

# Audit



# Report

OFFICE OF THE INSPECTOR GENERAL

**MANAGEMENT OF UNDERGROUND  
STORAGE TANKS AT FORT BRAGG**

Report No. 97-208

August 26, 1997

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### **Acronyms**

FORSCOM  
RCRA  
UST

U.S. Army Forces Command  
Resource Conservation and Recovery Act  
Underground Storage Tank



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
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August 26, 1997

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE  
(ENVIRONMENTAL SECURITY)  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Management of Underground Storage Tanks at Fort Bragg  
(Report No. 97-208)

We are providing this report for information and use. This report is one in a series about DoD management of underground storage tanks. We considered management comments on a draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Joseph P. Doyle, Audit Program Director, at (703) 604-9348 (DSN 664-9348) or Ms. Addie M. Beima, Audit Project Manager, at (703) 604-9231 (DSN 664-9231). See Appendix B for the report distribution. The 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. 97-208  
(Project No. 6CK-5051.00)

August 26, 1997

### Management of Underground Storage Tanks at Fort Bragg

#### Executive Summary

**Introduction.** This audit is part of an overall audit, "DoD Management of Underground Storage Tanks," (Project No. 6CK-5051). The overall audit was jointly conducted by the Inspector General, DoD, and the Army, Navy, and Air Force audit agencies. The audit was performed in response to a request from the Assistant Deputy Under Secretary of Defense (Environmental Quality). The Resource Conservation and Recovery Act, Subtitle I, effective December 22, 1988, requires all underground storage tanks to be equipped with specified minimum spill, overfill, leak detection, and corrosion protection mechanisms by December 22, 1998. In its March 1996 report to the Assistant Deputy Under Secretary of Defense (Environmental Quality), the Army reported that none of the 600 underground storage tanks at Fort Bragg were compliant with Subtitle I of the Resource Conservation and Recovery Act.

**Audit Objectives.** Our primary audit objective was to evaluate underground storage tank management at Fort Bragg. Specifically, we evaluated:

- o the accuracy of underground storage tank data reported to the Assistant Deputy Under Secretary of Defense (Environmental Quality);
- o the status of underground storage tank compliance with the Resource Conservation and Recovery Act, Subtitle I;
- o whether Fort Bragg officials established underground storage tank compliance plans and schedules and provided adequate funds; and
- o whether management controls were adequate to ensure compliance with the Resource Conservation and Recovery Act, Subtitle I.

**Audit Results.** The Army reported inaccurate underground storage tank data for Fort Bragg to the Assistant Deputy Under Secretary of Defense (Environmental Quality). Officials at Fort Bragg:

- o could not provide a verifiable underground storage tank inventory;
- o did not know whether underground storage tanks on the installation were compliant with the Resource Conservation and Recovery Act, Subtitle I;
- o did not have a plan, and therefore may not have adequate funds to identify and bring underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I; and
- o did not implement management controls to ensure that at least 212 regulated tanks on Fort Bragg will comply with the Resource Conservation and Recovery Act, Subtitle I, by December 22, 1998.

As a result, Fort Bragg risks being in noncompliance with the Resource Conservation and Recovery Act, Subtitle I, after December 22, 1998. For details of the audit results, see Part I. See Appendix A for details on the management control program.

**Summary of Recommendations.** We recommend that the Commander, Headquarters, 18th Airborne Corps and Fort Bragg, conduct an independent survey to develop a complete, verifiable inventory of underground storage tanks on Fort Bragg and determine the status of underground storage tank compliance with the Resource Conservation and Recovery Act, Subtitle I. In addition, a plan needs to be developed and adequate funds provided to bring noncompliant underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I, by December 22, 1998. We also recommend that steps to test controls over the management of underground storage tanks be included in Fort Bragg's Environmental Natural Resources Division assessable unit.

**Management Comments.** The Army concurred with all the audit recommendations. The Army stated that Fort Bragg assembled a reliable and comprehensive tank inventory and contracted for an independent consultant to physically verify the tanks in the inventory. The Army indicated that, after the initial audit issues were identified, actions were taken to plan and provide adequate funds to bring noncompliant underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I. The Army also stated that management controls have been improved. See Part I for a summary of management comments and Part III for the complete text of management comments.

**Audit Response.** The Army comments are fully responsive. We commend the Army for the positive responses and prompt actions taken to correct the conditions identified by the audit.

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## **Part I - Audit Results**

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## Audit Background

This audit is part of the overall audit, "DoD Management of Underground Storage Tanks," (Project No. 6CK-5051) which was performed at the request of the Assistant Deputy Under Secretary of Defense (Environmental Quality). The overall audit was jointly conducted by the Inspector General, DoD, and the Army, Navy, and Air Force audit agencies.

The Assistant Deputy Under Secretary was particularly interested in the status of 600 underground storage tanks (USTs) reported to be at Fort Bragg. The Army reported that none of the 600 USTs were compliant with the Resource Conservation and Recovery Act, Subtitle I, "Regulation of Underground Storage Tanks" (RCRA, Subtitle I), effective December 22, 1988. The Assistant Deputy Under Secretary was not certain if USTs at Fort Bragg would meet the RCRA, Subtitle I deadline. The Assistant Deputy Under Secretary wanted to know whether the data reported on USTs at Fort Bragg was accurate, and if Fort Bragg had a plan and adequate funding to bring the USTs into compliance by December 22, 1998.

There are several approved methods for bringing USTs into compliance with RCRA, Subtitle I: closure, upgrade, removal, or replacement. Closures are accomplished by emptying USTs and then filling them with approved substances. Upgrades are accomplished by adding spill, overfill, leak detection, or corrosion protection to USTs.

**Regulated USTs.** RCRA, Subtitle I, defines a UST as any tank and connected piping that contains a regulated substance and has ten percent or more of its volume underground. Regulated substances include motor fuels, jet fuels, lubricants, petroleum solvents, and used oils. USTs storing heating oil for use on the premises where they are located are exempt from RCRA, Subtitle I.

**UST Criteria.** USTs owned and operated by DoD are subject to Federal, state, and local statutory and regulatory guidance. Federal UST statutory provisions are found in 42 United States Code 6991 - 6991h. Implementing regulations are located in Title 40 Code of Federal Regulations, Chapter 1, Part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks." We considered both statutory and regulatory requirements in our analysis of UST management. References to RCRA, Subtitle I, in this report include both the statute and regulation. USTs at Fort Bragg are also subject to Army Regulation 200-1, "Environmental Protection and Enhancement," February, 1997.

**Federal Regulations.** RCRA, Subtitle I, sets minimum standards for spill, overfill, and corrosion protection mechanisms to be included in new USTs as well as standards for upgrading, replacing, and closing existing USTs. Existing USTs (those installed before December 22, 1988) were required to have functional leak detection methods by December 1993. By December 22, 1998, existing USTs must be upgraded to have spill, overfill, and

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corrosion protection; otherwise the USTs must be either removed, closed in place, or replaced with a new UST. New USTs must be installed according to industry codes and must have leak detection as well as spill, overfill, and corrosion protection.

**State Regulations.** The state of North Carolina incorporated Federal regulations into state UST regulations.

**Army Regulations.** Army Regulation 200-1, Paragraph 5-7, "Underground Storage Tanks (USTs)," not only implements RCRA, Subtitle I, but broadens it to include heating oil tanks located in states that regulate them. (Army guidance is inconsistent with RCRA, Subtitle I, and with the UST guidance of other DoD Components.) We did not include heating oil tanks when calculating the number and status of regulated USTs at Fort Bragg because North Carolina does not regulate heating oil tanks.

## **Audit Objectives**

Our primary audit objective was to evaluate UST management at Fort Bragg. Specifically, we evaluated:

- o the accuracy of UST data reported to the Assistant Deputy Under Secretary;
- o the status of UST compliance with RCRA, Subtitle I;
- o whether Fort Bragg officials provided adequate funds and established UST compliance plans and schedules; and
- o whether management controls were adequate to ensure compliance with RCRA, Subtitle I.

See Appendix A for a discussion of the audit process and for a summary of prior coverage related to the audit objectives. See the finding for a discussion of the material weakness identified, and Appendix A for the details of our review of the management control program.

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## **Management of Underground Storage Tanks at Fort Bragg**

Officials at Fort Bragg could not provide a verifiable inventory of underground storage tanks on the installation and did not have a plan or adequate funds to guarantee that at least 212 regulated underground storage tanks on Fort Bragg will comply with RCRA, Subtitle I, by December 22, 1998. This condition was caused by a lack of program emphasis and oversight which led to the breakdown of controls established to ensure effective management of the UST program. As a result, Fort Bragg risks being in noncompliance with RCRA, Subtitle I, after December 22, 1998.

### **UST Inventory**

Officials at Fort Bragg were unable to provide sufficient documentation to support a verifiable UST inventory or establish the accuracy of reported UST data. The audit team constructed a UST inventory using documentation collected from various sources within Fort Bragg. Subsequent to our visit, the UST manager provided a UST inventory and two corrected revisions. However, neither the audit-generated inventory, nor the inventories provided by the UST manager at Fort Bragg are consistent with the number (600) and status of Fort Bragg USTs reported to the Assistant Deputy Under Secretary by the Army in March 1996.

**Support for Reported USTs.** Fort Bragg officials could not document how many USTs were on the installation or whether the USTs were compliant with RCRA, Subtitle I. In March 1996, the U.S. Army Forces Command (FORSCOM) reported to the Assistant Deputy Under Secretary that there were 600 USTs located at Fort Bragg. However, Fort Bragg officials reported to FORSCOM that there were 206 USTs on the installation. Neither FORSCOM nor Fort Bragg officials could support the number and status of USTs reported to the Assistant Deputy Under Secretary in March 1996. Although the Fort Bragg UST manager had access to the Army's automated UST information management system, TANKMAN; the UST manager considered the system outdated and did not use it. Instead, the UST manager said a commercial database had been used but was lost when the computer's hard drive was damaged. The database was not backed up on an alternate electronic media or supported by complete UST document files. As a result, the UST manager did not have any kind of system to consolidate UST data, maintain a verifiable inventory of regulated USTs, and track UST compliance with statutory and regulatory requirements.

**Accuracy of Reported UST Data.** Without a reliable inventory or complete source document files, we were unable to determine the accuracy of UST information reported to the Assistant Deputy Under Secretary in March 1996.

## Management of Underground Storage Tanks at Fort Bragg

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However, in their March 6, 1997, revised UST inventory, Fort Bragg officials reported having 221 USTs, 212 of which were noncompliant with RCRA, Subtitle I.

**Audit-Generated UST Inventory.** While at Fort Bragg, the audit staff constructed an inventory of USTs. Various source documents identified 317 regulated USTs owned or operated by Fort Bragg. We confirmed that 8 of the 317 regulated USTs were compliant with RCRA, Subtitle I, by reviewing contract drawings, specifications, and property documents. The 317 USTs identified by the audit-generated inventory do not necessarily represent the total number of regulated USTs on Fort Bragg because the records used to construct the inventory contained contradictory and inconclusive data.

**Events Subsequent to Audit.** The UST manager provided a UST inventory within a week of the November 1996 Inspector General, DoD, visit. Fort Bragg personnel subsequently revised the inventory on February 24, 1997. The inventory was revised again on March 6, 1997, because the February inventory contained errors. The UST manager's March inventory indicated there were 221 USTs at Fort Bragg, 212 of which were noncompliant with RCRA, Subtitle I. The March inventory represents a significant effort on the part of Fort Bragg officials. However, the inventory varies from the audit-generated inventory in that it does not include USTs for which we found documentation during our visit, and it contains other USTs not identified in our inventory. Because of these discrepancies and the absence of UST-related information and documentation at the installation, the accuracy of the March 1997 inventory is unreliable. An independent organization or contractor should conduct a survey and develop a complete, verifiable inventory of USTs at Fort Bragg.

### UST Compliance Plan

In November 1996, Fort Bragg officials did not have a plan to bring all regulated USTs into compliance with RCRA, Subtitle I. Subsequent to our visit, the UST manager at Fort Bragg provided us with a plan to bring the revised inventory of 212 noncompliant USTs into compliance. However, the Fort Bragg plan to bring USTs into compliance with RCRA, Subtitle I, by December 22, 1998, may still be inadequate.

**UST Planning.** At the time of our visit, Fort Bragg officials did not have a plan to bring all regulated USTs into compliance with RCRA, Subtitle I, by December 22, 1998. According to the Chief, Environmental and Natural Resources Division, Fort Bragg officials were unable to plan for compliance with RCRA, Subtitle I, due to the demands of the facilities reduction program (the destruction of World War II buildings), discovery of unknown USTs requiring immediate removal, leaking storage tanks, and responding to other statutory requirements. The demands resulted in a crisis-driven management style that consumed resources that otherwise would have been used to address requirements of RCRA, Subtitle I.

## Management of Underground Storage Tanks at Fort Bragg

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**Subsequent UST Compliance Plan.** Subsequent to our visit, the UST manager provided us with a plan to bring the revised inventory of 212 noncompliant USTs into compliance. However, the plan may still be inadequate because it was not based on the time historically required to upgrade, remove or replace USTs at Fort Bragg. Fort Bragg had a contract to remove, upgrade, or replace 54 regulated USTs at Fort Bragg by the deadline; the U.S. Army Corps of Engineers contract No. DACA21-96-C-0159 awarded to Jones and Frank, Corporation. As of March 6, 1997, Fort Bragg did not have contracts to bring the remaining 158 USTs into compliance. However, Fort Bragg plans to bring the 158 USTs into compliance by:

- o removing 23 USTs;
- o upgrading 61 USTs; and
- o replacing 74 USTs.

In determining if Fort Bragg had enough time to bring the remaining 158 USTs into compliance, we used the time period March 6, 1997, through December 22, 1998, (657 days); the UST manager's planning schedule for removing USTs between November 1996 and February 1997; and a contractor's past performance data. Based on the UST manager's schedule, Fort Bragg should be able to remove the 23 USTs before December 1998. However, indications are that they may not be able to complete planned upgrade and replacement efforts by the deadline. Performance on a previous contract to upgrade 5 USTs took approximately 38 days per UST. At that rate, only 17 ( $657 \text{ days} \div 38 \text{ days}$ ) of the 61 USTs would be upgraded by December 22, 1998. We could not determine if 74 USTs would be replaced by the deadline because Fort Bragg did not have any historical contractor performance data on replacing USTs. However, performance data from other installations indicate that it takes approximately 30 to 90 days to remove and replace one UST. At that rate Fort Bragg would only be able to replace between 7 ( $657 \text{ days} \div 90 \text{ days}$ ) and 22 ( $657 \text{ days} \div 30 \text{ days}$ ) of the 74 USTs by December 1998. If officials do not take steps to increase their emphasis on bringing USTs into compliance, Fort Bragg may not be able to bring all of their regulated USTs into compliance by December 22, 1998.

## Funding

Fort Bragg may not have sufficient funds to bring all regulated USTs into compliance with RCRA, Subtitle I, by December 22, 1998. Fort Bragg officials could not identify what portion of their funds would be used for regulated USTs because they did not designate funds specifically to bring regulated USTs into compliance. As a result of our visit, FORSCOM and the Defense Fuel Supply Center proposed to increase Fort Bragg's funding for regulated UST projects. To determine if Fort Bragg would have enough funding, we calculated the cost to bring the 212 USTs in the revised inventory into compliance. Even with the increased funding we could not determine if

## Management of Underground Storage Tanks at Fort Bragg

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Fort Bragg's budget was sufficient because they did not have an accurate inventory and plan or estimates of the cost to bring the regulated USTs into compliance by December 1998.

**Required Funding.** Fort Bragg could not identify how much of their budget would be used to bring regulated USTs into compliance with RCRA, Subtitle I. The environmental compliance budget was not dedicated to regulated UST projects. The FY 1997 and FY 1998 environmental compliance budget for storage tank projects, including USTs, was \$3.9 million and \$2.3 million, respectively. Proposed FY 1997 and FY 1998 projects included:

- o \$5 million to remove leaking USTs and perform area remediation;
- o \$400,000 to conduct required annual precision leak testing for regulated and unregulated storage tanks;
- o \$328,000 to replace 75 used oil USTs with above ground storage tanks;
- o \$150,000 to evaluate, test, and survey unregulated heating oil USTs; and
- o \$300,000 to remove 6 USTs and replace them with 2 above ground storage tanks.

Only two of the projects, totaling \$628,000, were dedicated to bringing regulated USTs into compliance with RCRA, Subtitle I. Two other projects, totaling \$550,000, will not bring any regulated USTs into compliance. In addition, only a portion of the \$5 million for removing leaking USTs will be used to bring regulated USTs into compliance. An unknown amount of the \$5 million will be used to perform area remediation of contaminated soil and to bring some of Fort Bragg's 1,488 unregulated USTs into compliance with other regulatory and statutory requirements, such as the Comprehensive Environmental Response, Compensation and Liability Act of 1980. If a significant amount of available funds are used to meet other regulatory and statutory requirements, Fort Bragg may not have sufficient funds to bring all regulated USTs into compliance with RCRA, Subtitle I.

**Increased Funding for UST Compliance With RCRA, Subtitle I.** As a result of our visit, FORSCOM and the Defense Fuel Supply Center agreed to provide additional funds to bring USTs identified in Fort Bragg's revised inventory into compliance. The Defense Fuel Supply Center manages the fuel distribution points on Fort Bragg and is responsible for providing funding for USTs at those points. FORSCOM proposed to increase Fort Bragg's environmental compliance funding by \$2.4 million, thereby increasing the FY 1997 budget to \$6.2 million and increasing the FY 1998 budget to \$2.5 million. The Defense Fuel Supply Center also proposed to provide Fort Bragg with \$1 million in FY 1997 and \$65,000 in FY 1998.

**Cost To Bring USTs Into Compliance.** We calculated the cost to bring the USTs in the revised inventory into compliance with RCRA, Subtitle I. Fort

## Management of Underground Storage Tanks at Fort Bragg

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Bragg required funding for 205 of the 212 regulated USTs. The remaining seven USTs will be funded by the 81st Regional Support Command, a tenant activity. Because Fort Bragg provided cost estimates to remove, replace or upgrade only 52 regulated USTs,<sup>1</sup> we performed computations to assess the potential cost to bring the entire 205 USTs into compliance. To accomplish this, we used data from two sources; the contract to remove, replace, or upgrade USTs; and a previous contract (DACA21-92-D-0001) awarded to Environmental Technology, Incorporated, to remove USTs between FY 1992 and FY 1996. The table below provides the contract prices to accomplish the compliance actions at Fort Bragg. Contract prices varied depending on the tank size and scope of work involved.

### Contract Price Ranges Per Tank

|              | <u>Lowest</u> | <u>Highest</u> |
|--------------|---------------|----------------|
| Upgrade      | \$ 8,961      | \$14,042       |
| Pull/Replace | \$24,160      | \$54,012       |
| Remove       | \$ 714        | \$23,988       |

We analyzed data from the two sources and used data attribution techniques to develop a total cost estimate for the 205 tanks. For the techniques, we used the average and variance costs by compliance method and tank size group to assign a range of costs to the unknown tank costs. As a result, we calculated that Fort Bragg will need between \$3.4 million and \$4.6 million to bring all 205 USTs into compliance, with a midpoint cost of \$4 million.

**Sufficiency of Funds.** Fort Bragg's funding may not be adequate to bring USTs into compliance with RCRA, Subtitle I, by December 22, 1998. Without a reliable inventory and plan, and cost estimates to bring USTs into compliance, Fort Bragg could not determine, and we could not validate, if Fort Bragg's funding was sufficient.

## Management Controls

A lack of emphasis and oversight of the UST program allowed a breakdown of established management controls over USTs and resulted in management's failure to identify the conditions found by the audit.

**Established Management Controls.** The existing management controls should have ensured proper management of USTs at Fort Bragg. Applicable Federal, state, and Army regulations governing UST ownership and operations, including RCRA, Subtitle I, requirements, were communicated to the Fort

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<sup>1</sup>The cost estimates were obtained from the U.S. Army Corps of Engineers contract to remove, upgrade, or replace 54 regulated USTs. The contract identified specific cost estimates for only 52 of the 54 USTs.

## **Management of Underground Storage Tanks at Fort Bragg**

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Bragg UST manager. Performance standards were provided to the UST manager which required the manager to meet the prescribed criteria. The Army's automated data system for UST management, TANKMAN, was available for the UST manager's use in capturing, tracking, and reporting on the UST inventory. Finally, the UST program was included in the Environmental and Natural Resources Division assessable unit within the Fort Bragg Management Control Program. These controls should have been adequate to ensure sound UST management if the program had been properly monitored.

**Breakdown in Established Management Controls.** Officials at Fort Bragg ignored the established controls that would have ensured sound UST management. Management provided inadequate oversight to ensure that the UST manager maintained a verifiable inventory of USTs; tracked the status of UST compliance with RCRA, Subtitle I; or established a plan to bring USTs into compliance. In addition, the Environmental Natural Resources Division assessable unit, which includes the UST program, did not include steps to test whether controls over USTs were functioning as intended.

### **Summary**

Fort Bragg officials did not have a complete, accurate, and verifiable UST inventory with which to form the basis of a plan and adequate funding to bring USTs into compliance with RCRA, Subtitle I, requirements by December 22, 1998. Management failed to implement controls intended to ensure the maintenance of a reliable UST inventory, accurate UST reporting, establishment of a plan, and adequate funding to bring USTs into compliance with RCRA, Subtitle I. As a result, an unknown number of regulated USTs (thought to be at least 212) at Fort Bragg were not compliant with RCRA, Subtitle I, and there was no assurance that all regulated USTs would be compliant within required time limits.

### **Recommendations, Management Comments, and Audit Response**

**We recommend that the Commander, Headquarters, 18th Airborne Corps and Fort Bragg:**

- 1. Conduct an independent survey to develop a complete, verifiable inventory of underground storage tanks on Fort Bragg including the status of underground storage tank compliance with the Resource Conservation and Recovery Act, Subtitle I; tank size; installation date; content; construction material; and location.**

## Management of Underground Storage Tanks at Fort Bragg

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2. Based on the independent survey, develop a plan and provide adequate funds to bring noncompliant underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I, by December 22, 1998. The plan should be based on time historically required to upgrade, remove, replace and close such tanks.

3. Include steps in the Environmental Natural Resources Division assessable unit to test controls over the management of underground storage tanks to ensure that the controls are functioning as intended.

**Management Comments.** The Army concurred with all the audit recommendations. The Army stated that actions were taken to develop a complete, verifiable inventory of underground storage tanks on Fort Bragg. Fort Bragg has developed a comprehensive tank inventory and contracted for an independent consultant to physically verify the tanks in the inventory. The Army indicated that Fort Bragg has a plan and will have adequate funds to bring noncompliant underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I. A contract with Jones and Frank Corporation will remove, replace, or retrofit 54 underground storage tanks. Another contract, which should be awarded by October 30, 1997 will handle the remainder of the underground storage tanks. Fort Bragg is also considering awarding a third contract to expedite the overall effort. The U.S. Army Forces Command has advised Fort Bragg that they will provide the necessary resources to bring the underground storage tanks into compliance.

Finally, the Army stated that there was a breakdown in existing management controls for the underground storage tank program. The management controls have been improved. Required briefings are given to Fort Bragg management on underground storage tanks compliance status. In addition, a new Construction Management Division was established and will be inspecting completed underground storage tank retrofit, removal, or replacement projects during the next year.

**Audit Response.** The Army comments are fully responsive. We commend the Army for the prompt response and actions taken to correct conditions identified by the audit.

## **Part II - Additional Information**

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## **Appendix A. Audit Process**

### **Scope**

We reviewed the management of Fort Bragg's UST program. The review focused on RCRA, Subtitle I, regulated USTs that were owned or operated by Fort Bragg. Specifically, we evaluated the status of the 600 regulated USTs cited in the March 1996 semi-annual report to the Assistant Deputy Under Secretary and related documentation dated between October 1991 and December 1996. Fort Bragg was 1 of 83 installations statistically selected for audit from a universe of 222 DoD installations.

### **Methodology**

At Fort Bragg we performed the audit as follows:

- o We interviewed the Chief, Environmental and Natural Resources Division and the UST manager to discuss Fort Bragg's UST inventory and plans to bring noncompliant USTs into compliance with RCRA, Subtitle I, by December 22, 1998.

- o We interviewed FORSCOM personnel to determine the accuracy of the number and status of USTs reported to the Assistant Deputy Under Secretary in March 1996.

- o We reviewed UST documents including UST contract drawings and tank tightness test results for the period October 1991 to March 1997 to determine the number of USTs located at Fort Bragg, and whether the USTs were in compliance with RCRA, Subtitle I.

- o We reviewed contracts to upgrade, remove, and replace USTs that were not in compliance with RCRA, Subtitle I, to establish a historic baseline of cost and time requirements to upgrade, remove, and replace USTs at Fort Bragg.

- o We reviewed FY 1997 and FY 1998 budget formulation and justification documents to determine whether the UST manager had a fully-funded plan to bring USTs into compliance with RCRA, Subtitle I.

o We interviewed Fort Bragg officials responsible for management controls relating to the UST program to identify and test controls over UST planning and reporting processes.

o We reviewed the June 1994 Environmental Compliance Assessment System Report to determine whether there had been any findings related to our overall objective and, if so, the status of corrective actions.

**Audit Period and Standards.** We performed this program audit from November 1997 through April 1997 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary. We did not use computer processed data for this audit.

**Organizations and Individuals Visited and Contacted.** We visited or contacted individuals and organizations within DoD; the Environmental Protection Agency, Office of Underground Storage Tanks; and the North Carolina Department of Environment, Health and Natural Resources Division. Further details are available upon request.

## Management Control Program

DoD Directive 5010.38, "Management Control 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 Management Control Program.** We reviewed management controls over the UST program at Fort Bragg as they relate to compliance with RCRA, Subtitle I. Specifically, we reviewed management controls designed to ensure the maintenance of UST related documentation and inventories; the accuracy of UST reporting; establishment of plans and budgets to meet RCRA, Subtitle I, requirements by December 1998; and management's self-evaluation of those controls. As part of their review, the Army Audit Agency visited other FORSCOM installations, and will address FORSCOM's management controls in their audit report.

**Adequacy of Management Controls.** We identified material management control weaknesses in the UST program at Fort Bragg as defined by DoD Directive 5010.38. Officials at Fort Bragg did not ensure that the UST manager maintained a UST inventory; accurately captured, tracked and reported UST data; provided for adequate funding; or established a plan to bring USTs into compliance with RCRA, Subtitle I. Recommendations, if implemented, will improve management of the UST program and ensure that all USTs meet requirements of RCRA, Subtitle I, within specified time frames. A copy of the report will be provided to the senior official responsible for management controls at the Headquarters, 18th Airborne Corps and Fort Bragg.

## Appendix A. Audit Process

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**Adequacy of Management's Self-Evaluation.** Although Fort Bragg officials performed a self-evaluation, they did not identify the material management control weaknesses identified by the audit because the Environmental and Natural Resources Division assessable unit was too broad to provide visibility to the UST program.

### Summary of Prior Coverage

The U.S. Army Corps of Engineers, Savannah District, "Environmental Compliance Assessment Report (ECAR)," June 24, 1994, identified 859 areas of noncompliance, 113 of which pertained to USTs regulated by RCRA, Subtitle I. The areas of noncompliance ranged from the need to upgrade USTs with spill and overfill protection to UST removal. As of November 22, 1996, Fort Bragg officials had corrected 61 of the 113 RCRA, Subtitle I, UST areas of noncompliance and management had a plan to correct the 52 unresolved areas of noncompliance by December 1997.

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## **Appendix B. Report Distribution**

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

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Deputy Under Secretary of Defense (Environmental Security)  
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Director, Defense Logistics Studies Information Exchange  
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U.S. Army Forces Command  
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Inspector General, Defense Intelligence Agency

## **Appendix B. Report Distribution**

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### **Non-Defense Federal Organizations**

Office of Management and Budget  
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Senate Committee on Appropriations  
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Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on National Security, Committee on Appropriations  
House Committee on Government Reform and Oversight  
House Subcommittee on Government Management, Information and Technology,  
Committee on Government Reform and Oversight  
House Subcommittee on National Security, International Affairs, and Criminal  
Justice, Committee on Government Reform and Oversight  
House Committee on National Security

## **Part III - Management Comments**

# Department of the Army Comments



REPLY TO  
ATTENTION OF

DAIM-ED-C

DEPARTMENT OF THE ARMY  
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT  
806 ARMY PENTAGON  
WASHINGTON DC 20315-8800



18 AUG 1997

MEMORANDUM THRU ~~DIRECTOR OF THE ARMY STAFF~~ ~~DEPUTY ASSISTANT SECRETARY OF THE ARMY~~  
(ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH) *AUG 18 1997* *17/8/97* *REF 17/8/97*

FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE, ATTENTION:  
MR. ROBERT J. LIEBERMAN, ASSISTANT INSPECTOR GENERAL FOR  
AUDITING, 400 ARMY NAVY DRIVE, ARLINGTON, VA 22202-2884

SUBJECT: Audit Report on Management of Underground Storage  
Tanks at Fort Bragg (Project No. 6CK-5051)

1. References:

a. Memorandum, Inspector General, DoD, Director, Contract  
Management Directorate, 2 July 1997, SAB.

b. Memorandum, Inspector General, DoD, Director, Contract  
Management Directorate, 29 July, 1997, SAB.

2. Ref 1.a. requested Army management comments on the 2 July  
1997 draft of the subject audit report. Ref 2.b. extended the  
comment period to 18 August 1997.

3. Comments on the three recommendations of the subject draft  
report (as stated on page 10) are contained in the enclosure.  
We agree with the recommendations of the audit report and are  
providing the status of our actions to implement the recommen-  
dations.

4. The point of contact for this action is Mr. Emery Lazar,  
Office of the Director, Environmental Programs, (703)  
693-0547.

Encl

*for DC Meurig*  
DAVID A. WHALEY  
Major General, GS  
Assistant Chief of Staff  
for Installation Management

ENCLOSURE

DoD Inspector General's Recommendations for Corrective Action

**Recommendation 1:** Conduct an independent survey to develop a complete, verifiable inventory of underground storage tanks on Fort Bragg including the status of underground storage tank compliance with the Resource Conservation and Recovery Act, Subtitle I; tank size; installation date; content; construction material; and location.

**Command Comments:** Concur. Subsequent to the DODIG visit, the Directorate of Public Works and Environment (DPWE) assembled a reliable and comprehensive inventory of underground tanks (USTs) that confirms 223 USTs regulated by the Resource Conservation and Recovery Act, Subtitle I (RCRA-I). Nine of the USTs are in compliance with 1998 requirements. The DPWE continually reviews the inventory for accuracy. A copy of the inventory of RCRA-I tanks was forwarded to DODIG in February 1997. The current UST inventory was assembled using data from (i) the DODIG visit; (ii) further review of our records; (iii) data obtained outside of DPWE; and (iv) numerous field visits for data verification. In accordance with the recommendation, the DPWE also contracted for an independent consultant to physically verify the tanks in the inventory. The DPWE also utilized a separate independent consultant to review tank closure documents and other tank records. The DPWE master tank inventory is a Microsoft Access database, which includes all USTs on the installation. The DPWE personnel perform weekly backups and utilize anti-virus software to ensure that the database will not be lost or corrupted. The North Carolina Department of Environment, Health, and Natural Resources (NCDENR) also uses the DPWE database to monitor regulated USTs on Fort Bragg.

The DODIG audit report states that, in March 1996, the Army reported to the Assistant Deputy Under Secretary of Defense (Environmental Quality) that none of the 600 USTs at Fort Bragg were compliant with RCRA-I. We believe that the 600 reported USTs included the 223 tanks regulated by RCRA-I, plus an additional 377 heating oil tanks classified as commercial by the State of North Carolina.

## Department of the Army Comments

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**Recommendation 2:** Based on the independent survey, develop a plan and provide adequate funds to bring noncompliant underground storage tanks into compliance with the Resource Conservation and Recovery Act, Subtitle I, by December 22, 1998. The plan should be based on time historically required to upgrade, remove, replace and close such tanks.

**Command Comments:** Concur. At the time of the DODIG audit, the installation had initiated UST projects in order to meet the 1998 deadline. However, the overall plan was not being sufficiently managed to ensure accomplishment by the necessary date. A new plan emphasizes the use of a new contractor, Jones and Frank Corporation, who will remove, replace, or retrofit 54 USTs. The remainder of the USTs will be managed under another contract which should be awarded by 30 October 1997 with work commencing during the first quarter of FY 1998. To ensure maximum contractor performance, and avoid unnecessary work delays, the DPWE will closely monitor contractor schedules and progress. The DPWE is also considering awarding a third contract to expedite the overall effort. The North Carolina state regulations also allow an additional year after December 1998 to remove USTs as long as the tanks are taken out of service, emptied, and continued to be managed as part of the inventory. The additional year should allow sufficient time to finish the UST removals already under contract.

We concur with the anticipated cost for UST compliance as formulated by DODIG. The DPWE has received some UST funding for this fiscal year, and has received the remaining funding for FY 1998. The funds promised by the Defense Fuel Supply Center (DFSC) for the retrofit of 13 fuel sites may no longer be available to Fort Bragg. The DFSC now plans to redirect the funds to a plan for a fuel supersite construction project. The U.S. Army Forces Command is committed to funding the additional \$4.6 million that is required and has already earmarked \$3 million for Fort Bragg in August 1997--leaving an unfinanced requirement of \$1.6 million.

**Recommendation 3:** Include steps in the Environmental Natural Resources Division assessable unit to test controls over the management of underground storage tanks to ensure that the controls are functioning as intended.

**Command Comments:** Concur. Management controls for the UST program did exist at Fort Bragg, but heavy workloads and other

factors contributed to a breakdown. The management controls have been improved. A new UST program manager is competently and aggressively managing the UST program and inventory. The UST program manager is required to periodically brief the Director, DPWE, and subordinate supervisors on UST compliance projects and their progress. The Garrison Commander is also given a required briefing on the UST compliance status at the monthly Environmental Quality Control Committee (EQCC) meetings. A recent DPWE reorganization established a new Construction Management Division. The new division will be inspecting completed retrofit, removal, or replacement projects during the next year. The inspection function was previously performed by the former UST program manager, and interfered with the time needed to manage the UST compliance plan. The UST program manager also coordinates closely with the FORSCOM UST manager.

## **Audit Team Members**

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

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