

**Audit**



**Report**

OFFICE OF THE INSPECTOR GENERAL

**DEFENSE BASE REALIGNMENT AND CLOSURE  
BUDGET DATA FOR THE REALIGNMENT OF NAVAL  
SURFACE WARFARE CENTER ANNAPOLIS,  
MARYLAND, TO NAVAL SURFACE WARFARE CENTER  
PHILADELPHIA, PENNSYLVANIA**

Report No. 97-184

July 1, 1997

**Department of Defense**

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### **Acronyms**

BRAC	Base Realignment and Closure
MILCON	Military Construction
NAVFAC	Naval Facilities Engineering Command
NORTHDIV	Northern Division
NSWC	Naval Surface Warfare Center



**INSPECTOR GENERAL**  
**DEPARTMENT OF DEFENSE**  
**400 ARMY NAVY DRIVE**  
**ARLINGTON, VIRGINIA 22202-2884**



July 1, 1997

**MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (COMPTROLLER)**  
**ASSISTANT SECRETARY OF THE NAVY (FINANCIAL**  
**MANAGEMENT AND COMPTROLLER)**

**SUBJECT: Audit Report on Defense Base Realignment and Closure Budget Data for**  
**the Realignment of Naval Surface Warfare Center Annapolis, Maryland, to**  
**Naval Surface Warfare Center Philadelphia, Pennsylvania**  
**(Report No. 97-184)**

We are providing this audit report for review and comment. This report is one in a series about FY 1998 Defense base realignment and closure military construction costs.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Neither the Under Secretary of Defense (Comptroller) nor the Navy commented on a draft of this report. Therefore, we request that all addressees provide comments on the final report by August 1, 1997.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Wayne K. Million, Audit Program Director, at (703) 604-9312 (DSN 664-9312) or Mr. Nicholas E. Como, Audit Project Manager, at (703) 604-9215 (DSN 664-9215). See Appendix D for the report distribution. The audit team members are listed inside the back cover.

*David K. Steensma*

David K. Steensma  
Deputy Assistant Inspector General  
for Auditing

## Office of the Inspector General, DoD

Report No. 97-184  
(Project No. 7CG-5002.06)

July 1, 1997

### Defense Base Realignment and Closure Budget Data for the Realignment of Naval Surface Warfare Center Annapolis, Maryland, to Naval Surface Warfare Center Philadelphia, Pennsylvania

#### Executive Summary

**Introduction.** This report is one in a series about FY 1998 Defense base realignment and closure military construction costs. Public Law 102-190, "National Defense Authorization Act for Fiscal Years 1992 and 1993," December 5, 1991, directs the Secretary of Defense to ensure that the amount of the authorization that DoD requested for each military construction project associated with Defense base realignment and closure does not exceed the original estimated cost provided to the Commission on Defense Base Closure and Realignment (the Commission). If the requested budget amounts exceed the original project cost estimates provided to the Commission, the Secretary of Defense is required to explain to Congress the reasons for the differences. The Office of the Inspector General, DoD, is required to review each Defense base realignment and closure military construction project for which a significant difference exists from the original cost estimate and to provide the results of the review to the congressional Defense committees.

**Audit Objectives.** The overall audit objective was to determine the accuracy of Defense base realignment and closure military construction budget data. This report provides the results of the audit of two projects, valued at \$11.2 million, for the closure of Naval Surface Warfare Center Annapolis, Maryland, and realignment of the acoustics and electrical power systems facilities to Naval Surface Warfare Center Philadelphia, Pennsylvania.

**Audit Results.** The Navy did not ensure that the research and development facilities realigning to Naval Surface Warfare Center Philadelphia were adequately planned and documented to provide complete and usable facilities within a justified cost. The costs of projects P-185U, "Acoustics Research and Development Facility," and P-186U, "Electrical Power Systems Research and Development Facility," are understated by at least \$3 million and \$1.2 million, respectively. See Part I for a discussion of the audit results. See Appendix C for a summary of invalid and partially valid requirements for the projects we reviewed.

**Summary of Recommendations.** We recommend that the Under Secretary of Defense (Comptroller) place projects P-185U and P-186U on administrative withhold until the Navy submits revised DD Forms 1391, "FY 1998 Military Construction Project Data," that includes the total cost of the projects. We also recommend that the Navy reduce the cost estimate for project P-185U by \$1.7 million for the cost of the acoustical cones (the Navy should use other funds to procure the cones) and submit a revised DD Form 1391 for project P-185U to fully fund the project to the 100 percent design cost estimate in order to provide a complete and usable facility. We further

recommend that the Navy develop technical requirements for project P-186U and submit a revised DD Form 1391 to fully fund the project to the 100 percent design cost estimate that includes the correct square footage to satisfy the Naval Surface Warfare Center Annapolis base realignment and closure requirements.

**Management Comments.** The Under Secretary of Defense (Comptroller) and the Navy did not respond to a draft of this report, which was issued on April 21, 1997. Therefore, we request that the Under Secretary of Defense (Comptroller) and the Navy provide comments on the final report by August 1, 1997.

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## **Part I - Audit Results**

### Audit Background

The Office of the Inspector General, DoD, is performing audits of the Defense base realignment and closure (BRAC) process. This report is one in a series about FY 1998 BRAC military construction (MILCON) costs. For additional information on the BRAC process and the overall scope of the audit of BRAC MILCON costs, see Appendix B. See Appendix C for a summary of invalid and partially valid requirements for the projects we reviewed.

### Audit Objectives

The overall audit objective was to determine the accuracy of BRAC MILCON budget data. The specific objectives were to determine whether the proposed projects were valid BRAC requirements, whether the decision for MILCON was supported with required documentation including an economic analysis, and whether the economic analysis considered existing facilities. Another objective was to assess the adequacy of the management control program as it applied to the overall audit objective.

This report provides the results of the audit of project P-185U, "Acoustics Research and Development Facility," valued at \$6.2 million, and project P-186U, "Electrical Power Systems Research and Development Facility," valued at \$5.0 million, resulting from the closure of Naval Surface Warfare Center (NSWC) Annapolis, Maryland, and realignment to NSWC Philadelphia, Pennsylvania. See Appendix A for a discussion of the scope and methodology. The management control program objective will be discussed in a summary report on FYs 1997 and 1998 BRAC MILCON budget data.

### Prior Audits and Other Reviews

Three summary reports have been issued for the audits of BRAC budget data for FYs 1992 through 1996. These reports list individual projects. Since April 1996, numerous additional audit reports have been issued that address DoD BRAC budget data for FYs 1997 and 1998. Details on these reports are available upon request.

The following specific prior reports relate to the same installations and have similar findings to the finding in this report.

**Naval Audit Service, Report 029-96, "Fiscal Years 1996 and 1997 Military Construction Projects Stemming From Decisions of the 1995 Base Closure and Realignment Commission," February 27, 1996.** This report states that the FY 1997 BRAC MILCON project P-184U, "Advanced Machinery Systems Research and Development Facility," is valid at \$5.4 million.

**Report No. 93-092. "Base Closure and Realignment Budget Data for the Naval Surface Warfare Center," April 29, 1993.** The report provides results of two projects valued at \$36.5 million. The Navy overstated the MILCON construction estimate for the combined research laboratory by at least \$4.65 million. Also, the Navy could not support MILCON requirements for the realignment of the Hull, Mechanical, and Electrical In-Service Engineering Program. The project costs were estimated to correspond to a Navy imposed funding ceiling of \$10.1 million.

**Report 93-052, "Defense Base Closure and Realignment Budget Data for Naval Surface Warfare Center," February 10, 1993.** The report provides results of three projects valued at \$59.5 million. NSWC did not ensure that three MILCON projects were adequately planned and documented to provide complete and usable facilities within a justified cost. The NSWC personnel were constrained to a pre-established funding limit from the Naval Sea Systems Command which resulted in an understatement of \$7.5 million on the two Carderock projects. Also, the Dahlgren project was overstated by \$18.4 million because NSWC did not have detailed justification to support all project costs.

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## **Research and Development Facilities at NSWC Philadelphia**

The Navy did not ensure that the research and development facilities related to the realignment of NSWC Annapolis to NSWC Philadelphia were adequately planned and documented to provide complete and usable facilities within justified costs. This occurred because the Navy imposed a funding ceiling on the research and development projects that was not supported. As a result, the costs of projects P-185U, "Acoustics Research and Development Facility," and P-186U, "Electrical Power Systems Research and Development Facility," are understated by at least \$3.0 million and \$1.2 million, respectively.

### **Project Background**

The 1995 Commission on Defense Base Closure and Realignment recommended the NSWC Annapolis Detachment be closed and the applicable research and development functions be relocated to NSWC Philadelphia, Pennsylvania; NSWC Carderock, Maryland; and the Naval Research Laboratory, Washington, D.C. The Commission stated that the closure of NSWC Annapolis will collocate research and development with in-service engineering in common facilities at NSWC Philadelphia. The Commission also stated this collocation would provide the ability to incorporate lessons learned from fleet operations in research and development efforts and increase the pool of technical expertise to solve immediate problems.

### **Guidance**

Naval Facilities Engineering Command Publication P-80 (NAVFAC P-80), "Facility Planning Criteria for Navy and Marine Corps Shore Installations," September 1993, suggests three basic methods for developing and justifying net floor areas for research facilities: architectural, industrial, and use-of-criteria (approved rules-of-thumb). However, to apply any of the methods, the facility planners must determine the number of authorized personnel (billets) who will occupy the facility and the amount of equipment that will be installed.

NAVFAC Instruction 11010.44E, "Shore Facilities Planning Manual," October 1, 1990, outlines Navy policy on the responsibilities and procedures for the facilities planning process. This instruction includes requirements for planning unique (one-of-a-kind) facilities. Unique facility planning should be based on an engineering analysis of the operation and related support facilities. Navy planners are required to provide detailed justification of the requirements including function to be accommodated, space required for the function, number and organizational status of personnel, and support space requirements.

## Research and Development Facilities at NSWC Philadelphia

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NAVFAC Instruction 11010.44E, also states that a MILCON project should include all necessary elements to produce a complete and usable facility that satisfies an existing deficiency. The sponsoring command is to ensure that the cost estimate represents the entire scope of the project.

### Proposed Projects

The Navy proposed three BRAC MILCON projects resulting from the realignment of the research and development functions from NSWC Annapolis to NSWC Philadelphia. The three proposed projects at NSWC Philadelphia are for unique (one-of-a-kind) facilities as defined in NAVFAC Instruction 11010.44E. To justify the net floor areas for the three BRAC MILCON projects, the Navy used variations of the methods listed in the NAVFAC P-80.

The FY 1997 budget included project P-184U, "Advanced Machinery Systems Research and Development Laboratory." Project P-185U, "Acoustics Research and Development Facility," was included in the FY 1998 budget. Project P-186U, "Electrical Power Systems Research and Development Facility," was included in the FY 1999 budget. In December 1996, the Chief of Naval Operations requested that the FY 1999 project be reprogrammed to FY 1997 to allow for concurrent construction. The Navy approved the three projects for concurrent design and potential concurrent construction because the projects involved various sections of building 87 at NSWC Philadelphia. The projects and related funding estimates are shown in Table 1.

Project Number	NSWC Estimate April 1995 (millions)	NORTHDIV Estimate September 1995 (millions)	NAVFAC Estimate October 1995 (millions)	NAVFAC Estimate April 1996 (millions)
P-184U	\$6.2	\$ 7.0	\$5.4	\$5.4
P-185U	8.5	10.0	6.5	6.2
P-186U	5.8	6.5	5.3	5.0

The projects were initially established in April 1995 by NSWC. By September 1995, the Northern Division, NAVFAC (NORTHDIV), had reviewed the projects and certified them ready for design. A NAVFAC letter, "BRAC 1995 (BRAC IV) Program," October 1995, promulgated the BRAC MILCON program approved by the Navy Comptroller and established programing amounts for FY 1997 and future years BRAC MILCON projects. At that time, NAVFAC estimated the costs for the three BRAC MILCON projects. In April 1996, NAVFAC revised their estimates and informed NSWC that the

## Research and Development Facilities at NSWC Philadelphia

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three projects must be designed-to-cost. However, none of those funding amounts were supported with an analysis or cost estimate as required by NAVFAC P-80 and NAVFAC Instruction 11010.44E.

NSWC personnel reviewed the projects in an effort to reduce the scope to meet the funding ceiling. In addition, NORTHDIV contracted for a value engineering study to promote the projects' quality and remove nonessential costs from the projects. A 100 percent design cost estimate was developed based on NSWC and contractor reviews. The project documentation for the 100 percent design cost estimate listed existing research and development functions that would be included as part of the BRAC MILCON project, and other existing research and development functions that would be included only if complete funding was available.

### **Advanced Machinery Systems Research and Development Facility**

The NSWC Annapolis Advanced Machinery Systems Research and Development laboratory currently occupies approximately 124,000 square feet and conducts testing for naval shipboard power machinery systems. Table 2 shows the current functions performed at the NSWC Annapolis advanced machinery laboratory.

**Project Requirements.** NSWC prepared a DD Form 1391, "Military Construction Project Data," April 1995, that included the facility requirements for advanced machinery systems research and development. NSWC initially estimated \$6.2 million as the total cost for project P-184U. In September 1995, NORTHDIV reviewed the facility requirements and project cost, and certified that the project was ready for design at a cost of \$7.0 million.

**Project Scope Reduction.** Project P-184U was reduced in scope based on the NAVFAC design-to-cost funding restrictions. The contractor's documentation identified functions that could/could not be retained within the project funding ceiling at NSWC Philadelphia, as shown in Table 2.

## Research and Development Facilities at NSWC Philadelphia

<b>Table 2. Advanced Machinery Systems Research and Development Facility</b>		
Function	<u>Retained</u>	<u>Not Retained</u>
<b>Auxiliary Machinery</b>		
Hydraulics	X	
Piping Fatigue	X	
Steering and Diving	X	
Ventilation and Filtering	X	
Advanced Machinery		X
Affordability Through Commonality		X
Compressed Air		X
Non Chloro Fluoro Carbon		X
Pumps		X
<b>Propulsion Machinery</b>		
Shaft Bearing/Seal Test Facility	X	
Composite Shaft		X
Engine Development Lab		X
Full Scale Shaftline		X

Of the 13 functions performed by the laboratory, it was determined that 5 of the functions could be performed in a 94,058-square-foot facility. We did not review project P-184U, because in February 1996, the Naval Audit Service reviewed the project at the reduced NAVFAC estimate of \$5.4 million. The Naval Audit Service determined that the costs were supported for the retained functions included in the project. The Naval Audit Service did not review whether the project included all of the requirements currently at NSWC Annapolis that should be transferred to NSWC Philadelphia.

### Acoustics Research and Development Facility

The NSWC Annapolis Acoustics Research and Development facility occupies approximately 55,000 square feet as of February 1997. Six test cells are available to conduct simultaneous acoustical testing of ships and submarines.

**Project Requirements.** The technical research and development requirements to support the future fleet operational acoustic stealth performance capability were provided to NSWC by the Naval Sea Systems Command Ship Signature Group. NSWC developed a list of required technical capabilities that were to be retained in the new NSWC Philadelphia facility based on this information. NSWC prepared a DD Form 1391, April 1995, that included the facility requirements for an acoustic facility to accommodate current and future acoustic workloads envisioned by the Naval Sea Systems Command. Project P-185U

**Research and Development Facilities at NSWC Philadelphia**

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was initially estimated at a total cost of \$8.5 million. In September 1995, NORTHDIV reviewed the facility requirements and project cost and certified that the project was ready for design at a cost of \$10 million.

**Project Scope Reduction.** Project P-185U was reduced in scope based on the NAVFAC design-to-cost funding restriction. NSWC conducted facility reviews to obtain the most efficient layout that would accomplish as many simultaneous tests as possible. After the reviews, NSWC reduced the size of the acoustics facility at NSWC Philadelphia. As a result, the new facility cannot accommodate simultaneous testing at the existing level currently available at NSWC Annapolis.

**Contractor Review of Project Scope.** The design contractor reviewed the project to evaluate areas and ways to determine an efficient equipment layout to reduce project costs. The review showed that a minimum of two test cells would be necessary to meet the \$6.5 million funding ceiling. The contractor's documentation identified functions that could/could not be retained within the project funding ceiling at NSWC Philadelphia. These items are shown in Table 3.

Function	<u>Retained</u>	<u>Not Retained</u>
<b>Machinery Acoustic Silencing</b>		
Fans, Anechoic	X	
Quiet Pumps	X	
Fluid System Components		X
Compressors		X
Lube Oil, Hydraulic, Transient		X
Noise Transmission Mounts		X
Prototype Precision Manufacturing and Assembly		X

NAVFAC further reduced the FY 1998 project cost to \$6.2 million which would renovate 31,915 square feet (2,965 square meters) in building 87 for a quiet-pump test cell and construct a 7,255 square foot (674 square meters) new anechoic test cell beside building 87. Of the 7 functions currently performed at NSWC Annapolis, it was determined that only 2 functions could be performed in 39,170 square feet.

**Acoustical Cones.** The 100 percent design cost of \$10 million, and the \$6.2 million on the DD Form 1391 includes the cost of four-feet deep acoustical cones on the walls and ceiling for the anechoic test cell. These acoustical cones, valued at \$1.7 million, are collateral built-in equipment that should be designated as other equipment and funded from the BRAC procurement account. The 100 percent design cost should be reduced

to \$9.2 million to exclude the acoustical cones. However, the cost of project P-185U would still be understated by \$3.0 million because of the funding ceiling of \$6.2 million. The 100 percent design cost estimate and square footage is supported and adequate for the two functions proposed to be retained in the facility.

### **Electrical Power Systems Research and Development Facility**

NSWC Annapolis currently has approximately 104,000 square feet to conduct the electrical power systems testing. Table 4 shows the current functions performed at the NSWC Annapolis electrical power systems laboratory.

**Project Requirements.** The Naval Sea Systems Command Power Systems Group and the Office of Naval Research did not provide NSWC with technical requirements to develop the project requirements for project P-186U. NSWC personnel prepared a DD Form 1391, April 1995, that included the facility requirements for the electrical power systems laboratory. The total cost for project P-186U was initially estimated at \$5.8 million. In September 1995, NORTHDIV reviewed the facility requirements and cost and certified the project as ready for design at a cost of \$6.5 million.

**Project Scope Reduction.** Project P-186U was reduced in scope based on the NAVFAC design-to-cost funding restriction. NSWC conducted facility reviews to determine the most efficient way to accomplish the electrical power systems capabilities. The design contractor reviewed the project and evaluated areas and ways to accomplish the mission and reduce the project cost to meet the \$5.3 million funding. The contractor's documentation identified functions that could/could not be retained within the funding ceiling at NSWC Philadelphia. These items are shown in Table 4.

## Research and Development Facilities at NSWC Philadelphia

<u>Function</u>	<u>Retained</u>	<u>Not Retained</u>
<b>Auxiliary Machinery</b>		
Fuel Cells	X	
Remote Vehicles	X	
<b>Electrical</b>		
Fiber Optics Lab	X	
Machinery Controls Lab	X	
Power Distribution Lab (partial)	X	
Power Electronics Lab	X	
Sensitive Compartmented Information Facility	X	
Cryogenic and Superconductivity		X
Current Collector, Motors and Superconductivity		X
Magnetic Energy Storage		X
Electrical Propulsion Demonstration		X
Power Distribution Lab (remaining)		X
Pulse Power Lab		X

**Funding Adjustments.** NAVFAC further reduced the FY 1999 project cost to \$5 million. The current 100 percent design cost estimate of \$5.7 million will renovate 53,000 square feet, vice the 91,000 square feet, documented on the DD Form 1391. The DD Form 1391 does not correctly reflect the actual square footage being renovated that would satisfy relocating the reduced mission requirements. There were no plans to renovate the remaining 38,000 square feet, which understated the cost of project P-186U by approximately \$1.2 million. The 100 percent design cost estimate and 53,000 square feet are supported and adequate for the seven functions proposed to be retained in the facility. The DD Form 1391 must be revised to reflect the 53,000 square feet included in the 100 percent design.

The October 1995 NAVFAC letter set unrealistic program amounts for the BRAC MILCON projects. The letter also stated that accurate budget costs were more important since Congress requires BRAC projects to follow MILCON reprogramming rules. Major claimants must submit full funding requirements for all projects. Under this concept, BRAC MILCON project costs for the relocation of NSWC Annapolis did not reflect the full funding requirements necessary to meet the capabilities needed to complete current and future workloads. In April 1996, NAVFAC further required the research and development projects to be designed-to-cost.

NAVFAC Instruction 11010.44E states that a MILCON project should include all necessary elements to produce a complete and usable facility. The Naval Sea Systems Command Power Systems Group and the Office of Naval Research were not involved in developing requirements for the electrical power systems portion of project P-186U and were not aware of the functions that would not be

relocated because of the funding ceiling. NSWC Carderock stated that further scope reductions could not be made without jeopardizing the ability of the user to complete their mission. However, the Naval Sea Systems Command stated to NORTHDIV that a cost increase was not supported and the project must be designed to the funding ceiling.

Because of the established funding ceilings, NSWC would not have complete and usable acoustic and electrical power systems facilities. NSWC would require an additional \$3 million to construct project P-185U. The 100 percent design cost estimate for project P-185U is \$9.2 million, excluding the acoustical cones, and 148 percent of the programmed amount of \$6.2 million. In addition, NSWC would require at least an additional \$1.2 million to fund the 38,000 square feet not planned to be renovated, but shown on the DD Form 1391 for project P-186U.

### Summary

The intent of the 1995 BRAC Commission decision to close the NSWC Annapolis Detachment and relocate the facilities to NSWC Philadelphia would not be fully satisfied. The Commission recommendation required NSWC to collocate the research and development efforts with the in-service engineering work in order to incorporate lessons learned from fleet operations and increase the technical response pool to solve immediate problems. The Commission recommendation to close NSWC Annapolis did not include reductions in capabilities for the research and development projects. The 100 percent design cost estimate for the three BRAC projects were accurate and supported, but only for the functions to be retained at the facilities within the funding limitations. Only 14 of the functions are being programmed for the new facilities, which will occupy only 186,000 square feet, compared to the 32 functions currently being performed, which occupy 233,000 square feet. Therefore, the three NSWC Philadelphia projects do not result in the establishment of complete and usable facilities. These projects should not be initiated unless the Navy can demonstrate that the excluded functions are not needed, or that the functions will be accomplished in an alternative manner.

### Recommendations for Corrective Action

1. We recommend that the Under Secretary of Defense (Comptroller):
  - a. Place project P-185U, "Acoustics Research and Development Facility," on administrative withhold until the Navy submits a revised DD Form 1391, "FY 1998 Military Construction Project Data," that includes the total cost of the project.

## Research and Development Facilities at NSWC Philadelphia

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b. Place project P-186U, "Electrical Power Systems Research and Development Facility," on administrative withhold until the Navy submits a revised DD Form 1391, "FY 1999 Military Construction Project Data," that includes the total cost of the project.

2. We recommend that the Commander, Naval Sea Systems Command:

a. Reduce the cost estimate for project P-185U by \$1.7 million for the acoustical cones.

b. Submit a revised DD Form 1391, "FY 1998 Military Construction Project Data," for project P-185U, "Acoustics Research and Development Facility," to fully fund the project to the 100 percent design cost estimate in order to provide a complete and usable facility that satisfies the Naval Surface Warfare Center Annapolis base realignment and closure requirements.

c. Develop the technical research and development requirements for Project P-186U, "Electrical Power Systems Research and Development Facility."

d. Submit a revised DD Form 1391, "FY 1999 Military Construction Project Data," for project P-186U, "Electrical Power Systems Research and Development Facility," to fully fund the project to the 100 percent design cost estimate that includes the correct square footage to satisfy the Naval Surface Warfare Center Annapolis base realignment and closure requirements, including the technical research and development requirements stated in Recommendation 2.c.

## Management Comments Required

The Under Secretary of Defense (Comptroller) and the Navy did not respond to a draft of this report. We request that the Under Secretary of Defense (Comptroller) and the Navy provide comments on the final report by August 1, 1997.

## **Part II - Additional Information**

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## **Appendix A. Scope and Methodology**

**Scope of This Audit.** We examined the FY 1998 BRAC MILCON budget request, economic analysis, and supporting documentation for space requirements for one realignment project regarding the realignment of NSWC Annapolis. Project P-185U, "Acoustics Research and Development Facility," is estimated to cost \$6.2 million. We also reviewed FY 1999 BRAC MILCON project P-186U, "Electrical Power Systems Research and Development Facility," because the project was requested for reprogramming to the FY 1997 budget.

**Audit Period, Standards, and Locations.** This economy and efficiency audit was performed from September 1996 through February 1997 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. The audit did not rely on computer-processed data or statistical sampling procedures.

**Contacts During the Audit.** We visited or contacted individuals and organizations within DoD. Further details are available on request.

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## Appendix B. Background of Defense Base Realignment and Closure

**Commission on Defense Base Closure and Realignment.** On May 3, 1988, the Secretary of Defense chartered the Commission on Defense Base Closure and Realignment (the Commission) to recommend military installations for realignment and closure. Congress passed Public Law 100-526, "Defense Authorization Amendments and Base Closure and Realignment Act," October 24, 1988, which enacted the Commission's recommendations. The law also established the Defense Base Closure Account to fund any necessary facility renovation or MILCON projects associated with BRAC. Public Law 101-510, "Defense Base Closure and Realignment Act of 1990," November 5, 1990, reestablished the Commission. The law also chartered the Commission to meet during calendar years 1991, 1993, and 1995 to verify that the process for realigning and closing military installations was timely and independent. In addition, the law stipulates that realignment and closure actions must be completed within 6 years after the President transmits the recommendations to Congress.

**Required Defense Reviews of BRAC Estimates.** Public Law 102-190, "National Defense Authorization Act for Fiscal Years 1992 and 1993," December 5, 1991, states that the Secretary of Defense shall ensure that the authorization amount that DoD requested for each MILCON project associated with BRAC actions does not exceed the original estimated cost provided to the Commission. Public Law 102-190 also states that the Inspector General, DoD, must evaluate significant increases in BRAC MILCON project costs over the estimated costs provided to the Commission and send a report to the congressional Defense committees.

**Military Department BRAC Cost-Estimating Process.** To develop cost estimates for the Commission, the Military Departments used the Cost of Base Realignment Actions computer model. The Cost of Base Realignment Actions computer model uses standard cost factors to convert the suggested BRAC options into dollar values to provide a way to compare the different options. After the President and Congress approve the BRAC actions, DoD realigning activity officials prepare a DD Form 1391, "FY 1998 Military Construction Project Data," for each individual MILCON project required to accomplish the realigning actions. The Cost of Base Realignment Actions computer model provides cost estimates as a realignment and closure package for a particular realigning or closing base. The DD Form 1391 provides specific cost estimates for an individual BRAC MILCON project.

**Limitations and Expansion to Overall Audit Scope.** Because the Cost of Base Realignment Actions computer model develops cost estimates as a BRAC package and not for individual BRAC MILCON projects, we were unable to determine the amount of cost increases for each individual BRAC MILCON project. Additionally, because of prior audit efforts that determined potential problems with all BRAC MILCON projects, our audit objectives included all large BRAC MILCON projects.

## Appendix B. Background of Defense Base Realignment and Closure

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**Overall Audit Selection Process.** We reviewed the FY 1998 BRAC MILCON \$354.3 million budget submitted by the Military Departments and the Defense Logistics Agency. We excluded projects that were previously reviewed by DoD audit organizations. We grouped the remaining BRAC MILCON projects by location and selected all projects in the budget. We also reviewed those FY 1997 BRAC MILCON projects that were not included in the previous FY 1997 budget submission, but were added as part of the FY 1998 BRAC MILCON budget package.

## Appendix C. Projects Identified as Invalid or Partially Valid

**Table C-1. Causes of Invalid or Partially Valid Projects**

<u>Project Location</u>	<u>Project Number</u>	<u>Causes of Invalid Projects</u>		<u>Causes of Partially Valid Projects</u>	
		<u>Overstated</u>	<u>Unsupported</u>	<u>Overstated</u>	<u>Unsupported</u>
NSWC Philadelphia	P-185U				X
NSWC Philadelphia	P-186U				X

**Table C-2. Recommended Changes in Project Estimates**

<u>Project Location</u>	<u>Project Number</u>	<u>Amount of Estimate on DD Form 1391 (thousands)</u>	<u>Recommended Amount of Change</u>	
			<u>Invalid Projects (thousands)</u>	<u>Partially Valid Projects (thousands)</u>
NSWC Philadelphia	P-185U	\$6,200		(\$3,000)
NSWC Philadelphia	P-186U	<u>\$5,000</u>		<u>(\$1,200)</u>
<b>Total</b>		<b>\$11,200</b>		<b>(\$4,200)</b>

**Total Invalid and Partially Valid Projects (\$4,200)**

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## **Appendix D. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense for Acquisition and Technology  
  Director, Defense Logistics Studies Information Exchange  
Under Secretary of Defense (Comptroller)  
  Deputy Chief Financial Officer  
  Deputy Comptroller (Program/Budget)  
Principal Assistant Deputy Under Secretary of Defense (Industrial Affairs and  
  Installations)  
Assistant Secretary of Defense (Public Affairs)

### **Department of the Army**

Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller)  
  Commander, Naval Facilities Engineering Command  
    Commander, Northern Division  
  Commander, Naval Sea Systems Command  
    Commander, Naval Surface Warfare Center, Carderock  
    Commander, Naval Surface Warfare Center, Annapolis  
    Commander, Naval Surface Warfare Center, Philadelphia  
Auditor General, Department of the Navy

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force

### **Other Defense Organizations**

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
Director, National Security Agency  
  Inspector General, National Security Agency  
Inspector General, Defense Intelligence Agency

## **Non-Defense Federal Organizations and Individuals**

Office of Management and Budget  
Technical Information Center, National Security and International Affairs Division,  
General Accounting Office

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Subcommittee on Military Construction, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Military Construction, Committee on Appropriations  
House Subcommittee on National Security, Committee on Appropriations  
House Committee on Government Reform and Oversight  
House Subcommittee on Government Management, Information and Technology,  
Committee on Government Reform and Oversight  
House Subcommittee on National Security, International Affairs, and Criminal  
Justice, Committee on Government Reform and Oversight  
House Committee on National Security

## **Audit Team Members**

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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