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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Inadequate Support Undercuts Value of Booz Allen Study and Its Recommended Changes to NOAA's Finance and Administration Services

Audit Report No. DEN-16948-5-0001/March 2005

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Office of Audits, Denver Regional Office

UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

MAR 7 2005

MEMORANDUM TO: John J. Kelly, Jr.
Deputy Under Secretary for Oceans and Atmosphere
National Oceanic And Atmospheric Administration

FROM: Johnnie E. Frazier

SUBJECT: Improving NOAA's Finance and Administration Services
Final Audit Report No. DEN-16948-5-0001

Attached is the final audit report of "Inadequate Support Undercuts Value of Booz Allen Study and Its Recommended Changes to NOAA's Finance and Administration Services," our review of the Booz Allen Hamilton reports on NOAA's Finance and Administration Services. An executive summary begins on page i. A copy of Booz Allen's response to our draft report is included in its entirety as Attachment I of the report and NOAA's complete response to our draft audit report is included as Attachment II.

Although Booz Allen's reports indicate extensive data gathering, we had many concerns with the support for the findings, recommendations and assumptions contained in those reports. The Booz Allen consultants who prepared the reports advised us that they contained all the evidence necessary to support their recommendations. We did not find that to be the case. We were also unable to see how information obtained in the interviews the consultants conducted with NOAA and Departmental officials supported the reports' findings and conclusions. Finally, we were not able to eliminate these concerns in our meetings with the consultants who prepared the reports. As a result, we do not believe that the Booz Allen reports can serve as the sole justification for specific action by NOAA.

In its response to our draft report, Booz Allen details what it believes the firm did to ensure the accuracy of and the support for the data contained in its reports. Unfortunately, their response provided no additional information or documentation that would cause us to change our findings and conclusions.

We have also reviewed your February 10, 2005, response to our draft audit report, which is consistent with our conclusion that the Booz Allen reports not serve as the sole basis for NOAA action. With that said, we consider the audit closed.

We appreciate the cooperation and courtesies NOAA personnel extended to us during our review. If you have any questions or comments about our report, please feel free to contact me or Ed Blansitt, Deputy Inspector General, on (202) 482-4661.

Attachment
cc with Attachment: Mack A. Cato

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EXECUTIVE SUMMARY

In September 2003, the National Oceanic and Atmospheric Administration contracted with Booz Allen Hamilton, Inc., a management consulting firm, to perform a comprehensive review and analysis of the centralized finance and administrative services functions performed by the organization known within the agency as NOAA Finance and Administration. The purposes of the study were to:

- evaluate the performance of NOAA's central finance and administrative functions;
- recommend cost-effective improvements in service performance; and
- develop a transition plan to implement the recommended changes.

In presenting its findings and recommendations, Booz Allen produced interim reports on its workload analysis, benchmarking analysis, recommendations for cost-effective service improvements and recommended transition plan, followed by a comprehensive final report.

It should be highlighted that we have not sought—nor was it our intent in this audit—to independently assess or evaluate NOAA's finance and administration function or structure or to determine the type of management structure that is best for NOAA. Rather, because it was widely believed that the Booz Allen study (1) represented the cost-benefit analysis that would be useful in helping justify or recommend specific management courses of action and (2) was a primary basis for NOAA's decision to shift to a radically different management structure for its finance and administration services, we sought to determine how NOAA is using the study's results and whether the findings, assumptions, conclusions and recommendations presented in it are adequately supported.

With regard to the first issue, we found that, based on its findings and conclusions, Booz Allen recommended that NOAA change its administrative services organizational structure from a mix of functional, geographical, and business line service delivery approaches, which it contended is inefficient, to a predominantly functional approach. In addition to this recommendation, in its comprehensive final report, the contractor made a total of 62 recommendations, including six broader ones that it described as "global." A NOAA study team charged with working with Booz Allen during the course of its review analyzed Booz Allen's recommendations and endorsed the following ones:

- adopt the functional management model to deliver administrative and financial services;
- create a transition management team to implement approved recommendations;
- assess the financial and administrative services performed within NOAA line offices; and

- redesign the financial and administrative services to improve quality and consistency.

The NOAA study team rejected two Booz Allen recommendations: to establish and staff an Office of Assistant Administrator for Management; and to merge Program Analysis and Evaluation with selected budget functions under the NOAA Chief Financial Officer. At the time of our audit work, NOAA had not taken formal positions on the study's remaining 56 recommendations.

In an April 2004 memorandum, the Under Secretary of Commerce for Oceans and Atmosphere formally concurred with the four Booz Allen recommendations that the NOAA study team had endorsed, including the recommendation that NOAA adopt the functional management model to deliver administrative and financial services. Notwithstanding this memo, in our January 2005 exit conference with the Deputy Under Secretary for Oceans and Atmosphere, he informed us that NOAA's decision to move to a functional management structure was based on a variety of factors and not just the Booz Allen report.

Since April 2004, the NOAA Study Team has identified the initial steps to be taken (1) in transitioning to a functional model and (2) in redesigning Finance and Administrative Services. In September of 2004, the Under Secretary of Commerce for Oceans and Atmosphere announced the selection of a seven-member team that would be responsible for managing the transition and would report to the NOAA Chief Administrative Officer.

To determine whether the findings, assumptions, conclusions and recommendations presented in Booz Allen's study are adequately supported, we carefully reviewed the interim and final reports that presented the results of the Booz Allen study. We subsequently had many questions about the study's methodology and preparation and the support for some of its analyses, conclusions and recommendations. To address these questions, we met with some of the Booz Allen officials who conducted and managed the study. They advised us that their comprehensive final report is a stand-alone document containing all the supporting information for the study's conclusions and recommendations. We did not find that to be the case, as we were unable to find answers to many of the concerns and questions we had within the reports themselves. In an effort to resolve our concerns and questions about the study, we requested access to the study's supporting documentation, which many evaluators, reviewers and auditors commonly refer to as workpapers. Booz Allen officials stated that neither their company policy nor industry standards require workpapers for their study and that they therefore did not maintain such specific documentation.

In the absence of workpapers or other similar documentation, we attempted to utilize other verifiable data to evaluate the support for key aspects of the study as presented in the Booz Allen reports. For example, in an effort to trace information from selected interviews of NOAA and DOC personnel by Booz Allen consultants to the various reports, we requested the interview notes taken by the consultants for a sample of 16 of the 280 interviews that were reportedly undertaken as part of the study. We also met and discussed with the Booz Allen team leaders their methodology, how the study was prepared, the assumptions made during their analyses of NOAA's finance and administrative services, and the study's conclusions and recommendations. Likewise, to assess the level of effort and the amount of time spent on the project by senior

versus more junior Booz Allen employees, we requested resumes for the Booz Allen study team and timesheets.

Despite the aforementioned actions and other efforts, we found many problems with the support for the findings, recommendations and assumptions contained in the reports prepared by Booz Allen. Specifically:

- **We could not reconcile the key cost and staffing figures contained in Booz Allen's reports with other verifiable data, such as NOAA's audited accounting records.** While the overall cost for NOAA finance and administration services cited in Booz Allen's reports generally agrees with NOAA's accounting records, the reports' cost and staffing figures at the task level cannot be traced to verifiable data within NOAA. The lack of an adequate means to reconcile the cost and manpower data to other known or verifiable information makes it virtually impossible to independently determine whether errors exist in the Booz Allen study's calculations of cost and staffing levels by function and what the magnitude of any such errors might be. Furthermore, we believe that the lack of verifiable baseline data makes it risky to project potential cost and staffing reductions. (See page 10.)

- **We were unable to analyze (1) adjustments made by Booz Allen to the activity based costing data produced by NOAA and (2) the basis for those adjustments, since that information was not included in the report or subsequently provided by the Booz Allen consultants we interviewed.** Because the adjusted activity based costing data appears to have been the most significant component of Booz Allen's workload analysis and the associated recommendations to NOAA, the uncertain bases for those adjustments is particularly troubling. (See page 11.)

- **We could not assess the validity of Booz Allen's decision to recommend a specific organizational structure because its reports did not contain sufficient rationale supporting that decision or indicating why the specific structure chosen suited NOAA better than any of the other options identified.** Although the final report contains a matrix summarizing Booz Allen's scoring of the four proposed structures against a set of criteria it developed, with the highest aggregate score given to the functional structure, the report does not discuss how individual scores were assigned to each of the evaluation criteria, making it virtually impossible for an objective reader to independently assess the validity of the scoring. As previously noted, our audit was not intended to review or endorse any one organizational structure over another, only to evaluate the support for the recommendations Booz Allen made. Accordingly, while we found the support for Booz Allen's recommended structure to be inadequate, we did not assess whether the functional management structure is an appropriate or inappropriate choice for NOAA. (See page 15.)

- **We were unable to independently assess the validity of critical assumptions used to develop target workloads for the eight administrative functions**

performed by NOAA Finance and Administration because the bases for those assumptions were not clearly stated in the reports or explained in our subsequent meetings with the Booz Allen consultants. In the interim deliverable report on cost-effective service recommendations, the consultants generally assumed that all NOAA offices performing administrative functions could reach productivity levels for each function equal to 100 percent of the productivity of the current top-performing office within NOAA. However, in its comprehensive final report, Booz Allen subsequently reduced its target performance levels for most functions to 75 percent of the current top performer. We could not find any concrete evidence supporting the use of either target and therefore could not independently validate the use of either target. Without such evidence, the 75 percent figure appears no more likely to be attainable than had Booz Allen assumed 60 percent, 90 percent, or any other percentage of the top performer's rate as its target. (See page 16.)

- **We were unable to validate the productivity gains Booz Allen assumed NOAA could achieve because the reports did not contain an analysis of the reasons for current differences in productivity levels across existing NOAA operations or the firm's rationale for its conclusion that productivity could be increased to certain specified levels.** For example, the target level of $10.35 million of simplified acquisition actions per full time equivalent is nearly double the current productivity levels of three of the five NOAA acquisition offices surveyed and almost 45 percent higher than NOAA's nationwide average of $7.14 million of simplified acquisitions per full time equivalent. Yet the report does not indicate what circumstances might account for the differences in production or how Booz Allen believes such a large increase in productivity can be accomplished. (See page 17.)

- **We could not assess the validity of the estimated costs and savings identified by Booz Allen because the reports did not contain sufficient analysis supporting the assumptions underlying those calculations.** Booz Allen categorized the $22.1 million in estimated transition costs as being labor related (approximately $5 million) or non-labor related (approximately $17 million). Its reports contain almost no information related to the non-labor related transition costs that would allow a reviewer to independently assess the estimates and underlying assumptions. The remaining $5.1 million of labor related transition costs include assumed cost factors for downsizing and restaffing based on Booz Allen's calculations of the weighted average costs per full time equivalent employee affected. While the reports illustrate Booz Allen's calculations of the weighted averages, they did not include a description of how they arrived at the costs per full time equivalent employee, or the assigned weighting factors, that would enable an independent reviewer to assess the strength of these figures. (See page 20.)

In summary, although Booz Allen's reports indicate extensive data gathering and analyses, we have many concerns with the support for the findings, recommendations and assumptions contained in them. Despite our discussions and meetings with the Booz Allen consultants who

prepared the reports and their assertions that the reports contained all the evidence necessary to understand the basis for their recommendations, we did not find that to be the case. As a result, we do not believe that the assumptions, findings or recommendations contained in the Booz Allen reports can serve the sole justification for change or provide a solid basis for specific action by NOAA.

We provided Booz Allen and NOAA a draft of our audit report for their review and comment. Their responses are summarized below and copies of their complete responses are provided in Attachment I and II, respectively.

In its response to our draft report, Booz Allen details what it believes the firm did to ensure the accuracy of the data contained in its reports and states its belief that the data contained in its various consulting reports is accurate and that the recommendations based on the data are well supported. The response provided no additional information or documentation that would cause us to change our findings.

In its written response to our draft report, NOAA did not disagree with our conclusion that inadequate support for the conclusions and recommendations in the consulting firm's reports undercuts the value of the study. In fact, NOAA acknowledged the significant challenges faced by Booz Allen in its data collection, benchmarking efforts, and analyses. NOAA's response further suggests that the Booz Allen reports played a more limited role in its decisions and subsequent actions to change the manner in which it delivers finance and administrative services than was previously believed. Specifically, the agency states that it

> considered the BAH recommendations, *as well as findings and recommendations from previous studies*, in identifying its recommendations to NOAA leadership for strategic changes at the corporate level; these changes were seen as *necessary for establishing a solid foundation for future process improvements.* (Emphasis added.)

NOAA's response is consistent with our conclusion that the Booz Allen reports not serve as the sole basis for NOAA action.

INTRODUCTION

In September 2003, the National Oceanic and Atmospheric Administration contracted with Booz Allen Hamilton, Inc., a management consulting firm, to perform a comprehensive review and analysis of the agency's centralized finance and administrative services functions. The purposes of the study were to:

- evaluate the performance of NOAA's central finance and administrative functions;
- recommend cost-effective improvements in service performance; and
- develop a transition plan to implement the recommended changes.

The scope of Booz Allen's study included the finance and administrative functions provided by the organization known within the agency as NOAA Finance and Administration. These eight functions include finance, budget, workforce management, acquisition, grants, facilities and logistics, information technology, and environmental compliance. NOAA's finance and administrative services organization provides support not only to NOAA, but also to other Department of Commerce organizations. Finance and administration personnel are located in several offices in the Washington, DC area and at four Administrative Support Centers, located in Norfolk, Virginia; Kansas City, Missouri; Boulder, Colorado; and Seattle, Washington. The Washington, DC offices provide both oversight and policy for the entire organization, as well as, providing certain operational services.

Information provided to us by NOAA shows total costs for NOAA Finance and Administration were $176.1 million during fiscal year 2003. Booz Allen's final report cites a total cost figure of about $177.1 million, an immaterial difference. According to Booz Allen, staffing for NOAA Finance and Administration involved 917.9 full time equivalent government employees and 217.8 full time equivalent contractors. NOAA did not provide an analysis of actual finance and administration staff, but officials told us that authorized federal staffing for the organization was 941 full time equivalents in fiscal year 2003.

In the last 15 years, improving the performance of NOAA's administrative service has been the subject of at least 12 internal and external studies, some of which were conducted by contractors hired by NOAA and two of which were performed by this Office of Inspector General. "NOAA's 'Corporate-Costs' Process Needs Improvement," Final Audit Report No. STD-14427-3-0001, March 2003, made recommendations for improving the planning process for developing corporate costs and the methods by which corporate costs are funded by line offices. "Administrative Support Centers Need Functional Realignment and Focus on Essential Services," Inspection Report no. IPE-8569, August 1997, noted that NOAA's outdated billing methods fostered client dissatisfaction and recommended improvements in NOAA's finance and administrative services.

Historically, NOAA had not received specific appropriations to fund finance and administration services. Instead, the agency used funds appropriated for NOAA's scientific and research programs to cover the costs of finance and administration. Senate Report 108-144, which

accompanies the Department's fiscal year 2004 appropriation legislation, contains the following language, which was incorporated by reference into the Conference Committee's report, published as House Report 108-401:

> "*Truth in Budgeting*--NOAA covers the costs of certain central services through a system of internal 'taxation.' The costs of other central services are covered through a payment to the Department of Commerce's Working Capital Fund. Rather than budget for these expenses, NOAA has always skimmed funds from program, project, and activity lines. Congressional supporters of NOAA have been understandably frustrated by these hidden taxes on essential programs. The Committee recommendation eliminates the taxation system by adding new lines under Program Support that totally fund central services. Henceforth, funding in program, project, and activity lines shall be available only for those programs, projects, and activities unless NOAA submits, and Congress approves, a reprogramming."

Given the congressional interest in NOAA's funding of its finance and administration services, the agency needed to better understand and control its administrative spending. NOAA funded a study of the services, with the intention of streamlining and reconfiguring operations to improve performance and customer service, and to reduce costs.

OBJECTIVES, SCOPE, AND METHODOLOGY

The purpose of our audit was to determine whether the findings, assumptions, conclusions and recommendations presented in Booz Allen's study are adequately supported. We also discussed with NOAA officials how the study's results are being used. It should be highlighted that we have not sought—nor was it our intent in this audit—to independently assess or evaluate NOAA's finance and administration function or structure.

We reviewed the Booz Allen study, including the interim reports on its workload analysis, benchmarking analysis, recommendations for cost-effective service improvements, and recommended transition plan, and the comprehensive final report. After our review of the study, we had questions about its methodology and preparation, and about the support for its analyses, conclusions and recommendations.

To address our questions, we met with some of the Booz Allen officials who conducted and managed the study. They stated that their comprehensive final report is a stand-alone document containing all the supporting information for the study's conclusions and recommendations. However, to resolve our questions about the study, we requested access to the study's supporting documentation, which many evaluators, reviewers and auditors refer to as workpapers. Booz Allen officials stated that neither their company policy nor industry standards require workpapers for their study and that they therefore did not maintain such documentation.

In the absence of workpapers we or other similar documentation, we conducted additional work to evaluate the support for the reports. We requested resumes for the Booz Allen study team and timesheets to evaluate the time spent by each team member and thus the level of effort expended by junior and more senior Booz Allen consultants. Booz Allen provided resumes for 45 of the 48 members of the study team, but declined our request for time sheets. In an effort to trace information from selected interviews of NOAA and DOC personnel by Booz Allen consultants to the various reports, we requested interview notes taken by the consultants for 16 of the 280 interviews that were undertaken as part of the study.[1] We received 13 interviews; Booz Allen could not locate interview notes for the three remaining officials. In addition, we met and discussed with the Booz Allen team leaders their methodology, how the study was prepared, the assumptions made during their analyses of NOAA's finance and administrative services, and the study's conclusions and recommendations.

We interviewed NOAA personnel and reviewed pertinent documentation in order to assess the adequacy of evidence in support of the study. We conducted audit fieldwork during July through September 2004, at Booz Allen's offices in McLean, Virginia, and NOAA offices in Silver Spring, Maryland and Washington, DC.

In pursuing our objectives, we reviewed appropriate laws and department organization orders affecting NOAA's finance and administrative services. Our review did not assess compliance with laws and regulations, except as noted in this report. Also, we evaluated the adequacy of

[1] Since Booz Allen told the personnel interviewed that the results would be confidential, we requested a release from each person.

Booz Allen's internal controls for the report on NOAA's finance and administrative services. To assess the reliability of computer generated data, we interviewed Booz Allen officials about the limitations cited in their reports for estimated cost savings. In addition, we interviewed NOAA officials about the accuracy of the activity based costing data used in the Booz Allen comprehensive final report.

We conducted our audit in accordance with generally accepted government auditing standards, under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended

INADEQUATE SUPPORT UNDERCUTS VALUE OF BOOZ ALLEN STUDY

We had many concerns with the support for the findings, recommendations and assumptions contained in the reports prepared by Booz Allen after our initial review of those documents. In an effort to eliminate those concerns, we met with the Booz Allen consultants who prepared the reports, who advised us that the reports contained all the evidence necessary to understand the bases for their recommendations. We did not find that to be the case. As a result, we do not believe that the assumptions, findings or recommendations contained in the Booz Allen reports can serve as the sole justification for change or provide a solid basis for specific action by NOAA.

Our specific concerns can be summarized as follows:

- We could not reconcile cost and staffing figures contained in Booz Allen's reports with other verifiable data, such as NOAA's audited accounting records.

- We were unable to analyze adjustments made by Booz Allen to the activity based costing data produced by NOAA and the basis for those adjustments, as that information was not included in the report or provided by the Booz Allen consultants we interviewed.

- We could not assess the validity of Booz Allen's decision to recommend a specific organizational structure because the reports did not contain sufficient analysis supporting that decision or indicating why the structure chosen suited NOAA better than any of the other options identified.

- We were unable to independently assess the validity of critical assumptions used to develop target workloads for the eight administrative functions because the bases for those assumptions were not clearly stated in the report or explained in our meetings with the Booz Allen consultants.

- We could not assess the validity of the productivity gains Booz Allen assumed NOAA could achieve because the reports did not contain an analysis of the reasons for differences in productivity levels across existing NOAA operations or of the firm's rationale for its conclusion that productivity could be increased to certain specified levels.

- We could not assess the validity of the estimated costs and savings identified by Booz Allen because the reports did not contain sufficient analysis supporting the formulation of those amounts.

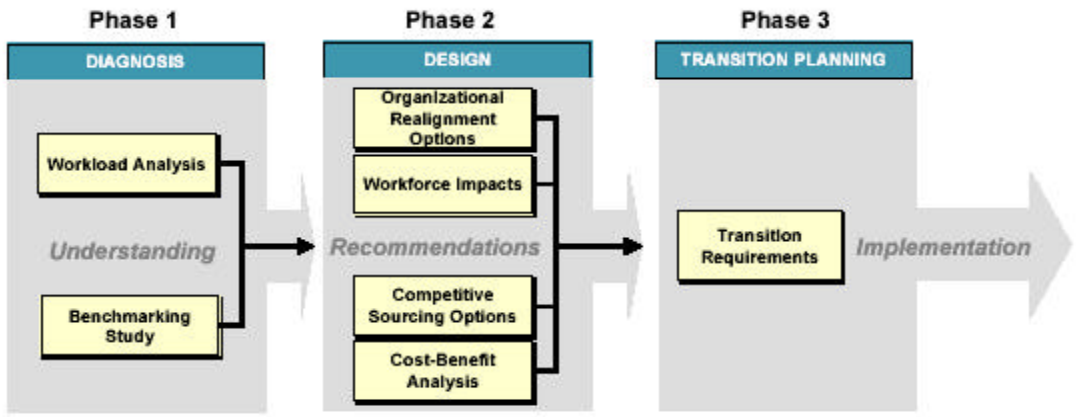
We also noted that the functional organizational structure Booz Allen recommended is not linked to almost half of the cost savings identified in the report, which are the result of productivity increases that could occur whether or not the organizational structure remains the same.

Insufficient Support for Analysis Found in All Phases of Study

Booz Allen issued four interim reports: one on its workload analysis, one on other agencies' workload, another on its recommendations for cost-effective service improvements, and a fourth on its transition plan. A fifth and final report, a comprehensive summary of the findings, conclusions and recommendations of first four reports, was issued on February 13, 2004. The final report appears on the Internet at http://oceanservice.noaa.gov/programs/mb/supp_adminreport.html.

According to Booz Allen's final report, it examined the activities, processes, and workload associated with the delivery of NOAA's administrative services in the Washington, D.C. headquarters offices and in the four Administrative Support Centers. The report states that a three-phased approach was used to study the agency's administrative services. The first phase included analyzing NOAA's workload and comparing it to the workload of other agencies in order to assess the productivity of each of the eight administrative functions. The second phase included identifying organizational structure options, appropriate staffing levels, and improved service delivery models in order to make cost effective recommendations. The third phase was to develop a transition plan that would be used to change the current organizational structure, staffing levels and service delivery methods to the recommended model. The following chart summarizes the three phases of the study.

Booz Allen Study Approach



Source: Comprehensive Final Report, Analysis Operations and Structure of NOAA's Finance and Administration Services, Page 2-3.

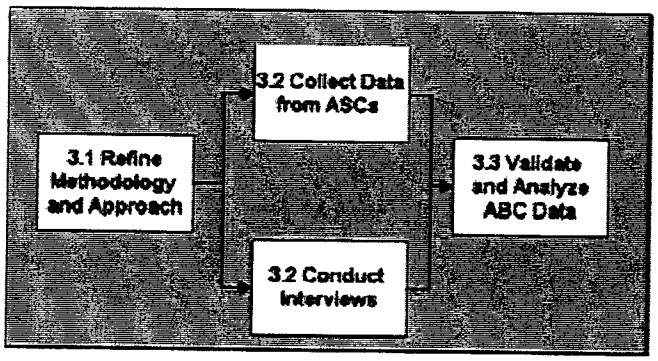
Phase One: Workload Analysis Data Are Not Verifiable

We had difficulty assessing the validity of Booz Allen's workload analysis because we could not reconcile cost and staffing figures contained in Booz Allen's reports with other verifiable data, such as NOAA's audited accounting records. We were also unable to analyze adjustments made by Booz Allen to the activity based costing data produced by NOAA and the bases for those adjustments, as that information was not included in the reports or adequately explained by the Booz Allen consultants we interviewed.

Analysis of Sources of Workload Data

The first phase of Booz Allen's study involved an analysis of NOAA's finance and administration workload to develop a model of the current or "as is" organization. The final report states that the purpose of the first phase "... was to review available data resources, collect additional information to validate, modify, and extend that data, and report on [Booz Allen's] findings with regard to workload and productivity levels for finance and administrative functions both within NOAA and with comparable benchmarking partners." The following table summarizes Booz Allen's workload analysis methodology.

Workload Analysis Methodology



Source: Interim Deliverable One: Workload Analysis, Analysis of Operations and Structure of NOAA's Finance and Administration Services, Page 3-1.

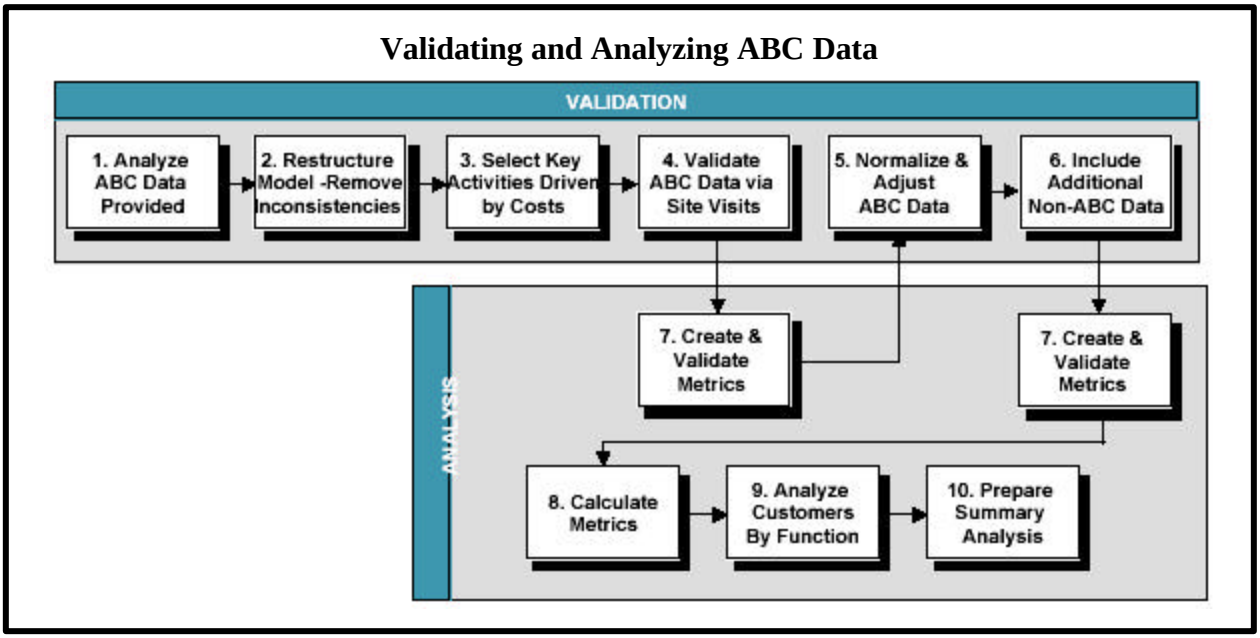
According to the report, data for the first phase of the study were derived from three sources:

- NOAA's activity based costing system;
- 280 interviews with finance and administrative services personnel, their customers, and other Commerce officials; and
- external organizations that provide similar finance and administration services.

Booz Allen explained to us that it assembled a 48-member team to conduct the study. We were told that the team was divided into groups, based on professional expertise, which focused on each of the eight functional areas of NOAA's finance and administration services. One final group was charged with analyzing the activity based costing data. According to Booz Allen's final report, "[The] workload analysis was performed using a methodology that was designed to provide NOAA management with the ability to evaluate the current distribution of labor across each functional area in an expedited timeframe."

Source One: Activity Based Costing Data

The first source of data for Booz Allen's workload analysis was NOAA's activity based costing data. Although both the agency and Booz Allen told us that they believe that data from NOAA's activity based costing system are unreliable, it appears that that information was the best source of workload data available to Booz Allen at the time of its study. According to Booz Allen, NOAA requested that the study team base its analyses on the activity based costing data, which NOAA first began to accumulate in 2001. The final report describes Booz Allen's ten-step approach for validation and analysis of NOAA's activity based costing data as shown in the following chart.



Source: Booz Allen Approach for Validating and Analyzing ABC Data from Comprehensive Final Report, page 2-5

According to Booz Allen's final report, NOAA provided full-year activity based costing data for fiscal year 2002, and partial-year data, through March 31, 2003, for fiscal year 2003. The report states that the consultants developed 2003 full-year estimates by supplementing the 2003 partial-year data with analysis of the 2002 data and interviews with NOAA staff. However, according to Booz Allen's final report, making comparisons of the data across fiscal years was difficult because NOAA changed the activity based costing account structure between 2002 and 2003, as

it worked to refine its system. Booz Allen personnel explained that they resolved the inconsistencies, to the extent possible, through discussions with NOAA's internal activity based costing team, reviewing previous studies of NOAA's finance and administration services, interviews with NOAA staff, and analysis of pertinent documentation. In describing the product of these activities of producing a meaningful full-year workload analysis, Booz Allen's final reports states, "The 2003 data presented in this report may be best described as 'adjusted' workload and transaction data, which has been modified to reflect our understanding of the present state."

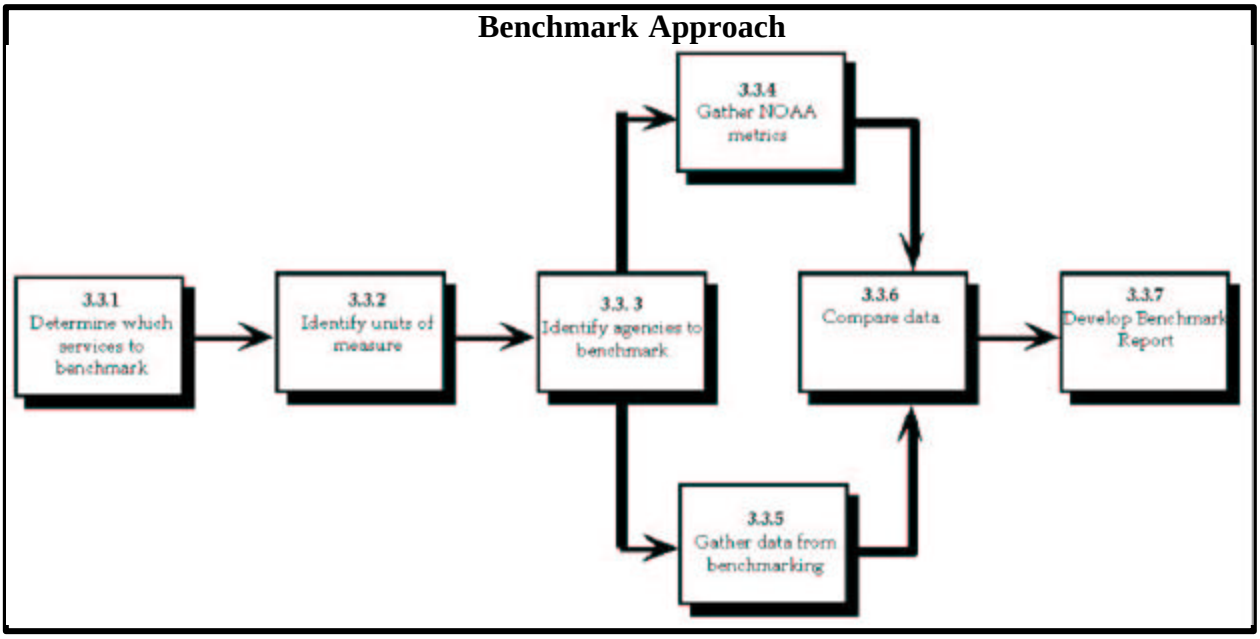
Booz Allen's validation and analysis of NOAA's activity based costing data also involved what it called "normalizing" the data. Booz Allen's final report explains this process to include isolating salary and contractor costs by specific activity and determining the levels of fixed and variable overhead costs. Knowledge of these cost factors was intended to enable the study team to project cost impacts of proposed changes in staffing levels.

Source Two: Interviews of NOAA and Department of Commerce Personnel

Booz Allen obtained the second source of workload analysis data by conducting 280 interviews with NOAA finance and administration personnel, customers within and outside NOAA, and Department of Commerce officials. A list of the interviews is included as Appendix E of Booz Allen's *Interim Deliverable One: Workload Analysis*. The Booz Allen's final report summarizes how data gathered during the interviews were used in performing the workload analysis. According to the report, the interviews were used as a source of workload data outside the activity based costing data, as a tool in validating NOAA's costing data, and in performing what Booz Allen's final report calls a "high-level survey" of customer satisfaction.

Source Three: External Benchmarking

The third source of data for Booz Allen's workload analysis involved benchmarking NOAA's finance and administration performance against similar operations outside NOAA. Evaluation of benchmarking data was a requirement of the NOAA contract. Booz Allen's *Interim Deliverable Two: Benchmarking Analysis*, states, "By examining the performance results of other organizations and the service delivery models that support those results, NOAA hopes to gain insight into its own performance levels, as well as the service delivery models other agencies are using as well as the inherent structure and processes necessary to achieve these results." Booz Allen's final report outlines a seven-step process for benchmarking, as summarized in the following chart.



Source: Interim Deliverable Two: Benchmarking Analysis , Page 7.

Regarding other agencies chosen to benchmark, Booz Allen's final report lists 13 outside agencies, as well as Booz Allen's own "industry reports" and "confidential benchmarking partners," against which various NOAA finance and administration functions were benchmarked. According to the report, the benchmarking agencies were identified through two sources. A NOAA internal study team, assembled to monitor the study and act as an interface between the Booz Allen consultants and NOAA management, provided a list of potential benchmarking partners and points of contact. Booz Allen also identified potential benchmarking partners from its archives of past consulting work with federal agencies. According to Booz Allen's final report, the Booz Allen archive data were "used to supplement the data gathered from other agencies when benchmarking partners could not provide the required data in the time available for [the] study." The report did not identify the benchmarking partner agencies in those instances where Booz Allen archive data were used, nor did it identify how old the archived data was.

Although Booz Allen conducted the external benchmarking study at NOAA's request, it does not appear to have used the results to establish staffing levels for the functional model recommended in the final comprehensive report. The comprehensive final report stated that comparisons of NOAA performance levels with external cost/service benchmarks identified fewer opportunities for improvement than internal benchmarking.

Combined Weaknesses Render Workload Analysis Questionable

We were unable to assess the validity of Booz Allen's workload analysis because we could not reconcile the cost and other data Booz Allen used with other verifiable data. While the overall cost for NOAA finance and administration services cited in Booz Allen's reports generally agrees with NOAA's accounting records, the reports' cost and staffing figures at the task level cannot be traced to verifiable data within the agency.

We are concerned that there is no adequate means to reconcile the cost and manpower data to verifiable information. Without such a mechanism, it is impossible to determine whether errors exist in the Booz Allen study's calculations of cost and staffing levels by function and what the magnitude of any such errors might be. Furthermore, lack of verifiable baseline data makes it risky to project potential cost and staffing reductions. Booz Allen recognized the risks associated with such projections by adding disclaimers in several places of its final report. For example, the cover of Booz Allen's final report states, "DISCLAIMER: In its conduct of this analysis, Booz Allen has utilized the best available data concerning NOAA workload, staffing, cost and performance levels. These data may be subject to further refinement, adjustment, or validation via additional analysis beyond the scope and objectives of this study..."

In addition, we were unable to analyze the support for adjustments made by Booz Allen to the activity based costing data produced by NOAA and the bases for those adjustments. Booz Allen's reports state that its consultants supplemented NOAA's activity based costing data with information gathered during its many interviews with NOAA and Departmental personnel. Other adjustments were made as a result of information received from NOAA's activity based costing group.

The Booz Allen team member who worked with the activity based costing data told us that, while he could trace the adjustments he made through various spreadsheets, he could not tell us what information prompted specific changes. We could not determine from the report itself: (1) what specific adjustments were made to the activity based costing data; (2) why those adjustments were made; and (3) how the information obtained from the interviews was analyzed and used in the study. Because the adjusted activity based costing data appears to have been the most significant component of Booz Allen's workload analysis and the associated recommendations to NOAA, the uncertain bases for those adjustments is particularly troubling.

Phase Two: Recommended Organizational Structure and Projected Productivity Gains Are Not Supported by Clear, Convincing Evidence

We could not assess the validity of Booz Allen's decision to recommend a specific organizational structure because the reports did not contain sufficient analysis supporting that decision or indicating why the structure chosen suited NOAA better than any of the other options identified. We were also unable to independently assess the validity of critical assumptions used to develop target workloads for the eight administrative functions because the bases for those assumptions was not clearly stated in the report or explained in our meetings with the Booz Allen consultants. In addition, we could not assess the validity of the productivity gains Booz Allen assumed NOAA could achieve because the reports did not contain an analysis of the reasons for differences in productivity levels across existing NOAA operations or of the reasons to expect that productivity could be increased to certain specified levels. Finally, Booz Allen's calculations of potential cost savings assume NOAA's finance and administrative services workloads will remain constant, which may not be a valid assumption.

Identification of Organizational Options, Staffing Levels and Service Delivery Models

The second major phase of the Booz Allen study of NOAA finance and administration involved identifying organizational structure options, appropriate staffing levels, and improved service delivery models in order to make cost-effective recommendations. Booz Allen's final report states that this phase of the study:

- reviewed the outcomes of Phase One to identify key issues and areas of opportunity for performance improvement in NOAA administrative services delivery;
- established, based on these issues and opportunities, a set of evaluative criteria for assessing the relative merits and applicability of alternative concepts of operation for NOAA's administrative services functions;
- defined alternative high-level organizational models for administrative services delivery, using Booz Allen's understanding of both commercial and governmental best practices in organization design;
- evaluated each alternative organizational model against the established design criteria, and force-ranked alternative models based on Booz Allen's assessment of their ability to meet the criteria; and
- used the highest ranked organizational model as a basis for defining a high-level Concept of Operations for NOAA administrative services.

The final report explains the proposed concept of operations for NOAA's finance and administration services. According to the report, the study considered the advantages and disadvantages of four organizational structures, as described in the following table:

	Definition	Advantages	Limitations
Functional Structure	Service delivery organized by functions (e.g., finance, human resources, and facilities management)	• Allows for efficiency gains and economies of scale • Encourages collaboration and attention to quality within each function • Facilitates greater sharing of functional knowledge • Makes more efficient use of resources (e.g., staff can better adapt to workload demands) • Is a structure that can easily be applied to a shared services model • Facilities Standardization	• Requires mechanisms to ensure coordination and communication across functional units • May result in functional units with different priorities, management structure, and accountabilities • Creates managers with depth rather than breadth – may inhibit managerial mobility across functional areas • More distant from organization's core mission
Geographic Structure	Service delivery organized by geographical regions	• Able to remain knowledgeable about and respond to environmental and market demands in a given geographic area • Facilitates faster customer response time, if face-to-face interaction is needed • Supports cross-functional skills development, strengthening the overall capabilities of the team • Minimizes travel-related costs	• Requires mechanisms for sharing resources and knowledge across same functions in different geographical units • Depending on the number of geographic regions, can result in duplicative functions, redundant resources, and excess management layers • Inconsistencies in service delivery may result if geographical units create unique methods of service delivery • More distant from organization's core mission
Business Unit Structure	Service delivery organized by customer organizations	• Able to focus on and serve unique needs of customers • Closer to organization's core mission, which facilitates staying abreast of changes in customer needs and preferences • Able to coordinate and integrate the delivery of various functional services to a given customer • Supports cross-functional skills development, strengthening the overall capabilities of the team	• Inconsistencies in service delivery may result if customer-facing units create unique methods of service delivery • Depending on the number of customer organizations, can result in duplicative functions, redundant resources, and excess management layers • May limit career mobility of opportunities are few due to smaller sized service delivery teams per function
Multi-Tiered Structure	Uses some hybrid of the described structures (e.g., sub-structures within structures, different structures at different levels in the organization)	• Allows the organization to take advantage of the benefits of multiple structural options • Can enhance customer service delivery by closely aligning providers and customers	• More complex model; may increase management layers • Requires additional communication to customer base to ensure clear distinction of service providers

Source: Booz Allen's *Interim Deliverable Three: Recommendations for Cost-Effective Service Improvement* (p. 2-3)

Booz Allen's final report describes NOAA's finance and administration service structure at the time of the study to be "a multi-tiered service delivery model that represents a hybrid of functional, geographic, and business line approaches." The report adds, "However, no one dimension of the model is completely realized. For example, [NOAA Administrative Support Centers] do not consistently confine their activities to the geographic footprint that surrounds their locations or to specific customers." Booz Allen also found what it called "a matrixed management reporting structure" in which employees at the support centers, regardless of their functional responsibility, report to the center director, rather than a functional manager at NOAA

headquarters. The report goes on to say, "This hybrid, multi-tiered operating model has contributed to a lack of clear accountability for performance."

In developing its recommended service structure for NOAA, Booz Allen's final report states that it compared NOAA's structure with the structures of 12 other federal agencies, using the four organizational structure types described above. According to the report, 8 of the 12 agencies in the comparison have a functional structure. Interestingly, this list of 12 agencies includes only 1 of the 13 benchmarking partners identified in Phase One of the study: the Internal Revenue Service.

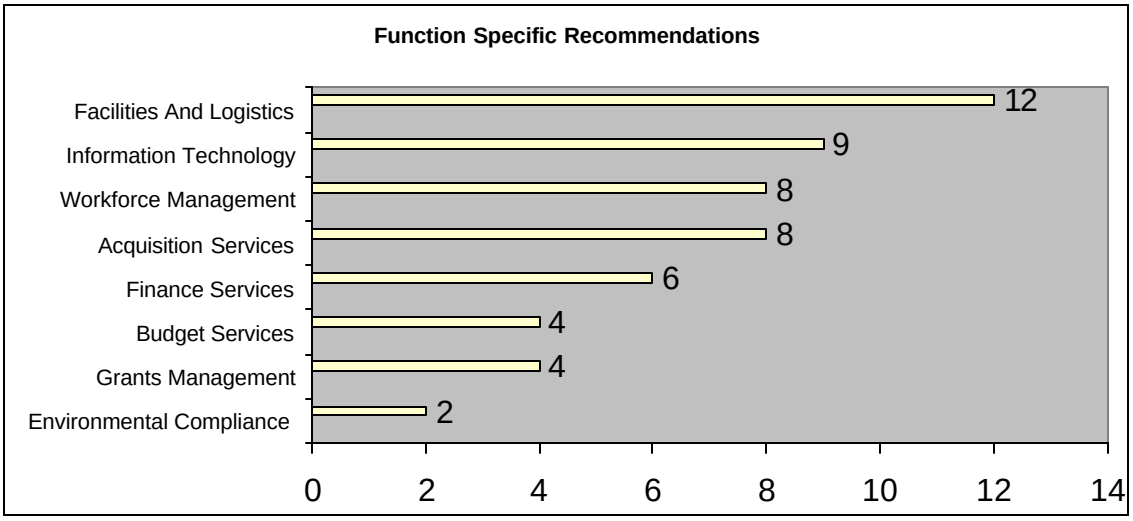
In addition to comparisons with other federal agencies, Booz Allen's report also assesses each of the four organizational structures' ability to achieve six objectives Booz Allen desired in its model structure. The six objectives are: (1) responding to customer needs; (2) supporting performance accountability; (3) leveraging technology; (4) promoting standardization; (5) streamlining processes; and (6) reducing costs of service delivery.

Development of Cost-effective Recommendations

Booz Allen proposes an overarching recommendation to change NOAA's administrative services organizational structure from a mix of functional, geographical, and business line service delivery approaches, which it contends is inefficient, to a predominantly functional approach. Booz Allen's recommended structure is both functional and geographic in that it provides for eastern and western operations centers, in recognition of NOAA's needs to provide finance and administrative services across multiple time zones, minimize travel to customer locations, and provide for continuity of operations in case of technology failure or natural disaster.

Booz Allen's final report states that, in order to support a transition to the proposed new organizational structure, NOAA needs to implement six so-called "global" recommendations. Two of the six recommendations included creating two new offices: a permanent office to oversee the management of administrative services and a temporary office to manage the transition to the new organizational structure. The other four recommendations included developing a plan to re-staff key positions, assessing the activity based costing initiative, conducting a study of the services provided to non-NOAA customers, and conducting an analysis of the other administrative services being performed outside NOAA's centralized administrative services system.

Booz Allen also made 53 specific recommendations directly related to the eight functional areas of NOAA's finance and administrative services. For example, the comprehensive final report includes a recommendation in the finance services functional area to "assess and redesign the activity of recording non-travel disbursements." Within the discussion of the recommendation in its report, Booz Allen summarizes its conclusions and any opportunities for cost savings and service improvements it believes NOAA could realize. This structure is standard throughout the 53 function-specific recommendations. The following chart summarizes the function-specific recommendations applicable to each of the eight finance and administration functions.



Source: Comprehensive Final Report, pp. 1-13 through 1-15.

According to Booz Allen, NOAA could save an estimated $19.1 million annually and significantly improve the quality of finance and administrative services if Booz Allen's recommendations are implemented. According to the report, total projected annual savings in NOAA's finance and administration organization would be $23.0 million, but the study recommended transferring certain functions currently performed within this organization to other offices within NOAA. The report estimates annual costs associated with the transferred activities to be about $3.9 million, making the net projected savings to NOAA $19.1 million per year.

Finally, the study makes three "other" recommendations to NOAA. These include establishing a separate budget office to support Booz Allen's recommended new position of Assistant Administrator for Management, improving records management processes within NOAA's Administrative Management and Executive Secretariat, and providing additional study assistance for NOAA's competitive sourcing program.

Insufficient Rationale for Recommended Structure and for Critical Productivity-related Assumptions

We could not determine Booz Allen's rationale for recommending a predominantly functional organizational structure rather than the other structures analyzed. The final report states that Booz Allen assessed the various organizational structure alternatives using "a set of customized criteria" developed by the consultants to ensure the recommended structure "would meet NOAA's needs now and in the future." The report contains a matrix summarizing Booz Allen's scoring of the four structures against each of the criteria, with the highest aggregate score given to the functional structure. However, the report does not discuss how individual scores were assigned to each of the evaluation criteria, making it virtually impossible for a reader to independently assess the validity of the scoring. It also should be noted that the functional organizational structure Booz Allen recommended is not linked to almost half of the cost savings

identified in the report, which are the result of productivity increases that could occur whether or not the organizational structure remains the same.

It should be highlighted that we have not sought—nor was it our intent in this audit—to independently assess or evaluate NOAA's finance and administration function or structure or to determine the type of management structure that is best for NOAA. Rather, because it was widely believed that the Booz Allen study (1) represented the cost-benefit analysis that would be useful in helping justify or recommend specific management courses of action and (2) was a primary basis for NOAA's decision to shift to a radically different management structure for its finance and administration services, we sought to determine how NOAA is using the study's results and whether the findings, assumptions, conclusions and recommendations presented in it are adequately supported. Accordingly, while we found the support for Booz Allen's recommended structure to be inadequate, we did not assess whether the functional management structure is an appropriate or inappropriate choice for NOAA

We were also unable to independently assess the validity of critical assumptions used to develop target workloads for the eight administrative functions because the bases for those assumptions were not clearly stated in the report or explained in our meetings with Booz Allen personnel. In our reviews of the interim and final reports we noted that Booz Allen made different assumptions in estimating necessary staffing levels in the interim deliverable report on cost-effective service improvements and in the subsequent comprehensive final report. In the earlier report, the consultants generally assumed that all NOAA offices performing administrative functions could reach productivity levels for each function equal to the productivity of the current top-performing office within NOAA. However, in its comprehensive final report, Booz Allen reduced its target performance levels for most functions to 75 percent of the current top performer. The effect of this change was to increase the projected number of staff required for each function, thereby decreasing the estimated cost savings. In its interim deliverable report, using the top-performing NOAA organizations as productivity targets, Booz Allen computed possible staff reductions of 207 full time equivalent federal employees and annual cost savings of $30.8 million. By contrast, the comprehensive final report, generally based on targets of 75 percent of the most efficient NOAA organization, suggested possible reductions of 144 full time equivalent employees and projected annual cost savings of $19.1 million.

The reports did not explain how Booz Allen arrived at either target performance level and the consultants we interviewed were not able to provide us with documentary evidence supporting the development of these levels. We did discuss development of the 75-percent productivity targets with the project manager of Booz Allen's study team, who explained that Booz Allen's original estimate of $30.8 million in cost savings was developed without input from NOAA. Conversely, the $19.1 million of estimated annual savings, using 75 percent of the most-efficient NOAA organization as a target, was based on input from the NOAA study team, although the project manager did not indicate what that input was. The project manager also indicated that both estimates were based on, and supported by, the expert judgment of the study team, in addition to the cost and manpower data. Despite these explanations, we could not find any concrete evidence supporting the use of either target and therefore could not independently validate the use of either target. Without such evidence, the 75 percent figure appears no more

likely to be attainable than had Booz Allen assumed 60 percent, 90 percent, or any other percentage of the top performer's rate as its target.

We also found problems with Booz Allen's methodology for computing staffing requirements and projecting cost reductions at the task level. The following example related to acquisitions is indicative of the type of analysis used for each of the eight functional areas. Booz Allen determined that the most efficient NOAA organization in the area of simplified acquisitions processed $13.8 million of simplified acquisition actions per full time equivalent employee in 2003. The report states:

> "It is reasonable to assume that the entire acquisition function could approach this level if the internal best practices that drove this performance were identified and applied across the entire function. … In order to determine the impact of this change, we assumed that the Acquisitions teams within NOAA that were not at the $13.8 million level would increase their productivity to 75% of that level."

The following chart, from the study's final report, summarizes Booz Allen's analysis of NOAA's simplified acquisitions activity.

Acquisitions – Simplified Acquisitions

ACQUISITIONS – SIMPLIED ACQUISITIONS PER FTE						
	EASC	CASC	MASC	WASC	WASH DC	TOTAL
Simplified Acquisition FTE	4.0	4.0	5.2	3.8	22.0	39.0
Value per FTE	$ 13,833	$ 5,649	$ 5,314	$ 12,568	$ 5,688	$ 7,141
Actions per FTE	582	706	511	688	153	354

Note: Dollars are in thousands ($000s)

Source: Simplified Acquisitions per Full Time Equivalent from Comprehensive Final Report, page 7-7

Using the target workload of 75 percent of the $13.8 million of simplified acquisitions processed per full time equivalent at the most efficient NOAA organization, Booz Allen determined each full time equivalent employee should be able to process about $10.35 million of simplified acquisition actions. Then, using the total value of NOAA simplified acquisitions in 2003, $278.3 million, Booz Allen calculated that NOAA requires 25 full time equivalent employees to process simplified acquisitions. This represents a nationwide reduction of 14 full time equivalent employees from the Booz Allen-computed figure of 39 full time equivalents in the "as is" organization.

Booz Allen's final report does not address a problem we noted in the analysis described above. The target level of $10.35 million of actions per full time equivalent is nearly double the current productivity levels of three of the five NOAA organizations surveyed -- these three organizations account for 31 of the 39 full time equivalent employees that Booz Allen determined to be involved in processing simplified acquisitions -- and is almost 45 percent higher than NOAA's nationwide average of $7.14 million of simplified acquisitions per full time equivalent, as shown in the table, above. Yet Booz Allen's reports do not contain an analysis of the functions performed at each of the five organizations in order to explain possible differences in the nature

of the work at each that could account for the wide range in existing productivity levels, nor do they contain support for its assumption that productivity could be increased by such a large amount. Instead, Booz Allen simply estimates that NOAA can achieve a nationwide target of $10.35 million of simplified acquisition actions per employee and calculates the number of staff required by applying the nationwide target level to NOAA's current workload. Without a more detailed analysis of the types of simplified acquisition work performed at each of the five NOAA organizations, a reviewer cannot independently assess Booz Allen's assertion that NOAA can achieve an overall productivity increase of 45 percent.

Finally, we are concerned by Booz Allen's assumption that NOAA workloads will remain constant, at fiscal year 2003 levels. Although we recognize the need to make certain assumptions about workloads in order to project staffing requirements, basing future resource requirements on current workload may not be realistic, particularly for non-NOAA customers. The clearest example involves the Mountain Administrative Support Center in Boulder, Colorado. In addition to a large base of NOAA laboratory functions in Boulder, the Mountain Administrative Support Center also provides services to a large number of non-NOAA employees of the National Institute of Standards and Technology and the National Telecommunications and Information Administration, who are collocated on the campus with the NOAA operations. The local managers of both the NIST and NTIA operations in Boulder have indicated that they may choose to terminate their respective administrative service agreements with NOAA if they are not able to receive the same level of services in Boulder. The Booz Allen report does not distinguish between NOAA and non-NOAA workloads and, therefore, it is not possible to determine the impact of the potential loss of non-NOAA customers would have on future staffing requirements. It is important for NOAA consider possible changes in anticipated workloads when developing a model finance and administration structure.

Phase Three: Cost Projections for Transitioning to Recommended Model Are Not Documented

We could not assess the validity of the estimated transition costs computed by Booz Allen because the reports did not contain sufficient analysis supporting the assumptions underlying those calculations. Booz Allen based its estimated transition costs on a series of assumptions it categorized as "labor related" or "non-labor related." However, the level of detail describing the assumptions in Booz Allen's report was insufficient to permit an independent assessment of their validity.

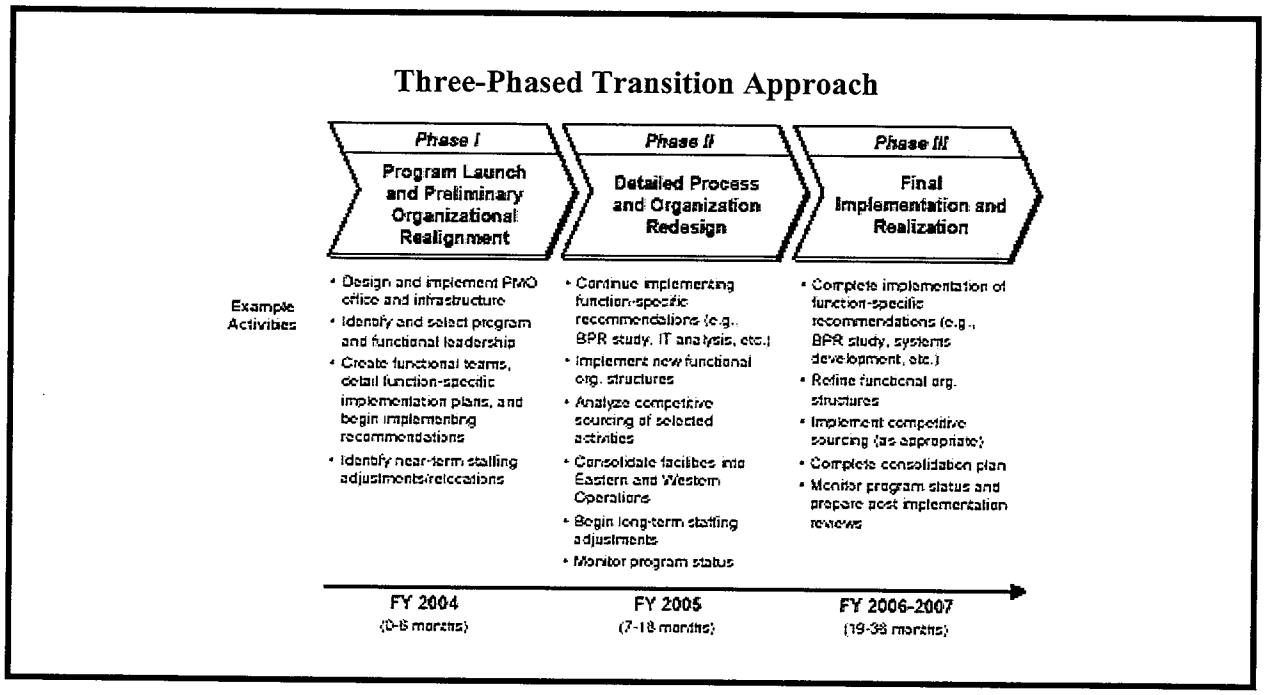
Development of Transition Plan

The third and final phase of the Booz Allen study was to develop a transition plan for NOAA to use as a guide in implementing the recommended operational model. Booz Allen's final report stated that the transition plan:

- identified all significant implementation activities, their estimated resource requirements, and interdependencies;

- defined significant implementation phases based on relationships among activities and key milestones;
- determined likely costs and benefits associated with each implementation phase; and
- identified probable risks associated with implementation and recommended risk mitigation strategies.

Booz Allen's final report discusses the proposed implementation plan and associated costs, benefits, and risks. The report suggests a three-phase, 36-month transition, summarized in the following chart.



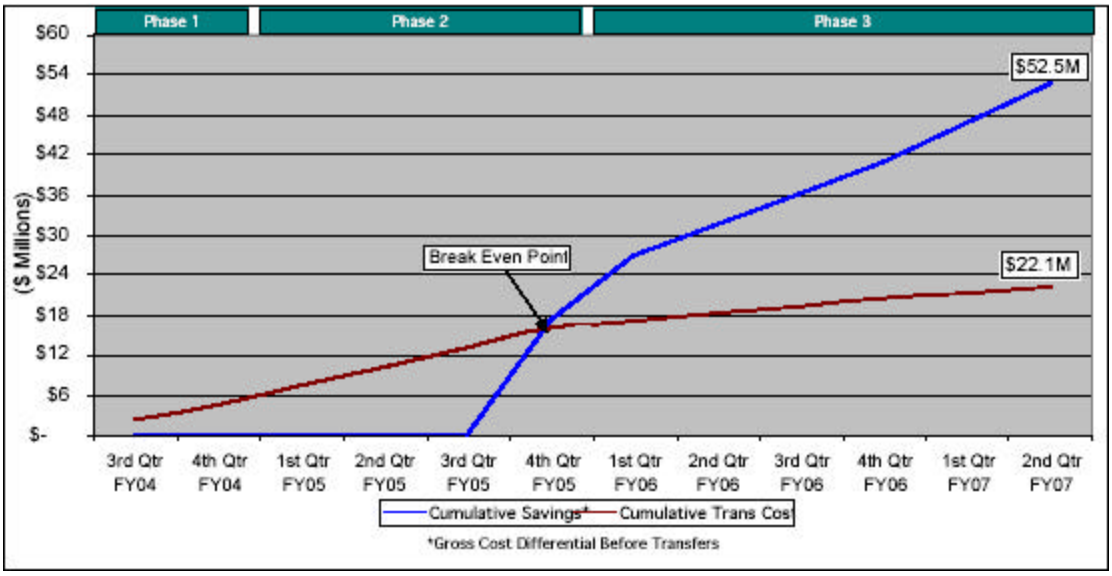
Source: Comprehensive Final Report, Analysis of Operations and Structure of NOAA's Finance and Administration Services, Page 13-2

Booz Allen's transition plan also includes a cost benefit analysis. The cost and savings assumptions are detailed in Appendix A of Booz Allen's final report, as labor and non-labor cost assumptions. The report states that labor costs and savings for NOAA employees were based on the average salaries for each functional area, plus a factor of 27 percent for fringe benefits, based on data supplied by NOAA. According to the report, costs and savings for NOAA contractors were based on determinations made in Booz Allen's workload analysis of NOAA finance and administration operations. The labor cost analysis also included factors for downsizing and restaffing based on data Booz Allen cites as being obtained from the Department of Defense, Government Accountability Office, and Office of Personnel Management. Non-labor cost and savings factors include planning, analysis, and policy development activities, as well as consideration of NOAA overhead on finance and administration services.

Booz Allen's final report states that it analyzed overhead costs and distinguished between variable and fixed overhead items. Variable overhead costs are those that are affected by changes in staffing levels, such as transportation subsidies and communications. Fixed overhead costs, for example facility costs, generally do not change with changes in staffing levels. The report states that Booz Allen assumed some fixed overhead costs could be removed or reduced in the case of a facility closing and mentions rental costs as an example.

Booz Allen estimates total transition costs for the three-year plan to be $22.1 million. As stated previously, Booz Allen estimates annual cost savings, if NOAA were to implement all of its recommendations, to be $19.1 million. As cost savings and transition costs are phased in throughout the three-year transition, Booz Allen projects that NOAA would reach a break-even point during the second year of the transition. After the break-even point, Booz Allen's projections indicate cumulative savings will exceed cumulative transition costs. The following chart illustrates Booz Allen's comparison of transition costs with annual cost savings.

Comparison of Cumulative Transition Costs and Cost Savings



Source: Comprehensive Final Report, Analysis of Operations and Structure of NOAA's Finance and Administration Services, Page 13-16

Validity of Estimated Transition Costs Cannot Be Confirmed

We could not assess the validity of the estimated transition costs computed by Booz Allen because the reports did not contain sufficient analysis supporting the assumptions underlying those calculations.

As noted previously, Booz Allen categorized the estimated transition costs as being labor related or non-labor related. The majority of Booz Allen's estimated transition costs, about $17 million of the total estimate of $22.1 million, are in the non-labor related category. Booz Allen's reports contain almost no information related to the non-labor related transition costs that would allow a reviewer to independently assess the estimates and underlying assumptions. In fact, Booz Allen's *Interim Deliverable Four: Transition Plan*, states, "The costs identified ... are rough order of magnitude costs and are based on our best professional judgment as to the level of effort required to implement the recommended activities." The levels of effort referred to in Booz Allen's report are assumed to be either low, medium, or high, with differing levels of estimated transition costs assigned based on Booz Allen's assumed level of effort. We found no support in the reports for the levels of effort assigned.

The remaining $5.1 million of labor related transition costs include assumed cost factors for downsizing and restaffing based on Booz Allen's calculations of the weighted average costs per full time equivalent employee affected. While the reports illustrate Booz Allen's calculations of the weighted averages, they did not include a description of how they arrived at the costs per full time equivalent employee, or the assigned weighting factors, that was sufficient to enable us to assess the strength of these figures.

NOAA IS MOVING TO FUNCTIONAL MANAGEMENT MODEL

NOAA is implementing a functional management model to deliver finance and administrative services. From October 2003 through February 2004, a NOAA study team met, usually weekly, with Booz Allen to review the progress of the study report. On February 13, 2004, Booz Allen delivered its comprehensive final report on NOAA's finance and administration services with six global recommendations, 53 function-specific recommendations, and three other recommendations. The NOAA study team acted on six of the 62 Booz Allen recommendations, endorsing four and rejecting two. The NOAA study team recommended accepting the following four Booz Allen recommendations:

- adopt the functional management model to deliver administrative and financial services;
- create a transition management team to implement approved recommendations;
- assess the financial and administrative services performed within NOAA line offices; and
- reengineer the financial and administrative services to improve quality and consistency.

The NOAA study team rejected two Booz Allen recommendations: to establish and staff an Office of Assistant Administrator for Management; and to merge Program Analysis and Evaluation with selected budget functions under the Chief Financial Officer. In an April 2004 memorandum, the Under Secretary of Commerce for Oceans and Atmosphere concurred with the four Booz Allen recommendations that the NOAA study team had endorsed, including the recommendation that NOAA adopt the functional management model to deliver administrative and financial services.[2] At the time of our audit, NOAA had not taken formal positions on the study's remaining 56 recommendations.

Study Team Identifies the Initial Steps to Implement Functional Model

The NOAA study team identified two preliminary actions required to implement the functional management model. The first action is to seek appropriate revision to Department Organization Order (DOO) 25-5. The NOAA study team drafted a revision to DOO 25-5, which is under review within the Department. The second action is to develop and implement, in conjunction with NOAA management, a placement plan for 20 individuals (including the four senior executives) who are not currently part of the direct business line activities of the NOAA finance and administration services. These 20 employees include the directors of the four Administrative Support Centers and their immediate staffs. In September 2004, the four senior executives were given responsibilities for the transition to functional management and their former staffs were

[2] In our January 2005 exit conference with the Deputy Under Secretary for Oceans and Atmosphere, he informed us that NOAA's decision to move to a functional management structure was based on a variety of factors and not just the Booz Allen report.

assigned to other responsibilities within the Administrative Support Centers. To date, no positions have been eliminated and none of the Administrative Support Centers have been closed.

Study Team Recommends Transition Management

The NOAA study team recommended a transition management approach with an eight- to ten-person transition management team headed by a senior executive or GS-15 transition manager. The transition manager would report to the Deputy Under Secretary and provide status reports to NOAA management. The transition management team would develop a budget to allocate the cost of the transition to functional management and communicate the transition management approach and resources needed to the Department, Office of Management and Budget, and the Congress. In September 2004, the Under Secretary of Commerce for Oceans and Atmosphere announced the selection of a seven-member transition management team to report to NOAA's Chief Administrative Officer.

Study Team Identifies Steps for Redesigning Finance and Administrative Services

The NOAA study team identified three steps to understand the business process for each of the eight functional areas and to develop improvements in each process:

- assess the major activities conducted within each of the eight business functions;
- identify targets for later business process analyses; and
- develop the re-engineered business process.

The administrative functions performed in the NOAA line offices, which Booz Allen did not review, are included in the study team's approach to understanding each business process.

The study team found that the Booz Allen approach for business process reengineering was unnecessarily costly with significant reliance on contractor support. Instead, the study team proposed an alternate approach, modeling the business process reengineering after similar efforts conducted elsewhere in the Department and relying on NOAA and Department employees to conduct the analytical work. The study team proposed the budget process and the grant award and administration process as the first two business processes for reengineering.

During summer 2004, about 90 staff from NOAA, other Department bureaus, and the Office of the Assistant Secretary for Administration attended weeklong training sessions on techniques for business process re-engineering. The staff was trained to conduct assessments of financial and administrative services in line offices and to redesign the financial and administrative services quality and consistency provided by Administrative Support Centers.

CONCLUSION

Although Booz Allen's reports indicate extensive data gathering and analyses, we had many concerns with the support for the findings, recommendations and assumptions contained in the reports prepared by Booz Allen after our initial review of those documents. During our discussions and meetings with the Booz Allen consultants who prepared the reports, they advised us that the reports contained all the evidence necessary to understand the basis for their recommendations. We did not find that to be the case. We were also unable to see how information obtained in the interviews Booz Allen consultants conducted with NOAA and Departmental officials supported the reports' findings and conclusions. Finally, we were not able to eliminate these concerns in our meetings with the Booz Allen consultants who prepared the reports. As a result, we do not believe that the assumptions, findings or recommendations contained in the Booz Allen reports can serve as the sole justification for change or provide a solid basis for specific action by NOAA.

We would also like to point out that the functional organizational structure Booz Allen recommended is not linked to almost half of the cost savings identified in the report, which are the result of productivity increases that could occur whether or not the organizational structure remains the same.

BOOZ ALLEN AND NOAA'S RESPONSES TO DRAFT REPORT AND OIG COMMENTS

We provided Booz Allen and NOAA a draft of our audit report for their review and comment. Their responses are summarized below and copies of their complete responses are provided in Attachment I and II, respectively.

Booz Allen states that it believes that the data contained in its various consulting reports is accurate and that the recommendations based on the data are well supported. The response explains what it believes the firm did to ensure the data's accuracy. Although Booz Allen's explanation of its procedures is generally consistent with the discussion in our report, the response provided no additional information or documentation that would cause us to change our findings.

NOAA did not disagree with our conclusion that inadequate support for the conclusions and recommendations in the consulting firm's reports undercuts the value of the study. In fact, NOAA acknowledged the significant challenges faced by Booz Allen in its data collection, benchmarking efforts, and analyses. NOAA's response stresses the role that the Booz Allen study played in its decisions and subsequent actions to change the manner in which it delivers finance and administrative services. The agency states that it considered the study's recommendations, as well as findings and recommendations from previous studies, in the context of sound management practices in making fundamental changes designed to strengthen NOAA's management of its corporate financial and administrative service program. NOAA's response is consistent with our conclusion that the Booz Allen reports not serve as the sole basis for NOAA action.

Attachment I

DENVER REGIONAL OFFICE

FEB 1 4 2005

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February 11, 2005

VIA EMAIL (jbunting@oig.doc.gov), facsimile (303- 312-7671) and FEDEX
Mr. John S. Bunting
Regional Inspector General for Audits
US Dept. of Commerce
Denver Regional Office
999 18th Street, Suite 765, North Tower
Denver, CO 80202

Dear Mr. Bunting:

We appreciate the opportunity to comment on your draft audit report (No. DEN-16948-5-0001/January 2005) dated January 28, 2005 that concerns Booz Allen Hamilton Inc.'s (Booz Allen) study of NOAA's Finance and Administration Services organization (NFA). We believe that the data contained in our series of reports on NOAA's NFA accurately reflects the current performance of finance and administrative functions and appropriately projects potential improvements to the current model. We also believe that the recommendations based on that data are well-supported and provide an effective roadmap for the implementation of a new, more effective performance model for NFA.

As we explained during our discussions with you in July 2004, we complied with the direction provided by the Statement of Work (SOW) that the Activity Based Costing (ABC) information "be used as the basis of this effort." This data was provided to us by NOAA, and as directed by the SOW, we worked closely with the NOAA Study Team to identify additional sources of data that could be used to validate and enhance the (ABC) data. We met with the Study Team on a weekly basis and, in particular, met individually with Ted David (CFO NWS and acting CFO NOAA) and Sandy Walters (Chief Business Mgt Fund Division – OCFO) on a number of occasions to obtain and evaluate NOAA budget data. Our interim reports were closely reviewed by the study team, which provided us with numerous comments. All comments were considered and addressed as we determined to be appropriate.

In our multiple meetings with you and your team, as referenced above, we provided access to the Booz Allen consultants who led key aspects of the study and spent numerous hours responding to your inquiries. We also provided you access to the extensive and complex financial models we constructed to analyze NFA. We provided you the resumes of all staff who participated in our study and provided you the notes you requested from a number of the interviews we conducted with NOAA and Department of Commerce officials.[1] Overall, we approached your audit with a desire to assist you in understanding the conclusions contained in our final report. Our comments are provided consistent with this cooperative approach and we trust that our comments will be published along with your final audit report.

Our comments below correspond to the specific conclusions summarized in your Audit Report.

Audit Report Conclusion: We could not reconcile the key cost and staffing figures contained in Booz Allen's reports with other verifiable data, such as NOAA's audited accounting records.

Booz Allen's Comment: We reconciled key cost and staffing figures with NOAA's other audited accounting data made available to us by the NOAA Study Team. We derived the adjusted full time equivalent employee (FTE) data provided in our As-Is analysis by reconciling the NOAA-provided ABC data against the Commerce Administrative Management System (CAMS) data for each function examined across all Administrative Support Centers (ASCs). Our analysis revealed that the validated FTEs were within 1.1% of the overall staffing levels shown in CAMS. In addition, we analyzed data collected in the field by our consultants, who specifically solicited input from ASC staff on performance levels for tasks presented in the ABC analysis. We also analyzed staffing roster information, and considered the number of positions that were authorized, including positions not currently filled. We consulted closely with Ted David (CFO NWS and acting CFO NOAA) and Sandy Walters (Chief Business Mgt Fund Division – OCFO) and met with them numerous times to ensure that we had the best data available. We made adjustments to the ABC data carefully, consistent with data obtained from all other available data sources.

Audit Report Conclusion: We were unable to analyze (1) adjustments made by Booz Allen to the activity based costing data produced by NOAA and (2) the basis for those adjustments, since

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1 *Your draft report notes that we stated that neither our company policy nor our industry "requires workpapers" for our study. We do not believe this conclusion fairly characterizes our statements or the conduct of our study. As noted above, we provided you copies of or access to an abundance of raw data. In addition, as we explained in our discussions, we provided NOAA copies of all drafts and interim deliverables, which we trust you obtained from NOAA. We believe the foregoing constituted adequate access to the supporting documentation you sought.*

that information was not included in the report or subsequently provided by the Booz Allen consultants we interviewed.

Booz Allen's Comment: During the two year period prior to our study, NOAA initiated an ABC effort that resulted in the development of a great deal of workload data which provided a valuable starting point for our analysis. However, as NOAA made clear in the statement of work for our effort, this information is not complete and the data collection process used to gather it is still being refined. As requested by NOAA, therefore, we used other available data to refine the information provided by the ABC study. Booz Allen validated and refined the ABC data where possible, and extended the data when other information was available. As noted in our comment above, we made adjustments to the ABC data based on several sources, including interview data collected from process performers (ASC staff), reconciliations between the ABC data and the staffing roster, and budget and spend plan data made available to us by the NOAA Study Team. We also reviewed actual cost data for fixed and variable expenses, which was provided to us by NOAA's office of the CFO. Our approach is further detailed in Section 2.2, "Approach/and Analytical Methodology" of our Comprehensive Final Report.

Audit Report Conclusion: We could not assess the validity of Booz Allen's decision to recommend a specific organizational structure because its reports did not contain sufficient rationale supporting that decision or indicating why the specific structure chosen suited NOAA better than any of the other options identified.

Booz Allen's Comment: The Comprehensive Final Report provides a detailed discussion of the overarching organization and management issues facing NOAA NFA and identifies the relationship between these issues and the existing management structure. Many of the issues we documented, particularly those related to functional accountability and process efficiency, were cited by studies previously commissioned by NOAA. For example, a study issued by the Dept. of Commerce Office of the Inspector General in August, 1997, entitled "Administrative Support Centers Need Functional Realignment and Focus on Essential Services," recommended increased attention to high level oversight and consolidation of some NFA functions from multiple to single locations. In our analysis, we considered four common structural models for the delivery of administrative services. These are defined in our report in Exhibit 4-1: Some Classic Organizational Design Options For Finance and Administrative Services Delivery. a chart that identifies the advantages and disadvantages of each model. In our analysis, presented in Exhibit 4-3: Alternative Models Evaluated, we clearly identified the six criteria by which we evaluated each model as a candidate for application to NOAA NFA. The ratings provided for each model with respect to these criteria are based on our experience and professional

judgment. We do not believe that it is possible to provide quantitative values for each rating, nor do we believe it is necessary to do so to produce an evaluation that can be used as the basis for selection of an appropriate model to improve the performance of NOAA NFA. In addition, only one of the criteria pertains to the cost of service delivery. Other criteria address performance accountability, process standardization, and other areas. As an external point of comparison, we also presented a chart that identifies which of the four candidate models are in use in twelve federal government agencies. This chart indicates that eight of the twelve agencies identified currently use the functionally-based model we recommended for NOAA NFA.

Audit Report Conclusion: We were unable to independently assess the validity of critical assumptions used to develop target workloads for the eight administrative functions performed by NOAA Finance and Administration because the bases for those assumptions were not clearly stated in the reports or explained in our subsequent meetings with the Booz Allen consultants.

Booz Allen's Comment: In our draft report, we assumed that each ASC could achieve 100% of the productivity results achieved by the highest ASC performer, once a series of actions had been taken to improve the performance of business processes. Based on conversations with the NOAA Study Team, however, we decided to apply a more conservative number, "75% of best performer," to all ASCs, agreeing with the Study Team that this would be more appropriate, given that a detailed Business Process Reengineering (BPR) analysis of all processes was not within the scope of our study. During our many interviews with process performers at the ASCs, we asked questions to enable us to identify significant reasons for disparities in process performance. In most cases, no significant rationale for discrepancies was identified. In addition, when we examined the performance of the other federal agencies that served as external benchmarking partners, we found many instances where substantially higher efficiencies were demonstrated for the same processes performed by the ASCs. Finally, Booz Allen has extensive experience in conducting BPR studies in federal government organizations, and we have demonstrated repeatedly in these studies that dramatic reductions in cycle time and level of effort can be achieved by taking advantage of the process improvement strategies cited in our NOAA NFA study. These strategies include: implementation of new computer systems, standardization of policies and procedures, enhanced training for process performers, and clear guidance from senior function executives. Based on the information gathered and our past experience in conducting BPR studies, we believe it is reasonable to expect that all ASCs will be able to meet the standard of "75% of best performer," and that this performance standard provides a sound basis for projected changes in staffing level requirements.

Audit Report Conclusion: We were unable to validate the productivity gains Booz Allen assumed NOAA could achieve because the reports did not contain an analysis of the reasons for

current differences in productivity levels across existing NOAA operations or the firm's rationale for its conclusion that productivity could be increased to certain specified levels.

Booz Allen's Comment: In general, our approach for evaluating the differences in performance among the ASCs is similar to that utilized in several of the previous studies on NOAA NFA that we reviewed. For example, a 1997 report by the Department of Commerce Office of the Inspector General, "Administrative Support Centers Need Functional Realignment and Focus on Essential Services," utilized similar data (HR systems data, staffing reports, federal salary tables, customer satisfaction survey, and staff interviews) to evaluate productivity of HR staff across the ASCs. Among the recommendations contained in that report is the suggestion that the HR function be consolidated, automated, and improved. The methodology and conclusions of our more recent report are quite similar. We recognize that there are differences in performance across the ASCs, but while a detailed BPR study would illuminate these differences, this level of analysis was not within the scope of our effort. We did, however, in our visits to the ASCs look for indicators that substantive reasons existed for the variations that we found. Our recommendation to conduct detailed BPR analysis of the processes was intended to enable the organization to reveal these differences, examine their rationale, and determine the extent to which they are justified. In determining that process standardization could be achieved across all process performers, we also relied on our experience in organizations where multiple units perform similar or identical tasks. In our experience, it is common to find that multiple performers of processes achieve very different productivity results. We also commonly find that once these differences are examined, most prove to be non-value added and can be eliminated. They are far more often traceable to a lack of clearly communicated and consistently enforced policies than to a demonstrable need for performance differentiation.

Audit Report Conclusion: We could not assess the validity of the estimated costs and savings identified by Booz Allen because the reports did not contain sufficient analysis supporting the assumptions underlying those calculations.

Booz Allen's Comment: As we identified in our detailed assumptions in Appendix A of our Comprehensive Final Report, the estimated calculations of the costs related to transitioning from the current environment to the "To-Be" environment are based several recognized sources. These sources include the GAO Federal Downsizing Report, DOD COBRA (Cost of Base Realignment Actions) estimates, and OPM PCS relocation cost estimates. Applying the formulas used in these sources to estimate costs related to downsizing and to employee relocation, we built a detailed model in Microsoft Excel. The model was constructed following Office of Management and Budget (OMB) principles relative to how inflation is accounted for and how employee

benefits are factored into burdened salaries. This standard approach was the basis for our analysis of current and forecasted labor FTEs and costs, fixed and variable overhead (non-labor) costs, and transition costs. The full financial model, while it was not included in the final report, was presented to your review team during your visit. Based on our discussions during your visits to our offices, we believed your team understood and was satisfied with our explanation of the model and its assumptions.

Thank you for the opportunity to comment on your draft audit report. If you have any questions about our response, please contact me or Naomi Leventhal at 703-902-4094.

Sincerely,

Lloyd W. Howell, Jr.

Lloyd W. Howell, Jr.
Vice President

BOOZ ALLEN HAMILTON INC.

Attachment II

UNITED STATES DEPARTMENT OF COMMERCE
The Deputy Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

DENVER REGIONAL OFFICE

FEB 16 2005

OIG/OFFICE OF AUDITS
DEPT. OF COMMERCE

FEB 10 2005

MEMORANDUM TO: Johnnie E. Frazier
The Inspector General
Department of Commerce

FROM: John J. Kelly, Jr.

SUBJECT: Inadequate Support Undercuts Value of Booz-Allen Study and Its Recommended Changes to NOAA's Finance and Administration Services
Draft Audit Report No. DEN-16948-5-0001

Thank you for the opportunity to provide comments on the draft audit report of your review of the Booz-Allen-Hamilton (BAH) study, "Inadequate Support Undercuts Value of Booz-Allen Study and Its Recommended Changes to NOAA's Finance and Administration Services."

As acknowledged in your draft report, the BAH report contained some 62 recommendations for NOAA's consideration, including recommendations specific to the eight functional areas (finance, budget, acquisitions, grants management, workforce management, facilities and logistics, information technology, and environmental compliance and safety) reviewed by BAH, and six cross-cutting or "global" recommendations. In considering the recommendations contained in the BAH report and developing subsequent recommendations for consideration by NOAA executive decision-makers, the NOAA Study Team responsible for reviewing the report acknowledged the significant challenges faced by BAH in its data collection, benchmarking efforts, and analyses.

The Study Team considered the BAH recommendations, as well as findings and recommendations from previous studies, in identifying its recommendations to NOAA leadership for strategic changes at the corporate level; these changes were seen as necessary for establishing a solid foundation for future process improvements. The recommendations from the NOAA Study Team ultimately adopted by NOAA, as outlined in your report and discussed below, reflect a commitment by NOAA executive leadership to make fundamental changes designed to strengthen NOAA's management of its corporate financial and administrative service programs, and to improve the quality and consistency of services provided by these programs across NOAA.

As outlined in your report, NOAA leadership supported the following proposals from the NOAA Study Team tasked with reviewing the BAH report and recommendations:

Adopt a functional management model to deliver administrative and financial services. After reviewing previous studies (by the Department's Office of Inspector General, by NOAA, and by contractors tasked with evaluating the performance of these functions) and current management paradigms, NOAA leadership decided to adopt a functional management business model. Under this model, business lines within the Administrative Support Centers (ASCs) would report functionally to their respective business line managers in NOAA headquarters. This recommendation was contained in the original NOAA Program Review Recommendations; and was supported by Vice Admiral Lautenbacher in his June 2002 information memorandum to the Secretary. Previous studies point out that there has been a lack of strong and effective leadership across the corporate financial and administrative services program historically, and the lack of clear and consistent accountability is one of the factors that have led to inconsistent service across service delivery points. NOAA's executive leadership believes the functional management model provides inherent improvements over the previous management model; most significantly, providing a clear point of accountability in a senior functional manager for each functional area. NOAA has proceeded with implementing this model under a matrixed reporting relationship, with each of the functional areas reporting to a business line manager in NOAA headquarters responsible for the efficiency and effectiveness of service delivery to customers receiving services from their business line, including the authority to set policies, define procedures, direct staff, align and allocate resources, etc.

Assess the financial and administrative activities performed within NOAA's line offices. Since the BAH study had focused on the financial and administrative functions performed within NOAA's Finance and Administration, we believed it critical to baseline how these functions were performed within the line offices; i.e., understand the "as-is" environment. NOAA established eight assessment teams under the leadership of the Transition Management Team (discussed below) to conduct the "as-is" assessment within the line offices, and initiated the assessment in September 2004. The data collection and business process-mapping phases of the assessment are now complete. The assessment report is under development and the TMT expects to finalize the report by March.

Reengineer NOAA's financial and administrative service functions to improve quality and consistency. NOAA leadership is committed to make organizational and process improvements in these functional areas to improve the quality of services provided and to strengthen NOAA's corporate management of these programs. The "as-is" assessment initiated in September 2004 provides the foundational analysis for proceeding with changes in NOAA's corporate financial and administrative services programs. NOAA expects to initiate the business process improvement efforts in two functional areas in FY 2005: grants management and budget.

Create a transition management team to implement approved recommendations. NOAA leadership recognized the need to establish and train a dedicated team to support the

planning, management and execution of the business process reengineering studies, including the assessment of financial and administrative services performed within the NOAA line offices. The Transition Management Team (TMT) was established in August 2004. The TMT is headed by a senior NOAA manager, and reports to NOAA's Chief Administrative Officer.

In addition to moving forward with these corporate efforts, the recommendations in the BAH report targeted to specific functional areas were provided to the NOAA business line managers for their consideration. Several of these recommendations have been adopted by the business line managers, based on alignment of these recommendations with sound management practices. For example, NOAA's Chief Administrative Officer has established a Project Planning and Management Division responsible for planning and managing NOAA's major facility construction program, and for establishing appropriate policies and processes to support this program. Similarly, the Chief Administrative Officer has realigned the regional safety managers to report directly to the Safety and Environmental Compliance Office in headquarters. The Director of NOAA's Workforce Management Office is establishing a capability to provide strategic workforce planning, and comprehensive training and development services across NOAA. The Director of NOAA's Acquisition and Grants Office has transferred responsibility for the Joint Institutes cooperative agreement process from Boulder to headquarters.

NOAA believes the changes it has implemented at its corporate level — including implementing the functional management model; establishing the TMT, led by senior NOAA leadership, to plan and lead process improvement efforts; and initiating specific business process reengineering efforts — provide a solid foundation for strengthening NOAA's management of its corporate financial and administrative services programs, and for improving service delivery across NOAA.