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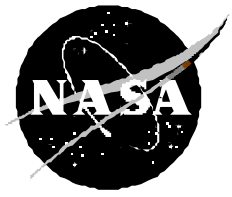
AUDIT REPORT

OFFICE OF AUDITS

NASA SHOULD RECONSIDER THE AWARD EVALUATION PROCESS AND CONTRACT TYPE FOR THE OPERATION OF THE JET PROPULSION LABORATORY

OFFICE OF INSPECTOR GENERAL



National Aeronautics and
Space Administration

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Note: This redacted version of the report omits predecisional information that is exempt from public release under the Freedom of Information Act, exemption (b)(5).

Final report released by:

signed

Debra D. Pettitt
Acting Assistant Inspector General for Auditing

Acronyms

CPAF	Cost-Plus-Award-Fee
CPFF	Cost-Plus-Fixed-Fee
CPM	Contract Performance Monitor
ESMD	Exploration Systems Mission Directorate
FAR	Federal Acquisition Regulation
FDO	Fee Determination Official
FFRDC	Federally Funded Research and Development Center
FY	Fiscal Year
GAO	Government Accountability Office
JET	JPL Evaluation Tool
JPL	Jet Propulsion Laboratory
MEP	Mars Exploration Program
MRO	Mars Reconnaissance Orbiter
MSL	Mars Science Laboratory
NFS	NASA FAR Supplement
NMO	NASA Management Office
OIG	Office of Inspector General
PEB	Performance Evaluation Board
PPE	Primary Performance Evaluator
SMD	Science Mission Directorate
SOMD	Space Operations Mission Directorate

OVERVIEW

NASA SHOULD RECONSIDER THE AWARD EVALUATION PROCESS AND CONTRACT TYPE FOR THE OPERATION OF THE JET PROPULSION LABORATORY

The Issue

The Jet Propulsion Laboratory (JPL) is a NASA federally funded research and development center (FFRDC) operated under contract by the California Institute of Technology (Caltech), a private nonprofit educational institution. The NASA Management Office (NMO) at JPL oversees the contract. Since 1993, NASA has awarded three cost-plus-award-fee (CPAF) contracts[1] to Caltech for the operation of JPL. Work under these contracts has included accomplishments in astrophysics, earth sciences, solar system exploration, and technology. Examples since 2003 include "Spirit" and "Opportunity," the Mars Exploration Rovers; the Spitzer Space Telescope; the Microwave Limb Sounder; and the Tropospheric Emission Spectrometer.

The current 5-year CPAF contract, awarded to Caltech in November 2002, is valued at approximately $7.5 billion[2]—$1.5 billion per year, including available award fees of $22 million. The current contract also includes an award term incentive, allowing Caltech to earn term extensions on the contract in increments of 3 or 9 months for up to an additional 5 years. The potential total value of these incentives is $7.5 billion. Award fee and award term determinations for the JPL contract are made by the NASA Associate Administrator based on annual evaluations of the contractor's performance against criteria established in the NASA "Award Fee Contracting Guide," June 27, 2001.

We initiated this audit to determine whether NASA appropriately calculated and justified the award fees and term extensions earned by Caltech for the operation of JPL. (See Appendix A for details of the audit's scope and methodology.)

[1] The Federal Acquisition Regulation, Subpart 16.305, "Cost-Plus-Award-Fee Contracts," defines a CPAF contract as a cost-reimbursement contract that provides for a fee consisting of (a) a base amount (which may be zero) fixed at inception of the contract, and (b) an award amount, based on a judgmental evaluation by the Government, sufficient to provide motivation for excellence in contract performance.

[2] The contract states that the estimated cost of the contract will be "the sum of the estimated costs set forth in task orders issued."

Results

NASA can improve its management of the JPL contract:

- NASA's overall assessment of contractor performance may have been overstated because the Agency's performance evaluations for fiscal year (FY) 2007 were incomplete or did not otherwise comply with its guidance.

- The contractor's poor performance on a large, significant project was offset in NASA's assessment by higher performance on smaller projects because the Agency did not use proportional weighting in its evaluations.

- NASA's award of $16 million in fees and 27 months of contract term extensions, valued at $3.375 billion, were unsupported because the Agency's performance evaluation factors did not include an assessment of required cost control measures.

- NASA does not have assurance that the existing contract still meets its needs or provides the best value for the taxpayer because the Agency did not fully comply with Federal Acquisition Regulation (FAR) requirements for a 5-year comprehensive review of the use and need for the FFRDC.

- NASA's use of a single CPAF contract for all aspects of the FFRDC creates a significant administrative and management burden for the Agency that is unnecessary given that there is a basis for the contracting officer to establish fair and reasonable prices for routine operations and maintenance of the facility.

The Assistant Administrator for Procurement and the NMO concurred with our recommendations to address these issues and agreed that there are potential monetary benefits associated with their implementation.

We found that performance evaluations and the method used to calculate the award fee score for Caltech's FY 2007 performance may not accurately reflect the overall performance of the contractor (Finding A). For the period of performance ending September 30, 2007, this resulted in potentially higher ratings, which could have led to NASA inappropriately paying award fees and awarding a term extension. Although the criteria used for evaluating the contractor's performance were sufficiently specific and measurable, NASA evaluators provided incomplete assessments or assigned inappropriate ratings. For example, the evaluation for one criterion stated that the contractor did not meet the Satisfactory or Excellent standards due to cost; however, the evaluator provided a rating of Good,[3] stating that he did not want to penalize the

[3] NASA guidance requires adjectival ratings (Excellent, Very Good, Good, Satisfactory, Poor/Unsatisfactory) to be used for award-fee contracts.

contractor's technical performance for poorer cost performance. In addition, there is no documentation to indicate that criteria were proportionately weighted by a project's overall importance to NASA or by project cost, which allowed exceptional contractor performance on smaller projects to conceal poorer performance on a larger, more significant project.

In addition, the performance evaluation factors did not include cost control measures weighted at no less than 25 percent of the total weighted evaluation factors, as required by NASA guidance. We calculated that cost control measures were weighted between 5 percent and 14 percent of the total (Finding B). The low percentage weighting deemphasized the importance of controlling cost, minimized the effectiveness of cost control, and gave the contractor minimal incentive to control costs. As a result, a portion of Caltech's award fees were unsupported costs and an ineffective use of Government funds. Specifically, we consider $16 million of the $97 million paid in award fees for Caltech's performance under the 2003 contract to be unsupported. In addition, we question the 27 months in term extensions, valued at approximately $3.375 billion, awarded to Caltech.

We also found that NASA did not adequately consider alternative sources for the operation of JPL as an FFRDC and could not provide support to justify its decision to continue procuring the services of Caltech (Finding C). The FAR requires a comprehensive review of the use and need for FFRDCs every 5 years and provides five criteria for the review, which is designed to consider alternative sources to meet the sponsor's needs and to ensure that the contractor is providing the best value for the taxpayer. However, the review NASA conducted in 2002 prior to awarding the most recent contract for operating its FFRDC, in 2003, was less than exhaustive in its search for viable competitors. A review conducted in 2008 addressed four of the five FAR criteria, but did not include consideration of alternative sources. NMO Procurement Office personnel decided to postpone the search for alternative sources until the current contract term, including extensions, was due to expire. Without a comprehensive review or assessment of viable competitors that could provide services for the operation of JPL, NASA cannot have assurance that it is obtaining the best value for the taxpayer. To be compliant with the FAR, NASA should conduct a comprehensive review when the contract is extended by an award term, which is, potentially, every year. However, NASA may be able to eliminate the completion of successive FFRDC reviews by amending the Performance Evaluation Plan to, in effect, escrow all award terms earned or lost during the base years of the contract and conducting a comprehensive use and need review at the end of the base term.

Lastly, we determined that a single CPAF contract is not the best contract vehicle to procure services from Caltech (Finding D). JPL had been managed using multiple cost-plus-fixed-fee (CPFF) contacts for more than 35 years, until NASA consolidated the two CPFF contracts to a single CPAF contract in 1993. We concluded that using a single CPAF contract for the operation of the entire FFRDC is difficult for NASA to effectively

manage because the contractor is responsible for multiple, complex, and often unrelated deliverables (for example, products crucial to NASA's missions in the areas of earth sciences and solar system exploration, as well as normal facility functions such as public affairs and maintenance of the grounds). In addition, a CPAF contract requires significant oversight and documentation to evaluate contractor performance, and NASA did not perform a cost-benefit analysis to ensure that the benefits of a CPAF contract adequately offset the additional costs associated with contract administration. NASA also did not adequately evaluate alternative contract vehicles to support JPL operations. As a result, NASA may not be getting the best value for the taxpayer.

Management Action

To ensure that evaluations appropriately reflect contractor performance, we recommended that NASA provide detailed, explicit direction to contract performance evaluators concerning their responsibilities, monitor the documentation provided by the evaluators for accuracy and completeness, and apply a weighting factor to each criterion or project based on significance and cost. In addition, the NMO Procurement Officer should (1) modify the "Performance Evaluation Plan for Management of the Jet Propulsion Laboratory" to clearly include cost control measures weighted at no less than 25 percent of the performance evaluation factors; (2) perform a comprehensive use and need review of the FFRDC, to include a proactive search for alternative sources; (3) consider amending the Performance Evaluation Plan to "escrow" earned award terms; (4) reevaluate the use of award terms for any future FFRDC contract; and (5) perform a cost-benefit analysis and evaluate alternative contract vehicles for any FFRDC follow-on contracts.

Comments from the Assistant Administrator for Procurement; the NMO Director, JPL; and the NMO Procurement Officer in response to a draft of this report concurred with our recommendations; in subsequent correspondence, the NMO agreed that there are potential monetary benefits to implementing the recommendations. The Assistant Administrator for Procurement, who signed the comments, stated that the NMO will propose additional language to clarify the performance evaluation process; ensure evaluation submissions are complete; request that annual criteria is weighted; capture cost control at no less than 25 percent of the award fee evaluation score; proactively consider alternative sources; reconsider the use of award term incentives in future JPL or FFRDC contracts; conduct a cost-benefit analysis if a CPAF contract is used again; and consider alternative contract vehicles for the next FFRDC contract. See Appendix D for the full text of management's comments, including an appendix of "Technical Comments" providing clarifying details on certain issues.

We consider management's proposed actions to be responsive for all recommendations. The recommendations are resolved and will be closed upon completion and verification of management's corrective actions.

CONTENTS

INTRODUCTION

Background

The Jet Propulsion Laboratory (JPL) is a NASA federally funded research and development center (FFRDC) operated under contract by the California Institute of Technology (Caltech), a private nonprofit research university located in Pasadena, California. In November 1943, JPL received funding from the U.S. Army Air Corps (Army); the Army formally transferred JPL to NASA, although it remained under the management of Caltech, in December 1958.

From 1958 to 1993, NASA procured services from Caltech for the operation and management of the FFRDC using cost-plus-fixed-fee (CPFF) contracts. A CPFF contract is a cost-reimbursement contract that provides for payment to the contractor of a negotiated fee that is fixed at the contract's inception. The fixed fee does not vary with actual cost, but may be adjusted as a result of changes in the work to be performed under the contract. Starting in the 1970s, there were two CPFF contracts—one for research and development activities and the other for operation of the facility. In 1993, the two CPFF contracts were consolidated into a single cost-plus-award-fee (CPAF) contract. A CPAF contract is a cost-reimbursement contract that provides for a fee consisting of (1) a base amount fixed at inception of the contract, and (2) an award amount that the contractor may earn in whole or in part during the performance period. Since 1993, NASA has awarded three CPAF contracts to Caltech for the operation of JPL: NAS7-1260 in 1993; NAS7-1407 in 1998; and NAS7-03001 in 2003 (the current contract). The 2003 contract included, for the first time, an award term incentive. This incentive is used to reward the contractor by extending the contract period of performance without a new competition or to penalize the contractor by shortening the performance period for poor execution of contract requirements.

The 2003 contract afforded Caltech the opportunity to earn both award fees and award terms. Award fees are intended to encourage and reward the contractor for excellence in such areas as quality, timeliness, technical ingenuity, and cost-effective management. The available award fee pool was $22 million for each annual performance period, or $110 million over the 5 years of the contract's initial period of performance. By the end of fiscal year (FY) 2008, Caltech had earned $97.02 million in award fees.

Contract Clause H-54, "Award Term," allows NASA to increase or decrease the contract's initial 5-year performance period for up to an additional 5 years, in increments of 3 or 9 months, based on the performance of the contractor. The total period of performance for the contract cannot exceed 10 years. The contract's initial period of performance was from October 1, 2003, through September 30, 2008, and by the end of

FY 2008, Caltech had earned additional award terms totaling 27 months, valued at approximately $3.375 billion, which extended the contract's period of performance to December 31, 2010. The value of the extended, 7¼-year contract is estimated at $10.875 billion.

Award fee and award term determinations are made by the Fee Determination Official (FDO), who is the NASA Associate Administrator, based on the proposed adjectival ratings and numerical scores for the evaluation factors provided by the Performance Evaluation Board (PEB). The NASA "Award Fee Contracting Guide," June 27, 2001, requires the following adjectival ratings and numerical scores to be used on all award-fee contracts:

- Excellent, 100-91;
- Very Good, 90-81;
- Good, 80-71;
- Satisfactory, 70-61; and
- Poor/Unsatisfactory, less than 61.

The Guide states that the award fee earned is calculated by applying the total numerical score (the award fee score) to the award fee pool. For example, an award fee score of 85 yields an award fee of 85 percent of the award fee pool for that performance period.

The FDO sets the award fee score based on information provided by the PEB. The PEB receives recommended adjectival ratings and numerical scores for a contractor's performance evaluation factors from the Primary Performance Evaluators (PPEs). To prepare the primary performance evaluation reports provided to the PEB, the PPEs review the criteria and performance evaluations from their organizations' Contract Performance Monitors (CPMs). The CPMs monitor, assess, and evaluate the contractor's performance in assigned areas, documenting their assessments and adjectival ratings in Performance Monitor Reports. The ratings assigned by the CPMs are based on their observations and knowledge of the quality of the contractor's work and the contractor's adherence to the established criteria. (See Appendix B for a synopsis of the award fee process.)

Table 1 shows the recommended and awarded adjectival ratings and numerical scores, the award fees earned, the award terms earned, and the earned award terms' estimated values for FY 2004 through FY 2008.

Table 1. FY 2004 through FY 2008 Evaluations and Award Fees and Award Terms Earned

Fiscal Year	PEB Recommendation for Rating/Score	FDO-Awarded Rating/Score	Award Fee Earned (in millions)	Award Term Earned	Estimated Value (in millions) of Award Term
2004	[redacted]	Excellent/96	$21.12	plus 9 months	$1,125
2005	[redacted]	Very Good/85	18.70	plus 3 months	375
2006	[redacted]	Excellent/91	20.02	plus 9 months	1,125
2007	[redacted]	Very Good/88	19.36	plus 3 months	375
2008	[redacted]	Very Good/81	17.82	plus 3 months	375
Total			**$97.02**	**27 months**	**$3,375**

Objectives

The audit's overall objective was to determine whether the award fees and award terms earned by Caltech for the operation of JPL were appropriately calculated and justified. Specifically, we determined whether

- the contractor's performance ratings were completed in accordance with the established criteria;
- evaluators' recommendations on earned award fees and award terms were based on valid collection methods and supportable data; and
- the award fees and award term extensions earned by Caltech accurately reflected the contractor's overall performance, cost, and schedule.

We also reviewed internal controls as they related to the overall objective. See Appendix A for details of the audit's scope and methodology, our review of internal controls, and a list of prior coverage.

FINDING A: CONTRACTOR PERFORMANCE EVALUATIONS AND METHOD USED TO CALCULATE RATINGS MAY NOT REFLECT OVERALL PERFORMANCE

For FY 2007, performance evaluations for Caltech and the method NASA used to calculate the ratings may not reflect the overall performance of the contractor. The NASA "Performance Evaluation Plan, General Guidance for Writing Annual Award Fee Criteria," August 9, 2006, states that "[q]uantitative measures should be used whenever the effectiveness or efficiency of the given performance can be unequivocally measured." In addition, NASA's Award Fee Contracting Guide states that contractor performance evaluation factors should be explicit, tied to desired outcomes, and based on characteristics of an individual procurement. We found that the criteria used for evaluating Caltech's performance were sufficiently specific and measurable and could be used to make an objective assessment of the contractor's performance. However, NASA evaluators provided incomplete assessments or assigned inappropriate ratings for 12 of the 45 criteria (27 percent) when evaluating the contractor's performance (as shown in Appendix C). In addition, criteria for different projects did not appear to be weighted within the evaluation factors by the projects' overall importance to NASA or their costs. This resulted in potentially higher ratings than warranted and the possibility that Caltech inappropriately received award fees and term extensions.

Quantifiable and Measurable Award Fee Criteria Are Required

NASA's General Guidance for Writing Annual Award Fee Criteria states:

- Annual award fee criteria should be as specific and measurable as possible. Specific and measurable criteria will assist the CPMs in evaluating contractor performance and assist the contractor in understanding NASA's expectations and the manner in which its performance will be evaluated.

- Where feasible, quantitative or objective measures are preferred over qualitative or subjective ones. Quantitative measures should be used whenever the effectiveness or efficiency of the given performance can be unequivocally measured.

- Award fee criteria should be crafted to make it as easy as possible to make an objective assessment of contractor performance and to minimize the subjectivity of the process.

NASA's Award Fee Contracting Guide, Section 3.7.4, "Documentation," states:

- The reporting formats used by monitors should be structured to ensure clarity and conciseness. The narrative comments provide detailed, pertinent information. For example, they cover the circumstances under which reported performance levels were achieved. These comments also discuss the contractor's efficiency in managing assigned personnel and other resources. Enough detail should be included in reports to the PEB to ensure their findings and recommendations are accurate and fair and can be supported to the FDO.

- Appropriate documentation is vital to support the recommendations of PEBs, particularly where these recommendations differ from the conclusions reported by cognizant monitors. Since the evaluation is a judgment, based on all pertinent information, that information needs to be identified, discussed, and substantiated in the documentation. The FDO will want to review the documentation to satisfy any concerns regarding contractor performance before deciding whether to accept the recommended award fee or some higher or lower amount.

Performance Evaluations Could More Accurately Reflect Contractor Performance

We determined that the FY 2007 award fee criteria were specific and measurable and could be used to make an objective assessment of the contractor's performance. However, NASA CPMs provided either incomplete assessments or inappropriate ratings when evaluating the contractor's performance for 12 of the 45 (27 percent) FY 2007 criteria. Higher ratings may have occurred in part because the FY 2007 Performance Evaluation Plan did not require the rating official (CPM or PPE) to address all elements, or metrics, of the criteria in the evaluation. The online form only included comment boxes for "Degree to which contractor performance met established performance standards," "Specific Strengths," "Weaknesses," and "Mitigating Factors," which allowed the evaluator to decide what specific criteria metrics to address. In addition, although the Performance Evaluation Plan contained both general criteria and annual criteria, none of the CPMs and PPEs that we interviewed indicated that the general criteria was addressed. The Performance Monitor Reports only addressed the annual criteria.

For example, the criterion "Office of Safety and Mission Assurance-2" has five metrics, which were not completely addressed in the assessment. Following is the standard for an Excellent rating:

> In addition to meeting the satisfactory performance standard, [Caltech must] achieve continual improvement in the effective implementation of JPLs quality assurance program, to include the following: [1] Implement improvements in the material review board process for procured JPL Critical Items, and in the process of identification and documentation of inspection criteria. Update applicable procedures and training.

> [2] Finalize and implement a supplier rating system that incorporates appropriate rating factors, captures all necessary data, and produces necessary reports for users to better assess and select suppliers. [3] Finalize and implement a standard set of defect codes to identify non-conformances. [4] Develop a Quality Assurance Engineering handbook to promote consistency in the performance of hardware quality assurance. [5] Define, collect, and analyze a standard set of quality metrics to monitor the execution of quality assurance activities.

The Performance Monitor Report for this criterion for Caltech's FY 2007 performance states that [redacted].

[redacted].[4]

[redacted]. The Satisfactory standards for the criterion state:

> Start Environmental Tests on schedule in mid-October 2007. Complete pre-ship review and ship on schedule (mid-May '07) with no critical issues identified. Launch on schedule (August '07), completing all tests in the incompressible test list. Total mission cost equals the mission's Confirmed cost cap ($383M), plus augmentation of no more than $29M ($410M total) per December 7th Cost-to-Go Review, and with minimum work to be done post launch. Ship and launch risk rated medium-to-low.

The Satisfactory standard stipulates that the contractor could not request augmentation of more than $29 million. [redacted]

[4] Management's comments (see Appendix D, page 39) specifically address this example, noting that rating officials are not required to document all elements of the rating criteria and that the Office of Safety and Mission Assurance considered the assessment "to have properly evaluated each rating element and to have fulfilled the documentation instructions." The comments state that future evaluations will fully document each rating element.

[redacted].

A Documented Tendency toward High Ratings and Awards

In 2007, a Government Accountability Office (GAO) report, "NASA Procurement: Use of Award Fees for Achieving Program Outcomes Should Be Improved" (GAO-07-58, January 17, 2007), found that NASA paid most of the available award fee on all of the contracts that GAO reviewed, including contracts for projects that showed cost increases, schedule delays, and technical problems. The report stated that NASA paid more than 90 percent of the available fee based on its evaluation of the contractor's performance against criteria even when those contractors did not deliver capability within initial cost, schedule, and performance parameters. The 2003 JPL contract included $110 million in award fees for the initial 5-year performance period; by the end of FY 2008, NASA had paid Caltech $97.02 million (88 percent) in award fees.

In interviews with Office of Inspector General (OIG) auditors, the NMO Procurement Office staff stated that high performance ratings are critical to the JPL contractor and that a satisfactory rating is perceived as a negative. High performance ratings correlate to significant award fees and additional award terms for the contractor. Our review of the evaluations for the award fee criteria indicated that Caltech received a rating above satisfactory more than 95 percent of the time. Specifically, the FY 2007 ratings for the 45 criteria (listed in Appendix C) were 31 Excellent, 8 Very Good, 4 Good, 1 Satisfactory, and 1 Poor/Unsatisfactory.

The potential for inflated evaluations as the result of long-term contracting relationships was noted by Vernon Edwards, a consultant in Government contracting who has written several articles on the use of award terms. In an October 2000 article, "Award Term: The Newest Incentive,"[5] he states:

> A potential disadvantage of a long-term relationship is the possibility that the agents of the contracting parties will begin to conduct business on a personal basis instead of a proper professional basis. Contractual relationships are, after all, human relationships. People who have come to know and like one another in the course of time may relax their standards and overlook performance deficiencies for the sake of their personal relations; they may become reluctant to criticize or to take an action that could hurt the other person. On the other hand, a change in personnel may bring conflict as the parties try to adapt to new personalities and changes in long-standing

[5] Available online at http://www.wifcon.com/anal/analaterm.htm (accessed September 11, 2009).

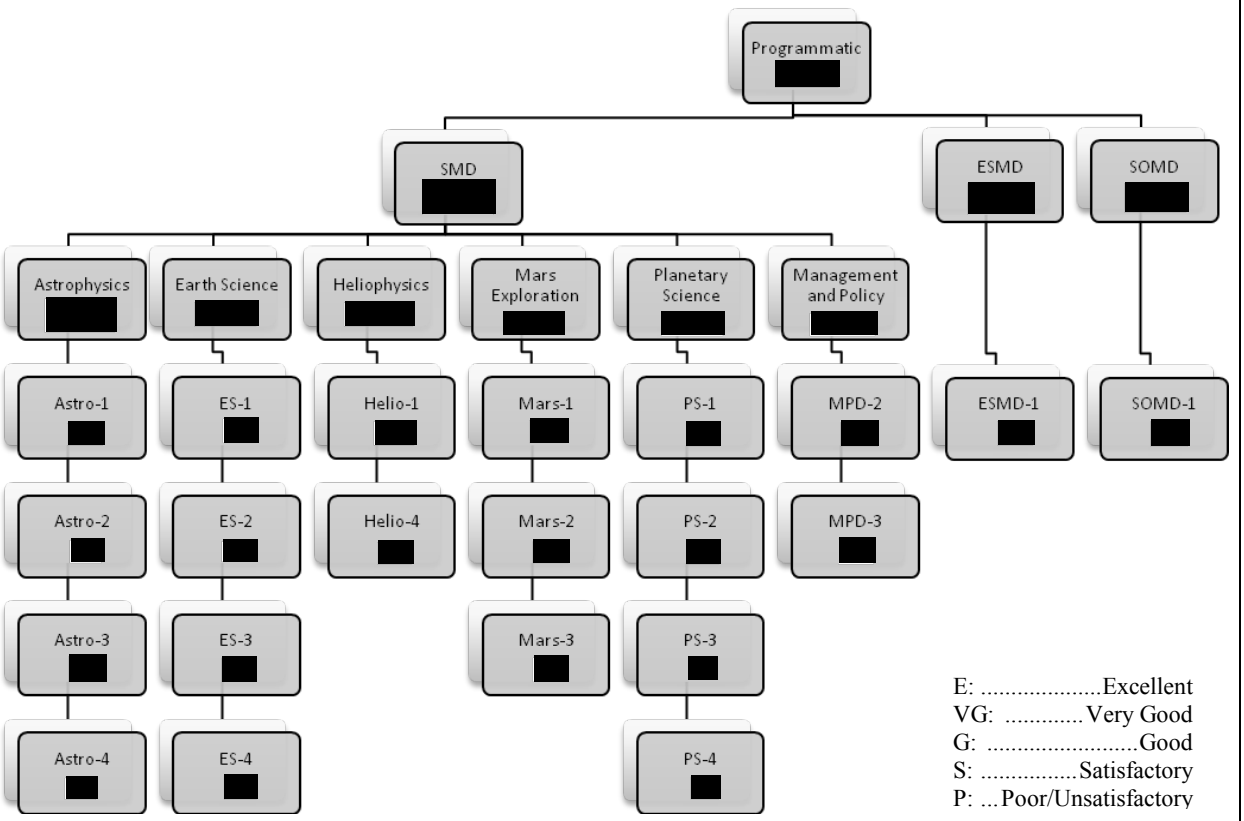
ways of seeing, understanding, and doing. These sorts of developments are probably a natural and unavoidable byproduct of long-term business relationships.

Lack of Proportionate Weighting May Lead to Inflated Performance Scores

NASA did not appear to use proportionate weighting of criteria and, therefore, the process used to arrive at Caltech's award fee score for FY 2007 may not have reflected the overall performance of the contractor. For example, the programmatic performance evaluation factor comprises 19 criteria for six programs[6] under the Science Mission Directorate (SMD), a criterion under the Exploration Systems Mission Directorate (ESMD), and one under the Space Operations Mission Directorate (SOMD), as shown in the following figure and listed in Appendix C. However, CPMs do not assign numerical scores to the criteria; PPEs assign a numerical score to each program, but do not appear to consider a criterion's significance in doing so. SMD's overall score is the average of the six programs' numerical scores.

[6] The SMD programs are Astrophysics, Earth Science, Heliophysics, Mars Exploration, Planetary Science, and Management and Policy.

Programmatic Evaluation Factor
FY 2007 Criteria and Ratings, by Mission Directorate



In addition, the numerical score of [redacted] for the programmatic performance evaluation factor was not calculated, either as a straight average or using proportional weighting, but was a consensus score subjectively determined by the PEB.

Without establishing weighted criteria to reflect significance or cost, NASA had no assurance that it was accurately evaluating Caltech's performance. For example, SMD's Mars Exploration Program (MEP) was valued at approximately $477 million in FY 2007, accounting for approximately 32 percent of the overall estimated $1.5 billion JPL contract for that year. The program includes three projects: the Mars Science Laboratory (MSL), Phoenix, and the Mars Reconnaissance Orbiter (MRO), each with a criterion (Mars-1, Mars-2, and Mars-3, respectively). The MSL project, valued at $359 million (75 percent of the MEP budget), with a cost overrun of $35 million, earned a [redacted]. The Phoenix project, valued at $75 million (16 percent), was [redacted]. The MRO project, valued at $42 million (9 percent), [redacted]. Although the PPE may have considered the projects' significance when determining the MEP's adjectival rating ([redacted]), there is no documentation of the methodology used for that determination or of the methodology used to calculate the numerical score. The numerical score assigned by the PPE for the MEP, [redacted], was then averaged with the five

other SMD programs to provide an overall SMD score. This process and calculation method essentially conceals poor performance because a small project with a high rating, such as the MRO project, carries the same weight as a more significant project that costs more, such as the MSL project, which [redacted].

We reevaluated the MEP using a weighted calculation that was based on the projects' percent of the FY 2007 MEP budget. Because the projects were not given numerical scores, we used the score at the top of the range for the adjectival rating assigned by the CPMs (see Table 2). Using this method, we determined that the MEP [redacted]—which would have also affected the subsequent SMD rating and score.

Table 2. Weighted Evaluation of the Mars Exploration Program by Cost

Project	Dollars Spent (millions)	Percent of Total	Adjectival Rating	OIG Calculation		
				Numerical Score*	Weighted Score	Adjectival Rating
MSL	$359.479	75.43	[redacted]	[redacted]	45.26	
Phoenix	75.462	15.83	[redacted]	[redacted]	12.67	
MRO	41.637	8.74	[redacted]	[redacted]	8.74	
MEP	**$476.578**	**100.00**	[redacted]		**66.66**	**Satisfactory**

* High end of adjectival rating's range. Multiplying these scores by the project's percent of the MEP budget yields the weighted numerical score.

Although the methodology was not documented, NASA personnel stated that project significance was considered when determining ratings. Using the significance order provided by the PPE ([redacted]), we considered significance alone to determine a weighted score for the MEP using arbitrary percentages based on the projects' order of significance (see Table 3). We then averaged that score (76) with the score we determined using cost alone (66.7), which results in an overall grade of Good (72).[7] However, without documenting its methodology, NASA cannot be assured of the accuracy of its evaluation process.

[7] Management's comments (see Appendix D, page 39) specifically addressed this example, noting that it "does not readily suggest a shortcoming on the part of the Mars Program PPE's evaluation." For our calculations, we assigned arbitrary percentages because CPMs only assign adjectival ratings, not percentages. To obtain numerical scores for our calculations, we used the numerical score at the high end of the given adjectival rating. Therefore, while our calculation resulted in a grade of 72 for the Mars Exploration Program, it does not mean to imply that the number is accurate.

Table 3. Weighted Evaluation of the Mars Exploration Program by Significance					
			OIG Calculation		
Project	Significance Ranking[a] (percent)	Adjectival Rating	Numerical Score[b]	Weighted Score	Adjectival Rating
MSL	[redacted]	[redacted]	[redacted]	[redacted]	
Phoenix	[redacted]	[redacted]	[redacted]	[redacted]	
MRO	[redacted]	[redacted]	[redacted]	[redacted]	
MEP	[redacted]	[redacted]		**76**	**Good**

[a] The OIG-assigned, arbitrary percentages to reflect the projects' order of significance, as stated by the PPE.

[b] High end of adjectival rating's range. Multiplying these scores by the project's significance ranking percentage within the MEP yields the weighted numerical score.

Despite the importance of the projects that Caltech manages under the JPL contract, NASA has not established weighted criteria relative to their significance or cost. Large projects appear to be equally evaluated in the award fee process and have minimal impact on the award fee scores, even if the standard of excellence is not met. MSL, which was worth approximately 24 percent of the total $1.5 billion FY 2007 contract and [redacted], appeared to be weighted the same as any of the other criteria in the programmatic factor. Averaging these ratings rather than weighting projects according to their relative importance to NASA's mission or their budgets does not ensure an accurate assessment of overall contractor performance.

NASA's failure to objectively support the performance ratings and proportionately weight the evaluation factors' criteria relative to their significance resulted in potentially higher ratings than warranted and the possibility that Caltech inappropriately received award fees and term extensions. Since 2003, Caltech has earned more than $97.02 million in award fees and 27 months in award term extensions, valued at approximately $3.375 billion. The additional award terms also resulted in the contract being extended without competition.

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

Recommendation 1. The NASA Management Office Procurement Officer should provide in the Performance Evaluation Plan, or other applicable documents, specific, explicit direction to the Contract Performance Monitors to evaluate and document the contractor's annual performance for all of the criteria's metrics under the evaluation factors.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will propose clarifying language for consideration by the PEB. The

Performance Evaluation Plan will be updated with the clarifying language and submitted to the FDO by August 31, 2009, and explicit direction will be given in the e-mail texts for the mid-year and final award fee evaluation calls.

Evaluation of Management's Response. Management's proposed actions are responsive. The recommendation is resolved and will be closed upon completion and verification of corrective actions to be taken during the mid-year (March 2010) and final (September 2010) award fee evaluation calls.

Recommendation 2. The NASA Management Office Procurement Officer should monitor Contract Performance Monitors' input for accuracy and completeness.

Management's Response. The Assistant Administrator for Procurement concurred, agreeing with the intent of the recommendation. The NMO will work with those directorates and offices providing evaluation input to ensure that the input is complete. In September 2009, the NMO will convene a meeting of CPMs and PPEs to address our report recommendations. Further, explicit direction will be given in the e-mail texts for the mid-year and final award fee evaluation calls. As stated in the "Technical Comments" appendix of management's comments:

> The NMO concurs with the need for a renewed emphasis on the documentation of the evaluation process at all levels, but particularly at the CPM and PPE stages. This is particularly im portant in th is s ituation w here b oth s ubjective (programmatic a nd strategic influence factors) and objective (quantitative measures or metrics) elements must be integrated in order to obtain a rational performance evaluation.

Evaluation of Management's Response. Management's proposed actions are responsive. The recommendation is resolved and will be closed upon completion and verification of corrective actions to be taken at the September 2009 meeting and during the mid-year (March 2010) and final (September 2010) award fee evaluation calls.

Recommendation 3. The NASA Management Office Procurement Officer should include in the Performance Evaluation Plan a weighting factor for each criterion or project based on significance and cost, as determined by the Performance Evaluation Board.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will submit the weighting request to the JPL-sponsoring Headquarters offices and will then implement the requirements approved by the PEB relative to weighting individual annual criteria. The estimated completion date is September 30, 2010.

Evaluation of Management's Response. Management's proposed actions are responsive. The recommendation is resolved and will be closed upon completion and verification of management's corrective actions.

FINDING B: COST CONTROL EVALUATION FACTOR DID NOT MEET THE REQUIRED 25 PERCENT

NASA did not effectively employ cost control as a measure for monitoring JPL's contract performance because "cost control" was not established as a separate performance evaluation factor in the CPAF contract. The NASA supplement to the Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS) Version 04.0, November 1, 2004, Subpart 1816.4, "Incentive Contracts," requires that CPAF contracts include a separate cost control evaluation factor worth no less than 25 percent of the total weighted evaluation factors. The NASA Management Office (NMO) Procurement Officer stated that cost control was included within the criteria of the programmatic evaluation factor. However, we determined that while the performance evaluation factors included some cost control measures, the combined weight of those measures was only 5 percent to 14 percent of the total weighted factors each year, far below the 25 percent requirement. In addition, NASA evaluators did not reference the cost control measures sufficiently in their evaluations to meet the intent of the NFS with regard to monitoring and controlling cost. As a result, we calculated that $16 million of the $97 million paid in award fees for Caltech's performance under the 2003 contract were not in compliance with NFS requirements. Therefore, we consider that amount to be unsupported and an ineffective use of Government funds. We also question the 27 months in term extensions, valued at approximately $3.375 billion, awarded to Caltech.

NASA FAR Supplement Requires Cost Control Evaluation Factor

FAR 16.402-1, "Cost Incentives," states that most incentive-type contracts, including CPAF contracts, are required to contain a cost incentive or constraint.
NFS 1816.405-274, "Award Fee Evaluation Factors," requires a cost control evaluation factor in all award-fee contracts and that the cost control factor be no less than 25 percent of the total weighted evaluation factors. NFS 1816.405-274 further states that the predominant consideration when evaluating cost control should be an objective measurement of the contractor's performance against the estimated cost of the contract, including the cost of undefinitized contract actions, when appropriate. NASA's Award Fee Contracting Guide, Section 3.4.3, "Weighting of Evaluation Factors," reflects this requirement, stating that "cost control should always be a substantial [evaluation] factor. When percentage weights are used, the cost control factor will be at least 25 percent of the total award fee. . . . This ensures that the factors are balanced and, when making trade-offs, the contractor assigns the proper importance to all factors."

NASA did not effectively employ cost control as a measure for monitoring Caltech's performance. The Performance Evaluation Plan did not include cost control as a separate performance evaluation factor. For example, although 12 of the 45 criteria for the performance evaluation factors in the FY 2007 Plan included some cost control measures, those cost control measures were not weighted to be at least 25 percent of the total weighted evaluation factors, as required by the NFS and NASA's Award Fee Contracting Guide. The NMO Procurement staff stated that the required 25 percent cost factor was included in the programmatic factor, but could not support that statement.

The Performance Evaluation Plan distinguished three evaluation factors—programmatic, institutional, and outreach—but did not include cost control as a separate factor. We found that cost control was included as one of three elements under the programmatic evaluation factor and that the institutional evaluation factor included a cost control criterion. However, the Performance Evaluation Plan did not specify the weight assigned to the cost control measures included in the evaluation factors. The July 2005 Procurement Management Survey Report by the NASA Office of Procurement, noted that "although there [was] not a specific breakout of the weightings of the sub-factors, it [was] clear that cost control [was] something less than 25 percent."

Cost control measures included in the performance evaluation factors were not sufficient to meet the intent of the NFS. We reviewed the FY 2007 award fee criteria and determined that 12 criteria within the programmatic and institutional factors contained some measure of cost control. We calculated the weight of those cost control measures to be 12 percent, which is well below the required 25 percent. (See Appendix A for a discussion of our calculation.)

Insufficient cost control measures gave minimum incentive for the contractor to control cost because a poor cost control performance rating could easily be offset by non-cost factors. In addition, the low percentage weighting deemphasized the importance of controlling cost and minimized the effectiveness of cost control. Because the evaluation factors did not include weighted cost control measures of at least 25 percent, as required by the NFS, but 12 percent, we determined that 13 percent of the award fees paid to Caltech for the FY 2007 performance period were not in compliance with NFS requirements. Similar low percentages, ranging from 5 percent to 14 percent, of cost control were evident in the other performance periods of the contract. Therefore, we consider $16,033,600 (17 percent) of the $97,020,000 award fees to be unsupported costs and an ineffective use of Government funds. Table 4 shows how we determined the portion of award fees that were not in compliance with NFS requirements.

Table 4. Summary of Paid Award Fees FY 2004 through FY 2008

Award Fee Period	Available Award Fee	Award Fee Score	Paid Award Fees	Unmet Weight of Cost Factor	Portion of Award Fee Not NFS-Compliant
FY 2004	$22,000,000	96 percent	$21,120,000	19 percent	$4,012,800
FY 2005	22,000,000	85 percent	18,700,000	20 percent	3,740,000
FY 2006	22,000,000	91 percent	20,020,000	19 percent	3,803,800
FY 2007	22,000,000	88 percent	19,360,000	13 percent	2,516,800
FY 2008	22,000,000	81 percent	17,820,000	11 percent	1,960,200
Total	**$110,000,000**		**$97,020,000**		**$16,033,600**

Because NASA did not effectively employ cost control as a performance measure for the JPL contract, NASA's evaluation of Caltech's performance could have resulted in inappropriately awarded fees and term extensions. Further, if management does not change the Performance Evaluation Plan criteria to meet the 25 percent cost control requirement, future award fees[8] could be awarded without appropriate emphasis on cost control.

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

Recommendation 4. The NASA Management Office Procurement Officer should modify the Performance Evaluation Plan to clearly indicate a cost control factor weighted at no less than 25 percent of the award fee evaluation.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will coordinate an implementation strategy that will consider developing a process to capture the cost factor. The estimated implementation date is September 30, 2010.

Evaluation of Management's Response. Management's action is responsive. The recommendation is resolved but will remain open pending corrective actions to be taken by September 30, 2010.

[8] For the FY 2009 and FY 2010 evaluation periods, $44 million in award fees will be available to Caltech ($22 million each year).

FINDING C: CONTINUATION OF JPL AS AN FFRDC WAS NOT ADEQUATELY JUSTIFIED

NASA did not adequately consider alternative sources and could not provide support to justify its decision to continue procuring services from Caltech for the operation of JPL as an FFRDC. The FAR requires a comprehensive review of the use and need for an FFRDC every 5 years. FAR 35.017-4, "Reviewing FFRDCs," provides five criteria for the review, stating that "the sponsor, prior to extending the contract or agreement with an FFRDC, shall conduct a comprehensive review of the use and need for the FFRDC" and that the review should include consideration of alternative sources to meet the sponsor's needs concerning operation of the FFRDC. However, the review NASA conducted in 2002 prior to awarding the most recent contract, in 2003, was less than exhaustive in its search for viable competitors. A review conducted in 2008 addressed four of the five FAR criteria, but did not include consideration of alternative sources. NMO Procurement Office personnel decided to postpone the review until the current contract term, including extensions, was due to expire. Without a comprehensive review or assessment of viable competitors that could provide services for the operation of JPL, NASA cannot have assurance that it is obtaining best value for the taxpayer.

FAR Specifies a 5-Year Review Requirement for Evaluating an FFRDC's Use and Need

FAR 35.017, "Federally Funded Research and Development Centers," specifies the policy for the "establishment, use, review, and termination of Federally Funded Research and Development Centers (FFRDCs) and related sponsoring agreements." It states that the FFRDC agreement will not exceed 5 years, but can be renewed every 5 years as long as a comprehensive review of the use and need for the FFRDC is conducted. Approval to continue or terminate the sponsorship shall be based on the results of the comprehensive review and rest with the head of the sponsoring agency. The FAR states that the review should include the following:

> (1) an examination of the sponsor's special technical needs and mission requirements that are performed by the FFRDC to determine whether and at what level they continue to exist; (2) consideration of alternative sources to meet the sponsor's needs; (3) an assessment of the efficiency and effectiveness of the FFRDC in meeting the sponsor's needs, including the FFRDC's ability to maintain its objectivity, independence, quick response capability, currency in its field(s) of expertise, and familiarity with the needs of its sponsor; (4) an assessment of the adequacy of the FFRDC management in ensuring a cost-effective operation; and (5) a determination that the criteria for establishing the FFRDC continue to be satisfied and that the

> sponsoring agreement is in compliance with FAR 35.017-1, "Sponsoring Agreements."

NASA Chose to Continue Procuring the Services of Caltech for the Operation of JPL Without Adequate Support

The FFRDC use and need determination review completed in 2002 by NMO personnel did address the five FAR criteria. However, the review was not proactive in the search for alternative sources because, as stated in the review, NASA concluded that the JPL FFRDC was a unique resource. The review did not assess other contractors' abilities, but rather focused on obstacles to procuring services from those contractors, which prevented NASA from determining whether alternative sources could perform the work. For example, the review indicated obstacles to not retaining Caltech, such as closeout liability and procurement of NASA's physical records from Caltech. The backup support for the review indicated two potential competitors but stated "a one-to-one comparison [was] not possible." NMO personnel confirmed that the acquisition team assembled for this review did not contact the two potential alternative sources to determine whether they could perform the work of Caltech.

The most recent review performed in 2008 addressed four of the five FAR criteria, but did not include a consideration of alternative sources because earning additional years postponed the acquisition planning process. NMO personnel stated that NASA normally conducts a search for alternate sources during the acquisition planning process. Because the contract was extended, NMO Procurement personnel postponed the search for alternate sources until planning for the competition or renewal of the JPL contract. As stated in the 2008 review, "Review and Findings" (Section 2.d.):

> [R]enewal of the contract with Caltech is not necessary at this time. As described above, the period of performance will run until at least September 30, 2010, but could possibly extend until December 31, 2012. A detailed, comprehensive acquisition strategy will be performed to explore all alternatives prior to competing or negotiating a follow-on contract to the present agreement. This activity is expected to commence no later than October 2009.

This consideration of alternative sources will be more than 7 years after the 2002 review was completed and may be delayed further with the award of additional term extensions.

Guidance Encourages Competition

A March 4, 2009, Presidential Memorandum[9] states that the Government must move away from cost-reimbursement contracts toward fixed-price contracts and must also

[9] Available online at http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-Subject-Government/ (accessed September 11, 2009).

move away from sole-source awards toward full and open competition. The Memorandum also states that "it is the policy of the Federal Government that executive agencies shall not engage in non-competitive contracts except in those circumstances where their use can be fully justified and where appropriate safeguards have been put in place to protect the taxpayer."

NASA has used a CPAF contract for its FFRDC since 1993 and introduced award term incentives in the 2003 contract. Since 2003, NASA has awarded term extensions to Caltech without competition for each of the 5 periods of performance. As of April 2009, NASA had awarded Caltech 27 months in term extensions, worth approximately $3.3 billion.[10] In addition, the structure of the 2003 contract allows Caltech to earn additional award fees and term extensions for performance periods added to the contract as a result of previously awarded term extensions, which could further increase the time between competitive evaluations.

Guidelines for when or how to effectively use award terms do not exist in any Federal or NASA guidance. However, the FAR explicitly requires the FFRDC sponsor conduct a comprehensive review, to include "consideration of alternative sources to meet the sponsor's needs," prior to extending the contract. Therefore, NASA should have completed a comprehensive review with each term extension awarded beyond the FAR-imposed 5-year limit for FFRDC review. Completion and documentation of such a review would provide assurance that Caltech is providing NASA the best value for taxpayer money.

An Alternative Approach to Award Term Extensions Could Effectively and Efficiently Meet FAR Requirements

Because the FAR lacks specifics on both the practical use of award terms and issuance of contract modifications for non-negotiated changes, NASA is challenged to effectively and efficiently integrate the FAR requirements with award term extensions. NASA Procurement Information Circular 06-02, "Use of Award Term Incentive," January 25, 2006, acknowledges this, stating that "with the lack of regulatory guidance relating to award term, the structure of the incentive and the evaluation methodologies employed have grown very diverse."

The Performance Evaluation Plan states that "the earned award fee and award term will be incorporated into the contract through a unilateral contract modification issued by the contracting officer within 60 days (goal) of the FDO's determination for the period." This is in line with FAR 43.2, "Change Orders," Section 204(b)(1), which states that "contracting officers shall negotiate equitable adjustments that resulted from change orders in the shortest practicable time." Although the FAR does not address when or how

[10]Each additional year that Caltech earns in award term extensions is worth approximately $1.5 billion.

to effectively use award terms, it does state that a comprehensive review of the use and need of the FFRDC must be completed every 5 years or prior to extending the contract. Therefore, to be compliant with the FAR, NASA should conduct a comprehensive review when the contract is extended by an award term, which is, potentially, every year.

However, NASA may be able to eliminate the completion of successive FFRDC reviews by amending the Performance Evaluation Plan to, in effect, escrow all award terms earned or lost during the base years of the contract and conducting a comprehensive use and need review at the end of the base term. The FFRDC review could then be cost-effectively completed, as required, at both contract extension and every 5 years. This approach would provide for a more effective and efficient use of award terms, allowing NASA to be FAR-compliant, save administrative effort, and avoid unnecessarily expending taxpayer dollars by completing reviews in successive years. In addition, the contract modification covering the escrowed award terms could exclude the provision for award terms, thus eliminating the current practice of allowing additional award terms to be earned during the extended contract performance periods. NASA is unique in allowing these additional award terms; other Federal agencies operating FFRDCs allow award terms to be earned only during the FFRDC contract's base years.

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

Recommendation 5. The NASA Management Office Procurement Officer should perform a comprehensive review in accordance with FAR, to include a proactive search for alternative sources, as soon as practicable.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will draft a plan to assemble updated NASA requirements for JPL that will be used in a proactive search for alternative sources. The estimated completion date is unknown, but a proactive search will commence by fall 2009 and continue through the acquisition phase of the new contract.

Evaluation of Management's Response. Management's proposed actions are responsive. The recommendation is resolved and will be closed upon completion and verification of corrective actions to be taken during the acquisition phase of the new contract.

Recommendation 6. The NASA Management Office Procurement Officer should reevaluate the use of award term for any future FFRDC contract.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will consult with the Office of Procurement and the NASA Associate Administrator's office on JPL contract and incentive alternatives. They do not foresee using an award term for future JPL contracts, and the current contract does not

allow any additional award terms beyond those already awarded. The estimated completion date for considering alternative contract vehicles is February 2010, during the acquisition planning phase of the new contract.

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

FINDING D: A SINGLE CPAF CONTRACT IS NOT THE BEST VEHICLE FOR MANAGING NASA'S FFRDC

We determined that a single CPAF contract is not the best contract vehicle to procure services from Caltech to manage and operate JPL as an FFRDC. JPL had been managed using multiple CPFF contacts for more than 35 years. In 1993, in part to respond to a GAO recommendation,[11] the two CPFF contracts, one for research and development activities and the other for facility operations, were consolidated into a single CPAF contract.

Using a single CPAF contract for the operation of the entire FFRDC is difficult for NASA to effectively manage because the contractor is responsible for multiple, complex, and often unrelated deliverables. In addition, a CPAF contract requires significant oversight and documentation to evaluate contractor performance and, by its nature, does not always motivate cost control. The FAR suggests the use of a fixed-price contract when the costs can be established reasonably and the risk is low, as is the case with a number of the services provided by Caltech under the single CPAF contract. NASA did not perform a cost-benefit analysis to ensure that the benefits of a CPAF contract adequately offset the additional costs associated with contract administration. NASA also did not adequately evaluate alternative contract vehicles to support JPL operations. As a result, NASA may not be getting the best value for the taxpayer.

FAR and NASA's Award Fee Contracting Guide Describe the Best Use of Various Contract Types

FAR 16.103b, "Negotiating Contract Type," states that a "firm-fixed-price contract, which best utilizes the basic profit motive of business enterprise, shall be used when the risk involved is minimal or can be predicted with an acceptable degree of certainty." Similarly, FAR 16.202-2, "Firm-Fixed-Price Contracts, Application," states that such a contract is suitable for acquiring commercial items or for acquiring other supplies or services on the basis of reasonably definite functional or detailed specifications when the contracting officer can establish fair and reasonable prices at the outset. The FAR addresses time-and-materials contracts in FAR 16.601(b), "Time-and-Materials Contracts, Application," stating that such a contract may be used only when it is not possible at the time of placing the contract to estimate accurately the extent or duration of

[11] GAO. "NASA Procurement: Proposed Changes to the Jet Propulsion Laboratory Contract" (GAO/NSIAD-93-178, July 1993).

the work or to anticipate costs with any reasonable degree of confidence. Managing the facility operations portion of JPL could potentially be best served by either type of contract vehicle.

Conversely, a CPAF contract, or a number of CPAF contracts, may be the most appropriate vehicle for the research and development activities performed at JPL. FAR 16.301-2, "Cost-Reimbursement Contracts, Application," states that cost-reimbursement contracts are suitable for use only when uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract. Also, FAR 16.405 2(b)(iii) states that a CPAF contract is suitable for use when any additional administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits. In addition, FAR 16.405-2(a) states that a CPAF contract provides for an award that is sufficient to motivate excellence in such areas as quality, timeliness, technical ingenuity, and cost-effective management.

NASA's Award Fee Contracting Guide, Section 1.3 states a CPAF contract is appropriate to use when key elements of performance cannot be objectively measured. CPAF contracts can also be used to procure design, development, and initial fabrication of state-of-the-art hardware, such as a new type of planetary probe or an experimental aircraft. The Guide further states that since award fee contracts require additional administrative effort, they should only be used when the contract values, performance period, and expected results warrant that additional management effort. As noted in NASA's Award Fee Contracting Guide, evaluation of performance under a CPAF contract requires much greater effort than a CPFF contract.

NASA Did Not Analyze the Cost or Benefit of Using a Single CPAF Contract

During GAO's fieldwork on NASA's use of award fees for a report issued in January 2007,[12] GAO questioned whether NASA had conducted a cost-benefit analysis to justify the use of a single CPAF contract for procuring services from Caltech for the operation of JPL. Specifically, GAO asked whether (1) a cost-benefit analysis was conducted to justify the use of a CPAF contract; (2) what costs were included, and (3) what benefits were considered in the analysis. The NMO Procurement Officer at the time responded that a cost-benefit analysis was completed, but the analysis was not conducted with enough detail to include a specific delineation of costs, and that the use of a CPAF contract was deemed appropriate during acquisition strategy planning sessions.

Because GAO found no instances where a documented cost-benefit analysis had been done for any of the NASA contracts that it reviewed for its 2007 report, GAO

[12]GAO. "NASA Procurement: Use of Award Fees for Achieving Program Outcomes Should be Improved" (GAO-07-58, January 2007)

recommended that the NASA Administrator direct the Centers to consider costs and benefits in choosing a CPAF contract by requiring, in accordance with the FAR, documentation explaining how the perceived benefits would offset the additional costs associated with contract administration. However, NASA has not had an opportunity to complete a thorough cost-benefit analysis because a follow-on contract has not been awarded.

For a CPAF contract to be cost-effective, NASA needs to ensure objective metrics are developed and a supportable mechanism is established for evaluating the effectiveness of performance against desired results. Without a detailed cost-benefit analysis, NASA is unnecessarily increasing the risk of not getting the best value for the taxpayer.

Trends in the Use of Cost-Reimbursement Contracts

In 1993, NASA consolidated the two CPFF contracts into a single CPAF contract for the operation and management of JPL. According to the NMO, the motivation behind moving to a cost-reimbursement contract was to inspire the contractor to perform as efficiently as possible while succeeding at its multiple research and development activities. The NMO Procurement staff also stated that the move served to respond to a GAO recommendation for NASA to use a cost-reimbursement contract for its FFRDC. However, the recommendation did not specify that NASA should use a single CPAF contract to procure services from Caltech for the management of JPL.

GAO's 1993 report[13] recommended that NASA "authorize a deviation from NASA policy to pay a fee only if its purpose and amount have been adequately justified in writing and, if a fee is authorized, apply NASA's agencywide initiative for contract excellence to the JPL contract and base the fee on management performance." GAO made this recommendation because NASA was paying Caltech an annual fee based on estimates of the volume of work to be conducted at JPL. This was despite a NASA policy prohibiting the payment of fees to educational institutions and to which no waiver had been obtained.

While a CPAF contract was in line with Government contracting trends in the 1990s that continue today, cost-reimbursement contracts are no longer the preferred vehicles for the private sector. According to the 14th Annual Government Contractor Survey, conducted in 2008 by Grant Thornton,[14] Government agencies increased their use of cost-reimbursement contracts over the last 4 years, noting that the use of cost-reimbursement contracts within the Federal Government went from 28 percent in 2005 to 45 percent in 2008. The Survey also notes that contracting in the private sector

[13]GAO. "NASA Procurement: Proposed Changes to the Jet Propulsion Laboratory Contract" (GAO/NSIAD-93-178, July 1993).

[14]Grant Thornton is one of the six global accounting, tax, and advisory organizations.

"normally uses fixed-priced or time-and-materials contracts while the government continues to maximize the use of cost-reimbursable contracts."

The Survey results indicate that private industry is moving in the direction called for by the Presidential Memorandum of March 4, 2009, which states that the Government must move away from cost-reimbursement contracts. The Presidential Memorandum also states that Federal Government executive agencies should not engage in non-competitive contracts unless their use can be fully justified and urges a preference for fixed-price type contracts.

Use of Multiple Contracts May Save Time and Money

We concluded that using a single CPAF contract for the operation of the entire FFRDC is difficult for NASA to effectively manage because the contractor is responsible for multiple, complex, and often unrelated deliverables. For example, the contractor is delivering products that are crucial to NASA's missions in the areas of astrophysics, earth sciences, solar system exploration, and technology. However, the JPL contractor is also responsible for such things as diversity and equal opportunity, media releases, information assurance, safety and mission assurance, and outreach. At other NASA Centers, contracts generally are awarded by project and evaluations of the contractors' performance do not include the operation of normal center functions (for example, safety, public affairs, maintenance of the grounds). Assessing contractor performance in these multiple, diverse areas creates a significant burden on NASA resources and requires several different levels of management and staff, including scientists, Deputy Directors, Directors, and Associate Administrators at NASA Headquarters.

For routine facility operations at the FFRDC, we believe that either a firm-fixed-price or a time-and-materials contract would be a more appropriate procurement vehicle. A fixed-price contract provides for a firm price or, in appropriate cases, an adjustable price. It can also provide for an adjustable price that includes a ceiling price, a target price, or both. A time-and-materials contract has the contractor acquire services on the basis of direct labor hours at specific fixed hourly rates and acquire supplies at cost. Either type of contract could be used effectively for JPL's facility operations. This would place maximum risk and full responsibility for all contract costs on the contractor, incentivizing the contractor to control costs and perform effectively and efficiently.

For research and development activities, we believe that a CPFF contract would be the most appropriate contract vehicle. A CPFF contract would allow the contractor's costs to be covered and a set fee paid each contract year. While a CPAF contract is also a viable contract alternative, we believe that potential benefits of a CPAF contract are outweighed by the time and effort required to appropriately evaluate contractor performance for such a large and diverse contract. NASA could potentially save time and money by using a CPFF contract.

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

Recommendation 7. The NASA Management Office Procurement Officer should ensure implementation of the 2007 GAO recommendation to conduct a cost-benefit analysis to justify the use of CPAF contracts.

Management's Response. The Assistant Administrator for Procurement concurred, stating that the NMO will coordinate with the Office of Procurement to ensure that a cost-benefit analysis is conducted if a CPAF contract is used for the new contract. The action will be completed in conjunction with corrective actions taken in response to Recommendation 8.

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

Recommendation 8. NASA should consider alternative contract vehicles, or a mix of contract vehicles, for any FFRDC follow-on contracts.

Management's Response. The Assistant Administrator for Procurement concurred, stating that an alternative contract vehicle or a mix of contract vehicles will be considered during the acquisition planning process for the new contract. The estimated completion date is fall 2009, when NMO will provide NASA Headquarters a set of contracting options.

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

APPENDIX A

Scope and Methodology

We performed this audit from August 2008 through July 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We concentrated our review on FY 2007 because, at the start of our audit, it was the most current complete contract period of performance available. We reviewed the Performance Evaluation Plan, the criteria used to evaluate the contractor, the PPEs' primary performance evaluation reports, and the CPMs' Performance Monitor Reports for FY 2007. We interviewed PPEs and CPMs to gain an understanding of how they evaluated the contractor and how they determined adjectival ratings and numerical scores. We used FY 2007 documentation in our discussions with the PPEs and CPMs, and we are confident that the answers we obtained were not from the "FY-2008 or FY-2009 perspective," as posited in management's comments (see Appendix D, page 36).

We performed work at the NMO and the Defense Contract Audit Agency office located at JPL to assess the contract value and the values related to the work performed under the contract. We interviewed the NMO Procurement Officer, contracting officers, and Defense Contract Audit Agency representatives. To determine whether the requirements to operate JPL as an FFRDC were met for FYs 2004–2008 and 2009–2013, we reviewed the use and need determination documents.

Computer-Processed Data. We used computer-processed data to perform this audit. The primary performance evaluation reports and Performance Monitor Reports are entered into the JPL Evaluation Tool (JET) system, a system set up by the NMO in 2007 to track and archive the documents. The NASA Headquarters Information Technology Support Services contractor designed the JET system, but the contract was not renewed and a new contractor took responsibility for implementing the JET system. However, software problems arose with the transition and some data entered into the system for FY 2007 was lost. Therefore, we do not have reasonable assurance that we received all of the documents used to brief the PEB and the FDO. However, the NMO provided us data that was last modified on March 14, 2007, and was thought to be the most accurate and complete available. We believe that we received the majority of the documentation and, therefore, our audit work, findings, and conclusions were not affected.

OIG Calculation of the Weight of Cost Control Measures. Although the following calculation is specific to the FY 2007 award fee criteria, similar calculations were made for award years FY 2004 through FY 2006 and FY 2008**.** Criteria in both the programmatic and institutional performance evaluation factors included some measure of cost control. As shown in Appendix C, 12 of the 45 criteria for FY 2007 had some measure of cost control. We calculated the weight of those cost control measures to be 12 percent of the total weighted evaluation factors (11.24 percent under the programmatic factor and 1.19 percent under the institutional factor; rounded from 12.43 percent to 12 percent), which is well below the required 25 percent. Following are details of our calculations.

Programmatic Performance Evaluation Factor. The Performance Evaluation Plan weighted the programmatic factor at 65 percent. The factor comprised 21 criteria addressing three elements: technical, schedule, and cost. The Performance Evaluation Plan did not specify a weight for each element; therefore, we considered each to be equally important and assigned a weight of one-third (0.33) of the programmatic factor's weight.

Weight for each of the three elements (technical, schedule, and cost):
0.33 x 65 percent = 21.45 percent

Of the programmatic factor's 21 criteria, 11 (52 percent) included a cost control measure. We calculated the weight for cost control measures using the weight for the cost element (21.45 percent) and the percentage of the factor's criteria that included cost control.

Weight of cost control measures in the programmatic factor:
52 percent x 21.45 percent = 11.15 percent

Institutional Performance Evaluation Factor. The Performance Evaluation Plan weighted the institutional factor at 25 percent. Of the factor's 21 criteria, 1 (4.76 percent) addressed cost. We applied the institutional factor's full weight (25 percent) to the percentage represented by the criterion addressing cost.

Weight of cost control measures in the institutional factor:
4.76 percent x 25 percent = 1.19 percent

Review of Internal Controls

We reviewed and evaluated the internal controls associated with documenting the evaluation of performance, assigning adjectival ratings and numerical scores, and determining the final award fee score. We found deficiencies in all three areas, as discussed in this report. Our recommendations, if implemented, should correct the weaknesses we identified.

Prior Coverage

During the last 5 years, GAO issued a report of particular relevance to the subject of this report. A 2004 NASA report was also relevant. Unrestricted reports can be accessed over the internet at http://www.gao.gov (GAO) and http://oig.nasa.gov/audits/reports/FY04 (NASA).

Government Accountability Office

"Federal Contracting: Guidance on Award Fees Has Led to Better Practices but Is Not Consistently Applied" (GAO-09-630, May 2009)

"NASA Procurement: Use of Award Fees for Achieving Program Outcomes Should Be Improved" (GAO-07-58, January 17, 2007)

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"Audit of Incentive/Award Fee Structure Under the Space Flight Operations Contract" (IG-04-014, March 23, 2004)

AWARD FEE PROCESS

NASA's Award Fee Contracting Guide states that the award fee earned is calculated by applying the total numerical score (the award fee score) to the award fee pool. The Fee Determination Official (FDO) sets the award fee score, based on information provided by the Performance Evaluation Board (PEB). That information is an accumulation of assessments by NASA evaluators: Primary Performance Evaluators (PPEs) and Contract Performance Monitors (CPMs).

At the time of our audit, NASA had 18 PPEs for the JPL contract: SMD had six, one for each program, and other Directorates and Offices each had one. CPMs monitor and assess the contractor's performance, providing biannual Performance Monitor Reports and recommending an adjectival rating to the appropriate PPE.

The PPEs use the Performance Monitor Reports to assign numerical scores and to prepare a primary performance evaluation report that summarizes the CPMs' assessments of the contractor's performance. The PPEs then prepare summary charts and make presentations to the PEB as to the strengths and weaknesses of the contractor and recommending an overall numerical score. PEB members discuss the evaluations and provide the FDO with their recommendation. The FDO decides on the final award fee score, which is used to make award fee and award term determinations.

FY 2007 EVALUATION CRITERIA

The following table shows the 45 criteria of the three peformance evaluation factors (programmatic, institutional, and outreach), the NASA evaluators' FY 2007 recommended rating, and whether the criterion addressed cost control. The [redacted].

No.	Directorate/Office	Criteria	Performance Evaluation Factor	Recommended Rating	Cost Control
1	SMD/Astrophysics	Astro-1	Programmatic	[redacted]	[redacted]
2	SMD/Astrophysics	Astro-2	Programmatic	[redacted]	[redacted]
3	SMD/Astrophysics	Astro-3	Programmatic	[redacted]	[redacted]
4	SMD/Astrophysics	Astro-4	Programmatic	[redacted]	[redacted]
5	SMD/Earth Science	ES-1	Programmatic	[redacted]	[redacted]
6	SMD/Earth Science	ES-2	Programmatic	[redacted]	[redacted]
7	SMD/Earth Science	ES-3	Programmatic	[redacted]	[redacted]
8	SMD/Earth Science	ES-4	Programmatic	[redacted]	[redacted]
9	Exploration Systems Mission	ESMD-1	Programmatic	[redacted]	[redacted]
10	SMD/Heliophysics	Helio-1	Programmatic	[redacted]	[redacted]
11	SMD/Heliophysics	Helio-4	Programmatic	[redacted]	[redacted]
12	SMD/Management and Policy Division	MPD-2	Programmatic	[redacted]	[redacted]
13	SMD/Management and Policy Division	MPD-3	Programmatic	[redacted]	[redacted]
14	SMD/Mars Exploration Program	Mars-1	Programmatic	[redacted]	[redacted]
15	SMD/Mars Exploration Program	Mars-2	Programmatic	[redacted]	[redacted]
16	SMD/Mars Exploration Program	Mars-3	Programmatic	[redacted]	[redacted]
17	SMD/Planetary Science	PS-1	Programmatic	[redacted]	[redacted]
18	SMD/Planetary Science	PS-2	Programmatic	[redacted]	[redacted]
19	SMD/Planetary Science	PS-3	Programmatic	[redacted]	[redacted]
20	SMD/Planetary Science	PS-4	Programmatic	[redacted]	[redacted]
21	Space Operations Mission	SOMD-1	Programmatic	[redacted]	[redacted]

No.	Directorate/Office	Criteria	Performance Evaluation Factor	Recommended Rating	Cost Control
22	Chief Engineer	CEO-1	Institutional	[redacted]	[redacted]
23	Chief Engineer	CEO-2	Institutional	[redacted]	[redacted]
24	Chief Engineer	CEO-3	Institutional	[redacted]	[redacted]
25	Chief Information Officer	CIO-1	Institutional	[redacted]	[redacted]
26	Chief Information Officer	CIO-2	Institutional	[redacted]	[redacted]
27	Chief Information Officer	CIO-3	Institutional	[redacted]	[redacted]
28	Diversity and Equal Opportunity	D&EO-1	Institutional	[redacted]	[redacted]
29	Diversity and Equal Opportunity	D&EO-2	Institutional	[redacted]	[redacted]
30	Infrastructure and Administration	OIA-1	Institutional	[redacted]	[redacted]
31	Infrastructure and Administration	OIA-2	Institutional	[redacted]	[redacted]
32	Infrastructure and Administration	OIA-3	Institutional	[redacted]	[redacted]
33	Infrastructure and Administration	OIA-4	Institutional	[redacted]	[redacted]
34	Infrastructure and Administration	OIA-5	Institutional	[redacted]	[redacted]
35	Infrastructure and Administration	OIA-6	Institutional	[redacted]	[redacted]
36	Infrastructure and Administration	OIA-7	Institutional	[redacted]	[redacted]
37	NASA Management Office	NMO-1	Institutional	[redacted]	[redacted]
38	NASA Management Office	NMO-2	Institutional	[redacted]	[redacted]
39	NASA Management Office	NMO-3	Institutional	[redacted]	[redacted]
40	Safety and Mission Assurance	OSMA-1	Institutional	[redacted]	[redacted]
41	Safety and Mission Assurance	OSMA-2	Institutional	[redacted]	[redacted]
42	Safety and Mission Assurance	OSMA-7	Institutional	[redacted]	[redacted]
43	Small and Disadvantaged Business Utilization	SDBU-1	Outreach	[redacted]	[redacted]
44	Strategic Communications	CSC PA-1	Outreach	[redacted]	[redacted]
45	Strategic Communications	CSC PA-2	Outreach	[redacted]	[redacted]

MANAGEMENT COMMENTS

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

August 6, 2009

Reply to Attn of: Office of Procurement

TO: Acting Assistant Inspector General for Auditing

FROM: Assistant Administrator for Procurement
NASA Management Office Director, Jet Propulsion Laboratory
Procurement Officer, NASA Management Office, Jet Propulsion Laboratory

SUBJECT: Response to Draft Audit Report, "NASA Should Reconsider the Award Evaluation Process and Contract Type for the Operation of the Jet Propulsion Laboratory," (Assignment No. A-08-016-00)

Thank you for the opportunity to respond to your draft audit report entitled, "NASA Should Reconsider the Award Evaluation Process and Contract Type for the Operation of the Jet Propulsion Laboratory," (Assignment No. A-08-016-00), dated July 7, 2009.

In addition to addressing the eight recommendations communicated in the draft report, we are providing technical comments to the draft report in Appendix A of this memorandum. It is our desire that you review and incorporate our technical comments in an effort to enhance the accuracy and utility of the final report.

Recommendation 1: ***The NASA Management Office Procurement Officer should provide in the Performance Evaluation Plan, or other applicable documents, specific, explicit direction to the Contract Performance Monitors to evaluate and document the contractor's annual performance for all the criteria metrics under the evaluation factors.***

Management's Response: Concur. The NASA Management Office (NMO) will propose additional clarifying language regarding the CPMs' performance evaluation process for consideration by the Performance Evaluation Board. The Performance Evaluation Plan will be updated to include the clarifying language and submitted to the Fee Determination Official (FDO) by August 31, 2009. Explicit direction will be included within the text of each e-mail for the mid-year and final Award Fee Evaluation call.

Recommendation 2: ***The NASA Management Office Procurement Officer should monitor Contractor Performance Monitors' input for accuracy and completeness.***

Management's Response: Concur. We agree with the intent of this recommendation. NMO will work with the Mission Directorates, Mission Support Offices, and the Administrator's Staff Offices in assuring all inputs are complete, understanding that the accuracy of the CPM reporting is ultimately the responsibility of the Directorates and Offices sponsoring the work at JPL. The NMO will organize a meeting in mid

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September 2009 with the Contractor Performance Monitors and Primary Performance Evaluators to address the recommendations communicated in the draft report. Explicit direction will be included within the text of each e-mail for the March 30 mid-year, and September 30 final Award Fee Evaluation call.

Recommendation 3: ***The NASA Management Office Procurement Officer should include in the Performance Evaluation Plan a weighting factor for each criterion or project based on significance and cost, as determined by the Performance Evaluation Board.***

Management's Response: Concur. NMO will submit the request for weighting annual criteria to the HQ offices sponsoring work at JPL, and will implement all the requirements approved by the Performance Evaluation Board regarding the weighting of individual annual criteria. The NMO will begin implementation discussion during the FY 2009 End of the Year Performance Evaluation Board meeting, scheduled for October 2009. Estimated date for implementation is September 30, 2010.

Recommendation 4: ***The NASA Management Office Procurement Officer should modify the "Performance Evaluation Plan for Management of the Jet Propulsion Laboratory" to clearly indicate a cost control factor weighted at no less than 25 percent of the award fee evaluation.***

Management's Response: Concur. The NMO will coordinate strategy for the implementation of this recommendation with the HQ Office of Procurement, the Performance Evaluation Board, and the Fee Determination Official. The discussions will consider the development of a process to capture the cost control factor in a way that's practical and auditable. The NMO will begin implementation discussions immediately and will address it during the Performance Evaluation Board meeting, scheduled for October 2009. Estimated date for implementation is September 30, 2010.

Recommendation 5: ***The NASA Management Office Procurement Officer should perform a comprehensive review in accordance with FAR, to include a proactive search for alternative sources, as soon as practicable.***

Management's Response: Concur. NMO will draft a plan to assemble updated NASA requirements for the Agency's FFRDC. These requirements will be used in a proactive search for alternate sources that could provide at least equivalent or better overall performance than the current source. This process will begin by Fall 2009 and will be completed during the acquisition phase for the new contract.

Recommendation 6: ***The NASA Management Office Procurement Officer should reevaluate the use of award term for any future FFRDC contract.***

Management's Response: Concur. NMO will consult with the Office of Procurement and the NASA Associate Administrator's office regarding the disposition of this recommendation for longer term FFRDC contract considerations. The current contract implementation, however, does not allow any additional award term beyond those already awarded. We do not foresee the use of award term on future Agency FFRDC contracts. This action will be completed within six months, during the acquisition planning phase for the new contract.

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Recommendation 7: ***The NASA Management Office Procurement Officer should ensure implementation of the 2007 GAO recommendation to conduct a cost-benefit analysis to justify the use of CPAF contracts.***

Management's Response: Concur. The NMO will coordinate with the Office of Procurement to ensure a cost-benefit analysis is conducted in accordance with NASA FAR Supplement should a CPAF contract be utilized. This action will be carried out in conjunction with NASA's response to recommendation 8.

Recommendation 8: ***NASA should consider alternative contract vehicles, or a mix of contract vehicles, for any FFRDC follow-on contracts.***

Management's Response: Concur. Alternative contract vehicles or a mix of contract vehicles for any FFRDC follow-on contracts will be considered during the acquisition strategy for any follow-on contract. The plan is to provide NASA HQ with a set of options in the Fall of 2009.

Again, thank you for the opportunity to respond to the subject draft report and for your consideration of our technical comments provided in the appendix to this memorandum.

William P. McNally

Enclosure

Appendix A

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Appendix A

Technical Comments to Draft Report A-08-016-00

1. In "The Issue" section of the Overview, we request that the OIG include comments acknowledging the critical subjective component of an award fee vehicle. The focus of this audit is on the failure to demonstrate objective, measurable findings and evaluations. There is a lack of discussion regarding the true nature of the CPAF vehicle; that it is an inherently subjective contract type, with assessments (rooted in objective criteria and findings) submitted to a PEB and an FDO for discussion and deliberation.

   The below citations are applicable:

   a. **FAR 16.305 Cost-plus-award-fee contracts.** A cost-plus-award-fee contract is a cost-reimbursement contract that provides for a fee consisting of (a) a base amount (which may be zero) fixed at inception of the contract and (b) an award amount, based upon a judgmental evaluation by the Government, sufficient to provide motivation for excellence in contract performance...

   b. The NASA Award Fee Contracting Guide Section 1.2 states in part:
   "**Cost-plus-award-fee (CPAF)** - CPAF contracts include an estimated cost and an award fee amount that is paid based upon periodic subjective evaluations of contractor performance..."

2. Remarks on the OIG methodology (Appendix A)

   The following comments are provided to set the context of the dynamic evolution of the performance evaluation process. They may be helpful in the interpretation of the audit findings.

   a. The focus of the audit was the FY-2007 award evaluation process, but the interviews of the Contract Performance Monitors (CPM) and of the Primary Performance Evaluators (PPE) were conducted between August 2008 and May 2009, a period of time spanning the year-end FY-2008 and the mid-term FY-2009 performance evaluations. There is a possibility that some of the interviewed CPMs and PPEs have answered questions regarding the FY-2007 evaluation with the FY-2008 or FY-2009 perspective. In particular, a specific change between FY-2007 and FY-2008 was the elimination of the requirement for the CPMs to evaluate the contractor's performance using the general criteria found in the FY-2007 Performance Evaluation Plan (PEP). This may partly explain why the auditors found that *"..., none of the CPMs and PPEs we interviewed indicated that the general criteria were addressed."* (page 5).

   b. The principal focus of the audit was on the annual criteria (totaling 45 in 2007). Because the general criteria (outlined in the Performance Evaluation Plan) were not considered by the OIG

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in their specific interview questions, their effect on the performance evaluation may not have been effectively reflected and assessed.

c. The FY-2007 final numerical scores for some programs in the Science Mission Directorate (SMD) used by the OIG auditors also include the input from the Performance Evaluation Board (PEB). For example, the initial input from the SMD PPE for the Mars Exploration Program (MEP) (Pages 10-11 of the Draft Report) was a score of 71 for MEP, but was subsequently raised to 74 after the PEB meeting. The OIG has estimated a score of 72 by averaging both the Cost and Importance of the Mars projects. This particular example does not readily suggest a shortcoming on the part of the Mars Program PPE's evaluation.

3. The NMO concurs with the need for a renewed emphasis on the documentation of the evaluation process at all levels, but particularly at the CPM and PPE stages. This is particularly important in this situation where both subjective (programmatic and strategic influence factors) and objective (quantitative measures or metrics) elements must be integrated in order to obtain a rational performance evaluation.

4. Finding A, pages 5 and 6.

The Office of Safety and Mission Assurance (OSMA) concurs with OIG's observation that online form comment boxes for "Specific strengths," "Weaknesses," and "Mitigation Factors" do not require rating officials to document all elements of the rating criteria, thereby allowing the evaluator to decide what specific elements to address. OSMA agrees that evaluators should be required to include documentation for all rating criteria elements. OSMA further considers the online form instructions to be overly restrictive by limiting Contractor Performance Monitor feedback to a maximum of one paragraph. Future OSMA evaluations will fully document each rating element.

OSMA notes that the draft report indicates that reviewers "provided either incomplete assessments or inappropriate ratings" (page 5). OSMA's interpretation of this statement is that OIG considers there to have been a lack of due diligence in performing the assessment rather than a lack of complete documentation of the assessment performed. For the example cited, "OSMA – 2," OSMA concurs with OIG's observation that the documented rating summary can be improved to clearly address all elements of the rating criteria (as discussed above), but considers the assessment in question to have properly evaluated each rating element and to have fulfilled the documentation instructions. The Jet Propulsion Laboratory (JPL) compliance with the rating criteria for "OSMA– 2" was based on written evidence obtained from JPL and subsequent verbal discussions held at length with JPL representatives. Additional documentation supporting the adequacy of OSMA's evaluation is available if desired.

In reply to OIG's observation that OSMA comments pertaining to certain metrics did not state whether the metric had been completed, OSMA considers that its statement in Block 6 of the evaluation form, "JPL has met or exceed all established performance standards for Quality Assurance" to address this concern.

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Deputy Administrator
Assistant Administrator for Procurement
NASA Management Office Director, JPL
NASA Management Office Procurement Officer

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Major Contributors to the Report:

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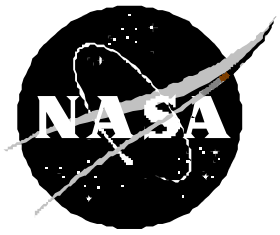
SEPTEMBER 25, 2009

REPORT No. IG-09-022-R



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