

**Audit**



**Report**

OFFICE OF THE INSPECTOR GENERAL

**DEFENSE BASE REALIGNMENT AND CLOSURE  
BUDGET DATA FOR THE CLOSURE OF STRATFORD  
ARMY ENGINE PLANT, STRATFORD, CONNECTICUT**

Report No. 96-226

September 18, 1996

**Department of Defense**

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### **Acronyms**

BRAC	Base Realignment and Closure
COBRA	Cost of Base Realignment Actions
SAEP	Stratford Army Engine Plant
TACOM	U.S. Army Tank-automotive and Armaments Command



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



Report No. 96-226

September 18, 1996

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit of Defense Base Realignment and Closure Budget Data for the  
Closure of the Stratford Army Engine Plant, Stratford, Connecticut  
(Project No. 6CG-5001.42)

## **Introduction**

We are providing this report for your information and use. The audit was performed in response to a request made by Senators Christopher J. Dodd and Joseph I. Lieberman. This report discusses concerns that the Stratford Army Engine Plant (SAEP), Stratford, Connecticut, was recommended for closure without considering relocation costs for the Army AGT-1500 tank engine and the T-53 and T-55 helicopter engines. Enclosure 1 provides details on the history of the Defense base realignment and closure (BRAC) process.

## **Audit Results**

The Army did not develop or use adequate cost estimates in its analysis of whether to recommend closure of SAEP. The 1995 Commission on Defense Base Closure and Realignment (the Commission) increased the Army initial estimate of \$2.1 million for closure costs to \$6.6 million. The increase was to cover the costs of relocating Government equipment and personnel. The contractor that operated SAEP, AlliedSignal Aerospace Corporation (AlliedSignal), developed an estimate of \$20 million but did not provide this information to the Army until after the Commission sent to the President its recommendation to close SAEP. The Army disagreed with the \$20 million cost estimate from AlliedSignal. As of February 14, 1996, the Army had negotiated the cost down to \$13 million. The Army commented on a draft of this report and stated that the current estimate to close SAEP was \$9.8 million.

## **Audit Objectives**

The overall audit objective was to address concerns raised by Senators Dodd and Lieberman as to whether the Army developed and used accurate relocation cost data in its analysis of whether to recommend closure of SAEP. The specific objectives were to determine when the Army developed or had available cost data, whether the Army withheld cost data from the BRAC process, and who in the Army knew or should have known about the cost data and should have provided it to the Commission.

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This audit did not assess the adequacy of the management control program. We reviewed the management control plan for the Total Army Basing Study office, the organization responsible for recommending bases for closure and developing cost estimates. However, we did not evaluate the adequacy of the management control program because the charter for the Total Army Basing Study office expired on July 31, 1995, and the office is no longer in existence.

## **Scope and Methodology**

**Audit Scope.** Our review was limited to addressing concerns by Senators Christopher J. Dodd and Joseph I. Lieberman that SAEP was recommended for closure without considering relocation costs for the Army AGT-1500 tank engine and the T-53 and T-55 helicopter engines.

**Audit Methodology.** We interviewed Department of Defense, Army, and AlliedSignal personnel and examined documentation supporting the Army and Commission recommendations to close SAEP. We reviewed computer-processed data from the Cost of Base Realignment Actions computer model (COBRA). The Army and the Commission used COBRA to project costs, savings, and return on investment for all DoD BRAC candidates. We reviewed Army procedures for recommending DoD organizations for closure and examined data input to COBRA. We did not test the COBRA automated system to determine the accuracy of the computer-processed data because COBRA was examined in separate audit coverage. No statistical sampling procedures were used to conduct this audit.

**Audit Period, Standards, and Locations.** This economy and efficiency audit was conducted from February through April 1996 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Enclosure 4 lists the organizations visited or contacted during the audit.

## **Prior Audits and Other Reviews**

Since 1991, numerous reports have addressed DoD BRAC issues. Enclosure 2 lists the Inspector General, DoD BRAC summary reports and BRAC reports issued since the last summary report.

## **Audit Background**

**Mission of Stratford Army Engine Plant.** SAEP is a Government-owned, contractor-operated facility that is operated by AlliedSignal. The mission of the plant is to manufacture and support Army turbine engines for helicopters and tanks, including the T-53 (for the AH-1 Cobra and the UH-1 Huey helicopters), the T-55 (for the CH-47 Chinook helicopter), and the AGT-1500 (for the M1A1 and M1A2 Abrams tanks) engines. The SAEP also manufactures and provides

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support for the Navy TF400B turbine engine. Additional work performed at SAEP includes developing the new LV100 tank or common platform engine for the Army and the Universal Jet Air Start Unit for the Navy and supplying spare components and engines for commercial applications.

**Department of Defense Base Closure and Realignment Report.** The "Department of Defense Base Closure and Realignment Report," March 1995, included the Army recommendation to close SAEP. The reasons that the Army cited for not needing SAEP were reduced production requirements and the increased capability to repair and rebuild engines at Anniston Army Depot, Alabama, and Corpus Christi Army Depot, Texas. The Army estimated that after a one-time cost of \$2.1 million to close SAEP, the funds put to better use annually would be about \$6 million, with an immediate return on investment.

**Commission Report to the President.** In July 1995, the Commission recommended to the President the closure of SAEP. The Commission found that the Army can sustain the tank and helicopter turbine engine base through Army depots. The Commission report states that with the decreased need for new engines, as well as new technological capabilities available in the private industrial sector, SAEP is not necessary. However, the Commission found that the Army underestimated costs for movement of equipment necessary for future production of spare parts, which will be needed to rebuild engines.

**Management of SAEP.** The U.S. Army Aviation and Troop Command (Aviation and Troop Command), St. Louis, Missouri, was responsible for management and oversight of SAEP until September 1, 1995. The responsibility was then transferred to the U.S. Army Tank-automotive and Armaments Command (TACOM), Warren, Michigan, because the 1995 Commission recommended disestablishing the Aviation and Troop Command.

**Chronology of Events.** Enclosure 3 provides a chronology of events between August 1993 through February 1996 applicable to the closure and realignment of SAEP.

## **Discussion of Concerns and Audit Results**

On December 1, 1995, Senators Christopher J. Dodd and Joseph I. Lieberman requested that the Office of the Inspector General, DoD, undertake an investigation of their concerns about the SAEP relocation costs. Their concerns and our audit results that address the concerns follow.

**Concern 1.** When did the Army have available or develop cost data to support the \$20 million estimate for relocation of engineering and component test capabilities?

**Audit Results.** The Army did not develop the \$20 million estimate. The first written evidence of the \$20 million estimate was a memorandum from TACOM to the Army Materiel Command on October 30, 1995, about 4 months after the Commission sent to the President its recommendation to close SAEP.

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The memorandum states that AlliedSignal developed the \$20 million relocation cost estimate. The costs were primarily for engineering and component testing for the AGT 1500, T53, and T55 engines.

**Commission Report to the President.** On July 1, 1995, the Commission sent to the President its report containing its BRAC recommendations, including the recommendation to close SAEP. The Commission found that the Army can maintain the tank and helicopter engine base through Anniston Army Depot and Corpus Christi Army Depot. As a result both of decreasing needs for new engines and of technological capabilities available in the private sector, the Commission determined that SAEP was not necessary. The Commission also found that the Army underestimated the cost to close SAEP. The Commission increased one-time closure costs from the \$2.1 million Army estimate to \$6.6 million. The increase was for the movement of the production capability of sole-source engine items: \$2 million for movement of equipment necessary for production of spare parts and \$2.5 million primarily for the movement of personnel. The revision from \$2.1 million to \$6.6 million changed the time frame for a return on the investment from immediate to one year.

**AlliedSignal Cost Estimate to TACOM.** On July 28, 1995, AlliedSignal wrote a letter to TACOM concerning support for the relocation for the AGT-1500 tank engine to an AlliedSignal engine facility in Phoenix, Arizona. AlliedSignal offered to furnish the following support: parts manufacturing, engine assembly and testing, technical component testing, and personnel to investigate and resolve production process and field problems. AlliedSignal provided a tentative cost estimate of \$11.9 million and stated that a formal cost proposal would probably be completed by August 31, 1995.

**AlliedSignal Cost Estimate to the Aviation and Troop Command.** On August 3, 1995, AlliedSignal wrote a letter to the Aviation and Troop Command addressing the relocation of support for the T-53 and T-55 helicopter engines and relocation of production for the T-55-L-714 helicopter engine for the Chinook upgrade program. AlliedSignal planned to relocate the engine support and production capabilities (parts manufacturing, engine assembly and testing, component testing, and personnel to investigate and resolve production process and field problems) to Phoenix, Arizona. AlliedSignal provided a tentative cost estimate of \$11.5 million for relocation of those capabilities.

**Commander, TACOM, Memorandum to the Deputy Commander, U.S. Army Materiel Command.** On October 30, 1995, TACOM informed the Commander, U.S. Army Materiel Command, that TACOM and the Aviation and Troop Command were evaluating estimates for relocating engineering and component testing capabilities from SAEP to an AlliedSignal facility in Phoenix, Arizona. The TACOM memorandum states that AlliedSignal estimated that it will cost \$7 million to relocate engineering and test capabilities for the AGT-1500 tank engine and \$13 million to relocate similar capabilities for the T-53 and T-55 helicopter engines. TACOM stated that the costs would normally be submitted as a BRAC cost; however, the costs were not identified until after the Commission's analyses were complete. The memorandum states that the Army BRAC office advised TACOM that no supplemental costs will be

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accepted for analysis. TACOM further stated that the Army Acquisition Executive advised the Army to provide funds for the relocation (to the AlliedSignal facility in Phoenix) if the capability is needed and AlliedSignal is the only source.

**Concern 2.** Did the Army withhold cost data from the BRAC process?

**Audit Results.** As discussed in our response to Concern 1, no evidence existed that the Army or AlliedSignal had identified a \$20 million estimate before the Commission's final deliberations and recommendations to the President. Even though both AlliedSignal and the Army were aware of some relocation costs for critical sole-source missions, neither fully identified or disclosed the costs to the Commission.

**Briefing to the Commission.** During a briefing to the Commission in April 1995, AlliedSignal identified an engine recuperator and 73 other spare parts as critical sole-source items. AlliedSignal provided the Commission a \$6.1 million estimate to relocate the recuperator, but did not report any relocation costs for other sole-source requirements to the Army or the Commission. Management officials at AlliedSignal stated that they believed that the recuperator and other spare parts could only be produced using the unique facilities and equipment at SAEP. Therefore, AlliedSignal's presentation to the Commission provided cost data to support keeping SAEP operational, rather than providing complete cost data for relocating production and support.

**Army Personnel Assumptions.** Personnel that we interviewed from the Army Materiel Command, Aviation and Troop Command, TACOM, and the Total Army Basing Study analysis team stated that relocation costs were not identified because the Army believed that the tank and helicopter engines could be supported through Army depots and other available commercial sources. The Army personnel stated that AlliedSignal's \$20 million estimate inappropriately included costs for relocation of contractor personnel to, and military construction at, the contractor's facility in Phoenix, Arizona. The Army considered the costs to be contract costs that should not be included in the COBRA analysis to determine the cost to close SAEP. Therefore, the Army did not include any relocation costs in cost data estimates to close SAEP that it provided to the Commission.

**AlliedSignal Briefing to the Commission BRAC Analyst.** In an April 1995 briefing to the Commission BRAC Analyst, managers from AlliedSignal stated that preserving SAEP as a dual use (military and commercial) production facility would be more cost-effective than closing the facility. AlliedSignal gave an estimated cost of \$2 million to relocate Government machines, assuming that the plant is closed. AlliedSignal estimated a cost of \$14.9 million to move Government machines and testing capabilities, assuming instead that production is moved to the contractor facility in Phoenix, Arizona. Of that amount, \$6.1 million was to move production capability for the recuperator. The \$6.1 million included \$4.3 million for construction at the AlliedSignal facility in Phoenix, Arizona. The remaining \$1.8 million was for relocation of test equipment for engines and components.

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**Commission's Site Visit to SAEP.** On May 1, 1995, the Commission made a site visit to SAEP. AlliedSignal gave the Commission a briefing that highlighted the military value of the facility and emphasized downsizing and dual use (shared military and commercial operations), rather than closure or relocation. In its discussion of cost alternatives, AlliedSignal stated that the Army cost estimates did not include the cost to move the industrial base for the AGT-1500 tank engine to the AlliedSignal facility in Phoenix. AlliedSignal identified the recuperator for the AGT-1500 as a critical sole-source spare part and stated that an additional 73 sole-source parts are produced at SAEP. AlliedSignal estimated the relocation cost for the AGT-1500 to be \$6.7 million. The estimate included personnel and write-off of assets but did not include any estimates of costs to relocate the industrial base for the AGT-1500.

**Hearings Before the Commission.** On May 5, 1995, AlliedSignal gave testimony before the Commission. During the hearings, AlliedSignal limited its discussion to keeping SAEP open. AlliedSignal gave little attention to any relocation efforts. The briefing did not provide any reference to the \$20 million estimate for relocation of equipment and support for the AGT-1500, T-53, and T-55 engines.

At the hearings, AlliedSignal acknowledged that the Army had suggested that machines specific to the AGT-1500 be moved to Anniston Army Depot. However, AlliedSignal stated that of 98 machines used for the AGT-1500 and the recuperator, AlliedSignal owned 42. AlliedSignal used much of the equipment for both military and commercial operations, and the operations could not be separated. In summary, AlliedSignal stated that splitting the manufacturing capability would not work and recommended that SAEP be downsized and remain open.

AlliedSignal also stated that the 10,000 spare AGT-1500 engines available to support about 8,000 Abrams tanks were not adequate to sustain the long-range demand for engines. AlliedSignal stated that production and technical support capabilities for the AGT-1500, T-53, and T-55 engines were unique to SAEP and could not be duplicated elsewhere.

In the briefing to the Commission, AlliedSignal indicated that the one-time closure costs should be \$5 million, rather than the Army \$2.1 million estimate. The Army estimate to close SAEP did not include any costs for relocating the tank engine industrial base. AlliedSignal estimated a one-time cost of \$5 million, which included costs for moving equipment to the receiving site and relocating 150 DoD personnel.

**AlliedSignal Letter to the Commission.** A June 19, 1995, AlliedSignal letter to the Commission states that based on a review of the Aviation and Troop Command implementation plan for closure of SAEP, the Army needs and intends to retain production capability for the recuperator and engineering and testing support. AlliedSignal informed the Commission that the COBRA input should be increased by \$15.5 million for the capabilities, \$9 million to relocate recuperator production capability, and \$6.5 million to retain the engineering and test support. However, because the letter was prepared on the same day that the



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BRAC COBRA estimate was prepared and only 3 days before the Commission's final deliberations, the information was prepared too late to affect the Commission's decision.

**Final Deliberations.** From June 22 through 24, 1995, the Commission performed a review and analysis of issues related to the closure of SAEP. Issues included industrial workload and equipment movement. AlliedSignal estimated that moving Government equipment at Government expense would cost \$2.5 million. The review and analysis findings supported the recommendation to close SAEP. The Commission concluded that engine sustainment was possible without retaining SAEP. The Commission added \$4.5 million to the COBRA estimate for movement of the industrial base and personnel required for production of sole-source engine items (the recuperator).

**Concern 3.** Who in the Army knew, or should have known, of the \$20 million cost data and should have provided the data to the BRAC Commission in a timely manner?

**Audit Results.** We did not find any evidence that the Army knew of the \$20 million cost data before the Commission sent its recommendations to the President, as stated in the audit results for Concern 1. The Aviation and Troop Command, the organization responsible for management oversight for SAEP, should have known whether some equipment and mission support would be required after the closure of SAEP and should have been able to identify any relocation costs. However, neither the Army Materiel Command nor the Total Army Basing Study office requested the information from the Aviation and Troop Command.

**Tank Engine Industrial Base.** In April 1994, the Assistant Secretary of the Army for Research, Development, and Acquisition issued a memorandum concerning the tank industrial base. The memorandum states that the Army has no requirement for new engines, remanufactured engines, or any firm prospects for foreign military sales of M1A2 tanks that might generate a requirement for new engines. The memorandum also states that the Army development plans for future heavy tracked vehicles are not dependent on the viability of SAEP. The memorandum noted that the Army does need component supply and some engineering support for fielded engines and the depot overhaul program. However, the Assistant Secretary stated that SAEP has excess capacity and is not suited for the mission of efficient low-rate parts production.

**Discussion With Army Management.** Management at the Aviation and Troop Command, the organization responsible for management oversight for SAEP, stated that the Aviation and Troop Command knew that some equipment and mission support provided by SAEP would still be needed if the plant closed. However, the Aviation and Troop Command stated that neither the Total Army Basing Study office nor the Army Materiel Command tasked the Aviation and Troop Command to identify essential, sole-source requirements or develop estimates for relocation costs. Management at TACOM stated that future requirements existed for spare parts, such as the recuperator. However, TACOM managers stated that the Total Army Basing Study office and the Army

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Materiel Command did not request a summary of future requirements to use in developing recommendations for base closures. Managers at the Army Materiel Command, the Aviation and Troop Command, and TACOM stated that they considered relocation costs to be overhead costs that should be allocated to production and support contracts and not charged as BRAC expenses.

**Discussion With the Total Army Basing Study Analyst for SAEP.**

The Total Army Basing Study analyst for SAEP stated that the Total Army Basing Study office did not request data for relocation costs from the Aviation and Troop Command and TACOM because the Army requirements for turbine engines were limited and could be provided by Army depots. Also, instructions to personnel on the Total Army Basing Study team required that information concerning recommendations for closure be kept close hold, to avoid the possibility of premature disclosure of base closure recommendations. Therefore, the Total Army Basing Study office submitted requests for detailed cost data to major commands, rather than to the organizations being considered for closure.

The analyst stated that the Total Army Basing Study office recommended SAEP for closure because engines manufactured and supported at SAEP had only limited future requirements. The FY 1996 program objective memorandum and the President's FY 1996 budget did not include requirements for engines produced at SAEP. The analyst stated that relocation costs were not considered because the Army believed that missions performed at SAEP could be accomplished at Army depots, without relocating assets. The analyst further stated that construction costs required to relocate the recuperator production capability and other essential missions were treated as contract costs, rather than as BRAC costs. The analyst stated that COBRA does not allow input for military construction at contractor sites.

## **Conclusion**

The Army did not adequately identify critical sole-source requirements or develop accurate estimates of costs to relocate production and essential support for the AGT-1500 tank engine or the T-53 or T-55 helicopter engines. The Army Stationing Strategy, the basis for developing BRAC recommendations, states that facilities that produce unique products should be retained, or be mothballed for future use if the products are not readily available in the private sector. Therefore, Army management should have identified those unique requirements to be retained and should have considered alternatives such as relocation to Army depots or alternate facilities owned by AlliedSignal. The Army should have developed cost estimates for those alternatives and considered the cost estimates when developing BRAC recommendations.

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## Management Comments

The Department of the Army commented on the draft report. The Assistant Chief of Staff for Installation Management stated that the current estimate, based on the latest negotiations with AlliedSignal, has decreased from \$20 million to \$9.8 million. The estimate may be further refined downward through negotiations between the Army and AlliedSignal. Further, the Assistant Chief of Staff stated that the current annual cost reduction estimate for the Stratford Army Engine Plant is \$5.9 million and could possibly increase to \$7 million a year. See Enclosure 6 for the complete text of management comments.

We appreciate the courtesies extended to the audit staff. For additional information on this report, please contact Mr. Wayne K. Million, Audit Program Director, at (703) 604-9312 (DSN 664-9312) or Mr. Michael Perkins, Audit Project Manager, at (703) 604-9273 (DSN 664-9273). Enclosure 5 lists the planned report distribution. The audit team members are listed inside the back cover.



David K. Steensma  
Deputy Assistant Inspector General  
for Auditing

Enclosures

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## **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 necessary costs 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 submits the recommendations to Congress.

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## Summary of Prior Audits and Other Reviews

Since 1991, numerous audit reports have addressed DoD BRAC issues. This appendix lists the summary reports for the audits of BRAC budget data for FYs 1992 through 1996 and BRAC audit reports published since the summary reports.

### Inspector General, DoD

<u>Report No.</u>	<u>Report Title</u>	<u>Date</u>
96-218	Defense Base Realignment and Closure Budget Data for the Closure of Naval Air Station Barbers Point, Hawaii, and Realignment to Marine Corps Base Hawaii Kaneohe Bay	September 4, 1996
96-209	Defense Base Realignment and Closure Budget Data for the Closure of Defense Electronics Supply Center Dayton, Ohio, and Realignment to Defense Supply Center Columbus, Ohio	August 13, 1996
96-206	Defense Base Realignment and Closure Budget Data for the Realignment of Navy and Air Force Food Services Training at Lackland Air Force Base, Texas	August 2, 1996
96-204	Defense Base Realignment and Closure Budget Data for the Realignment of the Deployment Function for the 10th Mountain Infantry (Light) Division to Fort Drum, New York	July 31, 1996
96-199	Defense Base Realignment and Closure Budget Data for the Realignment of the Defense Distribution Depot Columbus, Ohio	July 25, 1996
96-191	Defense Base Realignment and Closure Budget Data for the Relocation of the Carrier Air Wings From Naval Air Station Miramar, California, to Naval Air Station Lemoore, California	July 3, 1996

## Summary of Prior Audits and Other Reviews

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### Inspector General, DoD (cont'd)

<u>Report No.</u>	<u>Report Title</u>	<u>Date</u>
96-171	Defense Base Realignment and Closure Budget Data for Realigning the Office of the Judge Advocate General and the Naval Facilities Engineering Command to the Washington Navy Yard	June 21, 1996
96-170	Defense Base Realignment and Closure Budget Data for the Realignment of Five Navy Activities From Leased Space in Arlington, Virginia, to the Naval Security Station, Washington, D.C.	June 19, 1996
96-166	Defense Base Realignment and Closure Budget Data for the Closure of Lowry Air Force Base, Colorado, and Realignment to Sheppard Air Force Base, Texas	June 18, 1996
96-165	Defense Base Realignment and Closure Budget Data for the Construction of the Hazardous Material Storage Addition to Warehouse 28 at Defense Distribution Region West Tracy, California	June 17, 1996
96-158	Defense Base Realignment and Closure Budget Data for the Redirect of the 726th Air Control Squadron From Shaw Air Force Base, South Carolina, to Mountain Home Air Force Base, Idaho	June 11, 1996
96-154	Defense Base Realignment and Closure Budget Data for the Realignment of the National Airborne Operations Center to Wright-Patterson, Air Force Base, Ohio	June 10, 1996
96-147	Defense Base Realignment and Closure Budget Data for the Closure of Naval Training Center Orlando, Florida, and Realignment of Maintenance and Storage Facilities to Taft U.S. Army Reserve Center, Orlando, Florida	June 6, 1996
96-144	Defense Base Realignment and Closure Budget Data for the Realignment of Grissom Air Reserve Base, Indiana	June 6, 1996

## Summary of Prior Audits and Other Reviews

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### Inspector General, DoD (cont'd)

<u>Report No.</u>	<u>Report Title</u>	<u>Date</u>
96-142	Defense Base Realignment and Closure Budget Data for Closure of Bergstrom Air Reserve Base, Texas, and Realignment of the 10th Air Force Headquarters to Naval Air Station Fort Worth, Joint Reserve Base, Texas	June 5, 1996
96-139	Defense Base Realignment and Closure Budget Data for the Closure of Griffiss Air Force Base and Realignment of Rome Laboratory and Northeast Air Defense Sector, Rome, New York	June 3, 1996
96-137	Defense Base Realignment and Closure Budget Data for the Realignment of March Air Force Base, Riverside, California	May 31, 1996
96-136	Defense Base Realignment and Closure Budget Data for the Closure of Gentile Air Force Station, Dayton, Ohio, and Realignment of Defense Logistics Agency Components to Wright-Patterson Air Force Base, Ohio	May 31, 1996
96-135	Defense Base Realignment and Closure Budget Data for the Fleet Anti-Submarine Warfare Training Center Pacific, San Diego, California	May 30, 1996
96-131	Defense Base Realignment and Closure Budget Data for Realigning Elements of Headquarters, Department of the Navy, to the Washington Navy Yard	May 28, 1996
96-128	Defense Base Realignment and Closure Budget Data for the Naval Training Center Great Lakes, Illinois	May 24, 1996
96-127	Defense Base Realignment and Closure Budget Data for the Closure of Roslyn Air National Guard Base and Realignments to Stewart Air National Guard Base, New York	May 23, 1996

## Summary of Prior Audits and Other Reviews

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### Inspector General, DoD (cont'd)

<u>Report No.</u>	<u>Report Title</u>	<u>Date</u>
96-126	Defense Base Realignment and Closure Budget Data for the Realignment of Rickenbacker Air National Guard Base, Ohio	May 21, 1996
96-122	Defense Base Realignment and Closure Budget Data for the Realignment of the Air Education and Training Command at Vandenberg Air Force Base, California	May 17, 1996
96-119	Defense Base Realignment and Closure Budget Data for Construction of a Multiple Purpose Facility at Fort McCoy, Wisconsin	May 14, 1996
96-118	Defense Base Realignment and Closure Budget Data for Medical and Dental Clinic Expansion Project at Naval Weapons Station Charleston, South Carolina	May 13, 1996
96-116	Defense Base Realignment and Closure Budget Data for the Relocation of Deployable Medical Systems to Hill Air Force Base, Ogden, Utah	May 10, 1996
96-112	Defense Base Realignment and Closure Budget Data for the Closure of Naval Air Station Cecil Field, Florida, and Realignment of the Aviation Physiology Training Unit to Naval Air Station Jacksonville, Florida	May 7, 1996
96-110	Defense Base Realignment and Closure Budget Data for the Realignment of the 301st Rescue Squadron, Air Force Reserve, From Homestead Air Force Base, Florida, to Patrick Air Force Base, Florida	May 7, 1996
96-108	Defense Base Realignment and Closure Budget Data for the Naval Shipyard, Philadelphia, Pennsylvania	May 6, 1996
96-104	Defense Base Realignment and Closure Budget Data for the Construction of the Overwater Antenna Test Range Facility at Newport, Rhode Island	April 26, 1996



## Summary of Prior Audits and Other Reviews

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### Inspector General, DoD (cont'd)

<u>Report No.</u>	<u>Report Title</u>	<u>Date</u>
96-101	Defense Base Realignment and Closure Budget Data for the Closure of Naval Air Station Barbers Point, Hawaii, and Realignment of P-3 Aircraft Squadrons to Naval Air Station Whidbey Island, Washington	April 26, 1996
96-093	Summary Report on the Audit of Defense Base Realignment and Closure Budget Data for FYs 1995 and 1996	April 3, 1996
94-040	Summary Report on the Audit of Defense Base Closure and Realignment Budget Data for FYs 1993 and 1994	February 14, 1994
93-100	Summary Report on the Audit of Defense Base Closure and Realignment Budget Data for Fiscal Years 1992 and 1993	May 25, 1993

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## Chronology of Events

The following is a chronology of significant events applicable to the closure and realignment of SAEP.

- August 1, 1993** The Total Army Basing Study office was chartered to:
- conduct a comprehensive, detailed military value assessment of Army installations;
  - serve as the single point of contact for the Army staff for BRAC 1995;
  - review current and planned Army and Office of the Secretary of Defense initiatives that may affect basing requirements;
  - conduct site visits to installations as needed to update and verify data elements for using the BRAC 1995 analytical process; and
  - update all standard factors used in the analysis for BRAC study candidates.
- January 7, 1994** The Deputy Secretary of Defense memorandum, "BRAC 95," establishes policy, procedures, and responsibilities for selecting bases for submission to the Commission for consideration for closure.
- March 14, 1994** The Total Army Basing Study office establishes a plan to ensure accuracy, completeness, and integration of all information on which the Secretary of the Army recommendations for BRAC are based.
- April 21, 1994** The Assistant Secretary of the Army (Research, Development, and Acquisition) memorandum, "Tank Engine Industrial Base," states that the Army has no requirement for new engines or remanufactured engines, or any firm prospects for foreign military sales of Abrams tanks that might generate a requirement for new engines. The memorandum also states that the Army development plans for future heavy tracked vehicles are not dependent on the viability of SAEP.
- April 28, 1994** Senators Christopher J. Dodd and Joseph I. Lieberman and Representative Rosa L. DeLauro in a letter to the Secretary of the Army express concern about the Army role in preserving the tank industrial base. The letter also requests a copy of the report of the Defense Science Board's Blue Ribbon Panel and an update on the status of \$17 million authorized in the FY 1994 Defense Authorization Conference Report for funding long-lead items to prevent the break in tank-engine production.

## Chronology of Events

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- May 5, 1994** The Defense Science Board Task Force on Tracked Vehicle Industrial Base (the Task Force) concludes in its "Final Report of the Defense Sciences Board Task Force on Tracked Vehicle Industrial Base" that the Army must maintain capability for support engineering and for critical sole-source spare parts and logistics and company-owned proprietary processes. The Task Force recommends that the Army retain and downsize SAEP, increase engineering support, provide current funding streams, transfer some work from Anniston Army Depot to SAEP, share in the cost of downsizing, and provide engineering funding for an evolutionary engine upgrade program.
- May 20, 1994** The Under Secretary of Defense for Acquisition and Technology advises Senator Lieberman in a letter that the Blue Ribbon Panel has completed deliberations on the tank industrial base. The letter states that the Army generally supports the conclusions of the panel and particularly agrees that the purchase of new engines in the near term is not justified on the basis of operational or cost considerations. The Under Secretary states that improvement of the overhaul procedure appears to be the most reasonable approach.
- June 17, 1994** "Army Program Objective Memorandum 96-01," does not show any funded procurement requirements for the Cobra (AH-1), the Huey (UH-1), or the Chinook (CH-47). Funding is provided for the Abrams tank (M1A1/M1A2) for the foreign military sales program. The memorandum provides minimal funding for the correction of safety errors for the CH-47.
- July 12, 1994** The Army Stationing Strategy states that only those industrial production lines that have requirements in the Army Program Objective Memorandum 96-01 should be retained. Facilities that produce unique products, not readily available in the private sector, should be retained or, if not currently funded, should be mothballed for future use.
- September 1994** The "Total Army Basing Study Analytical Procedures for Developing BRAC 95 Recommendations," establishes procedures for developing BRAC recommendations. The procedures require the major command analyst to provide information on any special facility, equipment, and planning considerations to the Total Army Basing Study engineering analyst so that the analyst can determine the military construction requirements for each alternative. Based on major command input, the Total Army Basing Study engineering analyst will assess construction requirements. The procedure also requires that when evaluating operational considerations, the analyst shall carefully consider the Army Stationing Strategy and determine the operational rationale for each BRAC alternative.

**September 20, 1994** The Total Army Basing Study office COBRA report shows a total closing cost of \$2.06 million, \$2.05 million to shut down facilities and \$0.01 million to release and relocate personnel. The COBRA report included in the analysis does not show any costs for relocating equipment or military construction at the gaining depots.

**November 10, 1994** Senators Christopher J. Dodd and Joseph I. Lieberman and Representative Rosa L. DeLauro, in a letter to the Secretary of the Army, support providing funding to downsize SAEP and keeping the plant open to maintain the industrial base for the AGT-1500. The letter also requests information on the Army budget request for engine work.

**December 1994** The BRAC analyst responsible for evaluating depots recommends that to close SAEP, the Army should cancel the contract or let it expire, eliminate all personnel positions, and transfer all ground systems equipment to Anniston Army Depot and all aviation systems equipment to Corpus Christi Army Depot.

The analyst mentioned several key issues noted during the review of depots.

- Facility capability for production is not duplicated at depots.
- Army maintenance depots are capable of rebuilding engines.
- The Army has no projected procurement for new AGT-1500 engines.

The analyst concludes that equipment located at Anniston and Corpus Christi Army Depots is adequate to accomplish the Army mission requirements; therefore, no costs to transfer equipment between the losing and gaining facilities are identified.

**February 14, 1995** In response to a letter from Senator Lieberman and Representative DeLauro to the Secretary of the Army, the Assistant Secretary of the Army (Research, Development, and Acquisition) summarizes the Army Plan to spend the \$47.5 million approved by Congress for the AGT-1500 3-year upgrade. The plan includes:

- \$6 million to downsize SAEP and reduce overhead,
- \$9 million to improve component design and reduce out-year operation and support costs, and
- \$32.5 million to initiate a service life extension program for the AGT-1500.

## Chronology of Events

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The response letter states that the Army will monitor the plan to ensure that downsizing is efficient and that parts and services can be provided at a fair price. Otherwise, the Army will begin advanced purchases of spare parts and relocate parts production to a more cost-effective location.

**February 1995**

The "Office of Management and Budget, Executive Office of the President, Budget of the United States, Fiscal Year 1995," shows no funded procurement requirements for the Abrams (M1A1/M1A2) tank; the Cobra (AH-1), Huey (UH-1), or Chinook (CH-47) helicopters. Also, the budget does not include any funded requirement for engines for those systems (the AGT-1500 tank engine and the T-53 and T-55 helicopter engines).

**March 1, 1995**

The Army Materiel Command memorandum, "Certification of Base Operations Data Concerning Industrial Facilities and Depots," provides certified costs in response to a data call from the Total Army Basing Study office. The Army Materiel Command memorandum does not include any costs for relocating production equipment from SAEP.

**March 7, 1995**

In hearings before the Commission, the Secretary of the Army discusses the Army recommendation to close SAEP. In response to questions from the Commission, the Secretary of the Army states that the closure of SAEP would not limit the Army ability to design and produce critical items. Relocation costs are not discussed.

**April 14, 1995**

In a briefing to the BRAC analyst, managers from AlliedSignal state that it would be more cost-effective to preserve SAEP as a dual use (military and commercial) production facility than to close the facility. AlliedSignal gives an estimated cost of \$2.03 million to relocate Government machines, assuming that the Army would close the plant. AlliedSignal estimates a cost of \$14.9 million to move Government machinery and testing capabilities, assuming the production is moved to the contractor's facility in Phoenix, Arizona. Of that amount, moving the recuperator production capability would cost \$6.1 million, including \$4.3 million for construction at the Phoenix, Arizona, facility. The remaining \$8.8 million of the \$14.9 million is for the relocation of test equipment and support.

**May 1, 1995**

The Commission makes a site visit to SAEP. AlliedSignal gives the Commission a briefing that highlights the military value of the facility and emphasizes downsizing and dual use (shared military and commercial operations) rather than closure or relocation. In its discussion of cost alternatives, AlliedSignal states that the Army cost estimates do not include the cost to

move the industrial base for the AGT-1500 tank engine. AlliedSignal identifies the recuperator for the AGT-1500 as a critical sole-source spare part and states that an additional 73 sole-source parts are produced at SAEP. AlliedSignal's estimate for AGT-1500 specific costs is \$6.7 million. The estimate includes personnel expenses and write-offs of assets, but does not include any costs to relocate production or support for the AGT-1500.

- June 12, 1995** In BRAC Commission hearings, Senators Dodd and Lieberman discussed closure of SAEP. The Senators question the decision to close SAEP and state that the Army can not replicate the capabilities of SAEP without paying a significant price, which was not considered in the estimated cost of closing. The discussion does not specify the costs to relocate.
- June 19, 1995** The Commission adds \$4.5 million to the Army COBRA estimate for equipment relocation and disposal, based on its analysis of costs to close SAEP. The increased cost is to move production equipment and personnel for recuperator production to the AlliedSignal's production facility in Phoenix. The Commission estimates a one-time moving cost of \$6.6 million.
- June 19, 1995** An AlliedSignal letter to the BRAC analyst, "Issues related to SAEP Closure Derived From the Army Response to AlliedSignal Questions and From Aviation and Troop Command Implementation Planning for SAEP Closure," states that based on a review of the Aviation and Troop Command Implementation Plan for Closure of SAEP, the Army needs and intends to retain production capability for the recuperator and engineering and testing support. AlliedSignal informs the BRAC analyst that the COBRA input should be further increased by a total of \$15.5 million, \$9 million to relocate recuperator production capability and \$6.5 to retain the engineering and testing support.
- June 22-24, 1995** The Commission performs a final review and analysis of issues at SAEP, to include industrial workload and equipment movement. The review and analysis team's findings support the DoD recommendation to close SAEP. The team concludes that engine sustainment is possible without retaining SAEP. The team confirms costs added to the COBRA estimate required for production of sole-source engine items: \$2 million for movement of equipment and \$2.5 million primarily for the movement of personnel. The added cost increases the DoD estimate to close SAEP to \$6.6 million. The Commission unanimously adopts the recommendation to close SAEP.
- June 29, 1995** The Aviation and Troop Command implementation plan shows construction costs of \$3.79 million for relocation of the AGT-1500 recuperator production capability as a result of the closure of SAEP.

## Chronology of Events

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- July 20, 1995** The Aviation and Troop Command implementation plan shows a TACOM estimate of \$3.75 million for the relocation of recuperator production capability. The plan assumes that AlliedSignal will be responsible for any construction associated with the relocation of the AGT-1500 recuperator production capability. The plan states that all real property construction necessary for recuperator relocation will be planned and funded by AlliedSignal.
- July 28, 1995** An AlliedSignal letter, "SAEP Capabilities Recommended for Relocation at Government Expense," recommends plant, property and equipment required to reestablish AGT-1500 production in an AlliedSignal facility in Phoenix, Arizona. AlliedSignal recommends field and technical support capabilities for those AGT-1500 engines in the current Abrams fleet as well as those required to fulfill foreign military sales requirements. The relocation costs to reestablish AGT-1500 production in Phoenix total \$11.85 million, including \$7.75 million for relocating production capability of the recuperator.
- August 3, 1995** An AlliedSignal letter, "SAEP Capabilities Recommended for Relocation at Government Expense as a Result of the BRAC Closure Process," recommends capabilities required by the Government, field and technical support for the T-53 and T-55, and production capability for the T55-L-714 be reestablished in Phoenix at Government expense. AlliedSignal's cost estimate for relocation of essential capabilities, which includes engine testing and assembly, component testing, and technical and support personnel, is \$11.5 million (excluding personnel relocation costs).
- August 18, 1995** An AlliedSignal letter, "Proposed meetings to Discuss SAEP Closure Issues," invite the Commanding General of the Aviation and Troop Command to visit SAEP to discuss AlliedSignal's recommendation to the Government to relocate to Phoenix support for the T-53 and T-55 engines and production capability for the T-55-L-714 engine. Costs are not discussed in the letter.
- October 12, 1995** The Executive Director, Aviation Research, Development, and Engineering Center, U.S. Army Aviation and Troop Command, states in a letter to the Site Manager, AlliedSignal Corporation, that the Army Materiel Command has assigned the closure responsibility for SAEP to TACOM. The letter also discusses property accountability issues. Relocation costs are not discussed.

## Chronology of Events

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- October 30, 1995** A TACOM memorandum, "Transition of SAEP Management Responsibility," states that responsibility for management of SAEP was transferred from the Aviation and Troop Command to TACOM on September 1, 1995. The memorandum states that AlliedSignal has estimated that it will cost \$7 million to relocate engineering and component test capabilities for the Abrams AGT-1500 and \$13 million for the T-53 and T-55 engines. TACOM states that normally those costs would be submitted as BRAC costs; however, the costs were not identified until after the BRAC submittal, and the Army BRAC office has advised that no supplemental submittal will be accepted. The memorandum states that AlliedSignal is the sole source for those engine and component test capabilities.
- November 1, 1995** At an Aviation and Troop Command transition briefing, AlliedSignal provides a cost estimate of \$12.5 million, at Government expense, to relocate field technical support and production capability for aviation systems to Phoenix.
- December 21, 1995** AlliedSignal issues a statement of work, "Cost Estimate for the Proposed Statement of Work for the Transfer and Retention of Aviation-Related Government Programs Capability From Stratford to Phoenix." The statement of work gives the Aviation and Troop Command a cost estimate of \$9.7 million to relocate Government production from SAEP to the AlliedSignal facility in Phoenix.
- January 5, 1996** AlliedSignal recommends that the ownership of all special tooling and special test equipment for the T-53 and T-55 be transferred to AlliedSignal before closure of SAEP. AlliedSignal would then identify the special tooling and special test equipment required to relocate T-53 and T-55 production capability to Phoenix and would package, preserve, and ship those items to Phoenix at AlliedSignal's expense. Items not required for the T-53 and T-55 production capability would be scrapped by AlliedSignal, and funds recouped from the scrap sale would be credited to an overhead account, benefiting the U.S. Government.
- January 9, 1996** Aviation and Troop Command develops a preliminary statement of work for the retention of aviation equipment required to support Government production capabilities. The Aviation and Troop Command estimate to relocate the equipment from SAEP to AlliedSignal's facility in Phoenix is \$8.47 million.
- February 1996** TACOM updates the implementation plan for the closure of SAEP. The plan includes relocation costs as follows:
- Recuperator: \$7.11 million,
  - AGT-1500 engine: \$4.6 million, and
  - T-53 and T-55 engines: \$8.47 million.



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## **Organizations Visited or Contacted**

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

Under Secretary of Defense (Comptroller), Washington, DC  
Deputy Comptroller (Program/Budget), Washington, DC  
Principal Assistant Deputy Under Secretary of Defense (Industrial Affairs and Installations), Washington, DC  
Base Realignment and Closure Office, Washington, DC

### **Department of the Army**

Army Material Command, Alexandria, VA  
Aviation and Troop Command, St. Louis, MO  
Tank-automotive and Armaments Command, Warren, MI

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

Stratford Army Engine Plant, Stratford, CT

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  Principal Assistant Deputy Under Secretary of Defense (Industrial Affairs and  
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Assistant to the Secretary of Defense (Public Affairs)

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Commander, Headquarters U.S. Army Materiel Command  
  Commander, Headquarters U.S. Army Aviation and Troop Command  
  Commander, Headquarters U.S. Army Tank-automotive and Armaments Command  
Assistant Secretary of the Army (Financial Management and Comptroller)  
Assistant Secretary of the Army (Installations, Logistics and Environment)  
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Auditor General, Department of the Army  
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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 National Security, International Affairs, and Criminal  
Justice, Committee on Government Reform and Oversight  
House Committee on National Security

Honorable Christopher J. Dodd, U.S. Senate  
Honorable Joseph I. Lieberman, U.S. Senate  
Honorable Rosa L. DeLauro, U.S. House of Representatives

# Department of the Army Comments

Final Report  
Reference



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT  
600 ARMY PENTAGON  
WASHINGTON DC 20310-0600

5 AUG 1996



DAIM-BO

MEMORANDUM THRU

DIRECTOR OF THE ARMY STAFF *June 27 1996*

~~ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)~~

*RMW ISA 02 9/2*  
Robert M. Walker  
ASA (ILE)

FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE (AUDITING)

SUBJECT: Audit Report on Defense Base Realignment and Closure Account Budget Data for the Closure of the Stratford Army Engine Plant, Stratford, Connecticut (Project No. 6CG-5001.42)

1. This is in response to the USAAA memorandum dated 2 July 1996 (Tab A) that requests our comments on subject draft DODIG report prior to finalization.
2. The report contains no specific findings or recommendations; however, the conclusion summarizes several areas that are highlighted in the report. The following information addresses these concerns:
  - a. The primary concern focuses on the \$20M costs identified by AlliedSignal after the Total Army Basing Study (TABS) was completed. The current estimate based on the latest negotiations with AlliedSignal is \$9.8M (includes tank and helicopter engine logistics and engineering support). This estimate may be further refined downward through negotiations between the Army and AlliedSignal.
  - b. The Army's current annual savings estimate for SAEP is \$5.9M; however, additional savings may be realized as a result of the relocation of the heat recuperator function. Dependent on production quantities, an estimated \$7M savings per year could potentially result. These savings are not attributable to the processes examined in the DODIG report, but from relocating the heat recuperator production to Anniston Army Depot, Alabama.

Not Included

## **Audit Team Members**

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

Paul J. Granetto  
Wayne K. Million  
Michael Perkins  
Robert A. McGriff  
Cecil B. Tucker, Jr.  
Vanessa S. Adams