

Report Recipients:

M/Associate Administrator
for Space Flight

R/Associate Administrator
for Aerospace
Technology

S/Associate Administrator
for Space Science

Y/Associate Administrator
for Earth Science

GSFC/100/Director,
Goddard Space Flight
Center

JSC/AA/Director, Lyndon B.
Johnson Space Center

LaRC/106/Acting Director,
Langley Research Center

**NASA'S MONITORING OF CONTRACTOR
COMPLIANCE WITH NEW TECHNOLOGY
REPORTING REQUIREMENTS**

February 13, 2003

cc:

B/Deputy Chief
Financial Officer for
Financial
Management

B/Deputy Chief
Financial Officer for
Resources
(Comptroller)

BF/Director, Financial
Management
Division

G/General Counsel

H/Assistant
Administrator for
Procurement

JM/Director,
Management
Assessment Division

JM/Team Lead (Audit)



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

Released by: [Original Signed By]

Alan J. Lamoreaux, Assistant Inspector General for Audits

NASA's Monitoring of Contractor Compliance with New Technology Reporting Requirements

We performed this audit to follow up on Agency actions in response to a previous review and to determine whether NASA effectively monitored contractor reporting of new technology developments. NASA is required to review the technical progress of work performed under contracts to determine whether contractors are complying with the reporting requirements. Monitoring contractors' reporting of new technology developments allows NASA to provide the widest practicable dissemination, early utilization, expeditious development, and continued availability of new technologies for the general public. Our audit focused on the initial phase of NASA's technology commercialization process, that is, a contractor's reporting of a new technology development. We did not examine the potential transfer of such technologies to foreign partners because these transfers would occur in a later phase of NASA's technology commercialization process. Transfers of technology to foreign partners are generally subject to export control laws and regulations such as the International Traffic in Arms Regulations.

We found that some of the previously reported concerns continued to exist. Specifically, NASA did not follow up with contractors that were required to submit reports for 6 (55 percent) of the 11 active contracts and for 1 of the 4 completed contracts reviewed. As a result, the Agency could not be assured that new technologies, developed under contracts valued at \$9.8 billion, were transferred to private industry for commercial use.

Management Emphasis and Training Needed on New Technology Reporting and Follow-up

The Office of Inspector General previously reported on the lack of management emphasis on and training in new technology reporting requirements, and NASA took corrective actions. However, these two areas continue to be concerns.

Lack of Management Emphasis. Management at Goddard Space Flight Center, Lyndon B. Johnson Space Center, and Langley Research Center had not clearly communicated follow-up responsibilities to new technology representatives and contracting officer's technical representatives (COTRs). For example, the position descriptions for new technology representatives did not always include new technology reporting-related responsibilities. Consequently, the new technology representatives either were unaware of the responsibilities or believed that they had been assigned to, or should be performed by, other NASA officials. Additionally, COTRs placed higher priority on other delegated responsibilities.

Lack of Training. New technology representatives and COTRs were not sufficiently trained in new technology reporting requirements. Only one of the six new technology representatives interviewed had attended the Agency-provided “Technology Transfer and Commercialization for Project Personnel” training, and none of the seven COTRs we interviewed had attended training. Further, new technology reporting is not included in NASA’s COTR training course because NASA has not designated the responsibility as a core area of responsibility for COTRs.

Only one of the new technology representatives had received training on NASA’s Technology Tracking System (NTTS). The NTTS is the Agency’s commercial technology management system located at each Center and NASA Headquarters. Although the NTTS is a major productivity tool for new technology representatives, none of them used it to assist in managing and monitoring the reporting process.

Benefits of Contractor Compliance with Reporting Requirements

Compliance with interim and final reporting requirements does not provide complete assurance that contractors are reporting technologies. However, the reporting requirement is an added management control to monitor contractor development of Agency-funded technologies and provides greater assurance that contractors are aware of their obligation to report and disseminate the benefits of those technologies.

During fiscal year 2001, NASA had 495 research and development contracts with large businesses. The contracts were valued at \$84 billion. Some of the products resulting from reported technologies were fire retardant materials, air pollution monitors, noninvasive cardiac monitors, and sensors for environmental control. The return benefits on products similar to these represent a significant dividend to the taxpayer and the nation’s investment in aerospace research. Therefore, it is crucial that Agency representatives monitor contractor-reporting requirements.

Recommendations

We recommended that the Associate Administrators for Aerospace Technology, Space Flight, Earth Science, and Space Science emphasize to their applicable Center Directors the requirement to monitor and follow up on contractors’ reporting of new technologies. We also recommended that the Center Directors at Goddard Space Flight Center, Lyndon B. Johnson Space Center, and Langley Research Center:

- incorporate new technology reporting-related responsibilities into new technology representatives’ position descriptions and performance plans;
- direct COTRs to perform their new technology reporting-related duties;
- direct new technology representatives and COTRs to coordinate new technology activities; and
- train new technology representatives and COTRs on new technology reporting requirements.

Management's Response and our Evaluation of the Response

NASA concurred with the report recommendations and has planned or completed corrective actions. We considered management's comments (see Appendix F) to be responsive to the recommendations. Details related to disposition and closure of the recommendations are in Appendices A and E.

Appendices

Among the appendices, note that Appendix B includes a summary of the prior Office of Inspector General review on new technology reporting, Appendix C describes the new technology reporting and follow-up requirements, and Appendix D lists the NASA contracts we reviewed. Appendix G shows the report distribution.

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Acronyms Used in the Report

COTR	Contracting Officer’s Technical Representative
FAR	Federal Acquisition Regulation
GAO	General Accounting Office
NPD	NASA Policy Directive
NPG	NASA Procedures and Guidelines
NTTS	NASA Technology Tracking System
OIG	Office of Inspector General

Appendix A. Status of Recommendations

Recommendation No.	Resolved	Unresolved	Open/ECD*	Closed
1	X		30 days after issuance of final report	
2	X		30 days after issuance of final report	
3	X		30 days after issuance of final report	
4	X		30 days after issuance of final report	
5	X		04-30-03	
6	X			X
7	X			X
8	X			X
9	X		05-31-03	
10	X		05-31-03	
11	X		05-31-03	
12	X		05-31-03	
13	X			X
14	X			X
15	X			X
16	X			X

* ECD – Estimated Completion Date

Appendix B. Objective, Background, Scope, Methodology, and Prior Review Summary

Objective

The overall objective was to determine whether contractors and NASA were in compliance with the Agency's new technology reporting and follow-up requirements.

Background

Several NASA Headquarters Offices are responsible for new technology reporting: the Office of Procurement; the Office of General Counsel; and the Strategic Enterprise Offices of Aerospace Technology, Space Flight, Space Science, and Earth Science. The Office of Procurement prepares, issues, and maintains the NASA Federal Acquisition Regulation Supplement, which contains procurement policies, procedures, and contract clauses related to the new technology reporting requirements. The Office of General Counsel provides guidance to ensure that NASA applies uniform criteria to the contractors' invention reporting. Associate Administrators for the Enterprise Offices ensure that applicable activities under their cognizance are in compliance with NASA technology commercialization policy established by the Office of Aerospace Technology. The Office of Aerospace Technology also develops and maintains an Agencywide commercial technology information system, establishes requirements and curriculum for technology commercialization training, and provides necessary commercial technology training to NASA employees involved in the technology commercialization processes.

NASA Center Directors are responsible for implementing an effective technology commercialization program at the Centers. Each NASA Center has designated individuals as the Center's new technology representatives. Each Center's procurement office is responsible for incorporating applicable new technology reporting clauses¹ into research and development contracts for the performance of experimental, developmental, research, design, or engineering work. Center procurement officials also appoint qualified Center employees to act as Contracting Officer's Technical Representatives (COTRs) and to ensure that the COTRs receive adequate training.

Scope and Methodology

We limited our audit scope to NASA contracts with large businesses because the General Accounting Office (GAO) had announced plans to review NASA's compliance with the Bayh-Dole Act. The Bayh-Dole Act applies to small businesses, universities, and non-profit organizations. It generally gives those organizations the right to retain title and

¹ Two new technology-related clauses apply to research and development contracts with large businesses: NASA FAR Supplement 1852.227-70, "New Technology," and NASA FAR Supplement 1852.227-72, "Designation of New Technology Representative and Patent Representative."

profit from their inventions, provided the organizations follow certain requirements, such as submitting interim reports. Because of GAO's planned review, we focused our work on contracts with large businesses.

Using the NASA Technology Tracking System (NTTS), we judgmentally selected a total of 11 contracts (see Appendix D) from Goddard Space Flight Center (Goddard), Lyndon B. Johnson Space Center (Johnson), and Langley Research Center (Langley) using the following selection criteria:

- the contract was awarded to a large business,
- the contract was one of the Center's 10 largest in terms of estimated dollar value, and
- the contract included the new technology clause.

We reviewed the procurement and technology and commercialization offices' files and interviewed Center procurement officials, COTRs, and new technology representatives. We also interviewed personnel from the NASA Headquarters Offices of Aerospace Technology, Procurement, and General Counsel.

We reviewed the following documentation at Goddard, Johnson, and Langley:

- New technology interim and final reports.
- COTR letters of delegation.
- NASA employee position descriptions for new technology representatives and patent representatives.
- NASA employee performance plans for new technology representatives.

Use of Computer-Processed Data

We determined that the computer-processed data in the NTTS was reliable to meet the objectives of our audit. Therefore, we relied on that data to judgmentally select 11 contracts for review. We compared the information in the NTTS to the same information in the NASA Financial and Contractual Status system (an online query system of active NASA awards) and the Center procurement and technology and commercialization offices' files, where appropriate, to provide reasonable assurance that the NTTS data was reliable.

Management Controls Reviewed

We reviewed laws, regulations, and Agency policies and procedures related to the reporting and follow-up requirements for new technologies that are developed with Agency funds. Specifically, we reviewed the National Aeronautics and Space Act of

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1958, as amended; the Code of Federal Regulations; the Federal Acquisition Regulation (FAR) and NASA FAR Supplement; and NASA policy directives, procedures, and guidelines.

We considered the lack of management emphasis and training for monitoring new technology reporting to be control weaknesses that needed additional attention.

Audit Field Work

We performed audit field work from November 2001 through November 2002 at NASA Headquarters, Goddard, Johnson, Langley, and the John F. Kennedy Space Center. We performed the audit in accordance with generally accepted government auditing standards.

Prior Review

“Review of NASA New Technology Reporting,” Report Number P&A 96-001, September 30, 1996. (See <http://www.hq.nasa.gov/office/oig/hq/pubreports.html> for a copy of the report.)

The objectives of the review were to evaluate the required reporting of new technologies developed by NASA's large business contractors during contract performance and the processes and procedures NASA officials followed in managing such reporting. The review showed that the new technology reporting process, as it related to reporting by large business contractors, lacked Agencywide direction and management support.

Principle observations follow:

- Existing new technology reporting policies and procedures were inadequate, and Agencywide operating guidelines were lacking.
- The NTTS was not widely used by the Centers and was being developed with limited input from Center users.
- Staff resources assigned to new technology reporting were insufficient to carry out new technology tracking and reporting functions.
- Contracting officers, COTRs, and new technology and patent representatives were not adequately trained on new technology reporting requirements.

The report recommended that NASA completely reassess the new technology reporting process and develop an implementation strategy for it. At a minimum, the reassessment was to define an active role for NASA senior management, include a detailed implementation strategy, and provide sufficient staff for new technology reporting activities to implement the new strategy. The report also recommended that NASA:

- Include specific actions regarding new technology reporting in the COTRs Letter of Delegation.

- Include elements directly related to new technology reporting in the position descriptions and performance appraisals of personnel assigned those responsibilities.
- Provide in-depth training on new technology reporting to all personnel considered key players in the new technology process.

NASA initiated corrective actions in response to the recommendations.

Appendix C. New Technology Reporting and Follow-Up Requirements

Legislative New Technology Reporting Requirements. In accordance with the National Aeronautics and Space Act of 1958, as amended, NASA must require contractors to furnish “a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation” made in performance of work for the Agency. The Act is intended to protect the Government's interest. Contractors’ prompt reporting also allows the Agency to provide the widest practicable and appropriate dissemination, early utilization, expeditious development, and continued availability of new technologies for the benefit of the scientific, industrial, and commercial communities and the general public.

Agency New Technology Reporting Requirements. To comply with the intent of the Space Act, NASA established NASA Federal Acquisition Regulation (FAR) Supplement Part 1827.302, “Patent Rights Under Government Contracts.” The Supplement states that NASA contracts and subcontracts with large businesses are subject to the Space Act and that NASA must ensure the prompt reporting of new technologies to protect the Government's interest and to provide the widest practicable dissemination for the benefit of the general public.

NASA incorporates NASA FAR Supplement 1852.227-70, “New Technology,” into contracts that involve experimental, developmental, research, design, or engineering work. The clause requires a contractor to submit the following:

- Interim reports every 12 months (or such longer period as may be specified by the contracting officer) from the date of the contract, listing reportable items during that period and certifying that all reportable items have been disclosed or that there were no reportable items.
- A final report within 3 months after completion of the contracted work, listing all reportable items or certifying that there were no reportable items. The new technology clause states that final payment shall not be made before the contractor submits an acceptable final report. This statement provides an incentive for the contractor to submit a final report.
- A new technology report for each reportable item within 2 months after the inventor discloses it in writing to the contractor personnel responsible for the administration of the new technology clause.

Agency New Technology Follow-up Requirements. NASA FAR Supplement 1827.305-370(b), “NASA Patent Rights and New Technology Follow-up Procedures,” requires that new technology representatives review the technical progress of work performed under contracts to determine whether the contractors are complying with the reporting and recordkeeping requirements of the new technology clause.

In 1998, the Office of Aerospace Technology provided guidelines for follow-up procedures in the "Technology Commercialization Process Handbook." The handbook lists nine follow-up procedures for the new technology representative:

- Review the technical progress of work performed under the contract to ascertain whether the contractor is complying with the clause's reporting requirements.
- Receive and review new technology, interim, and final reports from the contractor and determine, in consultation with the Contracting Officer's Technical Representative (COTR), whether submitted reports are acceptable.
- Request that the contractor submit interim and/or final reports if not submitted in a timely manner.
- Forward copies of all new technology reports submitted by the contractor to the patent representative.
- Forward to the patent representative all correspondence relating to inventions and to waivers under the new technology clause. (A large business contractor may submit a request for a waiver that, if approved by NASA, gives up the rights of the United States Government to acquire title in a subject invention.)
- Enter new technology reporting information into the NASA Technology Tracking System (NTTS), an integrated Agencywide server located at Langley. The NTTS is used for capturing and managing reports of new technology and for providing status metrics. Agency officials commonly refer to the system as the TechTracS.
- After consulting with the COTR, request that the contractor resubmit interim reports deemed to be incomplete.
- After consulting with the COTR, request that the contractor submit any new technology reports identified in interim or final reports that have not yet been submitted.
- Upon receipt of any final report required by the new technology clause and upon determination that all work is complete, determine whether the contractor has complied with the clause's reporting requirements. If compliance occurred, the new technology representative shall certify to it, obtain the patent representative's concurrence, and forward the certification to the contracting officer.

The handbook lists two follow-up procedures for the COTR:

- Monitor the technical progress of work performed under the contract to ascertain whether the contractor is complying with the clause's reporting requirements.
- Review all interim and final reports to determine whether all expected reportable items or subject inventions have been disclosed, and provide input to the new technology representative.

In December 2001, NASA published NASA Procedures and Guidelines (NPG) 7500.1, "NASA Technology Commercialization Process." The NPG provides guidance for implementing NASA's technology commercialization requirements, including the

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responsibilities of the new technology representative and COTR as listed in the "Technology Commercialization Process Handbook."

Appendix D. NASA Contracts Reviewed

Center	Contract Number	Contractor	Submitted Interim Reports	Submitted Final Report	Contract Value (Millions)
Goddard	NAS5 – 29500	Space Systems Loral, Inc.	No	N/A*	\$ 1,100
Goddard	NAS5 – 60000	Raytheon Information System Co.	No	N/A*	1,000
Johnson	NAS9 – 18000	Boeing North American, Inc.	No	Yes	5,300
Johnson	NAS9 – 98100	Lockheed-Martin Space Operations	No	N/A*	2,100
Langley	NAS1 – 19570	Science Applications International Corp.	No	Yes	142
Langley	NAS1 – 20048	Computer Sciences Corp.	No	Yes	151
Subtotal					<u>\$ 9,793</u>
Goddard	NAS5 – 98069	Boeing Satellite Systems Inc.	Yes	N/A*	511
Johnson	NAS9 – 17800	Boeing North American, Inc.	Yes	No	1,900
Johnson	NAS9 – 20000	United Space Alliance	Yes	N/A*	9,700
Langley	NAS1 – 19039	TRW, Inc.	Yes	N/A*	122
Langley	NAS1 – 98100	Wyle Laboratories	Yes	N/A*	57
Subtotal					<u>\$12,290</u>
Total					<u>\$22,083</u>

* Denotes active contract. Therefore, the final report was not due as of July 31, 2002.

Appendix E. Recommendations, Management's Response, and Evaluation of Management's Response

1. The Associate Administrator for Aerospace Technology should emphasize to the Directors of Ames Research Center, Dryden Flight Research Center, Langley Research Center, and John H. Glenn Research Center the requirement to follow up on contractors' reporting of new technologies.

Management's Response. Concur. The Associate Administrator for Aerospace Technology will emphasize by letter the importance of complying with the required reporting of new technologies to all the Research Centers.

2. The Associate Administrator for Space Flight should emphasize to the Directors of Lyndon B. Johnson Space Center, John F. Kennedy Space Center, George C. Marshall Space Flight Center, and John C. Stennis Space Center the requirement to follow up on contractors' reporting of new technologies.

Management's Response. Concur. The Office of Space Flight will direct the Centers to enforce compliance with Federal procurement regulations and NASA policy guidance.

3. The Associate Administrator for Space Science should emphasize to the NASA Management Office at the Jet Propulsion Laboratory, the requirement to follow up on contractors' reporting of new technologies.

Management's Response. Concur. The Associate Administrator for Space Science will emphasize the requirement to follow up on the Jet Propulsion Laboratory's reporting of new technologies in a memorandum to the Director, NASA Management Office.

4. The Associate Administrator for Earth Science should emphasize to the Director, Goddard Space Flight Center, the requirement to follow up on contractors' reporting of new technologies.

Management's Response. Concur. The Office of Earth Science will emphasize the importance of following Recommendations 5 through 8 in a letter to the Director, Goddard Space Flight Center.

Evaluation of Management's Responses. Management's planned actions for recommendations 1 through 4 are responsive. The recommendations are resolved but will remain undispositioned and open until the agreed-to corrective action is completed.

The Director, Goddard Space Flight Center, should:

5. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into new technology representatives' position descriptions and performance plans.

Management's Response. Concur. Goddard's Technology Commercialization Office will incorporate new technology-related responsibilities into new technology representatives' position descriptions and performance plans.

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

6. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, ensuring contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Management's Response. Concur. Goddard's Technology Commercialization Office, in coordination with the Procurement Office, prepared a pamphlet on new technology reporting requirements and e-mailed the pamphlet to all Goddard COTRs. The e-mail included a reminder that, as part of their contract surveillance, COTRs are responsible for ensuring that contractors comply with new technology reporting requirements.

Evaluation of Management's Response. Management's completed action is responsive to the recommendation. Based on our review of the pamphlet and reminder, the recommendation is resolved, dispositioned, and closed for reporting purposes.

7. Direct COTRs and the new technology representatives to coordinate activities to ensure that contractors are submitting interim reports.

Management's Response. Concur. Goddard's Technology Commercialization Office developed a training briefing package for new technology representatives and COTRs. The training briefing package addresses coordination between COTRs and new technology representatives. The Center provided the training to its new technology representatives in September 2002. The Center incorporated the training material into the COTR training program and began training COTRs with the new training program in December 2002.

Evaluation of Management's Response. Management's completed action is responsive to the recommendation. Based on our review of the training package, the recommendation is resolved, dispositioned, and closed for reporting purposes.

8. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTTS features to the maximum extent. COTR training should include COTR responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of

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reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Management's Response. Concur. Goddard's Technology Commercialization Office has a training package for new technology representatives and for inclusion into the Center's COTR training program. The Center provided the training to its new technology representatives in September 2002 and to COTRs in December 2002. The Center provided training on NTTS features to new technology representatives in April 2002.

Evaluation of Management's Response. Management's completed actions are responsive to the recommendation. We reviewed the training package and found that it included reporting requirements, COTR new technology-related responsibilities, definitions of reportable items, and instructions for COTRs to contact new technology representatives with questions on whether a technology is a reportable item. We also reviewed evidence of the NTTS training provided to the new technology representatives. Based on those reviews, the recommendation is resolved, dispositioned, and closed for reporting purposes.

The Director, Lyndon B. Johnson Space Center should:

9. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into new technology representatives' position descriptions and performance plans.

Management's Response. Concur. Johnson's Office of Technology Transfer and Commercialization will update the position descriptions and the performance plans of the new technology representatives.

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

10. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, ensuring contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Management's Response. Concur. Johnson's Office of Procurement will, with assistance from the Office of Technology Transfer and Commercialization, communicate new technology reporting duties and responsibilities to existing and future COTRs.

Evaluation of Management's Response. Management's planned action is responsive to the recommendation. The recommendation is resolved but will remain undispositioned

and open until management provides to us evidence that the Center has communicated the duties and responsibilities to existing COTRs.

11. Direct COTRs and new technology representatives to coordinate activities to ensure that contractors are submitting interim reports.

Management's Response. Concur. Johnson's Office of Technology, with the assistance of the Office of Procurement, will implement a plan to verify contractor's interim reports.

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

12. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTTS features to the maximum extent. COTR training should include COTR responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Management's Response. Concur. Johnson has incorporated new technology reporting requirements into COTR training and will incorporate the requirements into training plans for new technology representatives.

Evaluation of Management's Response. Management's actual and planned actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until management provides us evidence that the Center has incorporated new technology reporting requirements into COTR training and the training plans for new technology representatives.

The Director, Langley Research Center, should:

13. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into the new technology representative's position description.

Management's Response. Concur. Langley's Technology Commercialization Program Office incorporated the responsibilities into the new technology representative's position description on September 20, 2002.

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Evaluation of Management's Response. Management's completed action is responsive to the recommendation. Based on our review of the position description, the recommendation is resolved, dispositioned, and closed for reporting purposes.

14. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, ensuring contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Management's Response. Concur. Langley's Technology Commercialization Program Office incorporated additions to the material it uses to train COTRs on new technology reporting. The material includes COTR's new technology reporting-related responsibilities and stresses the importance of ensuring proper reporting. Training of COTRs with the additional material began in November 2002.

Evaluation of Management's Response. Management's completed action is responsive to the recommendation. Based on our review of the additions to the COTR training material, the recommendation is resolved, dispositioned, and closed for reporting purposes.

15. Direct COTRs and the new technology representative to coordinate activities to ensure that contractors are submitting interim reports.

Management's Response. Concur. Langley's Technology Commercialization Program Office, representing the new technology representative, and Office of Procurement, representing the COTRs, have agreed to coordinate activities to ensure contractors submit interim reports. Based on the agreement, the Office of Procurement will send an initial letter reminding the contractors of their responsibility to provide the required reports, establish a deadline submission date in each year, and inform contractors that failure to submit the required reports may affect their annual performance evaluation rating. The Office of Procurement will also remind each contractor annually of the requirement to submit interim reports and will add language to new contract awards that specifically identifies required reports.

Evaluation of Management's Response. Management's actions are responsive to the recommendation. Based on our review of the initial letter and language for new contract awards the recommendation is resolved, dispositioned, and closed for reporting purposes.

16. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTS features to the maximum extent. COTR training should include COTR responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of

reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Management's Response. Concur. Langley has trained its new technology representative on new technology reporting requirements and the use of NTTS features through actions taken under Recommendations 13 and 15. As noted in the response to Recommendation 14, Langley will include additional information and emphasis on new technology reporting requirements in future COTR training.

Evaluation of Management's Response. Management's actions are responsive to the recommendation, and the recommendation is resolved. We consider the recommendation resolved, dispositioned, and closed for reporting purposes based on (1) our review of the new technology representative's modified position description, (2) the new technology representative's understanding of new technology reporting requirements and NTTS features as demonstrated to us through subsequent discussions, and (3) our review of the additional information for the COTR training.

Office of General Counsel Recommendation

A NASA Office of General Counsel official suggested an additional action, discussed below, that may improve contractor compliance with the reporting requirements.

At present, contracting officers normally incorporate the NASA FAR Supplement "New Technology" clause, along with other clauses, into research and development contracts by reference only. Some NASA officials believe that contractors are more likely to comply with the reporting requirements if the full text of the new technology clause is included in the contracts. Therefore, the official suggested that the full text of the clause be included in all research and development contracts. We agree that the suggested action may improve contractors' compliance with the reporting requirements and believe that management should take it under consideration.

The Office of Inspector General made a similar recommendation in its "Review of NASA New Technology Reporting," Report Number P&A 96-001, September 30, 1996 (see Appendix B for a summary). However, NASA disagreed with the recommendation at that time, responding that the text of the new technology clause was available to contractors and that including the full text in contracts would waste paper and effort.

Appendix F. Management's Comments

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



November 30, 2002

Reply to Attn of:

RS

TO: W/Assistant Administrator Inspector General for Audits

FROM: R/Associate Administrator for Office of Aerospace Technology

SUBJECT: Final Response to the Draft IG Audit Report on Compliance with New
Technology Reporting Requirements

The following is the coordinated final response to the subject draft audit report. This draft audit report includes recommendations affecting all Enterprises and Centers. Each audited Center addressed the recommendations pertinent to them, and the Enterprises have coordinated with the Centers that are under their purview. Dates have been provided for closing recommendations when possible.

Consolidated response to the "Recommendations for Corrective Action"

1. The Associate Administrator for Aerospace Technology should emphasize to the Directors of Ames Research Center, Dryden Flight Research Center, Langley Research Center, and John H. Glenn Research Center the requirement to follow up on contractors' reporting of new technologies.

Concur: The Associate Administrator for Aerospace Technology will emphasize to all the Research Centers the importance of complying with the required reporting of new technologies via letter. The estimated distribution date of this letter is within a month of the published final report.

2. The Associate Administrator for Space Flight should emphasize to the Directors of Lyndon B. Johnson Space Center, John F. Kennedy Space Center, George C. Marshall Space Flight Center, and John C. Stennis Space Center the requirement to follow up on contractors' reporting of new technologies.

Concur: The Office of Space Flight will implement the audit recommendations by a letter to the Space Flight Centers directing them to enforce compliance with federal procurement regulations and published NASA policy guidance. This action will be taken within a month of the published final report.

3. The Associate Administrator for Space Science should emphasize to the NASA Management Office at the Jet Propulsion Laboratory, the requirement to follow up on the contractor's reporting of new technologies.

Concur: Although the Jet Propulsion Laboratory (JPL) has been identified as a NASA Center in footnote no. 8, JPL is actually a contractor. The NASA Management Office (staffed by Headquarters Office of Space Science civil servant employees) administers the contract between NASA and California Institute of Technology. The Associate Administrator for Space Science will emphasize the requirement to follow up on the Jet Propulsion Laboratory's reporting of new technologies in a memorandum to the Director, NASA Management Office. This action will be completed within a month of the published final report.

4. The Associate Administrator for Earth Science should emphasize to the Director, Goddard Space Flight Center, the requirement to follow up on contractors' reporting of new technologies.

Concur: The Office of Earth Science (OES) will emphasize to the Director, Goddard Space Flight Center the importance of following recommendations 5-8, in accordance with NASA Procedures and Guidelines (NPG) 7500.1 "NASA Technology Commercialization Process" and COTR Delegation Form (1634), paragraph (3m). OES will issue GSFC a letter within a month of the published final report.

The Director, Goddard Space Flight Center, should:

5. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into new technology representatives' position descriptions and performance plans.

Concur: The GSFC Technology Commercialization Office will incorporate the new technology reporting-related responsibilities into the Technology Utilization Managers' position descriptions and performance plans. The following language will be added to the position descriptions: "The incumbent will assist in the monitoring of GSFC contracts, grants, and cooperative agreements that contain the New Technology Reporting clause. In addition, the incumbent will assist in overseeing that the recipients comply with reporting requirements specified in NFS 1852.227-70 (contracts) and 14 CFR 1274.912 (grants and cooperative agreements), including Interim and Final Reports. He/she shall ensure that the New Technologies Interim and Final Reports are documented in the Agency-wide commercialization database (NASATechTracS), in accordance with guidance provided in NPG 7500.1, NASA Technology Commercialization Process. He/she advises and consults with GSFC civil servants (as specified in NFS 1827.305 (b)) and recipient scientific and technical staff on procedures for complying with the reporting requirements of NFS 1852.227-70 and 14 CFR 1274.912." Performance plans will be modified accordingly. The GSFC action official is Ms. Nona Checks, Chief, GSFC Technology Commercialization Office, Code 504. The projected completion date is April 30, 2003.

6. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Concur: COTR delegation is accomplished via NASA Form 1634, and paragraph (m) refers specifically to new technology reporting. In order to stress the importance of these duties and the importance of coordination between COTR's and new technology representatives, GSFC will focus on continuous and enhanced COTR training and awareness tools. The GSFC Technology Commercialization Office provided training material from the "NASA Technology Transfer and Commercialization for Project Personnel" course that describes the requirements for the new technology reporting process. It addresses the responsibilities of the contractor, the GSFC Technology Commercialization Office, and the COTR to ensure timely contractor reporting. This material identifies the GSFC Technology Commercialization Office as the primary point of contact for the new technology reporting process. This Office in coordination with the Procurement Office prepared a pamphlet containing the important aspects of the new technology reporting process. This pamphlet was distributed to all GSFC COTR's via email on 9/12/02 with the following reminder: "Attached is a one-page pamphlet created by the Technology Commercialization Office to remind you of the requirements of new technology reporting and provide you with their telephone number. As part of contract surveillance, if your contracts contain the clause NFS 1852.227-70 New Technology, it is your responsibility to ensure that the contractor submits the required reports timely." The training material will be kept current and was provided to the COTR training instructors for all future COTR training classes and COTR refresher training classes. A section on new technology reporting has been incorporated into the COTR training program. The next COTR training at GSFC is scheduled for December 2-4, 2002, and the Refresher class is scheduled for December 5, 2002. The GSFC Technology Commercialization Office developed a briefing package entitled "New Technology Reporting Training" that was presented to the five GSFC Technology Utilization Managers on 9/3/02, along with the above-mentioned pamphlet. These five managers were also trained on the TechTracS in April 2002. We provided the OIG with copies of the New Technology Reporting pamphlet, training briefing package, and TechTracS training agenda and attendance list and GSFC requests closure of this Recommendation.

7. Direct COTRs and the new technology representatives to coordinate activities to ensure that contractors are submitting interim reports.

Concur: This recommendation was implemented through the COTR and Technology Utilization Manager training discussed in our response to Recommendation 6. GSFC requests Recommendation 7 be closed for reporting purposes.

8. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTTS features to the maximum extent.

COTR training should include COTRs responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Concur: This recommendation was implemented through the COTR and Technology Utilization Manager training discussed in our response to Recommendation 6. GSFC requests Recommendation 8 be closed for reporting purposes.

The Director, Lyndon B. Johnson Space Center should:

9. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into new technology representatives' position descriptions and performance plans.

Concur: The Johnson Space Center, Office of Technology Transfer and Commercialization will update the position descriptions and the performance plans of the new technology representatives as recommended. Updates will be completed by December 2002.

10. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Concur: The JSC Office of Procurement will, with the assistance of the Office of Technology Transfer and Commercialization, communicate new technology reporting duties and responsibilities to current and future COTRs. Duties will include those recommended in the report.

11. Direct COTRs and new technology representatives to coordinate activities to ensure that contractors are submitting interim reports.

Concur: The JSC Office of Technology, with the assistance of the Office of Procurement, will implement a plan to verify contractor's interim reports. This plan will be implemented by December 2002.

12. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTTS features to the maximum extent. COTR training should include COTR's responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Concur: JSC has incorporated the required update to COTR training. This update was included in the last round of COTR training and COTR refresher training. Training plans for New Technology representatives will be updated by December 2002.

The Acting Director, Langley Research Center, should:

13. Incorporate the new technology reporting-related responsibilities specified in NASA FAR Supplement 1827.305-370(b) and NPG 7500.1 into the new technology representative's position description.

Concur: The new technology representative's position description was modified on September 20, 2002 to incorporate the responsibilities as described above. Langley requests that this Recommendation be closed.

14. Direct COTRs to perform new technology reporting-related duties delegated to them by contracting officers. The COTR duties should include, but not be limited to, contractor compliance with new technology reporting requirements as part of his/her review of the contract performance.

Concur: Langley will increase the emphasis on these duties beginning with the next regularly scheduled session in November 2002. The increased emphasis includes additions to the training materials that: a) stress the importance of ensuring proper reporting, b) provide specific reference to NPG 7500.1 as an available resource tool, and c) clearly indicate that the COTRs should contact the new technology representative if questions arise or assistance is needed.

15. Direct COTRs and the new technology representative to coordinate activities to ensure that contractors are submitting interim reports.

Concur: Procurement and TCPO have agreed to coordinate activities to ensure that interim reports are submitted. As a result of that agreement, the Office of Procurement will send an initial letter by November 30, 2002, to all Contractors that are required to submit new technology reports. This initial letter will remind them of their responsibility to provide such reporting to the Government, will establish a deadline submission date in each year, and will inform them that failure to submit the required reports may impact their annual performance evaluation rating. In addition, reminder letters will be generated each year approximately 30 days prior to the due date to remind them of the annual interim reporting requirement. Finally, language will be added to new contract awards to specifically call out the reports that are required. These actions will ensure improved reporting in the future

16. Train the new technology representatives and COTRs on new technology reporting requirements. New technology representative training should include reporting requirements and the use of NTTS features to the maximum extent.

COTR training should include COTR's responsibilities as stipulated in the "Technology Commercialization Process Handbook" and NPG 7500.1, delegated responsibilities related to new technology reporting requirements, definitions of reportable items, and instructions to contact new technology representatives with questions on whether a technology is a reportable item.

Concur: As noted in recommendation 14, additional emphasis and information will be provided to the COTRs at their training beginning in November 2002, in order to stress the need for ensuring compliance with the reporting requirements. In addition, as described in recommendations 13 and 15, the reporting-requirement responsibilities have been explicitly incorporated into the new technology representative's position description, and TCPO and Procurement have implemented procedures to remind contractors of their reporting requirements.

If you have any questions pertaining to this draft response, please call Sue Humphrey 202-358-1177.


J.F. Creedon

cc:
JM/Ms. Team
RS/Ms. Humphrey
W/Mr. Lamoreaux

Appendix G. Report Distribution

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Report Title: NASA's Monitoring Contractor Compliance With New Technology Reporting Requirements

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
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Major Contributors to the Report

Sandra Massey, Program Director, Safety and Technology Audits

Carol St. Armand, Program Manager, Financial Audits, Management and Oversight

Douglas Orton, Auditor-in-Charge

Eugene Bauer, Auditor