it is unreasonable to expect the Houghton Mifflin Company to somehow know *without being clearly informed* that NASA has a policy that an "opinion presented by a NASA scientist . . . is not considered a position of NASA" and that they should therefore view the letter as personal opinion expressed as part of the "scientific method" in exchanging information. Without such disclaimers, the letter can only be viewed by the recipient as a conveyance of an official position of NASA that the textbook published by the company includes "a large number of clearly erroneous

statements” and “is profoundly mistaken in ways that will mislead students” with the United States Government’s explanation of what is correct.

Finally, the suggestion that NASA scientists may write private parties using NASA letterhead and without a disclaimer that the views expressed are the opinion of the scientist only and not NASA is inconsistent with the guidance embodied in the Standards of Conduct for Employees of the Executive Branch that employees should not allow their position or title or use of letterhead in a manner that could imply that their agency or the Government endorses the personal views of the employee. *See* 5 C.F.R. § 2635.702.

Given your position that Dr. Hansen’s letter is a personal opinion and not NASA’s, we recommend that you or Dr. Hansen clarify that fact with the Houghton Mifflin Company. We further recommend that Dr. Hansen be counseled as to the proper use of official government stationery, title, and disclaimers. This is particularly important in a case like this, where the evidence reasonably suggests that a United States Government official is, in his official capacity, seeking to influence a publishing company in the exercise of rights protected under the First Amendment. We ask for a response as to any actions taken or contemplated within 30 days of this letter.

If you have any questions, please contact me at 202-358-2580 or my Deputy, Matt Kochanski, at 202-358-2576.

7C

Kevin H. Winters

cc:

Science Mission Directorate/Dr. Gay
Science Mission Directorate/Mr. Luther
SMD/Earth Science Division/Dr. Freilich
SMD/Earth Science Division/Mr. Halpern
SMD/Earth Science Division/Mr. Kaye
General Counsel/Mr. Wholley

National Aeronautics and Space Administration
Office of Inspector General
Washington, DC 20546-0001



August 28, 2008

TO: Director, Office of Procurement, Johnson Space Center
FROM: Assistant Inspector General for Auditing
SUBJECT: Final Memorandum Regarding Potential Overpayment to Contractor
(Report No. IG-08-028; Assignment No. A-08-013-01)

During our audit of NASA's implementation of Defense Contract Audit Agency (DCAA) audit recommendations during the administration of cost-reimbursable procurement actions (Assignment No. A-08-013-00), we identified an issue that warrants timely attention. Specifically, this memorandum is to advise you of a potential overpayment to

b4 We found that DCAA's incurred cost audit reports may have overstated the contractor's cumulative allowable costs and could have resulted in NASA overpaying the contractor by \$180,902. In our August 5, 2008, draft of this memorandum, we recommended that the Johnson Space Center (JSC) Office of Procurement conduct a review to validate our finding and, if validated, initiate recovery of the amount overpaid. (See Enclosure 1 for details on our scope and methodology.)

Management's comments on the draft of this memorandum are responsive (see Enclosure 2), and the recommendation is closed.

Background

b4 under contract **b4** with JSC, provided **b4** services to NASA for various products and hardware ranging from hand tools to reentry vehicles. That contract is complete, a contractor's release was executed, and a final payment was issued. From November 1, 1997 (contract inception) through the end of the contract in fiscal year (FY) 2003, DCAA performed annual incurred cost audits of the **b4** contract, resolved questioned costs with **b4** and reported periodic and cumulative allowable contract costs. NASA relied on DCAA's incurred cost audit reports as a basis for determining and making contractor payments.

Potential Contractor Overpayment

NASA's final contract value determination and payment to **b4** under contract **b4** were based on the cumulative allowable costs reported in DCAA's FY 2003 final incurred cost audit report **b4**. However, cumulative costs identified in that DCAA report included potential reporting errors from previous periods that may have overstated the costs by \$180,902.

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Specifically, as shown in the following table, we identified two potential errors that could have resulted in an overstatement of allowable costs.

DCAA Audit Reports on b4	
<u>DCAA Report</u>	<u>Cumulative Allowable Incurred Costs</u>
FY 2001 Audit Report	\$61,499,609
Carryover in FY 2002 Audit Report	61,614,463
Amount Potentially in Excess of Cumulative Allowable Costs	114,854
FY 2002 Audit Report	73,659,103
Carryover in FY 2003 Audit Report	73,725,151
Amount Potentially in Excess of Cumulative Allowable Costs	66,048
Total Potential Overpayment	\$ 180,902

We discussed this finding with the currently assigned closeout contracting officer, who agreed that there is an appearance of inaccuracy in the cited DCAA reports and advised that review action would be initiated.

Given that NASA made final payment to b4 on September 28, 2006, it appears that the statute of limitations to recover overpayments to b4 has not expired. Title 28, United States Code, Part VI, Chapter 161, Section 2415, "Time for commencing actions brought by the United States," states that

every action for money damages . . . founded on any contract express or implied in law or fact shall be barred unless the complaint is filed within six years after the right of action accrues or within one year after final decisions have been rendered in applicable administrative proceedings required by contract or by law, whichever is later.

Recommendation, Management's Response, and Evaluation of Management's Response

We recommended that the Director, Office of Procurement, validate our finding concerning DCAA reporting errors that may have resulted in an overpayment to b4 and, if validated, send a demand letter to b4 to recover overpayment.

Management's Response. The Director, Office of Procurement stated that the contracting officer contacted DCAA to discuss and review the incurred cost audits from each year of the contract. DCAA provided the contracting officer with

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clarification and additional documentation regarding the cumulative totals for FYs 2001 through 2003. DCAA provided a comprehensive data description and analyses that concluded no overpayment was made. The JSC contracting officer reviewed the additional documentation provided by DCAA and concurred with DCAA. Based on the results of that collaborative review, the Director requested that the recommendation be closed.

Evaluation of Management's Response. Management's actions are responsive to the recommendation. We reviewed the additional information and analyses from DCAA and agree that no overpayment was made. The recommendation is resolved and closed.

We appreciate the courtesies extended the audit staff during the ongoing review. If you have any questions, or need additional information, please contact Mr. Vincent Scott, Procurement Director, Office of Audits, at 202-358-0546.

b6

Evefyn R. Klemstine

2 Enclosures

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Scope and Methodology

We performed this portion of our audit from May through August 2008 in accordance with generally accepted government auditing standards. Fieldwork was performed as part of our ongoing audit, "NASA's Implementation of Defense Contract Audit Agency Audit Recommendations during the Administration of Cost-Reimbursable Procurement Actions" (Assignment No. A-08-013-00).

For the issue reported in this memorandum, we did not use computer-processed data and we did not review or evaluate related internal controls. Our review of DCAA audit reports issued during fiscal years (FYs) 2005–2007 included five for which JSC contracting officers performed contract administration. We reviewed the following DCAA audit reports on the b4 contract with JSC b4

- FY 2003 audit report, Number b 4 April 6, 2005
- FY 2002 audit report, Number b 4 October 1, 2004
- FY 2001 audit report, Number b 4 February 18, 2004

Prior Coverage

During the last 5 years, the Government Accountability Office (GAO) and the NASA Office of Inspector General have issued two reports addressing the quality of DCAA audits. Unrestricted reports can be accessed over the Internet at <http://www.gao.gov> (GAO) and <http://oig.nasa.gov/audits/reports/FY08> (NASA).

Government Accountability Office

"DCAA Audits: Allegations That Certain Audits at Three Locations Did Not Meet Professional Standards Were Substantiated" (GAO-08-857, July 22, 2008)

National Aeronautics and Space Administration

"Audit of NASA's Use of Defense Contract Audit Agency (DCAA) Services in Managing NASA Contracts" (ML-06-011, September 25, 2006)

Management's Comments

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, Texas 77058-3696



August 19, 2008

Reply to AIN of: BD-08-122

TO: NASA Headquarters
Attn: Assistant Inspector General for Auditing

FROM: BA/Director, Office of Procurement

SUBJECT: Response to Draft Memorandum Regarding Potential Overpayment to Contractor (Assignment No. A-08-013-01)

We have reviewed the findings from your draft memorandum dated August 5, 2008, which alleged a possible overpayment made to **b4** based on inaccurate cumulative costs found in the Defense Contract Audit Agency's (DCAA's) audit reports. The recommendation stated:

"We recommend that the Director, Office of Procurement validate our findings concerning DCAA reporting errors that may have resulted in an overpayment to **b4** and, if validated, send a demand letter to ~~them~~ to recover overpayment."

JSC Comments: Personnel from the Office of Procurement met with the OIG audit team on May 14, 2008, to review the DCAA incurred costs audits from each audit year of this contract. Based on discrepancies found during this meeting, the Contracting Officer contacted the cognizant DCAA office to discuss the potential findings. DCAA provided the Contracting Officer with clarification regarding their cumulative totals for Fiscal Years 2001-2003, and stated that based on their review, no overpayment was made. The Contracting Officer also reviewed the documentation and concurs with DCAA's analyses. Therefore, NASA concludes that no overpayment was made. **b4** We are enclosing the documentation which is the basis for this decision.

Based on the results of our review, we request closure of this audit recommendation with the actions taken. If you have any questions, please contact **b6**

b6
Debra L. Johnson

Enclosure

cc:
HQ/D: P. Roberts
HQ/H.S. Robertson
HQ/HK/P. Flynn
JSC/BD/L. Pepper

Enclosure
pages 2-4
omitted.

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Summary of DCAA's Cumulative Allowable Costs for FY98-FY03

b4

Contract Period of Performance: November 1, 1997 thru May 31, 2003

Audit Year	Prior Years Settled Costs	Current Year Audited Costs	Cumulative Total Settled/Claimed	Contract Limitations (cumulative totals)	Total Allowable (cumulative totals)
1997-1998	N/A	\$16,321,472.00	\$16,321,472.00	\$0.00	\$16,321,472.00
1999	\$16,321,472.00	\$11,797,632.00	\$28,119,104.00	\$0.00	\$28,119,104.00
2000	\$28,119,104.00	\$18,867,912.00	\$46,987,016.00	\$0.00	\$46,987,016.00
2001	\$45,087,016.00	\$16,478,641.00	\$61,565,657.00	\$66,048.00 ¹	\$61,499,609.00
2002	\$61,614,463.00 ²	\$12,110,888.00	\$73,725,151.00	\$66,048.00	\$73,659,103.00
2003	\$73,725,151.00	\$6,101,552.00	\$79,826,703.00	\$390,455.00 ³	\$79,436,248.00

Note 1: Contract Limitations are incurred costs that are (i) in excess of contract ceiling rates, (ii) unallowable per contract, (iii) outside of the period of performance, or (iv) in excess of contract ceiling amounts that are not already excluded.

Per DCAA, the costs recorded as contract limitations are accumulated and are not included in the "Prior Years Settled Costs" number.

Note 2: Per e-mail dated 8/11/08 from the DCAA Supervisory Auditor, Sheryl Kramer, the DCAA uses the "Cumulative Total Settled/Claimed" amount to represent "Prior Years Settled Costs." They do not use the "Total Allowable" cost total to represent "Prior Years Settled Costs."

In 2002, the amount carried over as the "Prior Years Settled Costs" (reference audit report ^{b4} ^{b4} includes an overtime premium payment of \$48,806.00 made in 2002 ^{b4} for overtime worked in 2000 and 2001. Since the premium payment was made in 2002 for overtime worked in 2000 and 2001, DCAA added the \$48,806.00 to the "Prior Years Settled Costs" column in the 2002 audit report. The calculation is as follows:

Cum Total Settled/Claimed from 1997-2001 is \$61,565,657.00 + overtime premium \$48,806.00 = \$61,614,463.00

Note 3: Per DCAA, the costs recorded as contract limitations are accumulated.

\$390,455.00 represents the prior years contract limitation total of \$66,048.00 (1997-2002) + \$324,407.00 (2003 limitation).

Total Allowable Costs Incurred for ^{b4} are \$79,436,248.00. Therefore, no overpayment occurred.

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National Aeronautics and Space Administration
Office of Inspector General
Washington, DC 20546-0001



July 20, 2007

The Honorable Barbara A. Mikulski
Chairwoman
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
United States Senate
Washington, D.C. 20510

Subject: NASA's Compliance with Federal Export Controls Laws and Risks Associated
with the Illegal Transfer or Theft of Sensitive Technologies
(Report No. ML-07-010)

Dear Madam Chairwoman:

This letter is in response to Public Law 106-391, "National Aeronautics and Space Administration Authorization Act of 2000." The Law requires that the NASA Office of Inspector General (OIG) conduct an annual audit of NASA policies and procedures related to the export of sensitive technologies and the transfer of scientific and technical information to assess the extent to which NASA is complying with Federal export control laws. In addition, Conference Report 108-401, which accompanied H.R. 2673, the "Consolidated Appropriations Act, 2004," directed that the NASA OIG report annually on the risks associated with the illegal transfer or theft of sensitive technologies. To comply with the Public Law and the Conference Report requirement, the NASA OIG conducted, is conducting, or plans to conduct the audits and reviews reported herein. This letter provides general information about the results but does not provide detailed information about our findings. At your request, we will provide to you copies of each product, many of which are marked Sensitive But Unclassified (SBU), and discuss it with you or your staff.

The NASA OIG works closely with NASA's Chief Information Officer (CIO) and the Office of Security and Program Protection (OSPP) to address counter-intelligence and counter-terrorism issues, the results of which cannot be addressed in a SBU document. In addition, the NASA External Relations Office annually conducts an Agency-wide audit to assess and improve the efficiency of NASA's Export Control Program and verify that required screening and licensing procedures are consistently applied. The NASA External Relations Office is currently conducting an audit of export control activities at each Center for calendar year 2006. The audit is focusing on the adequacy of the review and submission of shipping documentation and whether the data was appropriately filed in the U.S. Census Bureau's Automated Export System. The results of the audit are expected to include a review of recordkeeping and reporting requirements associated with exports. The annual audits are shared with the OIG, as well as with all NASA Export

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Control officials, in a continuing effort to ensure compliance with the export control laws and regulations.

The strength of NASA's information technology (IT) security program is a monumental factor in protecting against the illegal transfer or theft of sensitive technologies. Our work continues to show recurring and significant internal control weaknesses related to IT security, including b 5 + b 2 b 5 + b 2 f b 5 + b 2 activities. In addition, several NASA Centers continue to experience IT security incidents, which the OIG is investigating. As a result, we identified IT security as one of NASA's most serious management and performance challenges. NASA has also recognized IT security as a management challenge and has taken steps to improve its overall IT security posture. For example, NASA reported its IT security program as a material weakness in its FY 2006 Federal Information Security Management Act report to the Office of Management and Budget (OMB) and developed a comprehensive corrective action plan to address its IT security weaknesses. In addition, the Deputy Administrator mandated a comprehensive NASA-wide IT security review that resulted in recommendations that, if implemented, should improve the Agency's IT security posture. Despite NASA's renewed commitment to improving its IT security program, our work continues to show that systemic IT security challenges remain.

OIG Products Issued in Fiscal Years (FYs) 2006–2007

In FY 2006 and FY 2007 to date, we issued 11 audit, review, and investigative products concerning NASA's efforts to protect scientific and technical information from illegal transfer or theft. Findings in those products reported a lack of internal controls over sensitive technologies and noncompliance with established procedures and regulations, which could place scientific and technical information at risk. One of the systemic themes visible during most of our audits, reviews, and investigations is that while Centers or other affected organizations are responsive to dealing with vulnerabilities or intrusions, those responses frequently are not centralized, coordinated, or communicated across the Agency.

Most notably, we issued two products addressing NASA's IT security program. On November 9, 2006, we provided the Administrator our annual view of the most serious management and performance challenges facing the Agency. We identified IT security as one of NASA's most serious challenges based on our continued identification of significant and recurring IT security weaknesses. On November 30, 2006, we provided the Deputy Administrator with a summary of the findings from our IT security audits, reviews, and investigations and explained how they may be useful in connection with the Agency's comprehensive IT security review. In addition, we offered suggestions for improving IT security within the Agency. The increased visibility of IT security as a management challenge warranting the attention of the Administrator and Deputy Administrator should provide the momentum necessary to address the systemic weaknesses identified.

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“NASA’s Policies for Protecting Technology Exported to Foreign Entities” (Report No. IG-06-006; March 14, 2006)

We reviewed NASA’s policies to determine whether they adequately protected export-controlled technology and found no systemic issues. NASA’s policies were consistent with Federal guidance concerning export license exemptions and NASA was appropriately using those exemptions. Although our audit did not reveal any systemic issues, we recommended that the Agency revise its policies to ensure that program and project managers prepare a Technology Transfer Control Plan and that the Agency seeks a legal opinion from its General Counsel as to the applicability to NASA of the International Traffic in Arms Regulations (ITAR) satellite monitoring requirements. We also recommended that the Goddard Space Flight Center improve its internal controls over the maintenance of export control documents. Management concurred with our recommendations and has taken appropriate corrective action.

“NASA’s Implementation of Patch Management Software Is Incomplete” (Report No. IG-06-007; March 17, 2006)

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We performed the audit to determine whether NASA had established formal requirements, guidance, and milestones for implementation of patch management software and whether NASA had fully implemented an effective patch management process. Patch management controls the deployment and maintenance of interim software releases and helps maintain efficiency and overcome security vulnerabilities in a production environment. We found that while NASA had established a formal requirement, issued guidance, and set milestones, two NASA contractors had not fully implemented the patch management software as required. We recommended that the CIO, in coordination with the relevant contracting officers, take appropriate action to ensure that contractors are complying with NASA requirements to implement an effective patch management program. We also recommended that the CIO require the Centers to maintain inventories of computers and use those inventories to ensure up-to-date installation of patch management tools on all applicable computers. NASA management concurred with both recommendations and is taking appropriate corrective action.

“Information Assurance Controls on b5 + b2 Systems Safety and Mission Assurance Systems Need Strengthening” (Report No. IG-06-004; March 21, 2006)

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We conducted the audit to determine whether the Office of Systems Safety and Mission Assurance at b5 + b2 implemented and maintained adequate controls to provide reasonable assurance of security for its IT resources. We found that the Center had implemented fundamental IT security controls on systems to support its networked projects; however, additional controls were needed to strengthen the security of those systems. Weak IT security controls increased the risk of compromise to the Center’s networked systems and data. We made six recommendations to improve the

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security of b5 + b2 networked systems. Management concurred with all of our recommendations and has taken appropriate corrective actions.

“NASA Should Improve Employee Awareness of Requirements for Identifying and Handling Sensitive But Unclassified Information” (Report No. IG-06-010; May 9, 2006)
b2

We determined that NASA’s policies and procedures for handling SBU information are consistent with Federal laws and regulations. However, we found that NASA lacked a comprehensive SBU training program for civil service and contractor personnel on the requirements for protecting SBU information. During our audit work, we found that NASA had not established policies and procedures for defining, recognizing, and protecting meta-data (data that is stored in a document that pertains to its origin and edit history). Because that meta-data can often be highly sensitive, we issued a memorandum to the NASA CIO on December 19, 2005, so that immediate action could be taken to develop policies and procedures to protect such data. We recommended that NASA establish an Agency-wide comprehensive training program that specifies the policies and procedures for identifying and handling SBU information. We also recommended that the NASA CIO develop policies and procedures to define, recognize, and protect meta-data that may be contained in electronic documents. Management concurred with our recommendations and its planned corrective actions were responsive to our recommendations.

“Security of b5 + b2 (Report No. IG-06-008; June 2, 2006)
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We performed this audit to determine whether controls over the b5 + b2 b5 + b2 were adequate to provide reasonable assurance of network security to protect NASA data and systems against possible compromise. We found that system administrators did not (1) periodically review critical firewall audit logs and modems used to protect the computer network, (2) monitor the files and commands with security risks, (3) consistently perform system backups, or (4) meet NASA requirements for storing backup media. System administrators also accessed a key server containing security information without adequate encryption and did not remove unnecessary services from the network. Further, software patches were not timely installed to fix security weaknesses in the network servers, and vulnerabilities found during security scans of the systems were not corrected in a timely manner. Finally, NASA did not have a formal policy for laptops or other electronic devices used by foreign nationals visiting the NASA Center or working onsite. Weaknesses in these areas could lead to the compromise of the computer network. NASA concurred with 9 of the 13 recommendations we made to improve security controls over the network, to include developing, implementing, and enforcing procedures and controls over auditing and monitoring, the use of software and unnecessary services, the installation of patches, and the performance of system backups. Management is taking appropriate corrective actions.

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**“NASA’s Information Technology Capital Planning and Investment Control”
(Report No. IG-06-017; September 14, 2006)**

We performed this audit to assess the adequacy of NASA’s selection, control, and evaluation processes for developing and managing the Agency’s IT investment portfolio. The capital planning and investment control process defines how the Agency will select capital investments, how those investments will be controlled and how their performance will be evaluated. We found that NASA had developed and implemented key selection and control processes needed to manage one of its investment portfolios. However, we found inconsistent implementation of the processes. We also found that improvements were needed to ensure that the Agency’s investments are selected in accordance with NASA policy. Until the Agency fully implements its policy, the Agency could be exposed to escalating project costs, duplicate and ineffective systems, and unmitigated technical risks. We recommended that NASA establish clear requirements mandating compliance with its policy and that the CIO review the submissions to ensure they are in compliance. We also recommended that the CIO ensure that all investments in the portfolio undergo the selection process as specified in its policy. Management concurred with our recommendations and is implementing appropriate corrective actions.

**“NASA’s Compliance with Office of Management and Budget Memorandum M-06-16,
‘Protection of Sensitive Agency Information’” (Report No. ML-06-013;
September 22, 2006)**

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As part of a President’s Council on Integrity and Efficiency (PCIE)/Executive Council on Integrity and Efficiency (ECIE) request from OMB, we conducted a review to determine whether NASA was implementing safeguards to protect sensitive Agency information in accordance with OMB Memorandum M-06-16, “Protection of Sensitive Agency Information,” June 23, 2006. OMB M-06-16 provides specific actions that Federal agencies need to take to protect personally identifiable information that is either accessed remotely or physically transported outside of an agency’s physical perimeter. We found that, overall, NASA had not fully complied with OMB M-06-16 requirements but was taking steps to address Agency deficiencies. The NASA Office of the CIO developed corrective actions and milestones for protecting sensitive information to ensure compliance with OMB M-06-16.

**“Federal Information Security Management Act: Fiscal Year 2006 Report from the
Office of Inspector General” (Report No. IG-06-021; September 28, 2006)**

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This annual report, provides OMB with our independent assessment of NASA’s IT security posture. We recommended that NASA identify its IT security program as a material weakness reportable in accordance with the Federal Managers’ Financial Integrity Act. Our recommendation was based on IT security weaknesses that we identified during FY 2006, many of which were similar to those we identified in previous years. Examples of recurring security weaknesses include patch management, management of network services, backup of systems, and certification of IT systems.

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“NASA’s Most Serious Management and Performance Challenges” (November 9, 2006)

Pursuant to the Reports Consolidation Act of 2000, the Inspector General annually provides the NASA Administrator the OIG’s views of the most serious management and performance challenges the Agency faces. The most recent report cites IT security as one of NASA’s most serious challenges despite the progress that NASA had made in improving its IT security program. OIG audits and assessments continue to identify systemic and significant internal control weaknesses related to IT security, including patch management, monitoring of critical system activities, and certification of IT systems. We believe that overcoming this management and performance challenge is critical to NASA’s ability to continue to build a sound foundation for implementing the President’s 2004 Vision for Space Exploration.

“Centrally Managed Comprehensive Approach Needed to Address NASA IT Security Vulnerabilities and Intrusions” (November 30, 2006)

The OIG coordinates extensively with NASA’s CIO and OSPP to identify counter-intelligence program weaknesses and vulnerabilities and to address investigative findings. We received input from and the concurrence of both the CIO and OSPP on our most recent investigative IT security product, which was a memorandum from the Inspector General to the Deputy Administrator that offered suggestions for improving NASA’s IT security based on the OIG’s investigative and audit work in this area. We also endorsed the centrally managed review of IT security directed by the Deputy Administrator as a critical step in addressing this weakness. However, we suggested that a similarly managed and comprehensive approach to addressing vulnerabilities and intrusions would help ensure that the responses are coordinated, adequately resourced, and sustained.

“Controls over the Detection, Response, and Reporting of Network Security Incidents Needed Improvement at the Four NASA Centers Reviewed” (Report No. IG-07-014; June 19, 2007)

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We performed this audit to determine whether NASA’s controls over the process of detecting, responding to, and reporting computer system or network security incidents were adequate. We found that the controls in place at the four Centers we visited did not provide reasonable assurance that network security incidents were detected, resolved, and reported in a timely fashion. In at least one instance, the lack of required controls resulted in an intrusion not being identified, which subjected NASA to a substantially increased threat of invasive and damaging illegal activities. Notwithstanding this impact, we did not quantify the extent of risk associated with the weaknesses. We made six recommendations to improve controls over detecting, resolving, and reporting network security incidents. NASA management concurred and initiated appropriate corrective actions for four of the six recommendations. We requested additional comments on the unresolved recommendations but considered the described actions to be responsive.

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Office of Audits Current Projects

The OIG Office of Audits is conducting five audit projects relating to the control of scientific and technical information or the protection of sensitive data. Preliminary findings indicate that the security of resources is at risk due to a lack of adequate procedures, processes, and internal controls.

**“NASA’s Implementation of the Privacy Provisions of the Electronic Government Act”
(Assignment No. A-06-005-00; projected issue date of August 2007)**

We initiated the audit to determine whether NASA was in compliance with the privacy provisions of the Electronic Government (E-Gov) Act, which included determining whether NASA conducted Privacy Impact Assessments (PIAs) for electronic information systems and collections, properly posted privacy policies on NASA’s public Web sites, translated privacy policies into a standardized machine-readable format, and properly reported compliance annually to OMB. We found that NASA was in compliance with OMB requirements with regard to PIAs. However, NASA was not in full compliance with OMB guidance with regard to posting NASA’s privacy policy. Preliminary findings indicate that about 20 percent of NASA’s public Web sites do not properly post their privacy policy. We plan to make recommendations to the Agency that are intended to improve its compliance with the privacy provisions of the E-Gov Act.

**“Review of NASA’s Budget Year 2008 Capital Asset Plan and Business Cases”
(Assignment No. S-07-006-00; projected issue date of September 2007)**

We initiated the review based on OMB official’s questions about the accuracy and completeness of the NASA’s capital asset plan and business cases (Exhibit 300s) submissions. Preliminary findings indicate that NASA’s budget year 2008 Exhibit 300s were not always consistent, accurate, or compliant with OMB requirements and provided minimal assurance that IT investments are secure and that Privacy Act data is protected. Our recommendations will focus on improving internal controls over the preparation, review, and submission process for Exhibit 300s.

**“NASA’s Scientific and Technical Information Program” (Assignment No. A-06-026-00;
projected issue date of September 2007)**

We initiated the audit to evaluate and test NASA’s policies and procedures for the review, approval, and release of scientific and technical information. Preliminary findings indicate that certain NASA scientific and technical information was released prior to completion of the Agency’s required approval process. The lack of controls over the Agency’s approval process increases the risk that NASA may release sensitive information, which could result in an export control violation. Our recommendations will focus on improving the management and oversight of the scientific and technical information program.

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“Annual Federal Information Security Management Act Reporting” (Assignment No. A-07-009-00; projected issue date of September 2007).

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In accordance with the Federal Information Security Management Act (FISMA), Title III of the E-Gov Act of 2002, we are conducting our annual review of the Agency’s information security and privacy program and will report the results to OMB at the end of the fiscal year. We will conduct work at all NASA Centers and NASA Headquarters.

“Retention of NASA’s Official Electronic Mail” (Assignment No. A-07-007-00; projected issue date of December 2007)

We are conducting this audit to determine whether NASA is effectively and efficiently managing official electronic mail (e-mail) records in accordance with applicable statutory and regulatory requirements.

Office of Investigations Current Projects

The OIG Office of Investigations is conducting several computer intrusion investigations involving NASA systems where there is the potential that technical data protected by ITAR or Export Administration Regulations (EAR) was unlawfully accessed. In addition, several Centers have experienced IT security incidents that are the subject of investigation. For example, one OIG investigation resulted in a Federal grand jury recently indicting a Romanian computer hacker for allegedly gaining unauthorized access to more than 150 Government computers, including machines located at the **b5 + b2** **b5 + b2**. The hacker was charged with conspiracy and nine counts of intrusion. The systems had to be rebuilt and NASA sustained approximately \$1.36 million in damages because of the intrusions and loss of integrity of scientific data. The prosecution of the hacker is ongoing.

Office of Audits Planned Projects

For the remainder of FY 2007 and FY 2008, the Office of Audits is planning several audits and reviews of NASA’s export control policies, compliance with export control laws and regulations, and the protection of scientific and technical information from illegal transfer. Two audits will focus on the protection of personally identifiable information and the implementation of Homeland Security Presidential Directive 12. We also plan to resume our audit of foreign national access to export-controlled technology, which was temporarily suspended because of workload issues.

As NASA continues its progress toward implementing the President’s 2004 Vision, safeguarding sensitive technologies will become even more critical to the safety of NASA missions and national security. Over the next few years, we will devote considerable attention toward transition issues, which include the disposition of Space Shuttle Program assets and the development of the new technology related to next-

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generation space exploration suits. A key aspect of our work will be to ensure that controls are in place to provide adequate assurance that sensitive technologies of the Space Shuttle Program and next-generation efforts are protected.

If you or your staff would like to meet with us to further discuss any of the issues addressed in this letter, please contact Ms. Evelyn Klemstine, Assistant Inspector General for Auditing, at 202-358-2572.

Sincerely,

b6

Robert W. Cobb
Inspector General

cc:

NASA Administrator
Deputy Assistant Administrator, Office of Security and Program Protection
Chief Information Officer
Chief Technology Officer, IT and Communications Division
Director, Export Control and Interagency Liaison Division

Identical letter to:

The Honorable Richard Shelby
Ranking Member
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Bill Nelson
Chairman
Subcommittee on Space, Aeronautics, and Related Sciences
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Kay Bailey Hutchison
Ranking Member
Subcommittee on Space, Aeronautics, and Related Sciences
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The Honorable Joseph I. Lieberman
Chairman
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Alan B. Mollohan
Chairman
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
House of Representatives

The Honorable Rodney P. Frelinghuysen
Ranking Member
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
House of Representatives

The Honorable Henry A. Waxman
Chairman
Committee on Oversight and Government Reform
House of Representatives

The Honorable Thomas M. Davis III
Ranking Member
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The Honorable Mark Udall
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Subcommittee on Space and Aeronautics
Committee on Science and Technology
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The Honorable Ken Calvert
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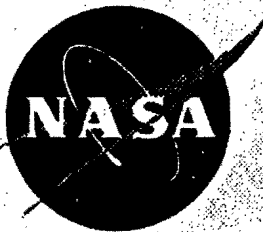
IG-98-003

**AUDIT
REPORT**

RAPID ACTION

**USE OF THE GOVERNMENT CREDIT CARD
BY SOMEONE OTHER THAN
THE CARDHOLDER**

December 5, 1997



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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



Reply to Attn of W

December 5, 1997

TO: H/Associate Administrator for Procurement

FROM: W/Acting Assistant Inspector General for Auditing

SUBJECT: Rapid Action Report on Use of The Government Credit Card
By Someone Other Than The Cardholder
Assignment Number A-HA-98-007 (Previous A-MA-96-008)
Report Number IG-98-003

The Office of Inspector General is conducting a NASA-wide audit of the International Merchant Purchase Authorization Card (IMPAC) program. During the audit, a condition came to our attention that warrants management's immediate attention. Specifically, we found 16 instances at 4 NASA locations, where 11 cardholders allowed other employees and contractor personnel to use their IMPAC card or account number for purchases of supplies. In our opinion, this number of instances from our limited sample indicates a systematic problem with the "loaning out" of credit cards. Credit card procedures allow the delegation of procurement authority to cardholders and prohibit the cardholder to allow anyone to use his/her card or account number. Designated cardholders do not have the authority to redelegate that authority. The 11 cardholders above, however, have allowed individuals without the required authority and IMPAC training to obligate NASA. We recommend the NASA Associate Administrator for Procurement (1) require centers to review their local procedures regarding the use of credit cards by authorized cardholders, and take appropriate actions to eliminate the "loaning out" of credit cards (such actions could include appointing additional cardholders), and (2) consider implementing penalties for any misuse of the card.

We discussed these findings with your office on August 28, 1997, and issued the draft audit report on October 28, 1997. A written response was received from your office on November 14, 1997. We have incorporated your comments in the report to outline the actions planned in response to the recommendation. The complete management's response is in Appendix 5.

Please include our office in the concurrence cycle for closing the recommendation. The NASA Office of Inspector General staff members associated with this audit express their appreciation to the representatives at all NASA locations.

b6

Robert J. Wesolowski

Enclosure

cc:

B/A. Holz

HC/J. Horvath

JM/D. Green

INTRODUCTION

The NASA Office of Inspector General (OIG) is conducting a NASA-wide audit of the International Merchant Purchase Authorization Card (IMPAC) program. Our overall objective is to determine if NASA is adequately managing its credit card program.

During the audit, a condition came to our attention that warrants management's immediate attention. Accordingly, we are issuing this rapid action report. Specifically, we found 16 instances at 4 NASA locations, where 11 cardholders let other employees and contractor personnel use their IMPAC card or account number for purchases of supplies. Credit card procedures allow the delegation of procurement authority to cardholders and prohibit the cardholder to allow anyone else to use his/her card or account number.

BACKGROUND

The General Service Administration (GSA) developed the IMPAC program for the purpose of extending credit card services to all government agencies. In 1989, GSA awarded Rocky Mountain BankCard System (RMBCS) a firm fixed price contract. This contract was renewed in March 1994, and currently runs through November 1998. As of May 1997, over 2,500 cardholders at 11 NASA installations used IMPAC cards to purchase supplies and services. (See Appendix 1, page 7, for more details on the IMPAC program).

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OBJECTIVE, SCOPE, AND METHODOLOGY

OBJECTIVE

The overall audit objective was to determine whether NASA is adequately managing the IMPAC credit card program. Specifically, we will determine whether internal controls are adequate to ensure:

- 1) purchases are proper,
- 2) the payment authorization process is adequate, and
- 3) property accountability is effective.

SCOPE AND METHODOLOGY

For purposes of this rapid action report, we limited the scope of work to evaluating the appropriate use of credit cards. (See Appendix 2, page 9 for details).

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OBSERVATION AND RECOMMENDATION

LOANED CARDS AT FOUR NASA LOCATIONS

We have not yet completed our overall evaluation of the NASA IMPAC credit card program. However, during the audit, we found 16 instances at 4 NASA locations, where 11 cardholders allowed other employees and contractor personnel to use their IMPAC card or account number for purchases of supplies. See chart at Appendix 3, page 11, for detail on the 16 instances.

Credit card procedures allow the delegation of procurement authority to cardholders and prohibit the cardholder to allow anyone else to use his/her card or account number. These procedures also require that cardholders be trained in small purchase procedures. Designated cardholders do not have the authority to redelegate that authority.

As a result, individuals without the required authority and IMPAC training obligated NASA to pay for purchases. Although none of our sampled transactions involved improper supplies or services, such individuals could make improper purchases without NASA management's knowledge. Langley Research Center had already removed a cardholder's authority because of improper use of the credit card.

RECOMMENDATION

We recommend the NASA Associate Administrator for Procurement:

- 1) Require centers to review their local procedures regarding the use of credit cards by authorized cardholders, and take appropriate actions to eliminate the "loaning out" of credit cards (such actions could include appointing additional cardholders); and
- 2) Consider implementing penalties for any misuse of the card (See example of a contractor proposed table of improper card uses and corrective action plan at Appendix 4, page 13).

MANAGEMENT'S RESPONSE

"We agree management action is required and propose the following:

- (1) All current cardholders will be reminded of the prohibition against allowing anyone else to use the card. This prohibition

will be emphasized during the training for new cardholders. The Centers will pursue issuance of additional cards to offices if justified.

- (2) We will pursue with Center Procurement Officers the establishment of formal penalties for unauthorized card use." (See Appendix 5, page 15).

The NASA Headquarters Office of Procurement audit liaison coordinator orally informed us that the above actions will be completed by the end of February 1998.

***EVALUATION OF
MANAGEMENT'S
RESPONSE***

Management's comments are responsive to the recommendation.

GENERAL COMMENTS

Our report is intended to provide NASA management with information necessary to ensure adequate management of the credit card program. We appreciate the cooperation and assistance extended to us by representatives at all NASA locations.

ADDITIONAL BACKGROUND AND OTHER AGENCY EXPERIENCE***BACKGROUND***

The IMPAC card is a commercial credit card that NASA organizations may use for purchases of approved supplies and services. The card is one initiative NASA has undertaken in response to Executive Order 12352, Federal Procurement Reforms, dated March 17, 1982, which called for reduced administrative costs and burdens on both the government and private sector.

The Federal Acquisition Regulations (FAR), NASA FAR Supplement (NFS), and the GSA credit card procedures regulate the use of the IMPAC card. The IMPAC card is embossed with the cardholder's name, and may be used only by the cardholder to pay for small purchases (supplies and services) made in accordance with Part 13 of the FAR and NFS. Cardholders may also use it to pay for orders placed against established requirements contracts or with established sources of supply (FAR Part 8). Current procedures require all cardholders to complete at least four hours of training before use of the card.

***AIR FORCE LESSONS LEARNED
WITH "LOANED" CREDIT CARDS***

Within the Air Force, recent surveillance and audits performed on use of the IMPAC card found a considerable amount of deficiencies, including persons other than the cardholder using the card. According to the Air Force "IMPAC Lessons Learned," "All mentioned deficiencies were objectionable but the violation of ... someone else besides the cardholder placing orders with the IMPAC card are a grave reprehensible deficiency." The agency recommended that abuses of the card privilege not be tolerated.

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DETAILS OF WORK PERFORMED

SCOPE AND METHODOLOGY

The scope of work for the rapid action report includes:

- 1) Reviews of FAR, Part 13, Simplified Acquisition Procedures, NFS Parts 1813, Small Purchases and Other Simplified Purchase Procedures, and 1870¹, NASA Credit Card System, and local NASA center's credit card procedures;
- 2) Analysis of electronic databases including the IMPAC credit card purchases for the months under audit;
- 3) Reviews of the IMPAC purchase records including monthly Statement of Accounts, cardholders' transaction logs, and invoices; and
- 4) Interviews of selected cardholders, requestors of the items purchased, approving officials, and agency program coordinators.

INTERNAL CONTROLS REVIEWED

We reviewed internal controls that applied to the purchases made by persons other than the cardholders at the four NASA locations. The review included:

- Establishment and control of transaction logs;
- Documentation of card usage; and
- Certifications by approving officials.

AUDIT FIELD WORK

We conducted the field work related to this observation from February 1997 to July 1997 at nine NASA locations. We performed the audit in accordance with generally accepted government auditing standards.

¹ Effective July 9, 1997, Part 1870 was deleted from the NFS. Part 1813, however, still requires that purchases made with the card comply with the instructions and procedures issued by GSA and the applicable parts of the FAR and NFS. GSA procedures defined "unauthorized use" as the use of a credit card by a person other than the cardholder.

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LOANED CARDS AT FOUR NASA LOCATIONS

NASA Locations	Instances	Amount	Explanation
Ames Research Center	1	\$52.75	For convenience, cardholder asked another employee to purchase bike parts and sign the sales draft for him.
Goddard Space Flight Center	8	(See note below)	Cardholder loaned his IMPAC card to other employees in his organization, because of work needs or when he is not available. Cardholder did not maintain the required log and records were not detailed to show when the card was used by others.
		\$445.10	Cardholder provided her account number for use by her group members. This transaction was for the purchase of office supplies (paper and print cartridge).
		(See note below)	Cardholder provided his credit card to the administrative assistant for necessary purchases.
		\$220.00	To save time, cardholder allowed his assistant and secretary to place orders with his IMPAC card. This transaction was for the purchase of ADP supplies (Ethernet Transceiver).
		\$320.00	Same cardholder as above. This transaction was for a pontoon rental.
		\$310.79	Same cardholder as above. This transaction was for a power supply.
		\$832.00	Same cardholder as above. This transaction was for equipment stickers.
		\$2,062.90	Cardholder was not in to use his card. Another employee used his card to purchase snow chains and supplies. The approving official certified the credit card transaction log prior to the purchase.
Langley Research Center	2	\$250.95	Cardholder approved a contractor's request, and provided him his account number to place the order (in this case, a CD ROM Drive). The cardholder commented that over 90 percent of the purchases made using his card were made by others.
		\$848.00	Cardholder loaned his card to another employee to purchase patio umbrellas for the cafeteria. Cardholder's authority to use the credit card was removed.
Lewis Research Center	5	\$1,158.34	Cardholder loaned his IMPAC card to another employee to purchase batteries. Other employees have also placed orders with his card.
		\$1,271.15	Same cardholder as above. Cardholder loaned his IMPAC card to another employee to purchase plumbing supplies. Other employees have also placed orders with his card.
		\$193.52	Cardholder loaned his IMPAC card to another employee to purchase hex plugs. Other employees have also placed orders with his card.
		\$45.00	Cardholder loaned her IMPAC card to a contractor employee to purchase plumbing supplies.
		\$71.94	Same cardholder as above. Cardholder loaned her IMPAC card to a contractor employee to purchase strap ties. Cardholder did not maintain a copy of the bank statement and purchase requisition as required.

Note: We have no specific amounts for these cardholders. During our interviews, these cardholders admitted to the practice of loaning their cards to other employees. Most purchases were made by telephone, and the cardholders kept very poor records of the use of their credit cards.

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DRAFT

Attachment 4

**RISK MANAGEMENT
CORRECTIVE ACTION PLAN**

<u>Infringement</u>	<u>Action</u>
Misuse in event of personal emergency	Investigation/warning, possible loss of card/reimbursement to Second offense, loss of card/suspension from program.
Misuse by accident	Investigation/warning, possible loss of card/reimbursement to offense, loss of card/suspension from program. Secon
Misuse with intent to defraud	Loss of card/reimbursement to /ethics investigation/ disciplinary action/possible legal action.
Non-surrender of card upon termination	Hold on final clearance pay/possible legal action.
Non-surrender of card upon transfer	Loss of card/possible suspension of cognizant AO and all assigned cardholders.
Late reconciliation practices	Warning. Second offense, loss of card/suspension from program.
Refusal to follow prescribed procedures	Loss of card/suspension from program. Investigation of AO involvement. If supporting infringement, AO suspension from program/suspension of all cardholders reporting to suspended AO.
Purchase of prohibited items	For cardholder and AO, investigation/if intentional, loss of card/suspension from program. If approved in advance by PCA, no corrective action.
Tax payment on non-taxable items	Warning. Second offense, loss of card privilege/retraining of cardholder. Third offense, loss of card/suspension from program.
Kickbacks/ethics violations	Loss of card/suspension from program. Ethics investigation/ disciplinary action/possible legal action.
Unresolved disputes	Warning/possible loss of card. Second offense, loss of card/suspension from program.
Reconciliation prior to receipt	Warning/possible loss of card. Second offense, loss of card/suspension from program.
Intentionally using false description of goods	Loss of card/suspension from program. Ethics investigation/possible reimbursement/ disciplinary action.
Splitting orders to circumvent cost controls	Loss of card/suspension from program/ disciplinary action.
Poor reconciliation practices	Warning/possible loss of card. Second offense, loss of card/suspension from program.
No approval signature on payment package	Warning/return package to AO for signature. Second offense, loss of card suspension from program/AO retraining if necessary.
AO approval audit not performed	Warning. Second offense. AO suspension from program/suspension of all cardholders reporting to suspended AO.

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



Reply in Ann of

HC

NOV 14 1997

TO: W/Acting Assistant Inspector General for Auditing
FROM: HC/Director, Analysis Division
SUBJECT: Draft Rapid Action Report on Use of The Government Credit Card by
Someone Other Than The Cardholder

We appreciate your bringing to our attention the instances of "loaning out" of Government Credit Cards by the authorized cardholders. The required internal NASA training given to each new cardholder clearly states the prohibition against letting others use the card. Additionally, the small brochure, "Cardholder Instructions", given to each new cardholder by Rocky Mountain Bankcard, specifies on page 1, "No member of your staff, your family, your supervisor, or anyone else may use this card."

We agree that management action is required and propose the following:

- (1) All current cardholders will be reminded of the prohibition against allowing anyone else to use the card. This prohibition will be emphasized during training for new cardholders. The Centers will pursue issuance of additional cards to offices if justified.
- (2) We will pursue with Center Procurement Officers the establishment of formal penalties for unauthorized card use.

We believe that these actions will make the policy clear. Thank you for sharing your findings with us.

66
Anne Guenther

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House Committee on Government Reform and Oversight
House Subcommittee on Space and Aeronautics, Committee on Science
House Committee on Science
House Subcommittee on Space and Aeronautics

Congressional Members

Honorable Pete Sessions, U.S. House of Representatives

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AUDIT REPORT

SPACE STATION PERFORMANCE MEASUREMENT COST DATA

November 13, 1997



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001



Reply to Attn of: **W**

November 13, 1997

TO: Lyndon B. Johnson Space Center
Attn: AA/Director

FROM: W/Acting Assistant Inspector General for Auditing

SUBJECT: Final Audit Report
Space Station Performance Measurement Cost Data
Assignment Number A-HA-97-039
Final Report Number IG-98-002

We have completed an audit survey of the Space Station Performance Measurement Cost Data. The purpose of this audit survey was to determine whether Boeing and major subcontractors are reporting reasonable cost data in monthly reports to the Space Station Program. Specific audit survey objectives were to answer the following questions.

- Is Boeing's estimate of the cost for a completed Space Station different from the Space Station Program Office's estimate?
- Are Boeing and major subcontractors adjusting estimates?
- Does Boeing's estimate impact its incentive fee calculation?

We found that Boeing did not report reasonable cost data in its monthly reports to the Space Station Program. As a result, NASA was receiving inaccurate cost data on the Space Station Contract.

The Center waived the exit conference and responded to the discussion draft report. The Center's written response is presented after each recommendation and included in its entirety as Appendix 3 in this final report. The NASA OIG concurs that the actions taken or planned by JSC are sufficient for the closures of recommendations 1 and 2.

b6

Robert J. Wesolowski

Enclosure

cc:
JM/D. Green
JSC/BD5/P. Ritterhouse
OA/W. Bates
R. Brinkley
OG/B. Waddell

SPACE STATION PERFORMANCE MEASUREMENT COST DATA

INTRODUCTION

The Space Station Contract, NAS15-10000, was signed January 13, 1995, with Boeing for \$5.638 billion. Boeing is responsible for:

- Integration and verification of the International Space Station System;
- Design, analysis, verification, and delivery of the U.S. On-Orbit Segment; and
- System performance.

In order for NASA to manage and monitor the contract, Boeing has a contractual requirement to provide performance measurement. The contract requires both a formal plan and monthly reports. The contract states:

"The contractor shall provide and maintain a Performance Measurement System (PMS) to provide an assessment of the integrated cost and schedule performance data in accordance with the contractor's NASA-approved systems."

Boeing submitted its initial Performance Measurement System Implementation Plan on December 12, 1994. It submitted a revised plan on April 3, 1995. Boeing has submitted the required monthly reports since the contract was signed. Each report incorporates data from major subcontractors in order to get a complete picture of the status of the project. The major subcontractors are McDonnell Douglas, Boeing North America, and Boeing-Huntsville.

In June 1996, we issued Audit Report No. JS-96-002, "Space Station Contractor Performance Management." In the report, the OIG found that Boeing was not revising its monthly performance measurement reports to reflect a reasonable estimate of the cost to complete the Space Station. Concerns in this area resurfaced during our Assignment No. A-HA-97-009, "Space Station Lower-tier Subcontractors' Reporting and Recovery Plans."

OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

The purpose of this audit survey was to determine whether Boeing and major subcontractors are reporting reasonable cost data in monthly reports to the Space Station Program.

The objectives were to answer the following questions.

- Is Boeing's estimate of the cost for a completed Space Station different from the Space Station Program Office's estimate?
- Are Boeing and major subcontractors adjusting estimates?
- Does Boeing's estimate impact its incentive fee calculation?

SCOPE AND METHODOLOGY

The scope of the audit survey included International Space Station Contract NAS15-10000 cost data between January 1, 1997 and March 31, 1997.

We conducted audit field work at Johnson Space Center from March 3, 1997 to May 2, 1997.

The following audit techniques were used to accomplish the audit objectives.

- Interviewed relevant NASA and contractor personnel.
- Examined contractor cost data and incentive fee calculations.

AUDIT FIELD WORK

We conducted the audit in accordance with generally accepted government auditing standards.

AUDIT REPORT

SPACE STATION PERFORMANCE MEASUREMENT COST DATA

November 13, 1997



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001



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Robert J. Wesolowski

Enclosure

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AUDIT FIELD WORK

We conducted the audit in accordance with generally accepted government auditing standards.

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OBSERVATIONS AND RECOMMENDATIONS

OVERALL EVALUATION We have found that Boeing did not report reasonable cost data in its monthly performance measurement reports on the Space Station Contract because its monthly reports to NASA did not reflect its best estimate at completion (EAC). Instead, Boeing reduced the monthly estimates provided by major subcontractors under the prime contract in order to report a smaller cost overrun. As a result, NASA was receiving inaccurate cost data on the Space Station Contract.

BOEING POLICY The Boeing Company Defense & Space Group Integrated Management System - General System Description states:

"An EAC is used to predict total costs to be incurred on an entire contract or a specific portion of it. EACs are developed by reviewing performance to date, current and future conditions, and the tasks to be accomplished."

The system description further states:

"Each contract EAC is assessed by the program manager and may be adjusted as a result of management decision and insight at the program level. Program management revisions of EAC generated data will be maintained by Finance cost management."

Boeing's system description requires the Finance cost management to "support and document the program management assessment value for reporting."

BOEING AND NASA ESTIMATES

Boeing's monthly reports to NASA did not reflect its best estimate at completion on the Space Station Contract. Boeing's estimate of the cost for a completed Space Station was about \$147 million less than the Space Station Program Office's estimate as presented in **Illustration 1**.

Comparison of Estimates As of February 2, 1997 (Dollars in Millions)		
	Estimate At Completion <u>(EAC)</u>	Variance At Completion <u>(VAC)</u>
NASA	\$6,717	(\$425)
Boeing	<u>\$6,570</u>	<u>(\$278)</u>
Difference	<u>\$ 147</u>	<u>\$147</u>

Illustration 1

The EAC should be Boeing's best estimate of what the Space Station Contract (NAS15-10000) will eventually cost the government. The VAC is the amount of the expected cost overrun. In the schedule above, NASA's best estimate resulted in an expected \$425 million cost overrun. However, Boeing only reported a \$278 million cost overrun¹. See Appendix 1 and 2 for history of Boeing EAC and VAC, respectively.

Based on past contractor performance, NASA's EAC was a more realistic estimate of contract cost at completion. We calculated a performance index by dividing the budgeted cost of work performed by the actual cost of work performed. The same calculation was applied to Boeing's and NASA's estimates of cost at contract completion. The indexes show the amount of work completed or planned to complete for each dollar spent as presented in Illustration 2.

Comparison of Cost Performance Indexes	
Boeing's Cumulative to Date Cost Performance	.94
Boeing's EAC Cost Performance	.96
NASA's EAC Cost Performance	.94

Illustration 2

¹In August 1997, we received Boeing's June Performance Measurement System Report. Boeing significantly increased its estimated VAC from \$278 million to \$600 million.

NASA's EAC index was equal to Boeing's cumulative to date performance index; therefore, NASA's estimate was more realistic. Boeing's EAC performance index was higher than its cumulative to date performance index, indicating improved performance. However, the contractor's performance index becomes more difficult to improve as a contract's percentage of completion increases. Therefore, past performance is a good indicator of future performance on a contract. The Space Station Contract was about 60 percent complete as of February 2, 1997.

PRIOR AUDIT

We previously found that Boeing was not reporting a reasonable estimate at completion on the Space Station Contract. This occurred because Boeing's EACs reflected better performance than history indicated. In our June 1996 Audit Report No. JS-96-002, "Space Station Contractor Performance Management," we found that Boeing was not revising its monthly performance measurement reports to reflect a reasonable estimate of cost to complete the Space Station. This was occurring even though cost and schedule variances indicated a need for a revised estimate at completion. At that time, we recommended the Contracting Officer require Boeing to:

- Analyze the estimate at completion data on a monthly basis; and
- Report the revised estimate at completion to reflect performance to date, current and future conditions, and tasks to be performed.

However, Boeing continued to report unrealistic EACs. Therefore, this audit was a follow-up of our prior audit. Our follow-up indicates that unreasonable estimates at completion continued to be reported because Boeing reduced the monthly estimates provided by major subcontractors.

ADJUSTMENTS

Boeing reduced the monthly estimates provided by the major subcontractors under the prime contract in order to report a smaller cost overrun. Boeing's adjustments are shown in **Illustration 3**.

Schedule of Boeing's Adjustments (Dollars in Thousands)	
Major Subcontractor	Total
McDonnell Douglas	
Boeing N. America	64
Boeing Huntsville	
Total	

Illustration 3

BASIS OF ADJUSTMENTS

Boeing did not provide the required documentation or audit trail from the adjustments to any detailed support. We randomly selected adjustments to determine if Boeing could provide support for the selected changes to its estimate. In each case, Boeing did not have the requested detailed support.

According to Boeing, the adjustments resulted from:

- Quarterly management challenges; and
- Monthly adjustments to hold to approved EAC.

Boeing updates the EAC on a quarterly basis. During the update, the Boeing Program Manager can accept or reject an estimate. If the Program Manager rejects an estimate, he "challenges" it and reduces the estimate. A "challenge" is used as a management tool to encourage managers to reduce cost. The "challenge" gives managers a lower target; therefore, may reduce cost. According to the Boeing Program Manager, if Boeing reported a higher EAC, the EAC would become a "self-fulfilling prophecy." However, the management challenges issued under the Space Station Freedom Program did not reduce cost and hid the expected cost overruns.

Boeing approves a new EAC on a quarterly basis. Between updates, Boeing adjusts the estimates to keep the variance at completion from increasing.

INACCURATE COST DATA

As a result of these adjustments, NASA was receiving inaccurate cost data on the Space Station Contract. NASA should be able to use the cost data provided by Boeing to manage the contract and project future funding requirements. However, NASA must perform its own monthly analysis in order to calculate more reliable estimates.

INCENTIVE FEE

Boeing's estimate did not impact its incentive fee calculation due to recent action taken by NASA. In February 1997, NASA decided to use its own estimate for funding purposes and instructed Boeing to invoice incentive fee based on a larger projected cost overrun. Because of this action, NASA now has a more accurate estimate of future funding requirements. NASA has also avoided \$8.6 million of questionable incentive fee.

***AWARD FEE
EVALUATION***

NASA has attempted to persuade Boeing to do a better job of reporting cost performance data by including criteria related to Performance Measurement Reporting in the contract award fee evaluation. This evaluation by NASA has found Boeing to have weaknesses in this area. The evaluation for the period ending March 31, 1997, concluded that Boeing's EAC and VAC were understated and did not match its funding requirements. NASA has penalized Boeing on award fee because of Boeing's inadequate Performance Measurement Reporting.

RECOMMENDATION 1

We recommended the Contracting Officer:

- a. Require Boeing to prepare detailed support and documentation for any adjustment of a subcontractor estimate in accordance with Boeing's Integrated Management System - General System Description, and
- b. Monitor Boeing's adjustment of subcontractor estimates and documentation of support for adjustments.

***MANAGEMENT'S
RESPONSE***

Boeing acknowledged in its July Performance Measurement System Report (PMSR) a \$600 million overrun which is more realistic than its earlier estimate of \$278 million. With the merger of the Product Groups under Boeing, there will be a single Boeing management approved estimate from Boeing to NASA rather than the previously developed "independent" Product Group estimates. The Program

Office will provide the oversight and diligence to ensure that the estimates at completion (EAC's) from Boeing are realistic. Boeing is currently developing a detailed baseline which represents a \$600 million over-target position.

***EVALUATION OF
MANAGEMENT'S
RESPONSE***

The actions taken by NASA are responsive to Recommendation 1. The NASA OIG concurs that the actions taken and planned are sufficient for closure of this recommendation.

RECOMMENDATION 2

We recommended the Space Station Program Office continue the monthly independent analysis of the EAC data submitted by Boeing.

***MANAGEMENT'S
RESPONSE***

Using Performance Analyzer and other analytic tools, the Program Office is performing monthly independent EAC's. These data are provided to management and are reflected in our internal budget planning. In addition, the Program Office has in place the appropriate monthly reviews to assess threats to the baseline and the EAC.

***EVALUATION OF
MANAGEMENT'S
RESPONSE***

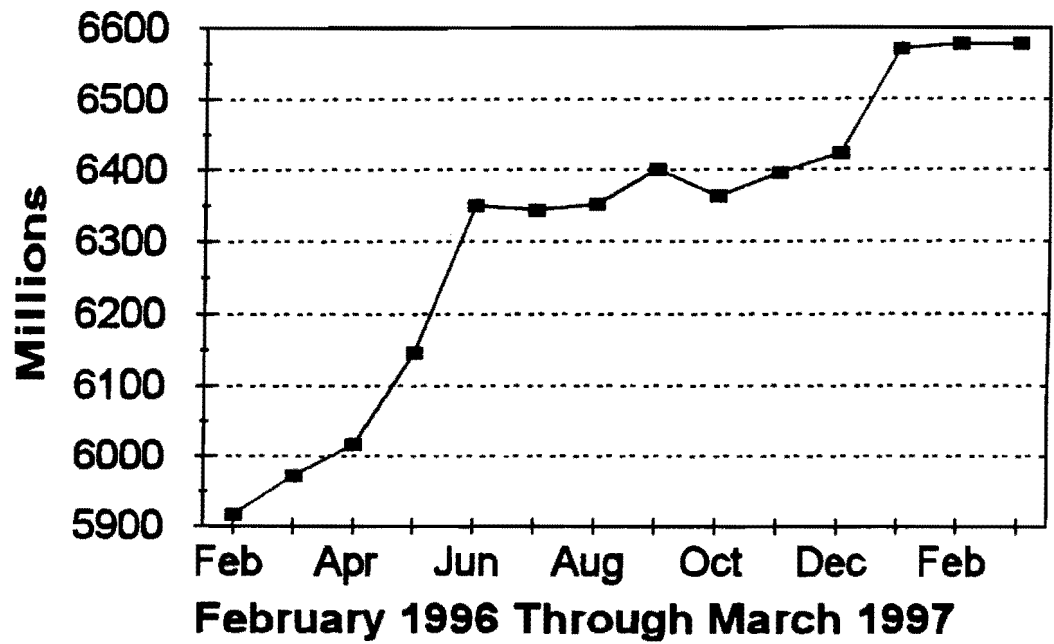
The actions taken by NASA are responsive to Recommendation 2. The NASA OIG concurs that the actions taken and planned are sufficient for closure of this recommendation.

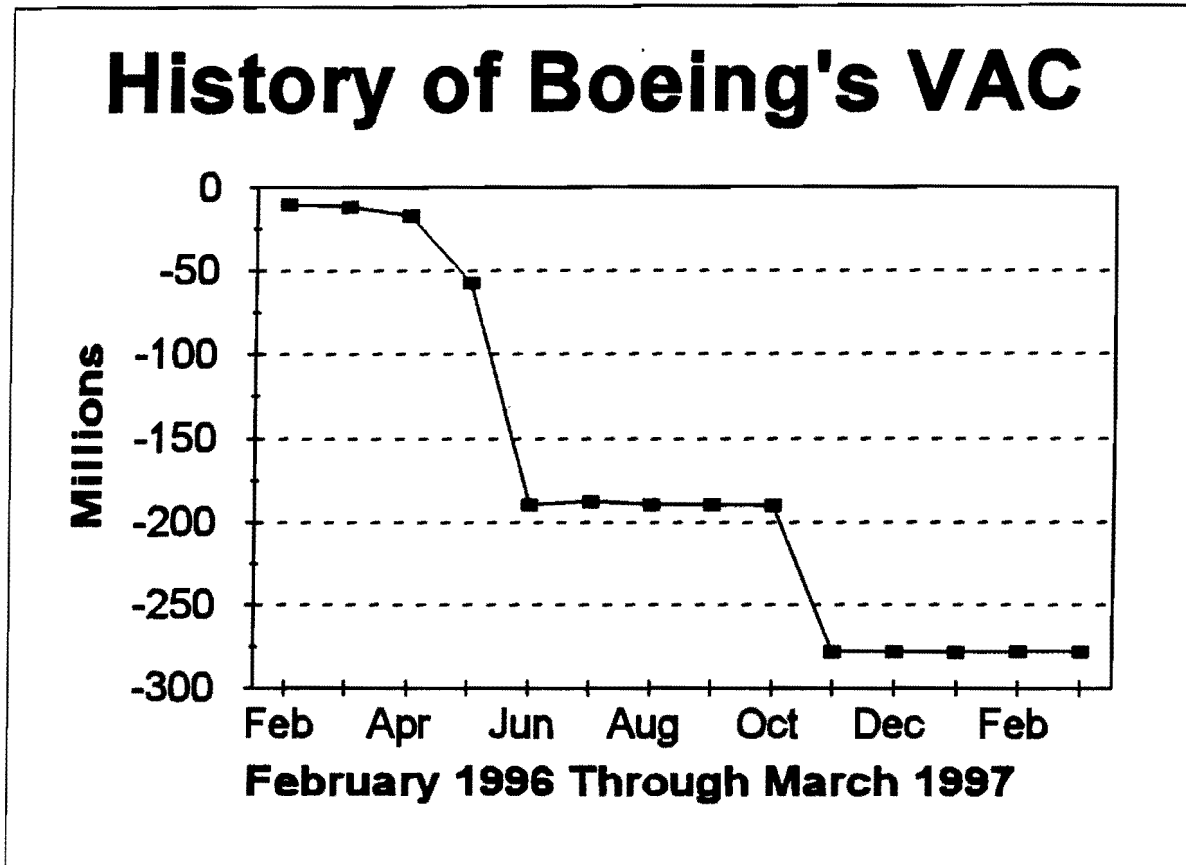
Major Contributors To This Report

JOHNSON SPACE CENTER Tony A. Lawson, Acting Program Director, Human Exploration and
Development of Space
Dennis Clay, Auditor-in-Charge
June Glisan, Program Assistant

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History of Boeing's EAC





National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
2101 NASA Road 1
Houston, Texas 77058-3696



NOV 13 1997

BD5

Reply to Attn of.

TO: W-JS/Acting Program Director, Human Exploration and Development of Space

FROM: AA/Director

SUBJECT: Management Response to OIG's Audit of Space Station Performance Measurement Cost Data, A-HA-97-039

Because of actions taken between the end of field work and release of the draft report, Johnson Space Center has elected to waive an exit conference and is responding directly to the draft report. The purpose of the audit survey was to determine whether Boeing and major contractors are reporting reasonable cost data in monthly reports to the Space Station Program. NASA and Boeing management are addressing ways to ensure accurate cost reporting.

The enclosure provides information regarding current procedures for reporting in response to the report recommendations, and addresses changes that have been implemented. These changes were acknowledged by the auditor-in-charge in meetings with Space Station Program personnel subsequent to the field work, and documented in footnote 1 on page 4 of the draft report. With the diligent oversight being given to Space Station Program through continual internal management reviews and audit efforts from both the Office of Inspector General and the General Accounting Office, we believe the appropriate actions are underway and request closure of this audit assignment on issuance of the final report. If you have any questions regarding this response, please contact **b6**

b6
George W. S. Abbey

Enclosure

cc:
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OA/W. V. Bates, Jr.
HQ/JM/D. L. Green
HQ/MX/G. Gabourel

**Management Response to OIG's Audit of Space Station Performance
Measurement Cost Data, A-HA-97-039**

Auditor's Finding

"We previously found that Boeing was not reporting a reasonable estimate at completion on the Space Station Contract. This occurred because Boeing's EAC's reflected better performance than history indicated. ...we found that Boeing was not revising its monthly performance measurement reports to reflect a reasonable estimate of cost to complete the Space Station. This was occurring even though cost and schedule variances indicated a need for a revised estimate at completion.

"Boeing reduced the monthly estimates provided by the major subcontractors under the prime contract in order to report a smaller cost overrun. ...Boeing did not provide the required documentation or audit trail from the adjustments to any detailed support."

Recommendation 1

"We recommend the Contracting Officer:

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JSC Comments

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Auditor's Finding

"NASA has attempted to persuade Boeing to do a better job of reporting cost performance data by including criteria related to Performance Measurement Reporting in the contract award fee evaluation. This evaluation by NASA has found weaknesses in this area."

Enclosure

Recommendation 2

"We recommend the Space Station Program Office continue the monthly independent analysis of the EAC data submitted by Boeing."

JSC Comments

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Congressional Members

The Honorable Pete Sessions, U.S. House of Representatives

IG-99-017

**AUDIT
REPORT**

**DISASTER RECOVERY PLANNING
AT KENNEDY SPACE CENTER**

March 31, 1999



National Aeronautics and
Space Administration

Office of Inspector General

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Acronyms

ADP	Automatic Data Processing
CCMS	Checkout, Control and Monitor Subsystem
CDS	Central Data Subsystem
FIPS PUB	Federal Information Processing Standards Publication
GOLAN	Ground Operations Local Area Network
LPS	Launch Processing System
OMB	Office of Management and Budget
RPS	Record and Playback Subsystem
SPDMS	Shuttle Processing Data Management System
USA	United Space Alliance

National Aeronautics and
Space Administration

Headquarters

Washington, DC 20546-0001



Reply to Attn of:

W

March 31, 1999

TO: KSC/AA/Center Director, John F. Kennedy Space Center

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Disaster Recovery Planning at
Kennedy Space Center
Assignment Number A-HA-98-016
Report Number IG-99-017

The subject report is provided for your use. Please refer to the Executive Summary for the overall audit results. Our evaluation of your responses has been incorporated into the body of the report. Your comments on a draft of this report were generally not responsive to our recommendations. We request you provide additional information on Recommendations 1, 2, and 3 by April 30, 1999. All recommendations are unresolved and will remain open pending our receipt and evaluation of the requested information.

If you have questions concerning the report, please contact Mr. Brent Melson, Program Director, Information Assurance Audits, at (202) 358-2588, or Ms. Mindy Vuong, Auditor-in-Charge, at (407) 867-4096. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix D.

66

Russell A. Rau

Enclosure

cc:

AO/Chief Information Officer

B/Chief Financial Officer

G/Office of General Counsel

M/Associate Administrator for Space Flight

J/Associate Administrator for Management Systems and Facilities

JM/Director of Management Assessment Division

NASA Office of Inspector General

IG-99-017
A-HA-98-016

March 31, 1999

Disaster Recovery Planning at Kennedy Space Center

Executive Summary

Background. NASA has one of the larger, more complex, and diverse computing environments in the Federal Government. NASA's Automated Information Security Program includes a risk management process which should continually identify and analyze potential threats to NASA's computer/network environments. An effective computer security program includes the proper safeguarding of information technology assets against disaster and other events that may result in a lengthy shutdown of computer processing capabilities.

Two critical systems at the John F. Kennedy Space Center (Kennedy) are the Launch Processing System (LPS) and the Shuttle Processing Data Management System (SPDMS). The LPS is an integrated network of hardware and software required to control and monitor flight systems, ground support equipment, and facilities used in direct support of Space Shuttle activities. The SPDMS supports various critical applications in processing the Space Shuttle for launch. Because of the importance of the two systems to the Space Shuttle program, the ability to resume operations in a timely manner in the event of a disaster is critical.

The United Space Alliance (USA) operates and manages the LPS and SPDMS under contract NAS9-20000. The USA is a joint venture of Boeing North America and Lockheed Martin Corporation.

Objectives. The overall audit objective was to determine whether the LPS and SPDMS have management-approved disaster recovery plans that include appropriate procedures for emergency response, extended backup operations, and testing. Details on the objectives, scope, and methodology are in Appendix A.

Results of Audit. The Agency has established appropriate procedures for emergency response for the LPS and SPDMS, assuming that hardware configurations for both systems are not destroyed.

62 + 65

Recommendations.

b2 + b5

Management's Response.

b2 + b5

Evaluation of Management's Response. We do not consider management's reply fully responsive and we are requesting additional documentation to support the position stated in its response.

b2 + b5

Introduction

The Computer Security Program. An effective computer security program includes establishing and maintaining appropriate disaster recovery plans to minimize interruptions and provide reasonable continuity of computer and network services should adverse events occur that would prevent normal operations. A disaster recovery plan contains procedures for emergency response, extended backup operations, and post-disaster recovery should a computer installation experience a partial or total loss of computer resources. The primary objectives of a disaster recovery plan are to provide reasonable assurance that a computer installation can recover from such incidents, continue to process mission-critical applications in a degraded mode, and return to a normal mode of operation within a reasonable time.

The Mission Critical Systems. The LPS is composed of three major subsystems: the Checkout, Control and Monitor Subsystem (CCMS); the Central Data Subsystem (CDS); and the Record and Playback Subsystem (RPS). The CCMS interfaces with the Space Shuttle and ground support equipment subsystems and executes automated checkout and launch procedures in CCMS consoles to control and monitor launch operations. The CDS provides an automated checkout and launch procedure library and program development support, simulation, and on-line test data storage for recall and analysis. The RPS records all raw telemetry data for playback to CCMS for post-test analysis and troubleshooting.

The SPDMS supports critical applications needed to process the Space Shuttle for launch. Examples of critical applications include the Computer Aided Planning and Scheduling System and the Problem Reporting and Corrective Action system. The Computer Aided Planning and Scheduling System provides an automated tool to plan, schedule, and manage resources for processing more than one Space Shuttle for launch. The Problem Reporting and Corrective Action system provides a means to maintain and track all problems and corrective actions associated with space flight and related ground operating support systems.

Finding and Recommendations

Finding.

b2 + b5

Office of Management and Budget A-130 Requirements

Appendix III, Section B.a.2e of Office of Management and Budget (OMB) Circular A-130, "Management of Federal Information Resources," February 1996, states that agency disaster recovery plans should assure an ability to recover and provide service sufficient to meet the minimal needs of the information system. Appendix B contains more information on requirements in the Circular.

NASA Handbook 2410.9A Requirements

The NASA Handbook 2410.9A, "NASA Automated Information Security Handbook," June 1, 1993, Section 203.a(4), states that "NASA managers need to continually identify and analyze potential threats to NASA's computer/network environments and reduce risk exposures to acceptable levels. This process is called risk management." Section 302(f) of the Handbook states disaster recovery plans must be established and maintained to prevent loss of information, minimize interruption, and provide reasonable continuity of computer and network services should adverse events occur that would prevent normal operations (see Appendix B).

Federal Information Processing Standards Publications Requirements

Federal Information Processing Standards Publication (FIPS PUB) 31, Section 7, Introduction, "Guidelines for Automatic Data Processing (ADP) Physical Security and Risk Management," June 1974, requires that arrangements be in place for an off-site ADP facility so that critical ADP tasks can be moved to the facility in the event of a catastrophe or major damage to the on-site ADP facility (see Appendix B).

FIPS PUB 87, "Guidelines for ADP Contingency Planning," requires that the contingency plan include components for backup operations and recovery (see Appendix B).

Extended Backup Operations Capabilities for the Launch Processing System

The LPS does not comply with information system security requirements in OMB A-130, NASA Handbook 2410.9A, and FIPS PUB 31 and 87 because:

b2 + b5

The Center plans to upgrade the LPS and migrate it to a client/server² environment for which backup capabilities should be widely available through other Federal agencies and commercial enterprises. The CCMS is the ~~b2~~ b2, b5 of the three major LPS subsystems (CCMS, CDS, and RPS). While the CDS and RPS will be replaced by mid-1999, the CCMS will not complete its migration to the new Checkout and Launch Control System until 2002.

~~b2~~ + b5

System ~~b2~~ + b5 Capabilities for the Shuttle Processing Data Management System

The SPDMS also does not comply with Federal and Agency security system requirements and

b2 + b5

1.

~~b2~~ + b5

² Client/server is an approach to computing in which the client (normally a personal computer or workstation) is the requesting machine and the server (a personal computer, workstation, midrange, or mainframe computer) is the supplying machine. The client machine, or front end, does preliminary data validation, possibly some other types of processing, and provides the user a friendly, transparent interface. The server, also sometimes referred to as the host or back-end, usually does the processing, holds or updates the data in a repository, and sends the results back to the client.

b2 + b5

Effects on Space Shuttle Program

Kennedy's location in Florida exposes the Center to potentially disastrous weather conditions such as hurricanes. Without the capabilities of the Shuttle Program, the Center would be unable to launch the Shuttle Program during the hurricane season.

b2 + b5

Strategic Alternatives

b2 + b5

Recommendations for Corrective Action

1.

b2 + b5

Management's Response.

b2 + b5

b2 + b5

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

Evaluation of Management's Response.

b2 + b5

2.

b2 + b5

Management's Response.

... schedules call for the decommissioning of

b2 + b5

b2 + b5

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

Evaluation of Management's Response.

b2 + b5

3.

b2 + b5

Management's Response. Partial concurrence.

b2 + b5

b2 + b5

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

Evaluation of Management's Response.

b2 + b5

Appendix A. Objectives, Scope, and Methodology

Objectives

Our overall objective was to determine whether the LPS and SPDMS have management-approved disaster recovery plans that:

- Contain adequate procedures to enable an emergency response should a partial or total loss of computer and network resources and physical facilities occur.
- Include sufficient strategies for extended backup operations.
- Provide for appropriate testing plans and that those tests are conducted at least annually.

Scope and Methodology

During the audit we:

- Reviewed applicable Federal and Agency guidance, including Appendix III of OMB A-130, NASA Handbook 2410.9A, FIPS PUB 31, and FIPS PUB 87.
- Reviewed various documents that are pertinent to disaster recovery.
- Interviewed key SPDMS and LPS personnel at Kennedy.

62 + 65

Management Controls Reviewed

We assessed various documents pertinent to disaster recovery. Those documents include Security Plans, Emergency Preparedness Plans, General Operating Procedures, Standard Practice Instructions, Operational Maintenance Instructions, and the SPDMS Mainframe Data Recovery Document. Appendix III of OMB A-130, NASA Handbook 2410.9A, FIPS PUB 31, and FIPS PUB 87 contain provisions to ensure that information technology processes continue after a disaster occurs. The LPS and SPDMS disaster recovery plans and documents meet Federal and Agency provisions except as discussed in the finding.

Audit Field Work

We conducted our field work at Kennedy from March 1998 through January 1999. We performed the audit in accordance with generally accepted government auditing standards.

Appendix B. Federal and Agency Requirements for Extended Backup Operations

OMB Circular A-130, "Management of Federal Information Resources."

OMB Circular A-130, Appendix III, Section B.a.2e, states:

Inevitably, there will be service interruption. Agency plans should assure that there is an ability to recover and provide service sufficient to meet the minimal needs of users of the system.... Decisions on the level of service needed at any particular time and on priorities in service restoration should be made in consultation with the users of the system....

NASA Handbook 2410.9A, "NASA Automated Information Security Handbook."³

NASA Handbook 2410.9A, Section 203.a (4) states that "NASA managers need to continually identify and analyze potential threats to NASA's computer/network environments and reduce risk exposures to acceptable levels. This process is called risk management."

Section 205.B.b. (3) of the Handbook states that "Contingency and disaster recovery plans provide overall protection when other safeguarding features may have failed. Such plans should be in place and periodically tested. For the most sensitive and critical systems, contingency and disaster plan testing must be conducted annually."

NASA Handbook 2410.9A, Section 302 states:

The management process must ensure that the following, as a minimum, are carried out:

- a. **Risk Assessments.** Periodic risk assessments must be conducted for new and existing Data Processing Installations to assure that appropriate, cost-effective protective measures are incorporated and are commensurate with the sensitivity, criticality, and value of associated computer systems, computer applications, and information processed....

- f. **Contingency and Disaster Recovery Plans.** Appropriate disaster recovery plans and contingency plans must be established and maintained to prevent loss of information, minimize interruption, and provide reasonable continuity of computer and network services should adverse events occur that would prevent normal operations.

The NASA Handbook 2410.9A, Section 308.a states:

Disaster recovery plans for Data Processing Installations and contingency plans for computer applications shall provide for minimizing interruptions and reasonable continuity of services if adverse events occur that prevent normal operations. These planning activities may be integrated with each other or other planning activities at the discretion of the Center Automated Information Security Manager.

³ NASA Procedures and Guidelines 2810 will cancel and replace NHB 2410.9A. However, the new guidelines are still in draft form and have not yet been approved.

Appendix B

- (1) **Disaster Recovery Plan.** Disaster recovery plans are documents containing procedures for emergency response, extended backup operations, and post-disaster recovery should a Data Processing Installation experience a partial or total loss of computer and network resources and physical facilities. The primary objectives of these plans, in conjunction with computer application contingency plans, are to provide a reasonable assurance that a Data Processing Installation can recover from such incidents, continue to process mission-critical applications in a degraded mode . . . and return to a normal mode of operation within a reasonable time
- (2) **Contingency Plans.** Contingency plans describe procedures and identify personnel necessary to respond to abnormal situations, and ensure that computer application sponsors/owners can continue to process important applications in the event that computer support at the primary Data Processing Installation is interrupted

The NASA Handbook 2410.9A, Section 308.b.6(a) and 308.b.7, state:

- It is the sponsor/owner organization's responsibility to ensure that a Data Processing Installation can meet specified functional security requirements. This includes identifying and considering alternative Data Processing Installations or providing additional funding to enhance protective measures at the supporting Data Processing Installation; and
- Contingency and disaster recovery plans for a Data Processing Installation should include identifying key individuals and developing proper emergency notification and response procedures.

FIPS PUB 31, Guidelines for Automatic Data Processing Physical Security and Management

FIPS PUB 31, Section 7.0, Introduction, states "There are four basic reasons for making use of an off-site ADP facility." The fourth reason is that "in the event of catastrophe or major damage to the on-site ADP facility, critical ADP tasks are moved to a preselected off-site facility for back-up operation."

FIPS PUB 87, Guidelines for Automatic Data Processing Contingency Planning

FIPS PUB 87, "Guidelines for ADP Contingency Planning," March 1981, states:

This document provides guidelines to be used in the preparation of ADP Contingency plans. The objective is to ensure ADP personnel, and others who may be involved in the planning process, are aware of the type of information which should be included in such plans; to provide a recommended structure and a suggested format; and generally to make those responsible aware of the criticality of the contingency planning process.

Appendix B

FIPS PUB 87 also states that a contingency plan should have the following components:

- **Emergency response, which includes the immediate actions to protect life and property and to minimize the effects of the emergency.**
- **Backup operations, which describe what must be done to initiate and effect backup operations.**
- **Recovery, which describes what to do to restore information systems capabilities.**

Appendix C. Management's Response

National Aeronautics and
Space Administration
John F. Kennedy Space Center
Kennedy Space Center, FL 32899



MAR 26 1999

Reply to Attn of
HM

TO: NASA Headquarters
Attn: W/Acting Assistant Inspector General
for Auditing

THRU: Attn: M/Associate Administrator for Office of Space
Flight

FROM: AA/Director

SUBJECT: Draft Report on the Audit of Disaster Recovery
Planning at Kennedy Space Center (Assignment
Number A-HA-98-016)

Regarding your letter dated February 18, 1999, subject as above, KSC has considered recommendations made in your draft report. We are nonconcurring in Recommendations 1 and 2. We are in partial concurrence with Recommendation 3. Specific comments related to this matter are enclosed.

b6

Roy D. Bridges, Jr.

Enclosure:
Response to Recommendations

Appendix C

b2
+
b5

Appendix C

b2

4

b5

Appendix C

b2
+
b5

Appendix C

5

In conclusion, the Security Risk Assessment and Security Plan on the Legacy LPS System is currently under review by the Shuttle Ground Processing Contractor IT Security Group. This plan will address the Disaster Recovery Plan requirement for LPS. The results of this assessment will then be presented to the NASA Designated Approval Authority (DAA) for signature authority, which will include the re-acceptance of the risks ^{b2 + b5} The same type of assessment is pending for SPDMS.

HM

Appendix D. Report Distribution

National Aeronautics and Space Administration (NASA) Headquarters

Code AO/Chief Information Officer
Code B/Chief Financial Officer Comptroller
Code C/Associate Administrator for Headquarters Operations
Code G/General Counsel
Code J/Associate Administrator for Management Systems and Facilities
Code JM/Director, Management Assessment Division
Code L/Associate Administrator for Legislative Affairs
Code M/Associate Administrator for Space Flight
Code MC/Chief Information Officer Representative
Code QS/Director, Safety and Risk Management Division

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Langley Research Center
George C. Marshall Space Flight Center
John C. Stennis Space Center

Kennedy Space Center Officials

HM/Director of Administrative Office
HM-E/Audit Liaison Representative

Appendix D

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
Budget Examiner, Energy Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, General Accounting Office
Special Counsel, House Subcommittee on National Security, International Affairs, and Criminal Justice
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 Committee on Science
House Subcommittee on Space and Aeronautics

Congressional Member

The Honorable Pete Sessions, U.S. House of Representatives

Major Contributors to this Report

Gregory B. Melson, Program Director, Information Assurance Audits

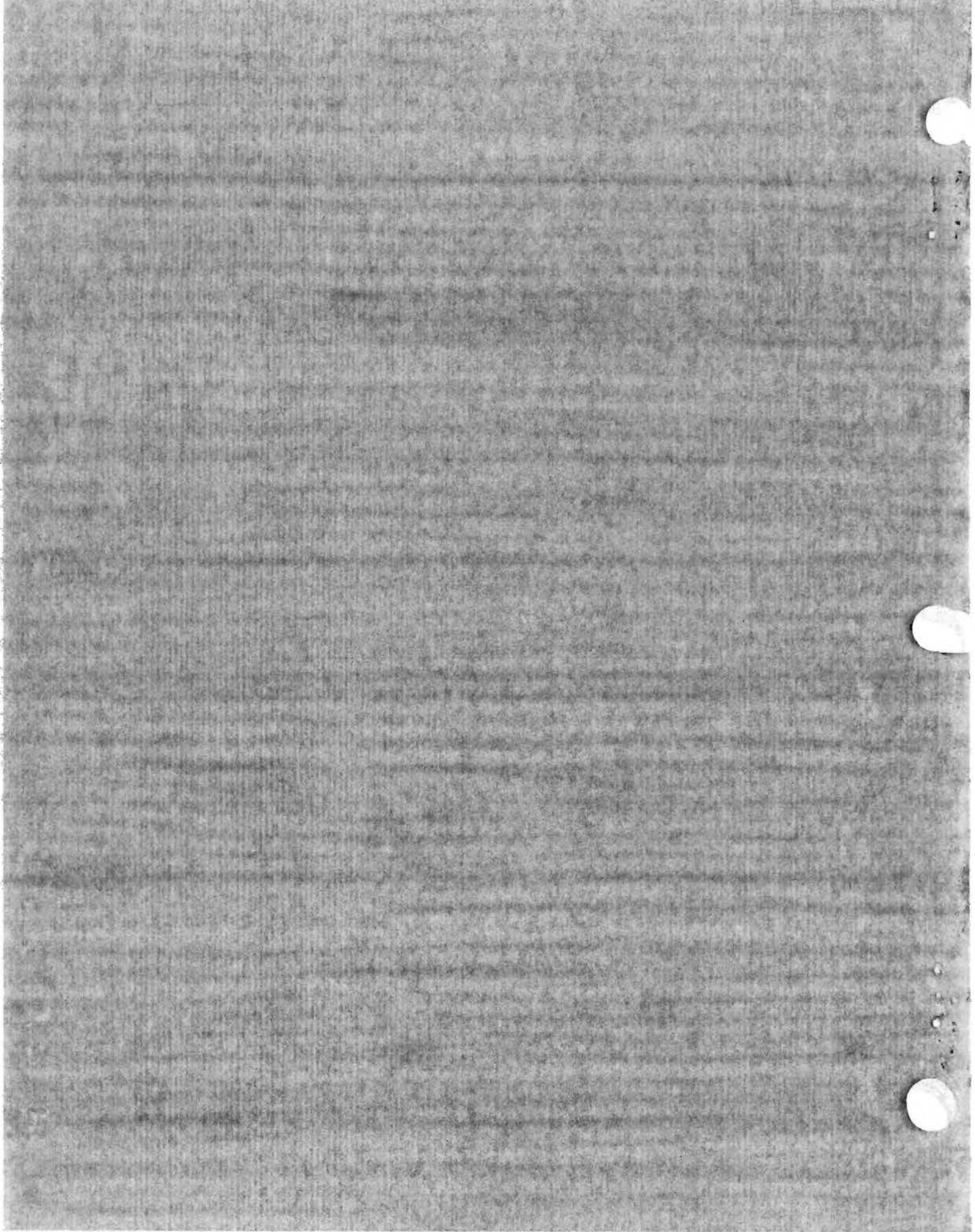
Ernest L. Willard, Program Manager, Information Assurance Audits

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Barbara J. Smith, Program Assistant



**AUDIT
REPORT**

**BARTERS ON THE INTERNATIONAL
SPACE STATION PROGRAM**

September 6, 2002

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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

FMM	Financial Management Manual
ISS	International Space Station
MPLM	Multi-Purpose Logistic Module
NPD	NASA Policy Directive
OMB	Office of Management and Budget

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



SEP - 6 2002

W

Reply to Attn of:

TO: B/Acting Deputy Chief Financial Officer
I/Assistant Administrator for External Relations
M/Associate Administrator for Space Flight

FROM: W/Assistant Inspector General for Audits

SUBJECT: Final Report on Audit of Barters on the
International Space Station Program
Assignment Number A-01-024-00
Report Number IG-02-024

The subject final report is provided for your information and use. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response has been incorporated into the body of the report. We consider management's proposed, corrective actions responsive for the recommendations. The recommendations will remain open for reporting purposes until corrective actions are complete. Please notify us when actions have been completed on the recommendations, including the extent of testing performed to ensure corrective actions are effective.

We appreciate the courtesies extended to the audit staff. If you have questions concerning the report, please contact Mr. Dennis E. Coldren, Program Director, Space Flight Audits, at (281) 483-4773, or Ms. Esther A. Judd, Audit Program Manager, at (301) 286-3359. The final report distribution is in Appendix E.

66

Alan J. Lamoreaux

Enclosure

62

cc:
HQ/AA/Chief of Staff
HQ/AI/Associate Deputy Administrator
HQ/B/Comptroller
HQ/BF/Director, Financial Management Division
HQ/G/General Counsel
HQ/JM/Director, Management Assessment Division
JSC/AA/Director, Lyndon B. Johnson Space Center

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NASA Office of Inspector General

IG-02-024
A-01-024-00

September 6, 2002

Barters on the International Space Station Program

Executive Summary

Background. NASA barters with other space agencies¹ to obtain International Space Station (ISS) hardware elements in exchange for providing goods and services such as Space Shuttle transportation² and a share of NASA's ISS utilization rights³ (Appendix B contains details on the barters).⁴ NASA estimated the total value of the ISS barters at about \$1.5 billion. To date, the major elements NASA has received are three Multi-Purpose Logistic Modules (MPLM's)⁵ built by the Italian Space Agency and the Super Guppy Transport Aircraft⁶ provided by the European Space Agency.⁷

Objectives. The overall audit objective was to evaluate NASA's management of barters on the ISS Program. Specifically, we determined whether NASA will receive adequate consideration for the goods and services it will provide and whether NASA properly accounted for offset transactions and complied with bartering agreements. Appendix A contains further details of our objectives, scope, and methodology.

Results of Audit. To date, NASA has complied with the bartering agreements but did not maintain adequate documentation to support its estimates of bartered item values. As a result, we could not determine whether NASA would receive adequate consideration for the estimated \$1.5 billion of goods and services the Agency would provide (Finding A).

¹NASA has International Space Station bartering agreements with the European Space Agency, the Italian Space Agency, the National Space Development Agency of Japan, the Canadian Space Agency, and the Brazilian Space Agency.

²NASA funds all Space Shuttle transportation through the Space Shuttle Program.

³Utilization rights are established in the memorandums of understanding between the ISS international partners and address accommodations and resources on the ISS. The accommodations include NASA's laboratory module and sites for external payloads, the European pressurized laboratory, and the Japanese experimental module. The resources include items such as power, user servicing capacity, heat rejection capacity, crew time, and data handling capacity. NASA's user accommodation rights are 97.7 percent of NASA's laboratory module and external payload sites, 46.7 percent of the European pressurized laboratory, and 46.7 percent of the Japanese experimental laboratory. NASA's allocation of utilization resources is 76.6 percent of non-Russian resources.

⁴NASA has two types of ISS agreements that this report refers to as bartering agreements. The two types are (1) cooperative barters in which a participant provides NASA with an element, system, or function, in exchange for consideration such as NASA's utilization and (2) offset barters in which NASA or the partner receives goods and services to offset a financial obligation.

⁵The pressurized MPLM's can accommodate 16 perimeter racks and 2 aisle storage containers for transporting user payloads and resupply items to and from the ISS.

⁶The Super Guppy Transport Aircraft is used for, but is not limited to, transporting ISS elements.

⁷The ISS agreement with the European Space Agency includes 11 member states: Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

Additionally, NASA did not properly account for bartered property. As a result, NASA's liabilities are understated by as much as _____ and the Agency could improperly account for an additional _____ of bartered property (Finding B).

Other Matters of Interest. The National Aeronautics and Space Administration Authorization Act for fiscal year 2000 (Public Law 106-391) required that NASA obligate not more than \$25 billion for ISS development. Because projected costs exceeded the mandated limit, NASA's budget required significant reductions for the ISS. As a result, NASA deferred certain elements considered high risk, such as the habitation module and the crew return vehicle. If no alternatives are provided, the absence of the deferred elements will limit the permanent ISS crew to three. NASA and the international space agencies negotiated two ISS bartering agreements based on a percentage of utilization rights contemplated with a seven-person crew configuration. To the extent that the two bartering agreements may be affected by a reduction in planned on-orbit resources, NASA should coordinate with the affected partner.

Recommendations. NASA should establish procedures for developing documented cost and value estimates for ISS barterers and should establish accounting policies and procedures for barter transactions.

Management's Response. Management concurred with the recommendations. NASA will establish procedures for documenting and maintaining the value estimates developed during barter negotiations. The Agency will also establish accounting policies and procedures for barter transactions. The complete text of the response is in Appendix D.

Evaluation of Management's Response. We consider management's planned actions responsive.

Introduction

The ISS is a cooperative international program that began in 1984 with the United States, Canada, nine member states of the European Space Agency, and Japan. In 1988, those countries signed an intergovernmental agreement, which was superceded by a 1998 agreement that included Russia and two additional member states of the European Space Agency.⁸ To implement the provisions of the intergovernmental agreement, NASA signed bilateral memorandums of understanding with the Canadian Space Agency, the European Space Agency, the Russian Space Agency, and the Government of Japan.

The intergovernmental agreement and the memorandums of understanding established, among other things, the contributions of the partners and their financial obligations. Additionally, the agreements state that the parties will seek to minimize the exchange of funds in the cooperative program, including the use of barter to provide goods and services.

Pursuant to the agreements discussed above, NASA negotiated seven ISS bartering agreements⁹ with the Canadian Space Agency, the European Space Agency, the Italian Space Agency, the National Space Development Agency of Japan, and the Brazilian Space Agency.¹⁰ NASA will provide Space Shuttle transportation services and/or a share of NASA's ISS utilization rights in exchange for hardware elements that NASA would otherwise be required to provide. NASA provides its required hardware under the ISS prime contract with The Boeing Company (Boeing).¹¹ The ISS Program's International Partners Office estimated that NASA would receive NASA-required elements valued at about \$1.5 billion in exchange for NASA-provided services valued at about \$1.5 billion with no exchange of funds.

NASA originally planned to contract with Boeing for the Agency's required hardware elements but instead bartered for some of the items. NASA had not contracted for the hardware elements included in the seven bartering agreements except for three elements included in Boeing's prime contract.¹²

⁸The two additional member states of the European Space Agency were Sweden and Switzerland.

⁹Two of the bartering agreements were cooperative barter (Italian Space Agency and Brazilian Space Agency) and five were offset barter.

¹⁰Brazil is not an ISS international partner and, therefore, was not part of the intergovernmental agreement or memorandums of understanding.

¹¹The prime contract (NAS15-10000), awarded by Johnson Space Center, is for the delivery and support of the U.S. On-Orbit Segment of the ISS and related ground support equipment.

¹²The three elements were the Node 2 (pressurized berthing/docking port), crew freezers, and unpressurized logistic carriers/dry cargo carriers.

Findings and Recommendations

Finding A. Valuing Barters

NASA's ISS International Partners Office did not maintain adequate documentation to support the estimated \$1.5 billion in goods and services (consideration) that NASA would receive for goods and services (bartered items) it would provide under bartering agreements, and the documentation that was available contained inaccuracies. For example, the ISS International Partners Office could not adequately support its estimate for the three hardware items NASA would receive as consideration under bartering agreements. The estimate was more than double the amount the ISS Program Office deleted from the prime contract for the same three items. Adequate documentation for the estimate was not maintained because NASA had not established procedures for developing and documenting support. Consequently, we could not determine whether NASA would receive adequate consideration in exchange for the estimated \$1.5 billion in goods and services it would provide on seven bartering agreements.

Guidance on Developing Value Estimates and Documenting Transactions

ISS bartering agreements are implementing arrangements for Space Act agreements, specifically, they are memorandums of understanding between NASA and the other space agencies. NASA considers the bartering agreements as nonreimbursable.

Nonreimbursable Agreement Guidance. NASA Policy Directive (NPD) 1050.1F, "Authority to Enter Into Space Act Agreements," November 13, 1998, requires that before executing a nonreimbursable agreement, NASA must prepare a cost accounting estimate of the value of the Agency resource to be committed so that an authorizing official has a basis for determining that the proposed contribution of the non-NASA party is adequate compared to NASA's contribution.

Office of Management and Budget (OMB) Guidance. OMB Circular A-123, "Management Accountability and Control," June 21, 1995, requires transactions to be promptly recorded, properly classified, and accounted for in order to prepare reliable management reports. The documentation for transactions, management controls, and other significant events must be clear and readily available for examination.

Value Received and Provided by NASA

With a total value of \$1.5 billion, the bartering agreements are significant financial transactions, but documentation to substantiate the estimated values of the bartering agreements was not clear or readily available for our examination, as required by OMB Circular A-123. Further, NASA did not have sufficient documentation, as required by NPD 1050.1F, to show that the consideration received from the non-NASA party was adequate. NASA did sufficiently support the value of consideration provided, which primarily was Space Shuttle transportation.

Value Received. For each of the seven bartering agreements, the ISS International Partners Office prepared a worksheet that showed the estimated value of the consideration NASA would receive and provide for each hardware element. However, two of the worksheets (representing two bartering agreements) contained inadequately supported values and significant inaccuracies.

Support for Values. For two of the bartering agreements, the ISS Program Office initially budgeted, negotiated, and included three of the bartered hardware elements in Boeing's prime contract.¹³ When the ISS Program Office decided to barter the three elements, the Program Office deleted them from Boeing's contract. The worksheets showed that NASA would receive _____ of value for the three hardware elements. Yet, the ISS Program Office deleted only about _____ from the ISS prime contract for the three elements, which represented the amount the ISS Procurement Office estimated that NASA would have paid Boeing for the elements as contracted.¹⁴ The ISS International Partners Office explained that the _____ difference represented additional costs that were estimated for anticipated changes in the configuration baseline and for technical issues¹⁵ that were not included in the prime contract. That office could not provide us documentation to support the _____ difference.

Accuracy and Support for Values. For one of the barterers, the worksheet¹⁶ showed that NASA would provide services estimated at _____: The worksheet also showed that NASA would receive only _____ in consideration, a difference of _____. Representatives of the ISS International Partners Office explained that _____ of the difference was for enhancements¹⁷ that NASA would not have included without the barter. Nevertheless, the representatives could not provide documentation to show that the enhancements would add _____ of value and could not explain the remaining difference.

Value Provided. The ISS International Partners Office used its value-received estimates to determine the value of consideration (primarily Space Shuttle transportation) NASA would provide as part of the barterers. The ISS International Partners Office used NASA's Space Shuttle Pricing Guidelines¹⁸ to calculate the value of the Space Shuttle flights NASA would provide. The pricing guidelines state that a pro-rata share of _____ would be used for ISS missions that require Space Shuttle cargo bay payloads.¹⁹ The pricing guidelines also state that for Space Shuttle missions that delivered the international partners' elements to the ISS during the

¹³The two barterers included other hardware elements in addition to the three elements in Boeing's contract.

¹⁴The ISS Procurement Office negotiated the contract deletions with Boeing, and the contract files properly documented the negotiations.

¹⁵Configuration baseline is the plan for the ISS to be built and used. Changes to the configuration baseline could be caused by technical issues that were not foreseen when the baseline was planned.

¹⁶Because both worksheets contained the same type of inaccuracies and unsupported explanations, only one is discussed in this report. Also, NASA considers specific details relating to negotiation values as sensitive information.

¹⁷Enhancements are improvements to the ISS that were not included in NASA's original configuration baseline.

¹⁸OMB reviewed NASA's Space Shuttle Pricing Guidelines, May 30, 1995, in order to cost Space Shuttle services used for the development and operations of the ISS.

¹⁹

assembly phase, the price for the return trip would not be applicable. Therefore, for barter, the Space Shuttle rate would be . . . for delivery of the element to the ISS prorated for the amount of payload used.

Procedures Needed for Assurance of Adequate Consideration

The ISS International Partners Office appropriately used the pricing guidelines for Space Shuttle flight services for its value provided on barter.²⁰ However, NASA did not have adequate procedures in place to ensure that adequate documentation was maintained to show that commensurate value was received for the \$1.5 billion contribution the Agency made. NASA should establish procedures to ensure that value estimates are adequately documented so there is a basis for determining whether the proposed contribution of the non-NASA party is adequate in comparison to NASA's contribution.

Recommendation, Management's Response, and Evaluation of Response

- 1. The Associate Administrator for Space Flight should establish procedures for developing documented cost and value estimates for ISS bartering agreements.**

Management's Response. Concur. The Office of Space Flight plans to establish procedures for documenting and maintaining cost and value estimates by September 30, 2002. Management also stated that steps were taken in the most recent barter negotiation to maintain all documents created during the valuation process. The complete text of management's response is in Appendix D.

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

²⁰In "Space Shuttle Payloads," IG-01-003, December 21, 2000, we reported that NASA's average cost was based on seven Space Shuttle flights per year (see Appendix C).

Finding B. Accounting for Barters

NASA did not properly account for bartered property. Specifically, for three MPLM's received from the Italian Space Agency, NASA did not record a liability²¹ when the property was received, did not record the property consistently, and did not use the proper methodology to value the assets. Property accountability was inadequate because current Agency policy does not address accounting for barter transactions. As a result, NASA understated its liabilities by as much as _____ and the Agency could improperly account for an additional _____ of bartered property NASA expects to receive.²²

Agency Policies and Procedures

NASA has established policies and procedures on accounting for program costs and for property, plant, and equipment. For example, NASA's Financial Management Manual (FMM) defines liabilities and provides policy and procedures on how property should be valued and recorded. Also, a NASA Policy Directive specifically establishes requirements for International Space Act Agreements. Yet, the FMM and the NPD, as discussed below, do not provide policies and procedures that address accounting for transactions that pertain to ISS bartering agreements.

Financial Management Manual. FMM 9020, "Definitions and Financial Management Terms," defines accounting terms NASA uses so that Agency personnel have a common understanding of recorded and reported NASA financial operations. Specifically, FMM 9021-4, "Definitions," defines liabilities and when they will be recognized (recorded). FMM 9021-4 defines a contingent liability as a potential liability based on a past transaction or event that may become an actual liability. The FMM requires that a contingent liability be recorded when the transaction or event has occurred and the future outflow of resources is measurable. FMM 9021-4 also defines a liability as the amount owed by NASA for items received, services rendered, expenses incurred, assets acquired, construction performed (regardless of whether invoices have been received), and as amounts received but as yet unearned.

NASA Policy Directive. NPD 1050.1F, "Authority to Enter Into Space Act Agreements," November 13, 1998, assigns responsibility to the NASA Chief Financial Officer and the Centers' Chief Financial Officers for developing guidelines consistent with the Agency's cost accounting system and budget development procedures to ensure fiscal integrity.²³

²¹The liability could be actual, contingent, or a combination thereof. Liabilities are defined in the FMM and are discussed in the finding paragraph entitled, "Financial Management Manual."

²²

²³The ISS bartering agreements are not Space Act Agreements. Nonetheless, the bartering agreements are international agreements that implement Space Act Agreements.

Accounting for Multi-Purpose Logistic Modules

NASA received three MPLM's valued at _____²⁴ as part of a 1997 cooperative barter between NASA and the Italian Space Agency. The agreement required the Italian Space Agency to design, fabricate, test, and deliver three MPLM flight elements complete with subsystems, ground support equipment, and associated software required to operate the elements. The agreement also required NASA to provide the Italian Space Agency with a share of NASA's utilization rights on the ISS, Space Shuttle launch and return services, and data transmission services.²⁵

Disclosure of Liability. The Italian Space Agency delivered the first MPLM to NASA in 1998, the second in 1999, and the third in 2001. NASA recorded the MPLM's as assets valued at _____ respectively,²⁶ but did not record a corresponding liability as required by FMM 9020. Based on the ISS International Partners Office's value estimate, NASA is required to provide the Italian Space Agency services valued at _____ in exchange for the MPLM's and the associated support. The Italian Space Agency delivered the MPLM's, but NASA had not yet provided the services. Therefore, NASA should recognize an actual liability of as much as _____

Recording Bartered Property. Kennedy Space Center (Kennedy) and Lyndon B. Johnson Space Center (Johnson) recorded the MPLM's incorrectly and inconsistently. Property accounting representatives at Kennedy and Johnson stated they had recorded the MPLM's in accordance with the FMM based on the documentation available. As stated earlier, the FMM does not address bartering agreements. Yet neither representative contacted the Office of the Chief Financial Officer at NASA Headquarters for guidance on how to account for the property to ensure that each Center would consistently record the assets.

Kennedy Space Center. When the Italian Space Agency delivered the first two MPLM's, Kennedy should have recorded them as Government-owned and held property before Kennedy transferred the property to Boeing as Government-furnished equipment.²⁷ Instead, Kennedy recorded the MPLM's as Government-owned and contractor-held property. Because Kennedy did not record the receipt of the property as Government-owned and held property, there was no record to show how NASA acquired the MPLM's and subsequently provided them to Boeing. The accounting method Kennedy used incorrectly implied that the Italian Space Agency provided the MPLM's to Boeing as Government-furnished equipment at no charge.

²⁴The _____ was the amount NASA capitalized (recognized and recorded) as an asset for the MPLM's flight elements. The amount capitalized did not include values estimated for ground support equipment, associated software, and sustaining engineering required for the maintenance and operation of the MPLM's.

²⁵NASA will provide .85 percent of NASA's utilization rights on the ISS, Space Shuttle launch and return transportation services for the Italian Space Agency's .85-percent utilization allocation, one crew rotation every 5 years with a minimum of three rotations, and data transmission services from NASA's Tracking and Data Relay Satellite System (TDRSS). The TDRSS is NASA's space and ground communications network for command, control, and operations of ISS elements and payloads.

²⁶NASA recorded the MPLM's based on the amount the Italian Space Agency estimated as its acquisition costs. For additional information, see paragraph entitled "Valuation of Bartered Property."

²⁷Kennedy transferred the property to Boeing under Kennedy's Payload Ground Operations Contract.

In fact, NASA agreed to compensate the Italian Space Agency by providing launch services, utilization, and crew rotations.

Johnson Space Center. Unlike Kennedy, Johnson properly recorded the third MPLM as Government-owned and held property before Johnson transferred the element to Kennedy. Therefore, an accounting record existed to show how NASA obtained the MPLM. Still, Johnson incorrectly recorded the third MPLM as donated property. Similar to Kennedy's method, the accounting method Johnson used incorrectly implied that the Italian Space Agency provided the MPLM at no charge. Johnson's property accounting representative stated that he did not know NASA was required to provide services to the partner in exchange for the MPLM. The representative explained that neither Johnson's Legal Office nor the ISS Program Office indicated there was a contingent liability as a result of the cooperative barter.²⁸

Valuation of Bartered Property. NASA did not value the individual MPLM's equally. Kennedy improperly included all of Italy's nonrecurring engineering and development costs in the _____ recorded for the first MPLM instead of allocating the nonrecurring costs to each of the three MPLM's. As a result of this accounting treatment, NASA overvalued the first MPLM and undervalued the second and third MPLM's. The unequal valuation should not affect NASA's accounts as long as all three MPLM's remain on the books. On the other hand, if NASA were to remove one or two of the MPLM's from its accounting records, the remaining assets would not be correctly valued, either individually or in total.

Need for Guidance on Accounting Treatment of Barter Transaction

The ISS bartering agreements are unique transactions because there is no exchange of funds, and they involve international entities that are not required to follow NASA guidance. Therefore, NASA should review the adequacy of its accounting method, and the method should be approved by NASA's Office of the Chief Financial Officer. To ensure complete, proper, and consistent valuation and recordation of barter transactions, NASA should establish policies and procedures for barter transactions. At a minimum, NASA should revise current financial management policy and procedures to include specific reference to barter-type transactions.

Recommendation, Management's Response, and Evaluation of Response

- 2. The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers, should establish accounting policies and procedures for barter transactions.**

Management's Response. Concur. The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers will establish accounting policies and procedures for barter transactions by September 30, 2002 (see Appendix D).

²⁸Each year, NASA's Centers submit a "Commitments and Contingencies Report" for the Center's Legal Office and Program Offices to respond to and report any contingent liabilities to property management.

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

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall objective was to evaluate NASA's management of barter on the International Space Station (ISS) Program. Specifically, we determined whether NASA will receive adequate consideration for the goods and services it will provide and whether NASA properly accounted for offset transactions and complied with bartering agreements with the ISS partners.

Scope and Methodology

To meet our objectives, we reviewed the intergovernmental agreement, memorandums of understanding, ISS bartering agreements,²⁹ and the U.S. Department of State Supplementary Handbook on the C-175 Process.³⁰ We also reviewed the National Aeronautics and Space Administration Authorization Act of 2000, ISS budgets, ISS prime contract, ISS Management and Cost Evaluation Report, and The Boeing Company's (the ISS prime contractor) Performance Measurement System Reports. We interviewed personnel in the ISS Program Office, Space Shuttle Program Office, Lyndon B. Johnson Space Center (Johnson) Legal Office, and Johnson's Accounting and Budget Office. We also interviewed personnel in the NASA Headquarters Office of External Relations, Human Space Flight, and Office of the Chief Financial Officer. We verified the C-175 process with personnel at the Department of State. We reviewed applicable regulations including Office of Management and Budget (OMB) Circulars, NASA policy directives, NASA Management Instruction, NASA Financial Management Manual, and Federal Acquisition Regulation. We did not assess the reliability of computer-processed data, because we did not rely on it to achieve our objectives.

Management Controls Reviewed

We reviewed management controls relative to proposal analysis, negotiation, and documentation. We also reviewed OMB Circular A-123, "Management Accountability and Control." Management controls need to be strengthened to ensure that NASA maintains adequate documented valuation support (Finding A) and properly accounts for barter (Finding B).

Audit Field Work

We performed the audit field work from April 2001 through March 2002 at Johnson and NASA Headquarters. We performed the audit in accordance with generally accepted government auditing standards.

²⁹See footnote 1 for a listing of space agencies involved in ISS barter.

³⁰The supplementary handbook streamlined and expedited the C-175 process for routine international science and technology agreements. The C-175 process involves interagency review and clearance of proposed international agreements.

Appendix A

Prior Audits and Other Reviews

The NASA Office of Inspector General and the General Accounting Office have issued numerous reports on the ISS Program. Related reports are summarized in Appendix C of this report.

Appendix B. Cooperative and Offset Bartering Agreements¹

Partner	Bartering Agreement States that NASA Receives the Following	Bartering Agreement States that NASA Provides the Following
Italian Space Agency	Three Multi-Purpose Logistics Modules ²	Space Shuttle flight, 0.85 percent NASA payload accommodations and utilization resources, and one crew opportunity every 5 years
European Space Agency	Super Guppy Transport Aircraft ³	450 kilograms of payload delivered by the Space Shuttle
European Space Agency	Cupolas 1 and 2 ⁴	Space Shuttle launch of payloads, window glass, and cupola outfitting hardware
Canadian Space Agency	Special Purpose Dexterous Manipulator System, software upgrades, Science Power Platform Analysis support, portion of Canada's utilization rights, and Canada's Micro-gravity Isolation Mount. One rack year or one adaptor site year.	Common Operations Cost Offset for 5.25 rack-years, 6 external adaptor site-years and associated 2 percent utilization resources. 800 pounds payload transport, \$5 million Tracking and Data Relay Satellite System credit for Canada payloads and some training for their astronauts.
National Space Development Agency of Japan	Centrifuge Accommodations Module, Centrifuge Rotor, Life Sciences Glovebox, and one HII-A launch	Space Shuttle launches for Japanese Experiment Module, Pressurized Module, Exposed Facility, Logistics Module, and Unpressurized Logistics Module
European Space Agency	Nodes 2 and 3, ⁴ refrigerator/freezers, cryogenic freezer/outfitting, sustaining engineering, spares for the laboratory freezers, micro-gravity science glove box	Outfitting for Node 3, Space Shuttle flight for the Columbus Orbital Facility
Brazilian Space Agency	4-Express Pallets, 4-Unpressurized Logistics Carriers, Cargo Handling Interface Assembly, Window Observational Research Facility, Technology Experiment Facility, and Z1-Unpressurized Logistics Carriers-Attach System	Space Shuttle flight, express locker, Window Observational Research Facility time, 2-50 kilograms Technical Experiment Facility trays, 0.45 percent of NASA's utilization resources, and 1 crew opportunity during life of the ISS

¹The agreements with the Italian Space Agency and the Brazilian Space Agency are cooperative bartering agreements. The agreements with the European Space Agency, the Canadian Space Agency, and the National Space Agency of Japan are offset bartering agreements.

²NASA received the Multi-Purpose Logistic Modules from the Italian Space Agency but had not yet provided the services required by the bartering agreement.

³NASA received the Super Guppy Transport Aircraft from the European Space Agency and has delivered the 450 kilograms of Space Shuttle payload to the International Space Station as required by the barter agreement.

⁴NASA deleted Cupola 2 and negotiated a small credit as part of the Node 2 and Node 3 barter with the European Space Agency. Nodes 2 and 3 are pressurized berthing/docking ports that accommodate the passage of the crew and equipment and are used for storage.

Appendix C. Prior Audits and Other Reviews

Office of Inspector General Reports

The NASA Office of Inspector General (OIG) and the General Accounting Office have issued reports relating to Space Shuttle payloads and international agreements. The reports are summarized below. See www.hq.nasa.gov/office/oig/hq/issuedaudits.html for copies of the NASA OIG reports.

“Space Shuttle Payloads,” IG-01-003, December 21, 2000. NASA’s budget for the Space Shuttle is based on a rate of seven flights a year. More than seven flights in a year require additional funding (which is referred to as the marginal cost of an added flight). An added flight would normally be a reimbursable flight, that is, the entity and primary payload necessitating the Space Shuttle flight would pay the user charge. As part of the budget process, NASA calculates the Space Shuttle average cost per flight and the marginal cost of an added flight. NASA’s fiscal year (FY) 2001 budget submission reported the FY 2002 average cost per flight as _____ and the marginal cost of an added flight as _____. However, the Agency had not established a pricing system and had not established a methodology for determining additive cost as required by 42 USC § 2466. NASA had not taken these actions because it believed that it was charging the Air Force fair value and that, due to considerations such as commercialization and national security, the Agency has broad statutory authority to set prices on a case-by-case basis. As a result, NASA could not show that its pricing represented reasonable customer incentives and, therefore, may have offered the two Space Shuttle flights at prices that are less than those intended by 42 USC § 2466. NASA did not agree with our report, and we have referred it to the NASA Follow-up Official.

“Assessment of the Crew Medical Transport Barter Arrangement,” Inspections and Assessments Letter, G-00-015, October 6, 2000. Negotiations were under way for NASA to acquire a Boeing Business Jet for use as a dedicated crew medical transport for the ISS. NASA planned to receive the aircraft in a bartering agreement involving the Government of Japan and Mitsubishi, Inc. NASA determined that the acquisition of a dedicated crew medical transport aircraft was the most effective approach to meeting crew medical needs. However, NASA’s analyses supporting this determination did not consider all reasonable alternatives. NASA subsequently cancelled the negotiations for the barter.

“Management and Administration of International Agreements,” IG-00-004, January 14, 2000. The NASA Office of External Relations is responsible for developing and implementing Agency international policies, including drafting, coordinating, negotiating, and maintaining records on all international agreements. That office is also responsible for ensuring that Agency programs are conducted in accordance with Administration and Agency international policies. Documentation and information

related to the international agreements were not complete or accurate. As a result, the Agency is relying on incomplete and inaccurate information when drafting new international agreements or responding to inquiries.

General Accounting Office (GAO) Reports

“Cost to Operate After Assembly Is Uncertain,” GAO-99-177, August 1999. In sharing operating responsibilities for the ISS, NASA and the Russian Space Agency agreed to exchange services rather than funds, but the agencies may not be able to achieve a balance in the services provided to each other. The cost of operating the ISS is also supposed to be shared with NASA’s other international partners. NASA’s share of common operating costs has increased slightly as partners have reduced their participation. Allowing the other partners to provide services to reimburse NASA for their shares of common cost may not offset NASA funding requirements. The partners may also reimburse NASA for Space Shuttle and communication services, but the amount and form of reimbursement cannot be accurately estimated at this time. The complexity, long life, and international nature of the Space Station program make it extremely challenging to accurately forecast future operating costs. Also unknown is the degree to which agreements with international partners for sharing cost and reimbursable services will offset NASA funding requirements.

Appendix D. Management's Response

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



August 9, 2002

Reply to Airtel of 1

TO: W/Assistant Inspector General for Audits

FROM: B/Chief Financial Officer
I/Assistant Administrator for External Relations
M/Associate Administrator for Space Flight

SUBJECT: Response to the May 24, 2002, Draft Report on Audit of Barter on the International Space Station Program, Assignment Number A-01-024-00

The following memorandum provides a joint response from the Office of the Chief Financial Officer, the Office of External Relations, and the Office of Space Flight to the subject audit report. This response has been coordinated with the Office of the General Counsel, the Johnson Space Center, and the International Space Station (ISS) Program Office. Because the report contains information that is negotiation-sensitive, including specific dollar values assigned to barter elements by NASA for ongoing valuation purposes, we request that the report remain administratively controlled.

I. Response to Finding A:

We concur with the recommendation of the Office of the Inspector General (OIG) that NASA should improve the process for documenting the ISS barter. A more standardized system or process for filing and archiving those records created during the valuation and negotiation of barter would facilitate future audits of NASA's ISS barter arrangements. NASA currently creates such records as a part of the process in place for international agreements. This process is contained in NASA Policy Directive (NPD) 1050.1F and NPD 1360.2. This process directs that all barter be properly developed, approved, and negotiated, in order to provide NASA a fair exchange while minimizing the exchange of funds and furthering NASA and U.S. Government goals.

Although the process that NASA had been following for developing and negotiating ISS barter is consistent with the guidance contained in the NPD's noted above, we have taken steps to improve the process consistent with the OIG's initial expression of concern. NASA took steps in the most recent barter negotiation with the European Space Agency to maintain all documents created during the barter valuation process. We documented our initial value estimates, the evolution of the series of proposals that

were addressed through negotiation, and the final barter rebalance agreed to by the Parties. These records will be maintained as part of the permanent negotiation and barter files. The Office of Space Flight will establish procedures for documenting and maintaining the value estimates developed during barter negotiations by September 30, 2002.

Despite a lack of sufficient contemporaneous documentation, the barter arrangements are effective for which NASA received returns appropriate for its investment while minimizing the exchange of funds. The OIG notes that the barter arrangements together represent a significant financial transaction for NASA. NASA also judged these agreements to be "significant" and thus subject to the Case-Zablocki Act (1 U.S.C. section 112 (b)). As a result, the barter arrangements were subject to review by NASA management and were circulated by the Department of State for interagency approval to the appropriate U.S. Government entities, including the Departments of State, Defense, and Commerce, and the Office of Management and Budget. This process provides program, agency, and interagency level review of the proposed barter arrangements.

We also wish to note the distinction between two types of barter arrangements: cooperative agreements, such as the bilateral agreement with the Italian Space Agency for the provision of three Multipurpose Logistics Modules, and offsets, such as the agreement with the European Space Agency for the launch of their Columbus Laboratory. Cooperative agreements are non-reimbursable agreements developed based on mutual benefit. Offsets are developed based on an accepted monetary value, such as the cost of launching payloads on the Space Shuttle, for which equal return is provided in kind. We recognize that in both cases, NASA needs to maintain the documentation created to support the values established in the barter arrangements.

Response to Finding B:

1. We concur with recommendation 2. The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers, will establish accounting policies and procedures for barter transactions by September 30, 2002.

Appendix D

3

Should you have questions concerning this response, please contact Ms. Donna Shortz at (202) 358-1406. Ms. Shortz will coordinate any follow-up necessary to ensure an appropriate and timely response. We appreciate the opportunity to provide comments prior to the issuance of the final report.

g Frederick Gregory ^{b6}

^{b6}
John D. Schumacher *JDS*

^{b6}
Steven J. Varholy *SJV*

cc:
AA/Chief of Staff
BF/Director, Financial Management Division
G/General Counsel
JM/Director/Management Assessment Division

Appendix E. Report Distribution

National Aeronautics and Space Administration (NASA) Headquarters

HQ/A/Administrator
HQ/AA/Chief of Staff
HQ/AD/Deputy Administrator
HQ/AI/Associate Deputy Administrator
HQ/B/Acting Deputy Chief Financial Officer
HQ/B/Comptroller
HQ/BF/Director, Financial Management Division
HQ/G/General Counsel
HQ/I/Assistant Administrator for External Relations
HQ/J/Assistant Administrator for Management Systems
HQ/JM/Director, Management Assessment Division
HQ/L/Assistant Administrator for Legislative Affairs
HQ/M/Associate Administrator for Space Flight

NASA Centers

JSC/AA/Director, Lyndon B. Johnson Space Center
KSC/CC/Chief Counsel, John F. Kennedy Space Center

NASA Assistant Inspector General for Audits Reader Survey

The NASA Office of Inspector General has a continuing interest in improving the usefulness of our reports. We wish to make our reports responsive to our customers' interests, consistent with our statutory responsibility. Could you help us by completing our reader survey? For your convenience, the questionnaire can be completed electronically through our homepage at <http://www.hq.nasa.gov/office/oig/hq/audits.html> or can be mailed to the Assistant Inspector General for Audits; NASA Headquarters, Code W, Washington, DC 20546-0001.

Report Title: Audit of Barbers on the International Space Station 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)

- | | |
|--|--|
| <input type="checkbox"/> Congressional Staff | <input type="checkbox"/> Media |
| <input type="checkbox"/> NASA Employee | <input type="checkbox"/> Public Interest |
| <input type="checkbox"/> Private Citizen | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Government: _____ | Federal: _____ State: _____ Local: _____ |

May we contact you about your comments?

Yes: _____ No: _____

Name: _____

Telephone: _____

Thank you for your cooperation in completing this survey.

Major Contributors to the Report

Dennis E. Coldren, Program Director, Space Flight Audits

Esther A. Judd, Program Manager

Jim J. Griggs, Auditor-in-Charge

Barbara A. Moody, Auditor

Nancy Cipolla, Report Process Manager

June C. Glisan, Program Assistant



O-JS-08-0097-P

April 7, 2008

**ALLEGED COST MISCHARGING ON NASA SHUTTLE AND SPACE STATION
PROGRAMS**

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: This case was initiated based upon information received on January 7, 2008, that an envelope containing an anonymous letter was slid under the Defense Contract Management Agency Government office door at the Bay Area Boulevard Boeing Houston facility from an apparent Boeing employee concerned about mischarging Information Technology expenses between the NASA Shuttle and Space Station programs. The complaint did not provide any specific details concerning the alleged cost mischarging.

b7c
b7c
; reported that Boeing, under NASA prime contract number NAS1510000, did maintain a corporate document/drawing repository but was not aware that any of the support of this system was paid through contracts with NASA. This corporate system would be utilized by numerous projects maintained by Boeing not limited to NASA projects only.

A Vehicle Master Database (VMDB) was developed by NASA which is only used by Boeing. This database is for use with the ISS program only. No other types of documents are placed within this system. The VMDB is maintained by Boeing and the costs associated with this database are charged as a direct cost to the ISS contract.

Boeing is a subcontractor under NASA contract number NNJ06VA01C, Space Program Operations Contract (SPOC), awarded to United Space Alliance (USA.) b7c
b7c ; advised all orbiter drawings are maintained in the Shuttle Drawing System (SDS.) The master SDS system is maintained by Boeing at their corporate Huntington Beach, CA facility. Two duplicate copies of this system are maintained at JSC and the Kennedy Space Center (KSC) by USA.

b7c ; reported the SDS is unique to the shuttle program and confirmed with b7c that no ISS drawings are maintained within this system. Direct charges to the SPOC contract are made by

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USA to maintain and operate the JSC and KSC SDS programs. Costs associated with the Boeing master SDS are charged as an indirect cost.

Based upon insufficient information in the original allegation and lack of substantial investigative information being developed to substantiate the complaint, this case is closed.

Prepared by: b7c
DISTR: File

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O-JS-08-0162-P

April 22, 2008

**ALLEGED CONFLICT OF INTEREST – STANDING REVIEW BOARD-ORION
CREW EXPLORATION VEHICLE PROJECT**

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: Case initiated based on receipt of a referral from NASA OIG, Office of Audits (OA's), Johnson Space Center, Houston, TX wherein ^{b7c} alleged that during the Audit of the Acquisition of the Orion Crew Exploration Vehicle (CEV), auditors identified an Orion Standing Review Board (SRB) member that did not disclose that ^{b7c} was an employee of a contractor receiving funding from the Orion Project.

The investigation revealed that SRB Members were nominated by NASA's Independent Program Assessment Office (IPAO) and appointed by the project's convening authority. The IPAO used a "Personal, External, and organizational Independence, and Political Influence Self Assessment" form as a tool to assess potential board member's independence and required each of the candidate Orion SRB members to complete a Self Assessment Form. One question under Section III of the Form asks the following questions:

- Have you ever been a superior or subordinate of an employee of a project being reviewed?
- Have you ever directly worked for the program or project being reviewed or been an employee of a contractor that receives funding from the program or project being reviewed?

A "Yes" answer required a detailed explanation of the circumstances. ^{b7c}
^{b7c} and SRB member answered the question "No".

On September 19, 2007; ^{b7c} completed section 3 of the Self-Assessment form again, but answered "yes" to the question indicating that ^{b7c} was an employee of a contractor receiving funding from the Orion Project. ^{b7c} provided additional information on the form by indicating that ^{b7c} has two people who provide purely administrative support to the LAS project office located at MSFC, Huntsville, AL. ^{b7c} provided NASA OIG with a copy of the revised form.

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On March 12, 2008, the OIG interviewed b7c who stated that b7c is a member of the SRB for the Orion Crew Exploration Vehicle Project and was appointed to the board in February 2007. b7c is a part time employee and began working for b7c in January 2002 in support of the Marshal Space Flight Center (MSFC) program in Electric Propulsion and transferred out of MSFC in 2006. Currently, b7c supports the Aries Upper Stage Project. b7c role on the board is in the technical discipline area for electrical power systems. The board is composed of a technical expert in each area. There are a number of members who are well versed in program management.

b7c stated b7c completed the Personal External and Organizational Independence and Political Influence Self Assessment Form in February 2007. b7c did not disclose that b7c was an employee of a contractor receiving funding from the Orion Project because b7c was not aware that b7c had any funding coming from the project.

On April 7, 2008, NASA OIG reviewed a copy of a draft memorandum prepared by the OA's. The report confirmed that b7c did not disclose that b7c was an employee of a contractor receiving funding from the Orion Project. The report also noted that six Orion SRB members in addition to the Chair were not independent of the Orion Project, as required by NASA procedural Requirements 7120.5D. They were employees (and in four cases were also stockholders) of companies having contracts for Orion work. OA concluded that because of the employee/stockholder status, those members had a vested interest in the Project's success - making them unsuited to serve on an advisory board that emphasizes "objectivity and independence".

The OA's recommended that the Associate Administrator for Program Analysis and Evaluation, in coordination with the Office of General Counsel, and the Office of the Chief Engineer; suspend the involvement of the six SRB members from further SRB activities until an evaluation of the legality and propriety of the participation of the individuals in the SRB is concluded.

The investigation found no evidence to support a violation of 18 USC 1001 (false statements) or 18 USC 208 (Conflict of Interest) regarding b7c failure to disclose that b7c was an employee of a contractor receiving funding from the Orion Project. Since the OA has addressed the administrative issues involving the contractors who disclosed the financial interests their companies had from the Orion Program and no criminal or civil violations were identified, the case is being closed.

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O-LA-08-0112-S

May 5, 2008

REPORT OF INVESTIGATION

ALLEGED COLUMBIA TILE FOR SALE ON EBAY

New Jersey

CASE CLOSING/REFERRED: This administrative investigation was predicated following a complaint to the Kennedy Space Center OIG Resident Agency (RA), that an item described as "Authentic Columbia Space Shuttle Tile" was listed for sale on the eBay, Inc. (eBay) internet web site. The narrative for the listing, item number b7c, claimed that the shuttle tile was not from the loss of STS-107 but came from the same lot of tile material originally installed on the Columbia orbiter. The purported seller was b7c of New Jersey.

Since shuttle tiles are fabricated from ceramic or ablative materials designed for use in reentry vehicles, they are classified as "defense articles." The manufacture or export of such materials is restricted and regulated under the International Traffic in Arms Regulations (ITAR) located at Title 22, Code of Federal Regulations, Sections 120-130. Any person manufacturing or exporting defense articles must register with the US Office of Defense Trade Controls (ODTC) per ITAR Section 122.1. Although a seller of said shuttle tile may not do so with the intent that it be sent out of the US, they cannot sell it due to the possibility that the tile could be exported to a foreign country without the knowledge and permission of the ODTC. In order to export shuttle tile, a person must obtain ODTC approval and secure a license per ITAR Section 123.2.

In a letter dated March 26, 2008, from b7c ; to b7c (with a copy to b7c provided the circumstances of b7c purported possession and attempted sale of the tile. b7c recommended that b7c office send b7c a cautionary letter explaining b7c obligations under the ITAR and emphasize the uncertainty inherent in selling shuttle tile on the internet.

Based upon the appropriate recommendation made, no further investigative activity is warranted. This investigation is closed.

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O-AR-08-0315-S

May 7, 2008

ALLEGED SCIENCE SUPPRESSION AT ARC

INFORMATION MEMORANDUM/CASE CLOSING: As previously reported, b7c b7c alleged that scientific reporting was suppressed at the Ames Research Center (ARC). b7c is the b7c b7c alleged b7c ooss, b7c b7c discouraged and preventing b7c from reporting Earth Science issues, specifically the ARCTAS science mission involving climate change research.

After being interviewed twice, b7c continued to contact the Reporting Agent concerning these issues. b7c provided emails from b7c a retired ARC PAO employee containing data which indicated b7c involvement with the science suppression issues at NASA HQ. None of the materials b7c provided indicated b7c was attempting to suppress b7c scientific reporting.

The crux of the allegation involved b7c desire to travel to Alaska in April to cover ARCTAS, which b7c in other emails, indicted was not logistically feasible given the demands of ARC's PAO during that particular week. Therefore b7c seemed to be exercising b7c management prerogative concerning personnel and resources.

Even more to the point, b7c tried to enlist the support of senior NASA HQ and ARC officials to sway b7c decision. This appeared to backfire on b7c as evidenced by the email chain provided to the Reporting Agent, when b7c explained the reasons for b7c decision on coverage of the ARCTAS mission, and those senior officials withdrew their support.

On March 6, 2008, the Reporting Agent forwarded the case initiation for this matter through channels for review by the SSRRC. Finally, on April 24, 2008, the SSRRC advised the WFO that NASA OIG at HQ would respond to b7c in a written acknowledgement of b7c complaint. In that letter b7c will be informed of new NASA rules regarding news release dissemination disputes. A copy of the memo and the Code of Federal Regulation (CFR) will be attached. The SSRCC did not specify if any further investigation should be undertaken by WFO/ARC, therefore it appears this matter is closed after investing many man-hours interviewing b7c and writing reports of the investigative activity.

In the meanwhile, on March 27, 2008, b7c informally discussed b7c contact and allegations in general terms with ARC management. Initially, WFO/ARC intended to refer this

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matter to the Center Management. However, since they were alerted to and dealt with this issue, no further action is warranted by OI in accordance with Chapter 32 of the OI Manual.

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O-KE-08-0216-HL-P

June 4, 2008

NASA DOCUMENTS, PICTURES, PROTOTYPES FOR SALE ON CRAIG'S LIST

INFORMATION MEMORANDUM/CLOSING: This investigation was initiated based on information received from a hotline complaint reported by the General Counsel's Office, NASA Headquarters, that an advertisement for the sale of several NASA related items, to include an alleged NASA Top Secret document from 1958, had been posted on the Internet website known as "Craig's List". In the ad, the seller claimed to have come across a "secret storage box that was to be sent to the dump", which contained the items. The seller stated the items were the personal belongings of [redacted], who was [redacted] of some sort. Traditional investigative methods were unable to identify the seller, so a NASA OIG Undercover Agent (UCA) was used to contact the seller online through Craig's List posing as an interested buyer. The UCA identified the seller as [redacted].
Address: [redacted] Additional UCA contact with [redacted] was unable to determine if the advertised Top Secret document was authentic. After [redacted] stopped communicating with the UCA, a decision was made to contact [redacted] directly.

Investigation and law enforcement records reviews disclosed that in August 2007 [redacted] was arrested by New Smyrna Beach Police Department for aggravated assault with a deadly weapon; however, the charges were later dropped. In May 2008, Volusia County Sheriff's Office (VCSO) was seeking [redacted] for questioning in a vehicle arson investigation. Additionally, [redacted] former employer indicated [redacted] and stated that after [redacted] [redacted] took an AR-15 assault rifle and three handguns from [redacted] as payment for money [redacted] owned [redacted]

[redacted] was located and interviewed at [redacted]. The Reporting Agent (RA) noted [redacted] was in possession of what appeared to be a French made FAMAS G2 Assault rifle and a semi-automatic handgun. [redacted] claimed the rifle was a "soft-fire" paintball rifle used for tactical training. [redacted] claimed [redacted] obtained a box filled with NASA related photographs and documents after [redacted] former employer bought [redacted] estate from his family, which included [redacted] house. [redacted] employer gave the items to [redacted] (the employer verified this). [redacted] displayed all the items from the box [redacted] found, which included only three documents, none of which were marked "TS" or "Top Secret". None of the documents were of a sensitive nature; one was [redacted] Standard Form (SF) 50 and

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the other two were related personnel documents containing job descriptions and personnel related data. [redacted] denied that any other documents were in the box and stated the SF 50 was the document [redacted] had described in his ad as being Top Secret. [redacted] stated it was secret because it described what [redacted] did for a living and that [redacted] must have thought it was sensitive because [redacted] hid it in a box in his attic. [redacted] also later admitted [redacted] had stated the document was Top Secret in [redacted] ad because he thought it would make people want to buy it more. It was noted that the SF 50 contained brown markings caused by age strikingly similar to the photograph of the alleged Top Secret document posted in the online ad. The RA advised [redacted] to remove the "Top Secret" description of the document in [redacted] ad. None of [redacted] other NASA related items appeared to pose a problem.

As all of the property in question appeared to be legitimately obtained and not of a sensitive nature, no further investigative activity is required. All criminal and administrative investigative effort is complete and this investigation is closed.

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O-KE-08-0360-P

August 29, 2008

POSSESSION OF ALLEGED CHALLENGER O-RING

b7c

INFORMATION MEMORANDUM / CLOSING: Via electronic mail, NASA OIG received a complaint from b7D. The complainant stated that 7D had received an unsolicited email from someone identified as b7D wherein b7D claimed to have a fragment of an O-ring from the wreckage of Space Shuttle *Challenger* in 7D possession. The email contained attached digital images that did not provide details in high resolution. Based upon information contained in the email correspondence, the Reporting Agent (RA) identified the subject of this investigation as b7D a citizen of b7D.

The RA then initiated email correspondence without fully identifying b7c. The RA convinced b7c that 7c had contact with museums and collectors and further convinced the subject to provide a sample of the material for testing in a laboratory in order to identify the actual origin of the material in question. The sample material arrived into NASA OIG possession via Federal Express and was then provided to Victoria Salazar, NASA Material Sciences Division, Kennedy Space Center for scientific analysis and study.

On August 12, 2008 the NASA Material Sciences Division provided the RA with a copy of its written analysis of the alleged *Challenger* material wherein NASA concluded that the material in question is "most likely not debris from the space shuttle *Challenger*." NASA further advised that "Space shuttle engineers were presented images of the suspect debris along with the composition . . . and the general consensus of experts in the field is that the suspect debris likely did not originate from the space shuttle *Challenger*."

On August 26, 2008 via electronic mail, having fully identified b7c as a representative of the NASA OIG, and with the concurrence of NASA OIG: b7c the RA advised the subject of this investigation that 7c is not believed to be in possession of wreckage or debris from Space Shuttle *Challenger*. b7c was also advised that possession of such material is a violation of US law. He was further advised that any attempts to sell the material as purported debris from *Challenger* could result in prosecution for fraud. This investigation is closed. No administrative remedies or criminal penalties may be applied.

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O-KE-08-0360-P

August 29, 2008

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O-KE-08-0400-S

September 18, 2008

REPORT OF INVESTIGATION

ALLEGED FALSE STATEMENTS REGARDING WATER RECOVERY SYSTEM

CASE CLOSING: This investigation was initiated based on a request for assistance from Safety and Mission Assurance (SMA), Kennedy Space Center (KSC) in resolving issues regarding two anomalies discovered after a work order was completed at KSC on the International Space Station (ISS) Water Recovery System (WRS). The WRS was designed and built at Marshall Space Flight Center (MSFC) to convert urine to potable water and is scheduled to be flown to the ISS in Nov 08. On April 24, 2008, MSFC documented that the WRS's Waste Storage Tank Assembly (WSTA) fluid level was at 77%. Approximately two or three weeks later, the WRS was shipped to KSC and arrived on May 14, 2008. On May 16, 2008, a KSC team from the Boeing Company (Boeing) performed a work order to fill the WRS with Internal Thermal Control System (ITCS) fluid. On Monday, May 19, 2008, the first anomaly was discovered; that the WSTA fluid level was missing 1.8 gallons of "pre-treat lite" a substance that is mixed with urine to facilitate the extraction of potable water. The second anomaly was discovered on May 29, 2008, when WSTA samples were tested and found to contain characteristics of ITCS fluid. This contamination was unexpected because the WRS contains two independent "loops", which do not interface; one containing ITCS fluid and one containing WSTA fluid.

SMA considered five scenarios that would possibly explain the anomalies; a design flaw, a faulty procedure, a hardware problem, and two scenarios involving human error. Their investigation ruled out possible design flaws and faulty procedures and determined that a hardware problem was possible, but "very unlikely". Additionally, they found that one of the scenarios involving human error would require two inadvertent errors, one at MSFC and one at KSC, and then a conspiracy among multiple individuals to cover up the mistakes. This scenario was also deemed to be very unlikely. The final human error scenario was based on the premise that the Boeing technician from the team conducting the May 16, 2008 ISTC fluid fill operation may have inadvertently connected the hose to the wrong port on the WRS, thereby pumping ISTC fluid into the WSTA loop of the machine, then discovered his mistake and covered it up. SMA requested that NASA OIG interview the four members of the Boeing team to determine if this was the cause of the anomaly.

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The Reporting Agent (RA) interviewed each member of the Boeing team that conducted the ITCS fill job and discovered that the team's leader and quality assurance inspector both personally verified that the technician connected the hose to the correct port. Additionally, all team members had independent memories of the team leader calling attention to the fact that the ITCS supply port was located on the left side of the WRS's "Rack 2" and on the right side of the WRS's "Rack 1" prior to making the connection, specifically to prevent the connection from being made to the wrong port. Overall, team members provided straight-forward, consistent answers to the questions pertinent to resolving the issue. No evidence was found that would suggest deception; however, they declined to provide written statements on the advice of Boeing attorneys.

SMA had previously assessed the scenario involving the Boeing team as "unlikely", but since all other possible scenarios were assessed as "very unlikely", this scenario had been the most likely one. Based on the findings of this investigation SMA changed their assessment to "very unlikely", making all the possible scenarios that could have caused the anomalies while the WRS was at KSC "very unlikely". SMA briefed their findings to Russ Romanella, UB, Director, Space Station Processing, KSC, who in turn briefed Michael Suffredini, Program Manager, International Space Station (ISS), Johnson Space Center (JSC), TX. SMA made three recommendations in their presentation, which included retesting certain WRS systems, to ensure the anomaly was not caused by a serious hardware problem. MSFC engineers also briefed Suffredini and highlighted the scheduling impact that would be caused by retests. Although the anomalies have still not been explained, MSFC emphasized their confidence that the WRS hardware would work properly when deployed to the ISS and stated there was no need for retesting. Subsequently, Suffredini decided to load the WRS onto the shuttle as planned without further testing. As SMA requires no further assistance, all criminal and administrative investigative effort is complete and this investigation is closed.

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**Office of Inspector General
Office of Investigations**

O-GO-07-0059-S

September 29, 2008

ALLEGED SUPPRESSION OF SCIENCE AND CENSORSHIP OF SCIENTISTS

Office of Public Affairs
NASA Headquarters
Washington, DC 20546

CASE CLOSING: On September 29, 2006, 14 United States Senators cosigned a letter to the NASA Inspector General to request a formal investigation into allegations of “political interference” with the work of scientists at NASA. In particular, the letter conveyed the Senators’ concern with apparent and “repeated instances of scientists . . . having publication of their research and access to the media blocked, solely based upon their views and conclusions regarding the reality and impacts of global warming.” The letter also identified areas of specific concern coupled with a request for this Office “to conduct a full and thorough investigation into the suppression of science and censorship of scientists at NASA.”

Accordingly, the NASA Office of Inspector General conducted an administrative investigation to examine reports of alleged “political interference,” predominantly by senior NASA Headquarters Office of Public Affairs officials, with the work of NASA scientists pertaining to climate change—to include whether NASA inappropriately prevented one of its scientists, Dr. James E. Hansen, from speaking to the media in December 2005.

Our investigation found that during the fall of 2004 through early 2006, the NASA Headquarters Office of Public Affairs managed the topic of climate change in a manner that reduced, marginalized, or mischaracterized climate change science made available to the general public through those particular media over which the Office of Public Affairs had control (i.e., news releases and media access). The OIG also concluded that the climate change editorial decisions were localized within the NASA Headquarters Office of Public Affairs; the OIG found no credible evidence suggesting that senior NASA or Administration officials directed the NASA Headquarters Office of Public Affairs to minimize information relating to climate change. To the contrary, the OIG found that once NASA leadership within the Office of the Administrator were made aware of the scope of the conflict between the Office of Public Affairs and scientists working on climate change, they aggressively implemented new policies with a view toward improved processes in editorial decision-making relating to scientific public affairs matters.

Further, it is our conclusion that the NASA Headquarters Office of Public Affairs’ actions were inconsistent with the mandate and intent of NASA’s controlling legislation—the National Aeronautics and Space Act of 1958 (Space Act) and NASA’s implementing regulations—

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insomuch as they prevented “the widest practicable and appropriate dissemination” of information concerning NASA’s activities and results. While the OIG could not substantiate that Administration officials employed outside NASA approved or disapproved or edited specific news releases, the OIG do, however, find by a preponderance of the evidence that the claims of inappropriate political interference made by the climate change scientists and career Public Affairs Officers were more persuasive than the arguments of the senior Public Affairs officials that their actions were due to the volume and poor quality of the draft news releases. Although the scientific information alleged to be “suppressed” appeared to be otherwise available through a variety of Agency forums, the OIG cannot reconcile that the Space Act would permit *any* purposeful obfuscation of scientific research by the Agency in *any* news dissemination forum as “appropriate” under the Act.

The supporting evidence detailed in this report reveals that climate change scientists and the majority of *career* Public Affairs Officers strongly believe that the alleged actions taken by senior NASA Headquarters Public Affairs officials intended to systemically portray NASA in a light most favorable to Administration policies at the expense of reporting unfiltered research results. Senior NASA Headquarters Office of Public Affairs officials (political appointees) deny such actions, claiming that many of the proposed news releases were poorly written or too technical in nature for meaningful broad public dissemination.

With respect to NASA’s climate change research activities, the OIG found no evidence indicating that NASA blocked or interfered with the actual research activities of its climate change scientists. In contrast to our findings associated with the NASA Headquarters Office of Public Affairs, the OIG found that NASA systematically distributed its technical climate change research throughout the scientific community and otherwise made it available through a variety of specialized forums, such as scientific journals, professional conferences, and public appearances by NASA scientists. Further, our recent audit of NASA’s formal process for releasing scientific and technical data resulting from research conducted by its employees and contractors found no evidence that the process was used as a means to inappropriately suppress the release of scientific or technical data at the four NASA Field Centers reviewed. Of the 287 authors surveyed at those Field Centers, none indicated that they had experienced or knew of someone who had experienced actual or perceived suppression of their research by NASA management. In short, the defects the OIG found are associated with the manner of operation of the NASA Headquarters Office of Public Affairs and are largely due to the actions of a few key senior employees of that office.

Regarding media access, our investigation confirmed that, contrary to its established procedures, the NASA Headquarters Office of Public Affairs declined to make one of NASA’s scientists, Dr. James E. Hansen, available for a radio interview with National Public Radio in December 2005. Our investigative efforts revealed that NASA’s decision was based, in part, on concern that Dr. Hansen would not limit his responses to scientific information but would instead entertain a discussion on policy issues. NASA maintains that the decision to deny media access to Dr. Hansen was unilaterally made by a junior Schedule C political appointee in the NASA Headquarters Office of Public Affairs.

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Regardless of the aforementioned Space Act standards, the OIG otherwise found that the Agency mismanaged this activity inasmuch as it occurred over a sustained period of time until senior management was eventually alerted by congressional staff and the media. That senior management did not know before then was emblematic of ineffective internal management controls such as a dispute resolution mechanism between contributing scientists and public affairs officials. This is especially true in that relations between NASA's climate change science community and the NASA Headquarters Office of Public Affairs had somehow deteriorated into acrimony, non-transparency, and fear that science was being politicized—attributes that are wholly inconsistent with effective and efficient Government. The investigation also uncovered that one of the underlying contributing factors of these problems may have, in fact, been in the very structure of the NASA Headquarters Office of Public Affairs, where political appointees were placed in the seemingly contradictory position of ensuring the “widest practicable” dissemination of NASA research results that were arguably inconsistent with the Administration's policies, such as the “Vision for Space Exploration.”

The OIG provided a draft Investigative Summary to the NASA Administrator on March 6, 2008, for the purpose of soliciting the Agency's comments. The Agency's comments were received on April 18, 2008. On June 2, 2008, our final investigative summary was disseminated to all interested parties.

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O-JS-08-0370-P

October 20, 2008

**ALLEGED PROCUREMENT INTEGRITY ACT VIOLATION - CONSTELLATION
SPACE SUIT SYSTEMS (CSSS)**

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: Case initiated based on receipt of a referral from NASA, OIG, Office of Audits (OA), NASA Headquarters. **b7D**

b7D Space Operations, and Exploration Directorate alleged that during an audit review of Constellation Program Standing Review Boards (SRBs), the OA determined **b7C**
b7C **b7C** **b7C** served on the Extravehicular Activities (EVA) Systems Standing Review Board (SRB). On June 12, 2008, Oceaneering International, Inc. (Oceaneering) was awarded NASA contract #NNJ06161022R for the Constellation Space Suit Systems (CSSS) design and development contract. **b7C** was listed as one of the subcontractors who would also be working on the CSSS. The NASA OIG initiated the investigation to determine if there were any Procurement Integrity Act (PIA) violations and OA is addressing any issues involving the appropriateness of **b7C** participation on the SRB.

The following reflects a list of key dates:

- On August 2, 2006, NASA published its intent to issue a Request for Proposal (RFP) from industry for the design, development, and production of a new spacesuit system for the Constellation Program voyages to the International Space Station and the moon.
- In March 2007, the EVA Systems SRB was formed to perform independent assessments of the EVA Systems Project and its subsystems, which includes the CSSS. On March 2, 2007, the Independent Program Assessment Office (IPAO), Office of Program Analysis and Evaluation, recommended to senior NASA management that the SRB be approved for the EVA Systems project. Stone was one of the persons nominated to serve on the EVA systems SRB.
- On July 13, 2007, **b7C** recused **b7C** from the SRB stating that **b7C** company appeared to be in the process of becoming an Oceaneering subcontractor for the CSSS contract.
- On July 16, 2007, NASA released a draft RFP.

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- On October 1, 2007, NASA released the final RFP for the CSSS acquisition.

On July 14, 2008, NASA, Office of Inspector General, Office of Investigations (OI), met with **b7c** Senior Auditor, NASA, OIG, OA, who stated that **b7c** spoke with, Diane Cheeks, EVA Systems Review Manager on June 23, 2008, and Cheeks told **b7c** that as a board member, **b7c** participated in the Systems Requirements Review (SRR) and reviewed program and project level documents. Members of the SRB were provided access to a folder within NASA's Process-Based Mission Assurance (PBMA) automated workgroup. **b7c** review of the website revealed that **b7c** had access to several procurement sensitive documents and one document that was labeled source selection. **b7c** stated that **b7c** contacted Zachary Kantzes, Manager, Applied Research, and Engineering Sciences (ARES) Corporation System Administrator to request information regarding **b7c** access. On July 3, 2008, Kantzes sent **b7c** an email stating that the companies' records show no activity on the **b7c** account. Kantzes also stated that **b7c** account was created on March 8, 2007 and **7c** last accessed the system on June 22, 2007.

On July 22, 2008, the NASA OIG subpoena duces tecum for records and other data and documentary evidence was served on the Custodian of Records at **b7c**

On July 29, 2008, the OIG interviewed **b7c** who stated that **7c** participated as a member of the SRB EVA CSSS based on **7c** flight mission control experience and operations background. **7c** stated **7c** agreed to participate as long as **7c** could have limited participation in meetings contingent on **7c** work schedule, **7c** company did not have any ties to spacesuit activities; and as long as a conflict of interest did not arise.

b7c said that **7c** reviewed various operations documentation and provided his input. **b7c** accessed the PBMA website about six to eight times to review documents **7c** had been assigned. On some occasions, **7c** printed the documents including procurement sensitive documents, but then **7c** would shred them after **7c** review. **7c** did not participate in meetings with the SRB after May 18, 2007. **7c** stated that if **7c** accessed the PBMA website on June 22, 2007, **7c** must have done so after **7c** had been asked to review a document on the site. **b7c** stated that **7c** saw the Performance Period Requirements Contract Structure document dated April 11, 2007 that was labeled "Source Selection Information" as part of a PowerPoint presentation by the program office to the SRB when **7c** attended a project review meeting on May 18, 2007.

b7c said that the first time **7c** heard Oceaneering was interested in working with **b7c** was at a company staff meeting that occurred on or about the same date that **7c** resigned from serving on the SRB. **7c** added that **7c** did not become involved with the subcontract proposal process until after NASA's pre-proposal conference that was held on July 30, 2007. **b7c**
b7c signed the Proprietary Information Exchange Agreement on July 24, 2007. **7c** stated that **7c** did not provide any documents or SRB information to Oceaneering.

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On August 7, 2008, the OIG interviewed Jefferson Dutton, Project, Planning Control Lead for EVA who stated that on April 11, 2007, a Procurement Strategy Meeting was held at NASA Headquarters. Dutton stated that the contract structure chart was included in a briefing presentation that was marked Source Selection Information. He also emailed the chart to Cheek, who posted it to NASA's PBMA website. Dutton stated that the document was not Source Selection Information and he should have removed the designation prior to distribution. He added that the chart did not have to be marked source sensitive because it had been previously released to the general public as Modification 5 in December 2006.

On August 18, 2008, the OIG interviewed ^{b7c} who stated that ^{b7c} initially contacted Oceaneering and no one from ^{b7c} asked ^{b7c} or directed ^{b7c} to do so. ^{b7c} believed Oceaneering entertained working with ^{b7c} based on their ^{b7c} certification which was required for the contract. ^{b7c} did not recall exactly when ^{b7c} pitched Oceaneering, but thought it was sometime around May or June 2007, but before the draft Request for Proposal (RFP) was issued. A few weeks later Oceaneering asked ^{b7c} would be interested in teaming with them in a bid for the CSSS contract.

On September 5, 2008, the OIG interviewed Philip R. Johnson; Purchasing Manager, Oceaneering who stated he contacted ^{b7c} Sometime in mid-May 2007, but ^{b7c} did not tell ^{b7c} that Oceaneering would be entering a bid for the CSSS solicitation. They scheduled a meeting to discuss the fact that Oceaneering was going after a contract that ^{b7c} ^{b7c} expertise could be used. Johnson reviewed and confirmed that he sent an email dated May 17, 2007 to ^{b7c} and noted that he attached a copy of the CSSS Architecture Document. NASA had placed the document on the NASA CSSS Procurement Library website which showed the requirements that would be needed for the CSSS Procurement. Johnson stated he did not talk to anyone else at ^{b7c} was his only point of contact. At the time of their conversations, the technical arrangements for the procurement had not begun. Johnson stated that Oceaneering made the decision in to select ^{b7c} the first or second week in July. Johnson added that Oceaneering did not know the CSSS requirements before NASA issued the draft RFP. Johnson stated that he did not know ^{b7c} was on NASA's CSSS SRB until the day of his interview with the OIG. Johnson said ^{b7c} did not provide him with any "inside" information and to his knowledge ^{b7c} provided no such information to anyone at Oceaneering.

The OIG's review of subpoenaed records from ^{b7c} revealed the following information:

- The Proprietary Information Exchange agreement was signed on July 24, 2007 by ^{b7c}
- On July 26, 2007, ^{b7c} sent a copy of the CSSS Kick-Off meeting sign-in sheet to ^{b7c} and other addresses to include ^{b7c}
^{b7c} The meeting was held on July 25, 2007. A review of the sign-in sheet

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for the kick-off meeting revealed that **b7c** attended
and represented **b7c**

- On August 10, 2007, Mark Gittleman, Vice President, and General Manager; Oceaneering Space Systems sent a message to **b7c** indicating that he was leading up the review teams for the CSSS Proposal and asked if he could include **b7c** designee on the planning.
- On August 22, 2007 and August 23, 2007 respectively, **b7c** and Oceaneering signed the Teaming Agreement for the purposes of competing for the Program and performing the contract. **b7c** and Gittleman were the authorized signatories.

The review did not reveal any exchange of information between **b7c** and officials at Oceaneering that was not pertaining to the development of Oceaneering's proposal. There were no indications that **b7c** provided any information or documents to Oceaneering that **he** had access to while serving on the SRB.

This investigation found no evidence to support any Procurement Integrity Act violations or other criminal or civil violations. In addition **b7c** did not have access to any Source Selection Information; therefore the case is being closed.

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O-MF-08-0316-P

October 21, 2008

ALLEGED DISCLOSURE OF CONFIDENTIAL INFORMATION

INFORMATION MEMORANDUM/CASE CLOSING: This investigation was initiated by the NASA Office of Inspector General (OIG), Office of Investigations (OI), at the Stennis Space Center (SSC), based on information received from b7D

b7D

MAF, was offered assistance in obtaining NASA data for rental rates to be charged to the Boeing Company (Boeing), relative to the company's use of work space and services at MSFC and MAF in support of Ares 1 Upper Stage Element project. b7D reported being offered this assistance by b7C

Marshall Space Flight Center (MSFC), Huntsville, AL.

b7D reported that, on April 17, 2008, James Bell, NASA ET Transition Manager, MSFC, arranged for b7D to receive a copy of a NASA Memorandum of Understanding (MOU) with Boeing, which defines details and charge rates for the company's use of MSFC and MAF floor space and related services in support of the the Ares 1 Upper Stage Element project, NASA contract number NNM07AB03C. b7D received the MOU as an email attachment.

b7D was requested to review the MOU to identify any potential conflicts regarding MAF work space currently occupied by b7D in support of the ET program. b7D reported that b7D as the b7D b7D was authorized to review the MOU, but would not be authorized to review NASA charge rates for Boeing. Shortly after receiving the MOU, b7D received a telephone call from b7D during which 7D informed 7D that NASA charge rates for Boeing were concealed and embedded in the body of the electronic document in portable document format (PDF). b7D offered to provide b7D with the PDF program that would enable 7D to access and view the NASA charge data. b7D declined b7D offer, at which time 7D told 7D that a copy may show up on 7D desk.

The NASA OIG interviewed b7D during which b7D confirmed that shortly after receiving the above referenced MOU b7D received a telephone call from b7D reported that, during the call b7D informed b7D that NASA charges rates for Boeing were concealed and embedded in the body of the electronic copy of the MOU that 7D was provided. b7D explained that the embedded data was in a PDF and that 7D would provide 7D with instructions on how to access the concealed data. b7D stated that 7D declined b7D offer and informed 7D that 7D felt it would be inappropriate for 7D to have the data. b7D reported that b7D then told 7D that a copy of the data may show up on 7D desk. b7D reported

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APPR: b7C

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that 7D was uncertain as to why b7D would want 7D to have the data. b7D reported that b7D never provided 7D with the PDF instructions or a copy of NASA charge data. Neither b7D or anyone else at b7D accessed the NASA charge rates reported to be embedded in the MOU document.

The NASA OIG, with the assistance of MSFC Information Technology (IT) security, conducted a review of b7D stored electronic mail (e-mail); however the review did not identify any information relevant to this investigation.

The NASA OIG interviewed George "Earl" Pendley, Contracting Officer, NASA Procurement Office, Marshall Space Flight Center (MSFC), Huntsville, AL. Pendley serves as the NASA Procurement Chief for the ARES I Upper Stage Element contract with Boeing. Pendley opined that a disclosure of the NASA charge rates for rental space at MAF to the b7D would not result in any direct loss or damage to NASA.

The NASA OIG interviewed b7D and 7D confirmed that 7D routinely works with b7D on matters related to the ET project budget. 7D admitted that 7D telephonically contacted b7D after 7D received a copy of the NASA MOU with Boeing to inform 7D of a computer program that would enable 7D to view concealed data embedded in the MOU document. b7D acknowledged that 7D offered b7D the computer program, as 7D felt 7D access to the concealed data would assist them in determining the amount of ET project funding to allocate for rent of MAF work space. b7D explained that after the Space Shuttle program is retired in 2010, ET project contractors will be required to pay rent to NASA for floor space at MAF. b7D stated that since NASA has never charged b7D for rent at MAF, he was not sure how much of the ET budget to allocate for this purpose. b7D felt that it would be beneficial for b7D to use the Boeing rental rates as the basis for determining the amount of the budget to allocate for ET project rent. b7D was not sure why the Boeing rental rates were concealed in the MOU document. b7D stated that 7D only offered the above computer program to b7D to assist them in managing the ET project budget and not for any personal gain.

The NASA OIG conducted a query of the National Crime Information Center (NCIC) database for b7D however the query did not reveal any information relevant to this matter.

The NASA OIG briefed Daniel Friel, Assistant United States Attorney (AUSA), United States Attorney's Office (USAO), Eastern District of Louisiana, New Orleans, LA, on the details of this investigation. AUSA Friel declined to accept this matter due to a lack of prosecution merit.

Based on the above facts and investigative findings, which includes no identified loss of damage to NASA, this case is closed.

Prepared by: b7c
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O-LA-08-0186-HL-S

July 23, 2008

REPORT OF INVESTIGATION

POSSIBLE SALE OF SHUTTLE PARTS

NASA Headquarters
Washington, DC 20546

CASE CLOSING/REFERRED: This administrative investigation was initiated following the receipt of information from the Office of General Counsel (OGC), NASA Headquarters (HQ), regarding an individual's inquiry regarding the potential sale of Space Shuttle parts he possessed.

b7c was subsequently interviewed by the Langley Resident Agency (LRA) and disclosed that b7c worked as a thermal protection engineer for Lockheed Corporation at Kennedy Space Center, FL, until 1995. b7c claimed that upon departure from b7c employment there, a civil servant named b7c, authorized b7c to take scrap items.

b7c took from scrap bins and kept three shuttle tiles, a piece of exterior insulation blanket material and a shuttle tile placement chart. Upon recently being approached about possibly selling the shuttle tiles, b7c contacted the OGC about b7c rights and responsibilities for possessing and selling the items. The LRA advised b7c that there were restrictions on the shuttle tiles and insulation blanket material b7c possessed. Specifically, b7c was told that the items were covered under export restrictions as set forth in the International Traffic in Arms Regulations (ITAR). Accordingly, b7c could possess the items but could not sell them since they could possibly be exported improperly to a foreign country. b7c declared that b7c would not sell or give the items away.

Since shuttle tiles are fabricated from ceramic or ablative materials designed for use in reentry vehicles, they are classified as "defense articles." The manufacture or export of such materials is restricted and regulated under ITAR located at Title 22, Code of Federal Regulations, Section 120-130. Any person manufacturing exporting defense articles must register with the US Office of Defense Trade Controls (ODTC) per ITAR Section 122.1. Although a seller of said shuttle tile may not do so with the intent that it be sent out of the US, they cannot sell it due to the possibility that the tile could be exported to a foreign country without the knowledge and permission of the ODTC. In order to export shuttle tile, a person must obtain ODTC approval and secure a license per ITAR Section 123.2.

In a letter dated July 17, 2008, from b7c
NASA Headquarters (HQ), Washington, DC, to the Director, Export Control Office (ECO),

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NASA HQ (with a copy to the Office of General Counsel, NASA HQ), b7c provided the circumstances of b7c possession of the shuttle tiles and sale interest. b7c recommended that the ECO send b7c a cautionary letter explaining b7c obligations under the ITAR and emphasize the uncertainty inherent in selling shuttle tiles on the internet.

Based upon the appropriate recommendation made, no further investigative activity is warranted. This investigation is closed.

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**Office of Inspector General
Office of Investigations**

O-JS-08-0179-HL-S

July 29, 2008

AUCTION OF SPACE ITEMS

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: This case was initiated based upon an OIG anonymous hotline complaint that [redacted] was auctioning parts of the lunar module and flown space memorabilia with [redacted] over the internet.

On March 5, 2008, [redacted] requested of the Johnson Space Center (JSC) General Counsel a legal determination as to title regarding NASA artifacts placed into auction by [redacted]. JSC General Counsel never provided a response.

On June 20, 2008, the OIG met with [redacted], to discuss their lack of response regarding [redacted] request to determine if the items at question were government property. [redacted] said [redacted] would look into the matter and advise the OIG. No response was received.

Since JSC General Counsel has failed to provide a response regarding proper title and/or exercising any claim to this property, no criminal, civil, or administrative violations exist. This case is closed.

Prepared by: [redacted]
DISTR: File

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O-KE-08-0180-HL-S

August 4, 2008

REPORT OF INVESTIGATION

POSSIBLE CHALLENGER DEBRIS

CASE CLOSING: The Office of Inspector General was contacted by b7c regarding material b7c found in b7c deceased grandfather's possessions that b7c thought might be Space Shuttle Challenger debris. b7c found the item, which appeared to have burn marks, in b7c grandfather's winter residence located north of Daytona Beach, FL.

On March 7, 2008, the Reporting Agent (RA) contacted b7c via b7c electronic mail address b7c. The RA explained that the remains of Challenger and the examination of all potential debris were conducted at Kennedy Space Center (KSC). The RA requested that b7c mail the item to KSC so that it could be analyzed by NASA's Material Science Laboratory.

On March 7, 2008, b7c responded to the RA's message and stated the item was in Canada. On April 16, 2008, the RA received via the U.S. Postal Service, a package from b7c containing a small piece of non-metallic material that b7c believed might be Challenger debris.

On April 17, 2008, the RA transported the suspect material to b7c. b7c stated b7c would initiate a Job Number for an analysis of the material.

On April 18, 2008, the RA received an automated electronic mail message from the NASA Materials Science Laboratory. The message stated that the analysis of the possible Challenger debris had been assigned Job Number KSC-MSL-2008-0180-00-00, and that the job had been assigned to b7c.

On July 31, 2008, b7c provided the RA with b7c Materials Science Division report for b7c analysis of the suspect material. b7c report stated the suspect material was polyethylene, a resin with a wide variety of uses, particularly in non-aerospace applications including marine devices. b7c report further stated the numerous orbiter systems personnel did not recognize the material. b7c report concluded that the possibility the object came from an assembly unrelated to the Space Shuttle Challenger was quite high.

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Although the likelihood that the object was from Space Shuttle Challenger was extremely low, it could not be ruled out entirely due to the generic nature of the sample.

On August 1, 2008, the RA informed b7c via electronic mail, of b7c conclusion. b7c had previously instructed the RA to dispose of the suspect material and that b7c did not need it returned. This investigation is closed.

Prepared by: b7c
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O-JS-08-0305-HL-M

August 8, 2008

CONFLICT OF INTEREST INVOLVING NASA ASTRONAUT

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: Investigation was initiated based upon an anonymous complaint that Johnson Space Center astronaut **b7c** improperly used **b7c** NASA position on an internet website **b7c** The website has **b7c** picture and NASA related articles. The complainant alleged that **b7c** financially benefits from **b7c** collaboration with the website owner, used **b7c** government furnished computer and time to post to the website; and has damaged NASA's image with **b7c** postings. The complainant alleged that **b7c** keeps a .45 caliber pistol in **b7c** vehicle. This allegation was referred to JSC security.

On June 3, 2008, the NASA Office of Inspector General (OIG), Central Field Office, sent the JSC Deputy Director Human Resources, a management referral requesting that their office review and address the allegations.

On August 1, 2008, the JSC Director responded that their investigation determined that **b7c** had violated the JSC Policy on Use of NASA Information Technology (IT) Resources and had been reprimanded. There was no evidence found to suggest that **b7c** has ever been paid for **b7c** collaborations with the website.

Based on management's response, this case is closed.

Prepared by: **b7c**
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O-LB-01-0400-O

August 12, 2008

REPORT OF INVESTIGATION

TEMPERFORM USA, ET AL

11425 Macaw Street
La Mirada, CA 90638

CASE CLOSING: This investigation was initiated on May 18, 2001, when NASA – OIG, Long Beach Resident Agency (LBRA) was notified by the Defense Criminal Investigative Service (DCIS) Western Field Office, Mission Viejo, CA. DCIS related that Temperform USA (AKA: West Coast Aluminum Heat Treating Company {West Coast}, La Mirada, CA) was still conducting unauthorized heat treatment and inspection practices. The allegations were reported to DCIS by Boeing. Purportedly, Boeing conducted an audit of Temperform USA and determined that Temperform conducted unauthorized heat treatment and improper inspection practices. As a result of audit, Boeing removed Temperform USA from its approved vendor list.

Interviews of former Temperform USA employees confirmed Boeing's findings of a continual practice of wrongdoing activities related specifically to the falsification of the heat treat and quench processes, quality inspection, and equipment maintenance records.

During the course of the investigation, numerous records were reviewed to ascertain the veracity of the allegations. Civilly, Temperform settled with the U.S. Government, and NASA received a civil settlement of \$100,000.00, which was transferred to NASA circa December 2004.

Criminally, Temperform USA and/or individual company officers were charged with criminal violations of Title 18 USC §38, (fraud involving aircraft and/or space vehicle parts in interstate or foreign commerce), §371, (conspiracy), §1001, (false statements), and §1341, (frauds and swindles), which have been pending final adjudication. After many months of plea negotiation, the U.S. Attorney's Office, Los Angeles, CA, made a decision to dismiss all pending charges against the last two remaining defendants, b7c and b7c, on May 19, 2008. The decision was explained and briefed to all the investigative agencies. The dismissal order was requested from the AUSA, and NASA received a copy of the dismissal order on July 9, 2008. Based on this decision, the case will be closed by NASA with no further action at this time.

Prepared by: b7c
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O-GO-07-0040-HL-S

July 24, 2007

REPORT OF INVESTIGATION

GAMMA-RAY LARGE AREA SPACE TELESCOPE (GLAST) PROGRAM ISSUES
Goddard Space Flight Center
Greenbelt, MD 20771

INFORMATION MEMORANDUM/CASE CLOSING: This investigation was initiated upon receipt of information from [redacted] SRS Technologies, Arlington, VA who alleged two instances of wasteful spending within the GLAST project. First, [redacted] alleged that GLAST Project Managers attended retreats at a micro-brewery during the workweek which may have been funded with GLAST project funds. Second, [redacted] alleged that GLAST project funds may have been used to pay for the increased travel expenses that [redacted] Back Nine Engineering (subcontractor through Swales Aerospace), incurred after relocating from the Goddard Space Flight Center (GSFC) area to Ohio.

The Office of Inspector General (OIG) investigation disclosed that [redacted] [redacted], NASA, organized a two-part trip for several members of the GLAST project to brew their own beer at a brew-on-premises establishment in Frederick, MD. A combination of civil servants and contractors made the first part of the trip which consisted of brewing beer on February 24, 2006. Two weeks later, on March 10, 2006, after the beer had a chance to ferment, some of the civil servants and contractors returned to bottle the beer.

Investigation disclosed that all members who attended the trips paid for their portion of the trips' expenses and no project funds were used to pay for the trips. However, investigation revealed that some NASA civil servants and contractors failed to take annual leave or vacation leave while attending the unofficial government function.

Civil Servants

Investigation revealed that [redacted] failed to take 16 hours of annual leave while attending both trips. In light of the OIG investigation and at the direction of [redacted], GLAST Project Manager, [redacted] corrected his NASA timesheets to account for 8 hours of AL for each trip.

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An interview of [REDACTED], [REDACTED], [REDACTED], disclosed that he failed to take annual leave while attending the second trip; however, [REDACTED] noted that he "caught himself" and took 8 hours of annual on March 24, 2006, even though he claimed to work a full day to account for the annual leave he failed to take for the second trip.

Contractor Employees

Investigation revealed that [REDACTED], QSS Group, Inc. (QSS), (subcontractor through prime contractor, MEI Technologies, Inc.) failed to take vacation leave and charged 8 hours to the GLAST project while attending the second trip.

The OIG interviewed [REDACTED] Swales Aerospace, who informed that he used 3 hours of vacation time and 5 hours of comp time to attend the second trip. However, a review of his Swales Aerospace timesheets disclosed that he charged the 5 hours to the GLAST project and not to comp time. [REDACTED] explained that he is required to work a 40 hour workweek and that he earned 5 hours of comp time after working 45 hours the week of February 27, 2006; however, his timesheets disclosed that he recorded 40 hours of work that week.

The OIG interviewed [REDACTED] Lockheed Martin, who informed that he did not attend the second trip but noted that he met the members of the GLAST project in Frederick, MD for lunch that day. Although he estimated that it took between 60 and 90 minutes each way to travel between his residence and the lunch site in Frederick, MD, [REDACTED] said he worked an 8 hour workday from his home that day.

Cost Analysis

The OIG coordinated with [REDACTED] NASA GSFC, and determined that [REDACTED]'s hourly wage rate was \$59.94 while he attended the unofficial government functions. [REDACTED] multiplied this rate by the number of hours [REDACTED] claimed he worked (16) and determined that he was unjustly paid \$911.04 in wages for the two days.

The OIG coordinated with [REDACTED] NASA, who related that she coordinated with MEI Technologies, Inc. and verified that it reimbursed NASA \$807.39 for the 8 hours [REDACTED] charged to the GLAST project on March 10, 2006.

Administrative Actions

On May 3, 2007, the OIG formally advised [REDACTED] of [REDACTED]s and [REDACTED]; conduct as it applies to The Standards of Ethical Conduct for the Employees of the Executive Branch (5 C.F.R. Part 2635.705), which states that an employee shall use official time in an honest effort to perform official duties. On June 1, 2007, [REDACTED] advised the OIG that he verbally counseled [REDACTED] and [REDACTED] on their conduct and their timesheets were corrected as appropriate.

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On May 3, 2007, the OIG formally advised [redacted] NASA GSFC, that GLAST contractor employees, [redacted], and [redacted] failed to properly record vacation leave to account for their attendance at an unofficial government function. On July 23, 2007, [redacted] advised the OIG that MEI had credited NASA \$807.39 for the 8 hours of time attributed to [redacted]. Furthermore, MEI verbally notified all employees and subcontractors of the appropriate procedures for timekeeping.

Additional allegation

In regard to the allegation that GLAST project costs increased after [redacted] relocated to Ohio, an interview of [redacted] NASA GSFC, determined that [redacted] point of travel is immaterial since he is a subcontractor of Swales and Swales has stayed within the negotiated task order value.

Since all allegations were fully addressed, this case is closed. There are no administrative or judicial actions pending.

Prepared by: [redacted]
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O-JS-07-0220-P

September 17, 2007

ALLEGED THEFT OF MERCURY FLOWN HELMET

Johnson Space Center
Houston, TX 77058

INFORMATION MEMORANDUM/CLOSING: This investigation was initiated based on information provided by [redacted], about an alleged flown Mercury 9 space helmet offered for sale on the eBay auction web site. The helmet was being offered for sale with a starting bid price of \$300,000. The seller alleged that the helmet was worn by Astronaut [redacted] on the MA-9 flight contrary to records that indicated the helmet from this flight was currently in the possession of the National Air and Space Museum (NASM).

Investigation disclosed that the individual that currently possesses the helmet, [redacted] an artifacts collector in Brooklyn, NY, purchased it from an antiques dealer for \$15,000 in 1995. The antiques dealer, [redacted] of East Hampton, NY, claimed to have purchased the helmet from an individual named [redacted] claimed [redacted] acquired it from an auction held in Nashville, TN in 1991 and that the helmet was placed into the Nashville, TN auction by an individual named [redacted]. It was rumored that [redacted] was a close friend of the Astronauts during the 1960's, but attempts to locate [redacted] proved unsuccessful. Several organizations at the JSC were contacted for information pertaining to the release of the helmet including Crew Systems, the Exhibits Program of the Public Affairs Office, and the JSC legal counsel, but no NASA documentation was located that explained the release of the helmet from Government control.

[redacted], NASM, provided information to the OIG that the original flown helmet was already in the NASM collection and on display at the Eisenhower Museum in Kansas. [redacted] stated that a mistake could have been made on the paperwork related to the helmet in the NASM's possession and that the helmet possessed by [redacted] could be the original flown helmet. However, the OIG investigation disclosed that during the Mercury program NASA did not document the specific helmets used on each space flight. As a result, clarification of this issue was not possible due to insufficient documentation.

[redacted] [redacted] provided information that NASA legally has ownership rights to the helmet but policy issues would dictate any attempts at recovery. Currently, no documentation within the JSC legal office exists regarding

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the transfer of the helmet. Additionally, no documentation would exist regarding gifting of the helmet primarily because it would have been illegal to gift.

The OIG referred this matter to NASA management requesting that a determination be made regarding whether or not NASA should pursue recovery of the helmet based on the facts disclosed during the investigation. This request was documented in a Management Referral letter dated July 26, 2007.

On September 6, 2007, NASA management responded to the OIG Management Referral by stating that it would not pursue recovery of the helmet. The response indicated that if the helmet was the actual flown helmet, NASA not NASM has ownership rights. Conversely, if the helmet was a training helmet, NASA was unlikely to pursue its recovery.

Since no evidence of criminal or civil violations exists, and NASA management has declined to pursue recovery of the helmet, this case is closed.

Prepared by: *bw BT*
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O-JS-07-0441-HL-S

October 5, 2007

ALLEGED MOON ROCK POSSESSION

NASA Headquarters
Washington, DC 20546

INFORMATION MEMORANDUM/CLOSING: This case was initiated based upon a NASA Hotline written complaint received from 66 67C claiming to possess an authentic moon rock. Allegedly, this lunar sample was gifted to the United Kingdom (UK) Science Research Council by 66 67C during the 1969-1970 timeframe. 66 67C inquired whether NASA had a legal claim to this sample.

66 67C, NASA, Johnson Space Center, read the letter dated July 16, 2007, and "Moon Rock History" report sent by 66 67C. Based on the information sent by 66 67C, in 66 67C opinion, there were no lunar samples involved. 66 67C based his opinion on the statement in the report that "NASA had gifted moon rock samples in 1969/70 to the UK Science Research Council under the auspice of 66 67C who in turn would disperse these samples to various bodies in the UK." 66 67C had reviewed the lunar sample inventory logs and determined that three lunar samples had been sent to 66 67C in 1970 and returned intact in 1972. The samples sent to 66 67C were "non-destructive", meaning they were not subjected to alteration. 66 67C explained that when samples are returned they are weighed and tested for authenticity.

Based on the above, no further activity is necessary or required. This case is closed.

Prepared by: 66 67C
DISTR: File

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O-GO-07-0119-S

October 22, 2007

REPORT OF INVESTIGATION

ACCOUNTABILITY AND SECURITY VULNERABILITIES OF LUNAR MATERIAL

Education Resources Center
Aerospace Education Services Program
Office of Education
Goddard Space Flight Center
Greenbelt, MD 20771

CASE CLOSING: On December 4, 2006, this investigation was predicated on information from ~~Wright Solutions, Inc.~~ ^{βε βγϷ} Wright Solutions, Inc. (WSI), Goddard Space Flight Center (GSFC), Greenbelt, MD, who reported that an audit of NASA artifacts disclosed missing lunar/meteorite samples from the GSFC Visitor Center. The missing materials were identified as extraterrestrial materials encased in two transparent six-inch Lucite disks inside a metal case. The disks were labeled and bore the serial numbers 217 (lunar) and 125 (meteorite).

The NASA OIG (OIG) accessed the United States Postal Service (USPS) tracking web site and determined that on May 25, 2006, the aforementioned artifacts were signed for by a representative of WSI. However, ~~WSI~~ ^{βε βγϷ} was unable to provide any documentation reflecting that the extraterrestrial material was loaned to an educational partner after May 25, 2006.

The ERC provided a list of all educational requests for extraterrestrial material within the GSFC area of responsibility. The OIG compared this list with ERC's record of shipment documentation and identified two educational entities that requested extraterrestrial material, but never received it. The OIG contacted the educational entities and determined that Orefield Middle School, Parkland School District, Allentown, PA, had in fact, received extraterrestrial material and returned it to GSFC on December 7, 2006. On December 12, 2007, the OIG took possession of the lunar material from the USPS and subsequently released it to the ERC.

On September 10, 2007, the OIG issued a Management Referral Letter to the Public Affairs Office (PAO), GSFC, identifying the deficiencies in the lunar/meteorite material loan program surfaced during this investigation. On October 18, 2007, a response was received from the PAO in which it addressed the program deficiencies and identified corrective actions taken to ensure improvements in communication activities, handling, and accountability associated with the

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lunar material loan program. The NASA OIG is in agreement with the actions taken and no further investigation is required. This investigation is closed.

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National Aeronautics and
Space Administration

Office of Inspector General
Office of Investigations



O-HS-06-0599-HL-S

November 2, 2007

APOLLO 11 SSTV TAPES
Goddard Space Flight Center

INFORMATION MEMORANDUM/CLOSING: The Office of Inspector General received a hotline complaint regarding a search for the original Apollo 11 footage of the first mission to the moon. Allegedly, the images seen on TV by the public of the first moon landing were not the original images but were copies with a diminished viewing quality. The original images were a higher-quality footage seen only by a small number of people at three tracking stations, and are somewhere in storage.

The Office of Audits has closed this S project on this matter. They will continue to do passive monitoring of the activity routinely liaison with the Deputy Center Director.

Based on this information, no investigative assistance will be needed by OA. This case is closed.

Prepared by: *bl b7c*
DISTR: File

910798

APPR: *bl b7c*

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ADDITIONAL MATERIAL RELEASED 24-MARCH-2009



MAR 24 2009

SUBJECT: Freedom of Information Act (FOIA) Request
OIG FOIA Request Number 2009-18

I have decided to reconsider my initial determination, dated February 27, 2009, which was provided to you in response to your FOIA request, dated January 26, 2009. You requested "the closing memo and final report and transmittal memo" for the following NASA OIG investigations:

- 1) Anomalies on the GOES-R Program
- 2) Concerns Involving COTS and ISS Contracts
- 3) Review of GAO's Audit on NASA Travel, Mission Management Aircraft
- 4) Improper letter to Houghton Mifflin Company

In my initial determination, I provided you with redacted copies of documents from the above investigations. Case numbers were withheld under FOIA exemption (b)(2), which protects internal matters of a relatively trivial nature. 5 U.S.C. § 552(b)(2). Other portions of these documents were withheld under FOIA exemption (b)(7)(C) to protect personal privacy and (b)(7)(D) to protect the identity of a source. 5 U.S.C. § 552(b)(7)(C) & (D).

After further consideration and issuance of new guidelines on March 19, 2009, from the Attorney General regarding the Freedom of Information Act (FOIA), I have decided to make additional disclosures for FOIA Request 2009-18. The case numbers that were withheld under FOIA exemption (b)(2) will be released. This information continues to be predominantly internal information that lacks genuine public interest, but I have decided to make a discretionary release of this information. The information withheld under FOIA exemption (b)(7)(C) and (b)(7)(D) will continue to be withheld. Based on my revised initial determination, your appeal letter, dated March 8, 2009, will not be addressed since exemption (b)(2) is not being used to withhold case numbers.

I am providing the enclosed pages that contain the disclosed case numbers. I am also listing the corresponding case numbers to the above requested cases:

- 1) Anomalies on the GOES-R Program (O-GO-08-0202-HL-S)
- 2) Concerns Involving COTS and ISS Contracts (O-AR-08-0219-HL-P)
- 3) Review of GAO's Audit on NASA Travel, Mission Management Aircraft (O-KE-07-0013-S)
- 4) Improper Letter to Houghton Mifflin Company (O-HS-08-0290-HL-M)

You have the right to appeal this initial determination to the Inspector General, Under 14 CFR § 1206.605(b), the appeal must: (1) be in writing; (2) be addressed to the Inspector General, NASA Headquarters, Washington, DC 20546; (3) be identified clearly on the envelope and in the letter as an "Appeal under the Freedom of Information Act"; (4) include a copy of the request for the Agency record and a copy of the contested initial determination; (5) to the extent possible, state the reasons why you believe the contested initial determination should be reversed; and (6) be sent to the Inspector General within 30 calendar days of the date of receipt of the initial determination.

Sincerely,



Kevin H. Winters
Assistant Inspector General for Investigations
OIG FOIA Officer – Investigations

Enclosures



O-GO-08-0202-HL-S

June 6, 2008

REPORT OF INVESTIGATION

ANOMALIES ON THE GOES-R PROGRAM

Goddard Space Flight Center
Greenbelt, MD 20771

CASE CLOSING: This investigation was initiated based on receipt of a NASA Office of Inspector General (OIG) Hotline complaint from **b7c & D**
7c & D Goddard Space Flight Center, MD (GSFC), who
alleged mismanagement of the Geostationary Operational Environmental Satellite-R (GOES-R)
Program Office, specifically the Ground Segment Project (GSP). **7c & D** further alleged **7c** was
denied **7c & D** because **7c** voiced **7c** concerns over the alleged
mismanagement.

Personnel Issues

7 c & D

GSP Request for Proposals

7c alleged that project mismanagement of a \$1B Request for Proposals (RFP) during the drafting and preparation phases caused the RFP to be unclear in the definition of its requirements and performance measures. According to **7c & D** poor oversight during the preparation and drafting of this RFP caused lax security procedures for handling, posting, and transferring International Traffic in Arms Regulations (ITAR) data. While preparing the drafts of the RFP for final release, **7c & D** explained that GSP management was unaware of the policies for handling and releasing ITAR data to commercial industry. **7c** recounted an incident in which the GSP Deputy Project Manager instructed a support contractor to make otherwise restricted ITAR material available to uncleared parties. This decision was made contrary to directives that had been provided by Procurement Operations Division staff.

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O-AR-08-0219-HL-P

June 17, 2008

REPORT OF INVESTIGATION

CONCERNS INVOLVING COTS AND ISS CONTRACTS

NASA Headquarters
Washington, DC

CASE CLOSING: The Office of Inspector General received a hotline complaint from an anonymous individual regarding an alleged conversation between NASA Administrator Griffin and John Karas, Vice President, Space Exploration, Lockheed Martin involving not bidding on the pending International Space Station (ISS) services Request for Proposal (RFP). The complainant alleges Administrator Griffin told Lockheed Martin not to bid on the contract and that he is telling Boeing the same thing.

The anonymous complaint originated from an America Online (AOL) email address:

7 C # D On April 8, 2008, the RA sent an email to the complainant requesting he/she contact the RA to further discuss and clarify the allegation. The RA did not receive any response from the complainant either via email or telephone.

On May 28, 2008, the Reporting Agent (RA), Long Beach Resident Agency (LBRA) interviewed Karas at the Lockheed Martin facility in Littleton, CO. Karas stated he telephonically spoke with Griffin on a weekly basis and last saw him at a breakfast around the last week of February, 2008 while attending the United Space Alliance (USA) user's conference in Washington, DC. About one hundred industry officials and NASA officials attended the breakfast, which was held at a location near the U.S. Capitol building. Karas, Griffin, and Boeing Vice President/General Manager of Space Exploration, Brewster Shaw shared a table at the breakfast, during which time Karas engaged in a "twenty-second, impromptu, casual at best" conversation regarding the Constellation crew Exploration Vehicle (CEV), going to Capitol Hill. Karas asked Griffin what he thought about the ISS RFP, to which Griffin replied it was politically risky and that Congress, not knowing the difference, could kill the CEV. Karas stated he actually agreed with Griffin in that the overlapping competition would jeopardize the Constellation project. Karas stated he specifically sought out an opinion from Griffin that day, described the breakfast conversation as "mutually agreeable," labeled any allegation Griffin told him not to bid on the RFP "a stretch," and in "no-way" categorized that conversation as wrongdoing or a contract integrity issue. Karas stated he probably told others "even Mike [Griffin] doesn't think we should bid on this thing," but could not remember the names of those

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O-KE-07-0013-S

June 18, 2008

Review of GAO's Audit on NASA Travel, Mission Management Aircrafts

CASE CLOSING: On October 3, 2006, the Reporting Agent (RA) and **7C** **7C** NASA Office of Audits, visited the U.S. Government Accountability Office (GAO), Washington D.C., to proactively review work papers related to GAO's August 2005 audit titled "NASA Travel, Passenger Aircraft Services Annually Cost Taxpayers Millions More Than Commercial Airlines." The RA and **7C** specifically reviewed documents to identify potential fraud indicators associated with travel relevant to NASA's Mission Management Aircraft (MMA). The RA and **7C** also interviewed various individuals at GAO who were associated with the NASA Travel audit. Based on this review, the RA was able to corroborate GAO's initial findings and found no indications of fraud relevant to travel on MMA.

However, during the course of GAO's audit, they related that several of Sean O'Keefe's (O'Keefe), former NASA Administrator, trips on MMA appeared to be questionable or improper. On December 5, 2006, the RA, **7C** and the Assistant Inspector General for Investigations (AIGI) Kevin Winters, returned to GAO to obtain additional information regarding O'Keefe's travel on MMA. GAO related that they had specifically identified seven questionable trips, six in which they never fully investigated. By January 18, 2007, the RA as well identified five additional questionable or possibly improper flights in which O'Keefe was a passenger. On March 14, 2007, NASA OIG reduced the GAO/NASA list from twelve flights and selected three of the most questionable flights in which the NASA OIG deemed it necessary to further investigate. They were as follows: (1) *Washington D.C. to New York, NY, March 14, 2003*; (2) *Washington D.C. to New York, NY, February 7, 2005*; & (3) *Washington D.C. to Syracuse, NY, April 23, 2004*.

During the course of the administrative investigation into O'Keefe's travel on MMA, the RA and **7C** reviewed multiple documents. The RA and **7C** did find that many of O'Keefe's trips were appropriate and allowable under MMA policy. However, with respect to the three flights in question, the government purposes for use of MMA appeared to be tenuous, and it was necessary to further investigate whether or not these trips were in compliance with MMA policy. The RA, **7C** and other NASA OIG personnel also interviewed several NASA employees associated with the MMA process to include the MMA Flight Requester, MMA Trip Coordinator, MMA Approving Officials, former Associate Deputy Administrator James Jennings (Jennings), former General Counsel Paul Pastorek (Pastorek), and O'Keefe.

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O-HS-08-0290-HL-M

July 15, 2008

IMPROPER LETTER TO HOUGHTON MIFFLIN COMPANY

Goddard Space Flight Center
Greenbelt, MD

INFORMATION MEMORANDUM/CLOSING: The Office of Inspector General received a complaint alerting the OIG that a letter was written by Dr. James Hansen, Director, NASA Goddard Institute for Space Studies, to the Houghton Mifflin Company to allegedly pressure the company to change its product to suit his view as a government representative. Dr. Hansen used NASA letter head and signed in his government capacity.

On May 20, 2008, the information was referred to Edward Weiler, the Associate Administrator for Science Mission Directorate for review and response.

On July 14, 2008, Weiler responded to the referral. Weiler stated that Dr. Hansen's letter does not support the conclusions of the complainant. He advised that Hansen's letter makes clear that it is his own opinion based on his scientific expertise and that he did not state or imply that the content of the letter represented NASA policy. NASA policy recognizes that a scientific lecture or scientific opinion presented by a NASA scientist represents the individual scientist's personal views and is not considered a position of NASA. In addition, NASA policy does permit the use of NASA information resources for various non-NASA activities.

Weiler stated that the Hansen's letter informed the textbook publisher of errors in the book and offered assistance to correct them. The letter did not indicate that Hansen pressured the publisher to correct errors in the textbook.

Based on the information provided by NASA management no further investigative activity will be conducted. This complaint is closed.

Attachment

1. Weiler Response, dtd July 14, 2008.

Prepared by: 7C
DISTR: 7C

1814
APPR: 7C

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National Aeronautics and
Space Administration

Office of Inspector General
Washington, DC 20546-0001

MAY 20 2008



TO: Associate Administrator for Science Mission Directorate
FROM: Assistant Inspector General for Investigations
SUBJECT: OIG Hotline Complaint
O-HS-08-0290-HL-M

The purpose of this memorandum is to request your comments in connection with the enclosed NASA OIG Hotline Complaint received by this office on April 17, 2008.

The Hotline Complaint refers to a March 28, 2008, letter (enclosed) apparently written by Dr. James E. Hansen, Director, Goddard Institute of Space Studies, to the Houghton Mifflin Company.

The complainant states that Dr. Hansen's letter attempts to "pressure" the publisher to change a textbook's wording pertaining to "Anthropogenic Global Warming." The complainant also poses questions – to include whether the letter's contents reflect NASA's position given the use of NASA letterhead stationery and that it was signed by Dr. Hansen with his title listed under his name.

We are requesting that you review the complaint and the enclosed letter and provide a response within 30 days of the date of this memorandum.

If you have any questions, please contact me at 202-358-2580 or my Deputy, Matt Kochanski at 202-358-2576.

7C

Kevin H. Winters

Enclosures

cc:
General Counsel/Mr. Wholley

National Aeronautics and Space Administration
Office of Inspector General
Washington, DC 20546-0001



AUG 6 2008

TO: Associate Administrator for Science Mission Directorate
FROM: Assistant Inspector General for Investigations
SUBJECT: OIG Hotline Complaint
O-HS-08-0290-HL-M

This is in reply to your July 14, 2008, response to our referral of allegations regarding recent letters written by Dr. James Hansen, Director, Goddard Institute for Space Studies, to the Houghton Mifflin Company and to the Governor of Minnesota.

We concur in your conclusion regarding Dr. Hansen's letter to the Governor of Minnesota and consider that matter closed. We disagree, however, with your conclusions pertaining to Dr. Hansen's letter to the Houghton Mifflin Company.

In particular, your reply states that Dr. Hansen's letter to the Houghton Mifflin Company "makes clear" that he was communicating his "own opinion" and not NASA's.

To the contrary, we believe that Dr. Hansen's letter is styled and presented to the Houghton Mifflin Company in a manner that reasonably suggests NASA's and the United States Government's sanction. Instead of using personal stationary (like he did in his letter to the Governor of Minnesota), Dr. Hansen chose to communicate with the Houghton Mifflin Company using official NASA letterhead stationary; he introduced himself in the opening paragraph as the Director of the NASA Goddard Institute of Space Studies; he delivered a scientific message related to his area of expertise as a Government official; and then he signed the letter as "Director, NASA Goddard Institute for Space Studies." Further, nowhere in his letter did Dr. Hansen opt to inform the Houghton Mifflin Company that he was expressing his personal opinion; that NASA doesn't take positions on scientific conclusions; and that, therefore, his letter was not the position of NASA or the United States Government.

Under these circumstances, it is unreasonable to expect the Houghton Mifflin Company to somehow know *without being clearly informed* that NASA has a policy that an "opinion presented by a NASA scientist . . . is not considered a position of NASA" and that they should therefore view the letter as personal opinion expressed as part of the "scientific method" in exchanging information. Without such disclaimers, the letter can only be viewed by the recipient as a conveyance of an official position of NASA that the textbook published by the company includes "a large number of clearly erroneous