

BULK FUEL STORAGE REQUIREMENTS FOR MAINTENANCE, REPAIR, AND ENVIRONMENTAL PROJECTS AT FORT HOOD, TEXAS

Report No. D-2001-006

October 23, 2000

Office of the Inspector General Department of Defense

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Acronyms

APC	Army Petroleum Center
DESC	Defense Energy Support Center
DLA	Defense Logistics Agency
DPW	Department of Public Works
FORSCOM	U.S. Forces Command
HAARRP	Hood Army Airfield Rapid Refuel Point
JP8	Jet Petroleum 8
MILCON	Military Construction
MACOM	Major Army Command
MR&E	Maintenance, Repair, and Environmental
POS	Peacetime Operating Stock
RGARRP	Robert Gray Army Airfield Rapid Refuel Point



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

October 23, 2000

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental Projects at Fort Hood, Texas (Report No. D-2001-006)

We are providing this report for information and use. This report is one in a series about infrastructure requirements for bulk fuel storage and delivery systems. We considered management comments on a draft of this report when preparing the final report. Management comments conformed to the requirements of DoD Directive 7650.3.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Ms. Deborah L. Carros at (703) 604-9217 (DSN 664-9217) or Mr. Wayne K. Million at (703) 604-9312 (DSN 664-9312). See Appendix E for the report distribution. Audit team members are listed inside the back cover.

Robert J. Lieberman Assistant Inspector General for Auditing

Office of the Inspector General, DoD

Report No. D-2001-006

October 23, 2000

Project No. D1999CG-0088.001

Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental Projects at Fort Hood, Texas

Executive Summary

Introduction. This report is one in a series that addresses the accuracy and reliability of maintenance, repair, environmental, and construction requirements for bulk fuel storage and delivery systems infrastructure.

The Defense Logistics Agency is responsible for DoD fuel inventory management, including fuel procurement and sales, and environmental oversight. The Defense Logistics Agency funds fuel-related infrastructure requirements from two different funding sources. Maintenance and repair projects are funded through the Defense Working Capital Fund - - a revolving fund that is continually replenished by a surcharge added to the sale price of fuel. Renovations and major construction projects are funded from the Defense Logistics Agency military construction appropriations.

The Military Departments are responsible for the operations of the petroleum facilities under their cognizance. The Military Departments are also responsible for reviewing, validating, and prioritizing maintenance, repair, and environmental projects in accordance with DoD guidance before submitting the projects to Defense Logistics Agency for review and funding. Although the Military Departments are not prohibited from funding fuel-related infrastructure requirements, senior Army management has recognized and emphasized the importance of implementing review and validation procedures to maximize use of available Defense Logistics Agency funds so that Army operations and maintenance funds can be put to better use.

Objectives. Our overall objective was to evaluate the accuracy and reliability of DoD maintenance, repair, environmental, and construction requirements for bulk fuel storage and delivery systems infrastructure. Specifically, we evaluated requirements for replacing six bulk fuel storage tanks located at Fort Hood, Texas. We also reviewed the adequacy of the management control program as it applied to the audit objective.

Results. The Army funded six bulk fuel storage maintenance, repair, and environmental projects at Fort Hood for FY 1998 that were not supported by valid project requirements. As a result, the Army spent \$3.24 million to replace bulk fuel storage tanks that were not justified by fuel inventory requirements. Unless the Army improves the requirements review and validation process, additional funds could be used on nonessential or unnecessary projects in the future. In addition, the Defense Energy Support Center plans to outsource the operations and maintenance of the Fort Hood fixed-fuel facilities, to include facilities that are not justified by fuel inventory requirements and that are not used for issuing and receiving fuel.

Summary of Recommendations. We recommend that Garrison Commander, Fort Hood, and the Commander, U.S. Forces Command, establish procedures to review and

validate bulk fuel storage project requirements in accordance with DoD and Army guidance. We also recommend that the Director, Defense Energy Supply Center, require that the Army Petroleum Center review all fuel-related maintenance, repair, and environmental project requirements before the projects are approved for funding.

Management Comments. The Garrison Commander, Fort Hood concurred with the recommendation and stated that he would issue a memorandum by October 30, 2000, reemphasizing that future Fort Hood military construction projects will comply with AR 420-10. The Deputy Chief of Staff for Logistics, U.S. Forces Command concurred with the recommendations and stated that his office will issue guidance directing the coordination of all MR&E and military construction projects through his office. The Defense Energy Support Center partially concurred with the recommendation stating that procedures are being reemphasized. Additionally, the Defense Energy Support Center is establishing an automated project submission process using the Defense Fuels Web that will electronically submit Army projects to the Army Petroleum Center for validation, approval, and prioritization before DESC review and approval. A discussion of the management comments is in the Finding section of the report, and the complete text is in the Management Comments section.

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Introduction

This report is one in a series being issued by the Inspector General, DoD, on DoD maintenance, repair, and environmental (MR&E) and military construction (MILCON) requirements for bulk fuel storage and delivery systems infrastructure (storage tanks, pipelines, dispensing facilities, hydrants, etc.). The Defense Logistics Agency (DLA) Defense Energy Support Center (DESC) is responsible for budgeting and funding MR&E and MILCON for DoD fuel terminals worldwide.

Background

The DLA is responsible for DoD fuel inventory management including fuel procurement and sales and environmental oversight. The DLA funds fuel-related infrastructure requirements from two different funding sources. Maintenance and repair projects are funded through the Defense Working Capital Fund - - a revolving fund that is continually replenished by a surcharge added by DLA to the sale price of fuel. Renovations and major construction projects are funded from the DLA MILCON appropriations.

The Military Departments are responsible for the operation of petroleum facilities under their cognizance. The Military Departments also review, validate, and prioritize maintenance, repair and environmental projects in accordance with DoD guidance before submitting the projects to DLA for review and funding. Although the Military Departments are not prohibited from funding fuel-related infrastructure requirements, senior Army management has recognized and emphasized the importance of implementing review and validation procedures to maximize the use of available DLA funds so that Army operations and maintenance funds can be put to better use.

Army Petroleum Center Procedures for Petroleum Facility Project Management. The Army Petroleum Center (APC) documented Army procedures for implementing effective petroleum facility project management in an October 1996 electronic message to the U.S. Forces Command (FORSCOM) and others. The message stated that each Army installation primary logistics point of contact will ensure that facility MR&E documentation is submitted through the major Army command (MACOM) logistics focal point to help ensure the accuracy and validity of data submissions. The message also stated that the MACOM logistics focal point will coordinate the preparation of a command MR&E project prioritization list and submit all data to APC in a timely manner.

Objectives

Our overall objective was to evaluate the accuracy and reliability of DoD MR&E and construction requirements for bulk fuel storage and delivery systems

infrastructure. Specifically, we evaluated requirements for replacing six bulk fuel storage tanks located at Fort Hood, Texas. We also reviewed the adequacy of the management control program as it applied to the audit objective. See Appendix A for a discussion of the audit scope and methodology and the review of the management control program.

Excess Bulk Fuel Storage Infrastructure

The Army funded six bulk fuel storage MR&E projects at Fort Hood in FY 1998 that were not supported by valid requirements. Those projects were not supported because installation senior management, the major Army command, and the Army Petroleum Center did not adequately review, validate, prioritize, or implement fuel-related MR&E project requirements in accordance with DoD and Army guidance. As a result, the Army spent \$3.24 million to replace bulk fuel storage tanks that were not justified by fuel inventory requirements. Unless the Army improves the requirements review and validation process, additional funds could be used on nonessential or unnecessary projects in the future. In addition, DESC plans to outsource the operations and maintenance of the Fort Hood fixed-fuel facilities, to include facilities that are not justified by fuel inventory requirements.

Policy Guidance

DoD guidance prescribes policy for bulk fuel storage and delivery systems infrastructure. The guidance also documents the processes and assigns responsibilities for managing the infrastructure. Army policies and procedures implement the DoD guidance, and Army regulations on inventory management supply policy assign responsibilities for bulk fuel and related infrastructure. See Appendix B for details on specific DoD and Army guidance for managing bulk fuel storage MR&E projects.

Fort Hood Bulk Fuel Storage Facilities

Fort Hood is a 340-square mile training, mobilization, and deployment installation that operated and maintained four separate fuel facilities with a combined total storage capacity of 2.89 million gallons of jet petroleum 8 (JP8) fuel and motor gasoline until FY 1998. The fuel facilities included the following locations.

- West Fort Hood Tank Farm provided all retail and bulk fuel refueling to tactical wheeled vehicles as well as support to Reserve and National Guard units that train on the installation. This facility consisted of one 200,000-gallon and two 600,000-gallon above ground storage tanks for JP8 fuel, and one 200,000-gallon above ground storage tank for motor gasoline.
- Robert Gray Army Airfield Alert Services provided support to fixedwing aircraft and consisted of two 500,000-gallon above ground storage tanks for JP8 fuel, four bulk receiving points, four issue points, and seven hydrant points on the airfield service ramp.

- Robert Gray Army Airfield Rapid Refuel Point (RGARRP) provided refueling support to rotary-wing aircraft for the First Calvary Division and supporting units. The facility consisted of three 47,661-gallon JP8 fuel underground storage tanks.
- Hood Army Airfield Rapid Refuel Point (HAARRP) provided refuel support to rotary-wing aircraft for the 4th Infantry Division and supporting units. The facility consisted of three 47,661-gallon JP8 fuel underground storage tanks.

Bulk Fuel Storage Requirements. The DESC documented Fort Hood authorized peacetime operating stock (POS) fuel levels in the annual Inventory Management Plan based on actual prior year fuel usage in accordance with DoD 4140.25-M. Fort Hood maintained an authorized POS fuel inventory level of 268,002 gallons of JP8 fuel for FY 1997. Fort Hood maintained JP8 bulk fuel storage capacity, however, for more than 2.69 million gallons.¹

Table 1. FY 1997 Bu	lk Fuel Inventory Require Capacity (gallons)	ements Versus Storage
Type of Fuel	Authorized POS Fuel Inventory	Bulk Fuel Storage Capacity
JP8	268,002	2,685,966
Motor gasoline	0	200,000
Total	268,002	2,885,966

Bulk Fuel Storage Environmental Deficiencies. In 1995, Fort Hood management personnel determined that existing bulk fuel storage facilities at two rapid refuel facilities did not meet the environmental requirements outlined in Title 40 of the Code of Federal Regulations, part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks" (Title 40). Title 40 requires that noncompliant underground storage tanks be corrected to address the environmental concerns no later than December 22, 1998. Fort Hood personnel stated that the underground storage tanks could not be upgraded because they were constructed of single-wall fiberglass. Therefore, Fort Hood personnel initiated MR&E projects to remove and replace the existing tanks.

¹Fort Hood maintained 2.42 (2,686,000 – 268,000 = 2,418,000 = 2.42) million gallons of JP8 fuel storage capacity more than was necessary to support its POS fuel inventory requirements. According to Fort Hood personnel, excess storage capacity had increased over the years because of constant reductions in fuel inventory requirements that resulted from downsizing and other issues. In addition, DESC and APC personnel stated that fuel storage tanks not in use cost as much, or more, to maintain than storage tanks that regularly receive and issue fuel. Furthermore, the West Fort Hood Tank Farm had more than sufficient capacity to store the maximum fuel inventory requirements for Fort Hood, but we recognize that fuel must be positioned at other refueling points on the installation to meet mission requirements. As a result, the report does not refer to the 2.42 million-gallon variance as excess capacity and does not recommend closing storage tanks unsupported by current fuel requirements.

Bulk Fuel Tank Replacement Efforts

The Army funded six bulk fuel storage MR&E projects at Fort Hood that were not supported by valid project requirements. Although Fort Hood personnel initiated MR&E projects to remove six storage tanks that were not compliant with statutory environmental requirements, they subsequently included the installation of five new tanks.

Fort Hood personnel submitted documentation for six MR&E projects to DESC in June 1997 in response to the FY 1998 MR&E project data call. The scope of the projects required the replacement of six 47,661-gallon underground storage tanks with five 50,000-gallon above ground storage tanks at the two rapid refuel facilities. Three new tanks were to be installed at the HAARRP facility and two were to be installed at the RGARRP facility. The projects had an estimated total cost of \$2.6 million and were completed in December 1998 for a total cost of \$3.24 million. The new projects only affected the JP8 fuel storage capacity at the two rapid refuel facilities. Fort Hood personnel did not validate the requirement for the storage capacity provided by the new tanks.

DoD Directive 4140.25M states that the maximum authorized fuel inventory level equals the sum of the POS and bulk petroleum war reserve stock requirements documented in the Inventory Management Plan.² The Inventory Management Plan documented the 1998 Fort Hood POS as 412,818 gallons of JP8 fuel. The DESC, Fort Hood, and APC personnel were unable to identify the 1998 POS by fuel facility at Fort Hood. Therefore, we calculated the portion of the 1998 POS that should have been attributed to the two rapid refuel facilities at Fort Hood based on the ratios used in the 1998 Fort Hood request for additional POS. The results (shown in Appendix C) indicated the 1998 POS attributed to the two rapid refuel facilities should have been 60,584 gallons of JP8 fuel; therefore, a storage capacity of five 50,000-gallon tanks, or 250,000 gallons, was not justified.

Tal	ole 2. JP8 Fuel Stora POS A	ge Tank Capacity Cor Authorization	mpared to
Sites	Capacity Before MR&E Projects	Capacity After MR&E Projects	1998 POS Authorization
HAARRP	142,983	150,000	31,374
RGARRP	<u>142,983</u>	100,000	<u>29,310</u>
Total	285,966	250,000	60,584

Fort Hood personnel stated that all of the new storage tanks contained fuel, but some of the tanks were routinely filled to only 10 percent of capacity. In an April 1998 memorandum from Fort Hood to APC requesting an increase in POS inventory, Fort Hood questioned the maintenance effect on the existing storage

²Although Fort Hood stored JP8 fuel in support of a war reserve requirement, we omitted any discussion of the war reserve requirement because of its classified nature and because that requirement was insignificant to the overall bulk fuel storage capacity.

tanks of routinely storing only 10 percent of their maximum fuel capacity. The memorandum also states that the storage capacity provided by the new storage tanks might be considered excessive, based on recommended POS figures. DoD 4140.25-M states that prior year actual fuel usage dictates POS fuel inventory requirements, and fuel storage infrastructure must support those requirements. Fort Hood personnel, however, constructed the fuel storage tanks and then used the available capacity as a justification for requesting additional fuel.

Army Bulk Fuel MR&E Requirements Validation Process

Installation senior management, the major Army command, and the Army Petroleum Center did not adequately review, validate, prioritize, or implement fuel-related MR&E project requirements in accordance with DoD and Army guidance.

Installation Project Review. Fort Hood Department of Public Works (DPW) personnel did not adequately coordinate approval of the MR&E projects. Fort Hood logistics personnel did not adequately project or coordinate future requirements for the petroleum, oil, and lubricants storage facilities. Fort Hood personnel stated that although DPW and the 13th Corps Support Command reviewed the project documentation, no one validated the requirements for fuel storage capacity at the rapid refuel locations. Fort Hood logistics personnel also stated that they have no role in MR&E project development, review, or validation.

Directorate of Public Works. The Director, DPW must comply with the requirements of AR 420-10 and coordinate the approval of installation MR&E projects. Fort Hood DPW personnel stated that they prepared the project documentation (DD Form 1391) and validated the technical requirements from an engineering perspective. The DPW personnel further stated that they did not validate the need for the storage tanks based on the POS fuel inventory storage capacity requirements in the Inventory Management Plan. The DPW personnel stated it was their understanding that logistics or the 13th Corps Support Command personnel were responsible for validating those requirements.

The 13th Corps Support Command. The 13th Corps Support Command had oversight responsibility for the fixed-facility mobility fuel operations. The 13th Corps Support Command personnel stated that although they worked with DPW on the MR&E project submissions to replace the storage tanks, they did not validate the need for the storage tanks based on the POS fuel inventory storage capacity requirements authorized in the Inventory Management Plan. The 13th Corps Support Command personnel stated that they believed DPW personnel were responsible for validating operational requirements. **Directorate of Logistics.** The Department of the Army, Headquarters, III Corps and Fort Hood Regulation 703-2, "Petroleum Management Operations and Procedures," April 1, 1998 (FH Reg 703-2), states that the Directorate of Logistics is responsible for projecting and coordinating future requirements for fuel facilities. The directorate is also responsible for planning and programming construction and maintenance requirements. APC procedures require that the installation logistics point of contact coordinate facility MR&E documentation with the MACOM logistics focal point. The Fort Hood Directorate of Logistics, however, had not designated an installation logistics point of contact and had no role in MR&E project development, review or validation. The Directorate of Logistics personnel did not know who had responsibility for project review or validation.

MACOM Project Review and Validation. FORSCOM personnel did not adequately implement Army procedures to validate the accuracy of data submissions. The FORSCOM logistics focal point did not effectively coordinate information on the MR&E project prioritization list or submit the data to APC in a timely manner. The FORSCOM engineering personnel reviewed the project documentation (DD Form 1391) for completeness and accuracy and performed an engineering review of the technical requirements. The FORSCOM engineering personnel approved the new bulk fuel storage projects, but did not validate the need for the storage tanks based on the POS fuel inventory requirement authorized in the Inventory Management Plan.

FORSCOM Responsiveness to Annual MR&E Data Call. FORSCOM logistics personnel acknowledged that Army installations were required to submit MR&E project documentation to the MACOM for validation and prioritization. FORSCOM also acknowledged that the MACOM was responsible for forwarding the projects to APC for review and DESC for funding. The logistics personnel stated, however, that FORSCOM installations did not routinely respond to the annual data call for MR&E project submissions and regularly submitted documentation directly to DESC instead of to FORSCOM headquarters. The logistics personnel illustrated the point by stating that the FORSCOM logistics directorate received one negative response to the January 2000 MR&E project data call. FORSCOM logistics and engineering managers stated that they could not confirm knowledge of all existing FORSCOM MR&E projects and, therefore, could not effectively prioritize MACOM projects for APC. The logistics personnel stated that the problem was a manpower issue and that MR&E project validation responsibilities were being transitioned to the engineers.

APC Recommendations to FORSCOM. A memorandum from APC to the Deputy Chief of Staff for Logistics and Readiness, FORSCOM, dated December 16, 1997, outlines the inadequacies of Army MR&E and MILCON fuel-related project submissions to APC. The memorandum cites the lack of installation and MACOM engineering involvement throughout the project development process, submission of poorly documented projects, and requests for fuel storage in excess of authorized fuel stockage levels. **FORSCOM Personnel Recognized Process Inadequacies.** The Office of the Deputy Chief of Staff for Logistics, FORSCOM, provided briefing charts that documented Army MILCON and MR&E process inadequacies and recommendations to address the inadequacies. The briefing charts showed that the key problem was that FORSCOM did not have a focal point for managing fuelrelated MR&E and MILCON programs. The briefing charts documented that FORSCOM installations were not submitting funding requirements or project submissions by suspense dates, or coordinating with DESC. FORSCOM personnel stated that they had not implemented the recommendations because of manpower shortages.

Army Petroleum Center Project Review and Prioritization. The Army did not adequately implement the requirements in accordance with DoD and Army guidance to ensure that the service control point reviewed and validated fuel-related projects and developed a consolidated project priority list. The guidance states that APC is the service control point for the Army and is designated to manage and coordinate requirements and technical issues with the military units and DESC. Army Regulation 710-2 requires that APC review all plans for new construction, modifications, or upgrades of petroleum facilities.

MR&E Projects Funded Without APC Review. FORSCOM personnel did not submit the MR&E projects to APC for review until June 1997. The APC personnel stated they did not review the documentation because it was received too late in the MR&E cycle to be considered for 1998 funding. See Appendix D for the annual MR&E project cycle. The APC personnel stated that they expected to see the projects resubmitted for 1999 funding, but learned when the projects were listed in the DESC MR&E project database, that the Fort Hood projects were already funded.

The Fort Hood Fuel Facility Assessment. The APC and DESC performed an assessment of the fuel facilities at Fort Hood in June 1998. The assessment determined that the Fort Hood mobility fuel infrastructure was relatively modern and did not require replacement. The assessment also concluded that:

- transaction histories and POS authorizations for the rapid refuel facilities indicated that one contractor-operated rapid refuel facility would provide economic day-to-day mission support; and
- the second rapid refuel facility should be mothballed, but made available for contingency operations, as required. This option would save an estimated \$2.4 million over a 20-year contract period.

The assessment stated that the HAARRP storage capacity of 150,000 gallons provided adequate space for rapid refuel operations. The assessment recommended that Fort Hood develop a contingency plan to open the RGARRP facility to support increased activity, as required.

MR&E Projects Funded by the Army

Although DLA DESC had responsibility for funding facilities that store and distribute aviation fuel, the Army did not effectively use the DESC funding because Fort Hood personnel did not adequately implement Army policies to manage the MR&E projects. Fort Hood personnel did not submit timely documentation requesting MR&E funding from DESC in accordance with their guidance. In July 1995, Fort Hood personnel initiated work requests to design and construct above ground systems and to remove existing underground tanks after construction wacomplete. However, original MR&E project documentation was not submitted to FORSCOM and DESC until June 1997. Fort Hood personnel stated that they funded the projects with Army operations and maintenance funds because of the time-sensitive environmental requirement and expected DESC reimbursement after project approval. DESC funded the projects in December 1997. Army legal counsel advised return of the funds to DESC because restrictions limited the use of the funds to specific projects and not for Army operations and maintenance fund store and maintenance fund reimbursement.

DESC Approved MR&E Funding Without APC Approval. DESC did not ensure that APC reviewed the projects prior to approval and funded the projects in December 1997. DoD Directive 4140.25M requires that the service control point review and approve all fuel-related MR&E projects funded by DESC. DESC personnel stated that they have neither the visibility nor the responsibility to validate mission requirements and they rely on the Services to validate those requirements.

As the Army service control point for petroleum facilities, APC should review all Army fuel-related MR&E projects. The APC project reviews are critical to MR&E project validation and project prioritization. In addition, projects not submitted for APC review cannot be prioritized by the APC to ensure that the highest priority Army projects are recommended for funding approval.

Bulk Fuel Storage Operations and Maintenance Costs

The Army must fund the operations and maintenance of bulk fuel storage tanks that do not support fuel inventory requirements because the Army did not adequately implement DoD and Army guidance for reviewing and validating fuel-related MR&E project requirements.

The APC personnel stated that maintenance of fuel storage tanks that are not in use costs as much as, or more than, maintenance of storage tanks that regularly receive and issue fuel. Therefore, the Army must fund the operations and maintenance of bulk fuel storage tanks that are unnecessary to meet fuel inventory requirements. As of June 2000, Fort Hood personnel initiated action to establish a DESC service contract to outsource fixed-fuel operations. The June 1998 Fort Hood Fuel Facility Assessment recommended outsourcing the fixed-fuel operations with the exception of one rapid refuel point, as noted above. The DESC personnel stated that although the performance work statement assigns contractor responsibility to all four facilities, the contractor is only required to perform preventative maintenance and ensure that the rapid refuel points are ready for service. The DESC personnel stated that requirements will determine which rapid refuel facility is used and how often it is used. The DESC personnel also stated that the contract could be amended to exclude one of the rapid refuel facilities, but that would precipitate closing the facility which is very costly. The DESC personnel added that the costs associated with maintaining both rapid refuel facilities are minimal with little impact on total contract costs.

Conclusion

The Army completed the new fuel storage tank MR&E projects in December 1998. The requirement for five new tanks was not valid, but the Army must continue to operate and maintain the tanks. With APC and DESC support, the Army opted to outsource tank operations and maintenance through a DESC service contract. Although it is too late to remedy the FY 1998 investment, the Army must improve their processes to avoid future problems.

Recommendations and Management Comments

1. We recommend that the Garrison Commander, Fort Hood, establish procedures to coordinate approval of maintenance, repair, and environmental projects that ensure compliance with DoD 4140.25-M and Army Regulation 420-10.

Management Comments. The Garrison Commander, Fort Hood, concurred and stated that he would issue a memorandum by October 30, 2000, reemphasizing that future Fort Hood military construction projects will comply with AR 420-10.

2. We recommend that the Commander, U.S. Forces Command, establish procedures to:

a. Implement Army Petroleum Center guidelines for managing maintenance, repair, and environmental projects that include:

• Army Petroleum Center policy that requires the major Army commands to respond to maintenance, repair, and environmental project data calls. • The recommendations from Army Petroleum Center to the Deputy Chief of Staff for Logistics and Readiness, U.S. Forces Command, dated December 16, 1997, that cite the lack of installation and major Army command engineering involvement throughout the project development process, submission of poorly documented projects, and requests for fuel storage in excess of authorized fuel levels.

b. Resolve the internally identified maintenance, repair, and environmental process inadequacies documented by the Office of the Deputy Chief of Staff for Logistics, U.S. Forces Command.

Management Comments. The Deputy Chief of Staff for Logistics, U.S. Forces Command, concurred and stated that his office will issue guidance directing the coordination of all MR&E and military construction projects through his office. Additionally, U.S. Forces Command is coordinating with the Army Petroleum Center and the Defense Energy Support Center to ensure that U.S. Forces Command approves and prioritizes all projects submitted by U.S. Forces Command installations before any action by either APC or DESC. All actions should be complete by October 30, 2000.

3. We recommend that the Director, Defense Energy Support Center modify existing policies and procedures to require Army Petroleum Center approval of bulk fuel storage maintenance, repair, and environmental projects before the projects are approved for funding.

Management Comments. The Defense Energy Support Center partially concurred with the recommendation, stating that procedures already require Army Petroleum Center approval of bulk fuel storage maintenance, repair, and environmental projects, but that the Fort Hood project was overlooked. However, the procedures are being reemphasized. Additionally, the Defense Energy Support Center is establishing an automated MR&E project submission process using the Defense Fuels Web. All Army MR&E projects will be electronically submitted to the Army Petroleum Center for validation, approval, and prioritization before any DESC review and approval.

Appendix A. Audit Process

Scope

Work Performed. We reviewed DoD and Army guidance for validating bulk fuel storage infrastructure project requirements and conducted on-site visits to determine whether the guidance was adequately implemented. We reviewed the policies and procedures that Army personnel used to review and validate maintenance, repair, and environmental requirements for removal and replacement of fuel storage tanks at Fort Hood, Texas. We reviewed cost data associated with operating and maintaining the Fort Hood fixed-fuel facilities. However, we were unable to determine the potential monetary savings from outsourcing the operations and maintenance of only one rapid refuel facility because the cost data was not separated by facility. We also reviewed the fuel consumption reports at Fort Hood from January 1998 to December 1999.

DoD-Wide Corporate Level Government Performance and Results Act Coverage. In response to the Government Performance and Results Act, the Department of Defense annually establishes DoD-wide corporate level goals, subordinate performance goals, and performance measures. This report pertains to achievement of the following goal, subordinate performance goal, and performance measure:

FY 2000 DoD Corporate Level Goal: Prepare now for an uncertain future by pursuing a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities. Transform the force by exploiting the Revolution in Military Affairs, and reengineer the Department to achieve a 21st century infrastructure. (00-DoD-2) FY 2000 Subordinate Performance Goal 2.3: Streamline the DoD infrastructure by redesigning the Department's support structure and pursuing business practice reforms. (00-DoD-2.3) FY 2000 Performance Measure 2.3.1: Percentage of the DoD Budget Spent on Infrastructure. (00-DoD-2.3.1)

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Defense Infrastructure high-risk area.

Methodology

Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

Audit Type, Dates, and Standards. We performed this economy and efficiency audit from August 1999 through June 2000 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

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

Management Control Program

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of the Management Control Program. We reviewed the adequacy of Army management controls over bulk fuel storage MR&E projects. Specifically, we reviewed management controls over the review and validation process for bulk fuel storage MR&E project requirements. We reviewed management's self-evaluation applicable to those controls.

Adequacy of Management Controls. We identified a material management control weakness for the Army as defined by DoD Instruction 5010.40. Army management controls for MR&E projects were not adequate to ensure that bulk fuel storage MR&E project requirements were adequately reviewed and validated. Recommendations 1, 2, and 3, if implemented, will establish controls within Army procedures to ensure bulk fuel storage MR&E project requirements are adequately reviewed and validated. A copy of the report will be provided to the senior official responsible for management controls in the Department of the Army.

Adequacy of Management's Self-Evaluation. Army officials did not identify bulk fuel storage MR&E projects as an assessable unit and, therefore, did not identify or report the material management control weaknesses identified by the audit.

Prior Coverage

Inspector General, DoD, Report No. D-2000-164, "Bulk Fuel Storage and Delivery Systems Infrastructure Requirements for Yakima Training Center, Washington," July 20, 2000.

Inspector General, DoD, Report No. D-2001-003, "Bulk Fuel Storage and Delivery Systems Infrastructure Requirements for Japan," October 12, 2000.

Appendix B. DoD and Army Guidance for Managing Bulk Fuel Storage MR&E Projects

DoD Guidance

DoD Directive 4140.25, "DoD Management Policy for Energy Commodities and Related Services," April 20, 1999. DoD Directive 4140.25 prescribes DoD policy for energy and related programs (that is, petroleum, natural gas, coal, propellants, and others). The directive requires that programs support DoD peacetime and wartime missions and permit successful and efficient deployment and employment of forces. DoD Components are also directed to minimize inventories consistent with peacetime and contingency needs.

DoD Responsibilities. The directive designates the Deputy Under Secretary of Defense (Logistics) as the DoD central administrator for energy policy and overall management responsibility for petroleum. The directive designates the Deputy Under Secretary of Defense (Installations) as the DoD central manager for energy policy on installations.

Defense Logistics Agency Responsibilities. The Director, DLA is responsible for planning, programming, and budgeting for facility maintenance and repair; environmental compliance of petroleum storage and distribution facilities; and construction of new permanent storage and distribution facilities. In addition, DLA is required to coordinate these functions with the Services and Combatant Commanders.

Military Departments Responsibilities. The Secretaries of the Military Departments are responsible for the operations of petroleum facilities under their cognizance.

DoD 4140.25-M, "DoD Management of Bulk Petroleum Products, Natural Gas, and Oil," June 22, 1994. DoD 4140.25-M (the Manual) implements DoD Directive 4140.25 and prescribes policy guidance, supply operating procedures and reporting instructions, and assigns functional responsibilities for the integrated management of bulk petroleum products and associated bulk storage facilities. Each Service also establishes and designates a service control point as the central management function to coordinate requirements and technical issues with the military units and the DESC.

MILCON and MR&E Project Review and Validation. The Combatant Command Joint Petroleum Office and the service control points are responsible for MILCON and MR&E project review and validation, as well as developing consolidated project priority lists. The Joint Petroleum Offices and the service control points forward candidate projects and consolidated project priority lists to DESC for review, validation, and funding approval. **Bulk Fuel Inventory Categories.** The manual establishes two categories of liquid petroleum products: peacetime operating stock (POS) and petroleum wartime reserve stock. The POS is defined as the amount of fuel required to sustain peacetime operations in support of military demands at a Defense fuel supply point. The manual provides the formula for computing POS and requires that DESC compute POS and publish an inventory management plan that lists approved inventory levels and requirements for each location. The formula for POS gives emphasis to actual amount of prior year fuel usage. Installations must justify variances of more than ten percent between projected requirements and actual prior year usage. Petroleum wartime reserve stock is defined as inventory held in support of petroleum wartime reserve requirements.

Annual Cycle for the Submission of Project Documentation. The manual describes the annual cycle for petroleum MILCON and MR&E compliance project submissions. A graphic explanation of the MR&E timetable is provided in Appendix D.

Army Guidance

Army Regulation 710-2, "Inventory Management Supply Policy Below the Wholesale Level," October 31, 1997. Army Regulation 710-2 states that sufficient tankage must be available to store POS and that normal peacetime operations require maintaining fuel stock necessary to support 5 days of normal operations. The Army Petroleum Center is responsible for reviewing all plans for new construction, modifications, or upgrades of petroleum facilities.

Army Regulation 420-10, "Management of Installation Directorates of Public Works," April 15, 1997. Army Regulation 420-10 requires that MACOMs establish DPW organizational, operational, and administrative procedures for installations under their command. The regulation also requires that the MACOMs schedule technical reviews of projects and DPW programs. The regulation further requires the Director of Public Works to:

- coordinate the approval of installation maintenance, repair, and construction projects to ensure compliance with statues and regulations;
- plan and prioritize project work and maintain a central data base for requirements and a centralized tracking system that accounts for projects; and
- prepare and submit DD Form 1391 for maintenance, repair, or construction projects over the dollar thresholds outlined in Army regulations.

Department of the Army, Headquarters, III Corps and Fort Hood Regulation 703-2, "Petroleum Management Operations and Procedures," April 1, 1998 (FH Reg 703-2). The FH Reg 703-2 applies to III Corps and Fort Hood units and activities and prescribes policies, assigns responsibilities, and establishes procedures for petroleum management. The Directorate of Logistics is to project and coordinate future requirements for petroleum-, oil-, and lubricants-handling facilities, as well as, planning and programming for associated construction and maintenance. The FH Reg 703-2 assigns the 13th Corps Support Command the daily management of petroleum, oil, and lubricants stock; solicitation and consolidation of near term fuel requirement projections; and user maintenance of the bulk petroleum, oil, and lubricants stockage points.

Appendix C. Calculation of 1998 POS Authorization by Fixed Fuel Facility

The annual Inventory Management Plan documented the 1998 Fort Hood POS as 412,818 gallons of JP8 fuel. However, DESC, Fort Hood, and APC personnel were unable to identify the 1998 POS at each fuel facility at Fort Hood. Therefore, we calculated the portion of the 1998 POS that should have been attributed to the two rapid refuel facilities at Fort Hood by determining the ratios used in the 1998 Fort Hood request for additional POS and applying the ratios to the 1998 POS of 412,818.

The results indicated the 1998 POS attributed to the two rapid refuel facilities should have been 60,584 gallons of JP8 fuel.

Site	POS Requested by Ft. Hood (gallons)	Percentage of Total Requested	1998 POS Authorization by Facility (gallons) ¹
WFHTH ²	308,322	43.8	180,814
RGAAF ³	291,396	41.5	171,319
RGARRP	49,686	7.1	29,310
HAARRP	53,466	7.6	<u>31,374</u>
Total	702,870	100.0	412,818 ⁴
² West Fort Hoo Robert Gray A	12,818 gallons multipli d Tank Farm rmy Airfield Alert Serv repancy of 1 gallon.	• • • •	rcentage.

Appendix D. Annual Maintenance, Repair and Environmental Project Cycle

The following figure prescribes the annual submission cycle for MR&E projects in accordance with DoD Directive 4140.25-M.

Annual Maintenance	, Rej	pair	and	d Ei	nvir	onn	nent	al P	roj	ect (Cycl	le	
	O c t	N o v	D e c	J a n	F e b	M a r	A p r	M a y	J u n	J u l	A u g	S e p	O c t
Data Call	x												
Projects forwarded to MACOMS													
Projects forwarded to DESC					x								
Annual work plan developed for DLA							-						
DESC forwards approved project list to MACOMs									_				
Design funding for approved projects													
Construction funding available after October 1													x

The DESC sends out a data call in October for MR&E project nominations for a 2-year period beginning with the budget year (for example, October 1993 data call required submissions for FYs 1995 and 1996). DESC sends the data call to the Combatant Command Joint Petroleum Offices and service control points. The Combatant Command Joint Petroleum Offices and service control points relay the data call to their field activities. Combatant Command Joint Petroleum Offices and service control points relay the data call to their field activities. Combatant Command Joint Petroleum Offices and service control points review and validate project submissions and develop a consolidated project priority list for DESC by February 1. DESC reviews and validates the projects and performs programming and budgeting for approved projects from February through April. DESC provides the consolidated list of approved projects to the Combatant Command Joint Petroleum Offices and service control points in May.

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller/Chief Financial Officer)) Deputy Chief Financial Officer Deputy Comptroller (Program/Budget) Deputy Under Secretary of Defense (Installations)

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller) Assistant Chief of Staff for Installation Management Commander, U.S. Forces Command Garrison Commander, Fort Hood Auditor General, Department of the Army Director, Army Petroleum Center

Department of the Navy

Naval Inspector General

Department of the Air Force

Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Logistics Agency

Non-Defense Federal Organizations

Office of Management and Budget

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations Senate Subcommittee on Defense, Committee on Appropriations Senate Committee on Armed Services Senate Committee on Governmental Affairs House Committee on Appropriations House Subcommittee on Defense, Committee on Appropriations House Committee on Armed Services House Committee on Government Reform House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform

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Department of the Army Comments

	DEPARTMENT OF THE ARMY OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS 500 ARMY PENTAGON WASHINGTON DC 20310-0500
DALC	27 SEP 2000
MEMO	RANDUM THRU
DEPU	TY CHIEF OF STAFF FOR LOGISTICS
DIR	CTOR OF THE ARMY STAFF
FOR	INSPECTOR GENERAL, DEPARTMENT OF DEFENSE, CONTRACT MANAGEMENT DIRECTORATE
Mair Texa	ECT: Audit Report on Bulk Fuel Storage Requirements for Itenance, Repair, and Environmental Projects at Fort Hood, Is (Project No. D1999CG-0088.001) (Formerly Project No. 5049.01)INFORMATION MEMORANDUM
whice	This is in response to USAAA E-mail of 31 Jul 00 (Tab A) Th asked ODCSLOG to respond to the subject report of Yul 00.
2. repo	The Army concurs with the recommendations of the subject ort.
to t	Enclosed at Tab B is the U.S. Army Forces Command's response the subject report. The response includes the actions erway to implement the subject report's recommendations.
	STON
2 Er	CHARLES W. FLETCHER, JR. Brigadiar General, GS Director of Transportation and Troop Support
CF: VCSA	
)-ZXA
ASA FORS ACSI	(I&E) - Concur, Mr. Donald Manuel/(703) 697-1155 (ALT) - Concur, LTC Doug Thomson/ (703) 697-5727 SCOM - Concur, Mr. Dennis Joe/(404) 464-5404 M - Concur, Mr. David Carter/(703) 692-9204 - Concur, Mr. Dave Corbin/(707) 777-5873 LTC Foster/(703) 695-9749
	Printed on 🛞 Recycled Paper

Foster, James M LTC ODCSLOG From: Frazier, Melvin R LTC ODCSLOG Sent: Wednesday, September 06, 2000 4:08 PM To: Hall, Janet O Ms ODCSLOG; Matthews, Larry W COL ODCSLOG Cc: Foster, James M LTC ODCSLOG Subject: RE: S: 22 Sep 00 - Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental Projects (9CG-0088.001) formerly (9CG-5049.01)
Original Message From: Trigueiro, Sharon M Ms AAA Sent: Monday, July 31, 2000 10:54 AM To: Santili, Mary L Ms OCOSLOG Cc: AMC E-Mail Box, AMC-Robert Kurzer; CEAO-Pearlena Patters; DAAR-IX John Price; DAAR-Juanita R, Rankin (OCAR-CO); DAMI-Tom Gililiand; DAMO-Butch Lutz; DAMO-MAJ Savold; DAMO-ZQ MAU Charles Stuart; DAPE-Martha Carden; DCSINT James Conion; Debra Rinderknecht; FORSCOM Joe Dennis; FORSCOM Marge Williams; Joseph Dailey; NGB- Pat Gallop; SAAL -Diana Sinnett; SAFM-Don Sketo; SAIS-Angie Woodson; SALL COL Matt Martin; SAMR-Diana Cooper; TRADOC-Butch Gordon; USAREUR Susan C. McCoy; USARPAC IRO Kim Gary Subject: Bulk Fuel Storage REquirements for Maintenance, Repair, and and Environmental Projects (9CG- 0088.001) formerly (0CG-5049.01)
Attached below is the hyperlink to subject report:
http://www.aaa.army.mil/liaison/DODIG/9cg-0088.001/9cg-0088.001-dft-rpt.pdf
DCSLOG is the HQDA principal official responsible for responding to this report. Suspense date: 25 September 00.
Thank you,
Sharon Marie Trigueiro Department of Army Strategic Engagement Office U.S. Army Audit Agency 703-614-9439/DSN 224-9439 <u>sharon.trigueiro @ aaa.army.mil</u> .

Reference DEPARTMENT OF THE ARMY HEADQUARTERS UNITED STATES ARMY FORCES COMMAND 1777 HARDDE AVENUE SW PORT MCPMERSON GEOROM 25535-1092 REAL TO AFDCG-IR MEMORANDUM FOR OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT, 600 ARMY PENTAGON. WASHINGTON DC 20310-0600 SUBJECT: DODIG Draft Report on Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental Projects at Fort Hood (Project No. D1999CG-0088.001) 1. Reference subject draft report dated 26 July 2000. Forces Command has reviewed the subject report and our comments to the recommendations are provided below. This Headquarters has also reviewed Fort Hood's comments to the report and recommendations and agree with their corrective actions. Fort Hood's comments are enclosed. 3. Following are the comments on the recommendation addressed to Forces Command. a. Page 11, Recommendation 2.a. Concur. Forces Command Agrees that there is a need for closer coordination of both maintenance, repair, and environisental (MR&E) and military construction projects. As such, this Headquarters will issue guidance directing the coordination of MR&E projects through the Office of the Forces Command Engineer. The guidance requires the submission of Peacetime Operating Stock Authorization calculations and also provides guidance for review and submission of projects to the Army Petroleum Center (APC). Forces Command is also requesting that APC coordinate with OESC for revision of the Defonse Fuels Web (DEFWEB) so that all projects originating at Forces Command installations are routed through this Headquarters for approval and prioritization before they can be submitted to APC. These extince will be completed by 30 October 2000. Page 10 b. Page 11 Recommendation 2.s. Concur. A point of contact within the Office of the Force Command Engineers has been established as the focal point for review, approval and submission of MR&E projects. 4. For additional information, plasse contact Mr. Dennis Jos at (404) 464-5404. LAWSON W. MAGRUDER III Encl Lieutenant General, USA Deputy Commanding General/ Chief of Staff

Final Report

DEPARTMENT OF THE ARMY HEADOJARIERS, U.S. ARMY GARRISON FORTHOOD, 15XAS 75514-5200 MPLY ID 30 August 2000 AFZF GC MEMORANDUM FOR Inspector General, Department of Defense. The Contract Management Directorate, ATIN: 400 Army Navy Urive, Arlington, Virginia 22202-2084 SUBJECT: Draft Audit Report on Bulk Fuel Storage and Delivery Systems Infrastructure MR4E Requirements for fort Wood, Texas. 1. Garrison Commander, Fort Nood concurs with the recommendation to 1. Garrison Commander. Fort Hood concurs with the recommendation to "establish procedures to implement Army Regulation 420-10 requirements that the Director of Public Works coordinate approval of installation maintenance, repair, and environmental projects to ensure compliance with Dop 4140.25 M." Carrison Commander will issue a memorandum re-emphasizing that, in the future, MILCON projects will comply with procedures established in AR 420-10. The action will be completed by 30 procedures 2000 Octoher 2000, 2. The issuance and implementation of the Garrison Commander memorandum will ensure that future bulk fuel storage MILCON projects at Fort Rood are adequately reviewed and validated in accordance with Army Regulation 400-10 420-10. DAVID B. HALL COL, AR Garrison Commander CF-DPW -Internal Audit 13th COSCOM ACots. G-4

Defense Logistics Agency Comments

DEFENSE LOGISTICS AGENCY DEFENSE ENERGY SUPPORT CENTER 8725 JOHN J. KINGMAN ROAD, SUITE 4950 FORT BELVOIR, VIRGINIA 22080-6222	
IN REPLY REFER TO	DESC-DI SEP 2 2 2000
	MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE, ATTN: OAIG-AUD
	SUBJECT: Draft Report on Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental Projects at Fort Hood, Texas (Project No. D1999CG-0088.001)
	Attached are our comments on the subject draft report. Please contact Ms. Emilia Snider at (703) 767-9671 or by e-mail at <u>esnider@desc.dla.mil</u> if you have any questions.
	S. D. FUNK CAPT, SC, USN Deputy Director
	Attachment
	Federal Recycling Program
	-+



Audit Team Members

The Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report. Personnel of the Office of the Inspector, DoD, who contributed to the report are listed below.

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Paul J. Granetto Wayne K. Million Deborah L. Carros Hugh J. Elliott Andrew A. MacAttram James E. Miniter Amy L. Schultz

INTERNET DOCUMENT INFORMATION FORM

A . Report Title: Bulk Fuel Storage Requirements for Maintenance, Repair, and Environmental, Projects at Fort Hood, Texas

B. DATE Report Downloaded From the Internet: 11/01/00

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): OAIG-AUD (ATTN: AFTS Audit Suggestions) Inspector General, Department of Defense 400 Army Navy Drive (Room 801) Arlington, VA 22202-2884

D. Currently Applicable Classification Level: Unclassified

E. Distribution Statement A: Approved for Public Release

F. The foregoing information was compiled and provided by: DTIC-OCA, Initials: __VM__ Preparation Date 11/01/00

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