

# AIR FORCE AUDIT AGENCY



## AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 MILITARY CONSTRUCTION



# AUDIT REPORT

F2010-0008-FD1000

4 March 2010





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- **American Recovery and Reinvestment Act of 2009 (Recovery Act)**
  - Signed into law on 17 February 2009
- **Purposes**
  - Create and save jobs
  - Jump start economy
  - Address unfunded facility requirements
  - Long term economic growth foundation



# Introduction (Cont'd)

- **Joint Audit Effort**

- DoDIG directed by Recovery Act to review
- Service audit agencies assisted

- **Magnitude**

- 13 active Air Force MILCON projects in the Recovery Act
- Excludes \$50 million in 10 ANG MILCON projects addressed separately (Project F2009-FD1000-0659.000)
- \$260 million in Recovery Act funds



- **Installation CE Programmers' Responsibilities**
  - Oversee MILCON project planning
  - Develop cost estimates
  - Prepare DD Forms 1391 (MILCON project requirements and justification data)
  
- **MAJCOM CE Programmers' Responsibilities**
  - Review/validate DD Forms 1391
  - Assure estimates are in line with OSD Pricing Guide
  - Verify project fully justified with historical or other cost data
  - Validate accuracy of Primary and Supporting Facilities Costs



# Background (Cont'd)

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- **Full Project Justification Recorded on DD Form 1391**
  - Describes impact on mission, people, productivity and life cycle
  - Identifies impact if project not accomplished
  - Determines AT/FP type and adds 1 percent cost, justifies increased percentage
  - Adds CE mandated 2 percent LEED costs, justifies increased percentage



# Background (Cont'd)

- **Economic Analysis and Certificate of Exception**
  - Requested for Projects > \$2 million
  - Certificate of exception (waiver) requested when
    - Only one method will accomplish project
    - Higher headquarters directs a specific method of accomplishment
    - Legislation exempts project from EA
    - Project corrects serious, urgent, or hazardous problems/violations
    - Cost of EA clearly outweighs benefits by decision maker
  
- **Environmental Flight Responsibilities**
  - Gathers preliminary environmental data and documents effect
  - Assures environmental impact (if any) is known and addressed



- **Determine whether Civil Engineer Programmers properly planned Recovery Act MILCON requirements.**
  - Selected valid projects
  - Properly scoped and supported costs estimates on DD Forms 1391
  - Conducted environmental studies and document on AF Form 813
  - Prepared EA or Certificate of Exception for projects >\$2 million
  - Included all new FAR clauses Recovery Act contracts
  - Reported project information (transparency)
  - Achieved Recovery Act goals (fostering competition, expeditiously awarded contracts, creating/retaining jobs)



- **Conclusions**
  - AF Civil Engineer personnel did not properly plan all aspects of the Air Force Recovery Act MILCON program
  
- **Project Selection (Results 1, Sld. 14)**
  - Properly justified MILCON projects selected
  
  - Public can be assured Air Force civil engineers selected valid projects



# Audit Results Overall (Cont'd)

- **Scope and Cost Estimates (Results 1, Sld. 14)**

- Did not accurately identify and support cost estimates on DD Forms 1391
- Overstated \$9.2 million in costs estimates
- Reducing overstated estimates allow funds to be used for other valid Recovery Act MILCON projects (PMB)
- Without proper documentation, AF could not support and justify \$5.98 million requirements

- **Environmental Studies (Results 1, Sld. 14)**

- Properly conducted for all seven Recovery Act MILCON projects
- Allowed Air Force decision-makers to consider environmental factors prior to resources commitment



# Audit Results Overall (Cont'd)

- **Economic Analysis or Certificates of Exceptions (Waiver) (Results 1, Sld. 14)**
  - Air Force CE programmers did not obtain and coordinate five of seven required certificates of exception
  - Without an EA or waiver prior to developing the DD Form 1391, the Air Force does not have the required information to make informed construction decisions
- **FAR clauses in contracts Reported project information (transparency) and achieved Recovery Act goals**
  - No MILCON contracts awarded as of audit date
  - Will accomplish in another audit once contracts are awarded



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# Recommendations and Management's Response

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- **Recommendations.** We made two recommendations to AF/A4/7 to improve MILCON planning process. (Reference individual slides for specific recommendations.)
- **Management's Response.** Management concurred with the audit results. Management's planned actions were responsive to the issues and recommendations in this report.

ROBERT F. BURKS  
Associate Director  
(Engineering and  
Environment Division)

JAMES W. SALTER, JR.  
Assistant Auditor General  
(Support and Personnel Audits)



- **Condition (Table 1, Sld.15)**
  - All seven MILCON projects reviewed were valid and properly conducted environmental analyses
  - Four projects did not have accurately identified cost estimates and four lacked support on DD Forms 1391
  - Five of seven projects did not have obtained and coordinated economic analyses or waiver, as required



# Audit Results

## MILCON Planning (Cont'd)

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Project Title Installation	Valid Project	Project Amount (000)	Overstated (000)	Lacked Support (000)	Proper Scope*	Air Force Form 813 completed	EA or waiver
Cannon AFB Child Development Center	Yes	\$ 12,000			NA	Yes	No
Goodfellow AFB Student Dormitory	Yes	28,400	\$ 2,700	\$2,800	Yes	Yes	Yes
Hulburt Field Child Development Center	Yes	11,000	679		Yes	Yes	No
Kessler AFB Dormitory	Yes	20,800	2,000	591	No	Yes	No
Lackland AFB Child Development Center	Yes	6,000		970	No	Yes	No
Moody AFB Child Development Center	Yes	11,400			Yes	Yes	Yes
Nellis AFB Child Development Center	Yes	13,400	3,813	1,627	Yes	Yes	No
<b>Total</b>	<b>7</b>	<b>\$ 103,000</b>	<b>\$ 9,192</b>	<b>\$5,988</b>	<b>2</b>	<b>7</b>	<b>5</b>

N/A- DD Form 1391 prepared by the U.S. Army Corps of Engineers therefore not reviewed

**Table 1. MILCON Project Planning Errors**



# Audit Results

## MILCON Planning (Cont'd)

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- **Examples**

- Goodfellow AFB TX: Overstated 200 room dormitory floor space requirements by \$2.7 million
- Hurlburt Field FL: AT/FP was 11.8 percent not 1 percent of the primary facility cost; overstated the cost by \$679,000
- Keesler AFB MS: Input error recorded AT/FP resulted in a cost estimate error of \$1,040,000
- Nellis AFB NV: Incorrect unit cost, overstated the primary facility cost by \$3.8 million



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# Audit Results

## MILCON Planning (Cont'd)

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- **Cause**

- AFI 32-1021 did not provide specific instructions on developing and maintaining documents to support adequate project accuracy and completeness
- MAJCOM CE programmers lacked procedures
  - Documenting and validating DD Forms 1391 scoping data
  - Requesting documentation to recalculate historical costing method line items
- No document used to track all required office reviews and approved projects



# Audit Results

## MILCON Planning (Cont'd)

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- Insufficient guidance (AFI 65-501 and AFMAN 32-1089) for completing EA or waiver. Did not identify :
  - Who should initiate, coordinate, and maintain
  - When initiated
  - What details are required for justification



# Audit Results 1

## MILCON Planning (Cont'd)

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- **Impact**

- Public can be assured Air Force civil engineers selected valid projects
- Project costs overstated by \$9.2 million
  - Overstated funds could be used for other valid Recovery Act MILCON projects
  - Eliminating overstatement results in potential monetary benefit
- Without proper documentation, Air Force could not support and justify \$5.9 million in Recovery Act MILCON requirements
- Air Force needs required environmental and economic detail to make informed construction decisions



# Audit Results

## MILCON Planning (Cont'd)

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**Recommendation 1.** AF/A4/7 should require the Civil Engineer :

- a. Revise scope and reduce remaining overstated costs totaling \$6.5 million\*
- b. Develop and maintain documentation for the \$5.9 million in unsupported construction costs
- c. Complete an economic analysis or obtain a waiver for the five MILCON projects

\*Installation level reports included recommendations to CE to reduce overstated costs totaling \$2.7 million



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# Audit Results

## MILCON Planning (Cont'd)

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- d. Update AFI 32-1021 and AFMAN 32-1089 with specific instructions on:
  - 1. Developing and maintaining documents to support project accuracy and completeness-- See Suggested Source Documentation (Sld. 31)
  - 2. MAJCOM CE programmers procedures
    - a) Documenting and validating DD Forms 1391 scoping data
    - b) Requesting documentation to recalculate Historical Costing method line items
- e. Develop a checklist stating all required offices reviewed and approved project



# Audit Results

## MILCON Planning (Cont'd)

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- **Management Comments.** AF/A4/7 concurred with the finding and recommendation and stated: “AF/A7C will:
  - a) “Direct the MAJCOMs to further review and correct costing data for the following projects: Goodfellow AFB Student Dormitory and Nellis AFB Child Development Center. Based on actual award amounts A7C has captured bid-savings and utilized them to fund an additional dormitory and child development center, AF/A7C has proactively taken action with the bid savings to fund much needed projects. Estimated Completion Date: 31 August 2010.

Potential Monetary Benefit: “Concur with intent. We agree a potential monetary benefit of \$6.5 million may occur. Policy was implemented to utilize actual bid savings in accordance with ARRA. Future revisions to AFI 32-1021 and AFMAN 32-1089 will improve programming document development.



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# Audit Results

## MILCON Planning (Cont'd)

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- b) “Direct the MAJCOMs to develop and maintain more comprehensive documentation for estimated construction costs that deviate from the OSD pricing guide for the following projects: Goodfellow AFB Student Dormitory, Keesler AFB Student Dormitory, Lackland AFB Child Development Center, and Nellis AFB Child Development Center. Estimated Completion Date: 31 August 2010.
  
- c) “Direct the MAJCOMs to provide updated economic analysis documentation, or appropriate waiver, for the following projects: Cannon AFB Child Development Center, Hurlburt AFB Child Development Center, Keesler AFB Student Dormitory, Lackland AFB Child Development Center, and Nellis AFB Child Development Center. Estimated Completion Date: 31 August 2010.



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# Audit Results

## MILCON Planning (Cont'd)

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- d) “Update AFI 32-1021 and AFMAN 32-1089 to ensure accuracy in MILCON programming, and improve MAJCOM programmer procedures. Due to the extended period of time required to revise/update AF Instructions and Manuals, an interim policy memo will be issued to the MAJCOMs implementing these recommendations.  
Estimated Completion Date (Policy Memo): 31 August 2010; (AFI and AFMAN revisions): 28 February 2011



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# Audit Results

## MILCON Planning (Cont'd)

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- e) “Develop a checklist to formalize review and validation of project documentation. In addition, guidance is provided to the MAJCOMs on documentation in the FY12 MILCON Program Objective Memorandum data call. The checklist will contain the following:

Installation:

Major Command:

Completion Date: Air Force IMT 813

Completion Date: Environmental Assessment (If applicable)

Completion Date: Environmental Impact Statement (If applicable)

Completion Date: Economic Analysis/Certificate of Exception (Circle one)

Completion Date: MAJCOM Review

MAJCOM Reviewer Printed name and date

Estimated Completion Date (Policy Memo): 31 August 2010”



# Audit Results

## MILCON Planning (Cont'd)

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**Recommendation 2.** AF/A4/7 should direct the Air Force Civil Engineer, in coordination with SAF/FMC to:

- a. Identify the office responsible for initiating, coordinating, and maintaining economic analysis and waivers at MAJCOM level
- b. Update both AFMAN 32-1089 and AFI 65-501 requiring economic analysis or a waiver to be requested prior to project programming



# Audit Results

## MILCON Planning (Cont'd)

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- **Management Comments.** AF/A4/7 concurred with the finding and recommendation and stated: “AF/A7C will coordinate with SAF/FMC to :
  - a) Identify the offices responsible or initiating, coordinating, and maintaining economic analysis and waivers at MAJCOM level. Estimated Completion Date: 31 August 2010



# Audit Results

## MILCON Planning (Cont'd)

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- b) “Update both AFMAN 32-1089 and AFI 65-501 requiring economic analysis or a waiver to be requested prior to project programming. Due to the extended period of time required to revise/update AF Instructions and Manuals, an interim policy memo will be issued to the MAJCOMs implementing these recommendations. Estimated Completion Date (Policy Memo): 1 January 2011; (AFI and AFMAN revisions): 28 February 2011”
- **Evaluation of Management Comments.** Management comments addressed the issues raised, and actions taken and planned are responsive. The potential monetary benefit was used as bid savings on new ARRA MILCON projects.



# Glossary of Terms and Acronyms

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A4/7	Chief of Staff for Logistics, Installations & Mission Support
AF Form 332	Air Force Form 332, <i>Base Civil Engineer Work Request</i>
AF Form 813	Air Force Form 813, <i>Request for Environmental Impact Analysis</i>
AFI 32-1021	Air Force Instruction 32-1021, <i>Planning and Programming Military Construction (MILCON) Projects</i> , 24 January 2003
AFH 32-1084	Air Force Handbook 32-1084, <i>Facility Requirements</i> , 1 September 1996
AFI 65-501	Air Force Instruction 65-501, <i>Economic Analysis</i> , 10 November 2004
AFMAN 32-1089	Air Force Manual 32-1089, <i>Air Force Military Construction and Family Housing Economic Analysis Guide</i> , 1 August 1996
ANG	Air National Guard
ARRA	American Recovery and Reinvestment Act of 2009
AT/FP	Antiterrorism Force Protection
BRAC	Base Realignment and Closure
CATEX	Categorical Exclusion
CE	Civil Engineer
DD Form 1391	Department of Defense Form 1391, <i>Military Construction Project Data</i>
DoDIG	Department of Defense Inspector General
EA	Economic Analysis
EA	Environmental Analysis
FAR	Federal Acquisition Regulation



# Glossary of Terms and Acronyms (Cont'd)

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Term	Glossary of Terms
FONPA	Finding of No Practical Alternative
FONSI	Finding of No Significant Impact
GAGAS	Generally Accepted Government Auditing Standards
LEED	Leadership in Energy and Environmental Design
MAJCOM	Major Command
MILCON	Military Construction
OSD	Office of Secretary of Defense
ROD	Record of Decision
SAF/FMC	Secretary of the Air Force for Cost and Economics
UFC	Unified Facilities Criteria



# Suggested Source Documents

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Item	Sources of Information	Documents to Maintain Along with DD Form 1391c
Scope/Quantity	Real Property Records	Applicable page(s) that list quantity used.
Scope/Quantity	Measurements	Actual measured area and the amount measured for each primary facility and any Add/Alter projects. Retain AFH 32-1084 pages used to compute scope. If calculation not identified in AFH 32-1084, specifically record how space was determined.
Scope/Quantity	If scope/quantity is not applicable for specialty projects such as utility substations, flightline fillstands, etc.	Reference Site Action Task Force Trip Report Title and all applicable pages. If other organizations developed estimates for CE, request data organizational personnel computed.
Antiterrorism Force Protection	If greater than 1 percent	Develop detailed cost estimate that identifies and explains the extra cost. Show all calculations if any.
Leadership in Energy and Environmental Design	If greater than 2 percent	Develop detailed cost estimate that identifies and explains the extra cost. Show all calculations if any.



# Suggested Source Documents (Cont'd)

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Item	Sources of Information	Documents to Maintain Along with DD Form 1391c
Site Improvements	Identify the sources used to determine the amount of site improvement costs such as UFC 3-701-07/08 etc.	Retain copies of all pages used to calculate amounts. Retain cover page of documents to show publication year and date, if not indicated on the page(s) retained. Show all calculations if any.
Pavements	Identify the sources used to determine the amount of pavement costs, such as the Historical Air Force Construction Cost Handbook or other source.	Retain copies of all pages used to calculate amounts. Retain cover page of documents to show year of publication if not indicated on the page(s) retained. Show all calculations if any.
Communication cost/support	Obtain communications estimate from the Communication Squadron and any applicable Engineering Technical Letters .	Retain a copy of this estimate to support amount recorded on DD Form 1391.
Other costs	Identify the sources used for any other costs identified on the DD Form 1391, not specifically listed above.	Develop detailed cost estimate that identifies and explains the extra cost. Show all calculations if any.
Equipment from Other Appropriations	Identify the sources used for any other costs identified on the DD Form 1391, not specifically listed above.	Develop detailed cost estimate that identifies and explains the extra cost. Show all calculations if any.



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# Audit Scope and Prior Audit Coverage

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- **Audit Coverage**

- Performed audit at 7 locations
- Accomplished fieldwork 28 July through 3 September 2009
- Reviewed documentation from July 2000 through August 2009
- Issued draft report (slide presentation) in December 2009



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# Audit Scope and Prior Audit Coverage (Cont'd)

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- **Work Performed**

- **Validity**

- Reviewed DD Forms 1391 and other available documentation
- Determined potential conflict with BRAC actions
- Discussed project selection criteria with installation personnel



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# Audit Scope and Prior Audit Coverage (Cont'd)

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- Cost Estimates
  - Accurate category code IAW AFH 32-1084
  - Applied all criteria available from AFH 32-1084 and any other documentation to validate scope
  - Calculated AT/FP at mandated 1 percent - unless otherwise justified
  - Calculated LEED at mandated 2 percent - unless otherwise justified
  - Reviewed documents - identifying utility, pavement, and site improvement cost development
  - Reviewed communications estimate provided by communications squadron



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# Audit Scope and Prior Audit Coverage (cont'd)

- Environmental Analysis
  - Reviewed AF Form 813 and Air Force Form 332s
  - Determined if EA result in -- CATEX, FONSI, FONPA or ROD
- Economic Analysis
  - Reviewed EA or waivers documents for sufficiency
  - Determined if all required organizations coordinated on Certificates of Exception
- FAR Clauses
  - Reviewed solicitations and contracts for each applicable FAR clause
  - Discussed issues with Contracting personnel



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# Audit Scope and Prior Audit Coverage (Cont'd)

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- **Sampling Methodology**
  - Selected 7 locations
    - Five locations requested by DoDIG--predictive analysis using critical risk factors
    - Two locations with projects for 100 percent Recovery Act MILCON project coverage



# Audit Scope and Prior Audit Coverage (Cont'd)

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- **Computer Assisted Auditing Tools and Techniques** Excel spreadsheets to re-calculate cost estimates
  - COUNTIF, and SUM functions
  - IF/THEN mathematical formulas --project overstatements/ determine potential monetary benefit
- **Data Reliability** Did not use or rely on computer generated data to support audit conclusions



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# Audit Scope and Prior Audit Coverage (Cont'd)

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- **Auditing Standards**
  - Accomplished audit work in accordance with GAGAS
  - Included tests of management controls over:
    - Documentation of transactions
    - Document retention
    - Management oversight



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# Audit Scope and Prior Audit Coverage (Cont'd)

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- **Prior Audit Coverage** We did not identify any reports issued within past 5 years with same objectives as those addressed in this report
  - Air Force Audit Agency
  - DoD Inspector General
  - Government Accountability Office



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# Locations Audited/ Reports Issued

Organization/Location	Installation Level Reports Issued
<u>Air Combat Command</u>	
23d Wing ** Moody AFB GA	F2010-0009-FCR000 17 September 2009
99th Air Base Wing ** Nellis AFB NV	F2010-0007-FBS000 29 October 2009
<u>Air Education and Training Command</u>	
17th Training Wing ** Goodfellow AFB TX	F2010-0003-FBS000 5 October 2009
37th Training Wing Lackland AFB TX	F2010-0011-FDS000 2 November 2009
81st Training Wing Keesler AFB MS	F2010-0028-FDD000 15 January 2010
<u>Air Force Special Operations Command</u>	
1st Special Operations Wing ** Hurlburt Field FL	F2010-0007-FDD000 22 October 2009
27 Special Operations Wing ** Cannon AFB NM	F2009-0076-FBS000 17 September 2009
** Directed by DoDIG	



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# Points Of Contact

Engineering and Environment Division (AFAA-SPE)  
Support and Personnel Audits Directorate  
2509 Kennedy Circle  
Brooks City-Base TX 78235-5116

Robert F. Burks, Associate Director

Davina Lock, Program Manager

Euthena Sensley, Audit Manager

We accomplished this audit under project number F2009-FD1000-0655.000.



# Final Report Distribution

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