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OFFICE OF THE INSPECTOR GENERAL

WASTEWATER TREATMENT PROGRAMS

Report Number 93-014

October 29, 1992

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WASTEWATER TREATMENT PROGRAMS



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The following acronyms are used in this report.

DEH..Directorate of Engineering and Housing
NPDES.....National Pollutants Discharge Elimination System
O&M.....Operations and Maintenance
OMTAP....Operations, Maintenance, and Training Assistance Program
OPNAVINST.....Office of the Chief of Naval Operations Instruction



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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October 29, 1992

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (PRODUCTION
AND LOGISTICS)
COMPTROLLER OF THE DEPARTMENT OF DEFENSE
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL
MANAGEMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
INSPECTOR GENERAL, DEPARTMENT OF THE ARMY
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Audit Report on Wastewater Treatment Programs
(Report No. 93-014)

We are providing this final report for your information and use. We initiated this audit in response to concerns voiced by the Office of the Deputy Assistant Secretary of Defense (Environment) that the aging wastewater treatment facilities throughout DoD would be unable to consistently meet tightening clean water standards.

Comments on a draft of this report were considered in preparing the final report. Since the report contains no findings or recommendations, no additional comments are required.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. Wayne Million, Program Director, at (703) 692-2991 (DSN 222-2991) or Ms. Judith I. Karas, Project Manager, at (703) 692-2994 (DSN 222-2994). The planned distribution of this report is listed in Appendix F.

Robert J. Lieberman
Assistant Inspector General
for Auditing

cc:
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force
Commandant of the Marine Corps

Office of the Inspector General, DoD

Report No. 93-014
(Project No. 1CG-0042)

October 29, 1992

WASTEWATER TREATMENT PROGRAMS

EXECUTIVE SUMMARY

Introduction. The goal of wastewater treatment programs is to operate effective, efficient utility systems and to comply with Federal, state, and local laws; with conditions of National Pollutants Discharge Elimination System permits; and with publicly owned treatment works agreements.

Objective. The overall objective of this audit was to evaluate the Military Services' long-range plans and program execution for wastewater treatment systems.

Audit Results. The Services each had a program to identify and plan short- and long-term resource requirements for utility systems including wastewater treatment systems. The Air Force and the Marine Corps established programs specifically to plan for and to manage wastewater treatment systems that comply with permits and agreements. Military utility system and environmental projects, including wastewater treatment systems, are required to compete with all other budget projects for priority and funds. We found no material deficiencies in program management.

Internal Controls. This audit did not identify any material control weaknesses. The internal controls assessed included the guidance and procedures used to document, oversee, and operate wastewater treatment plants in compliance with environmental regulations. See page 2 in Part I for a description of the controls assessed.

Summary of Recommendations. This report conveys the results of our audit; however, it does not contain recommendations.

Management Comments. Since this report contained no findings or recommendations, management comments were not required. However, the Departments of the Navy and the Air Force commented in order to best reflect the status of their respective wastewater treatment programs. See the full text of their comments in Part III.

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This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate, at (703) 614-6303 (DSN 224-6303).

PART I - RESULTS OF AUDIT

Introduction

We initiated this audit in response to concerns voiced by the Office of the Deputy Assistant Secretary of Defense (Environment) that the aging wastewater treatment facilities throughout DoD would be unable to consistently meet tightening clean water standards. The Services were also very concerned about the status of program implementation and the obstacles faced by environmental managers in the course of implementation.

The Services had programs in place to identify and fund wastewater treatment system projects. Before FY 1991, environmental projects financed with operations and maintenance funds were not reported separately from other facilities projects. Accordingly, funding data specifically on wastewater treatment systems were not available. As a result of this limitation, we could not substantiate the validity or extent of any problem caused by not always receiving the funding advocacy and priority necessary for timely completion of wastewater treatment projects.

Background

Wastewater treatment for military installations can be accomplished either by on-site facilities or by non-DoD service facilities. Purchasing wastewater treatment services and replacing and maintaining wastewater treatment systems costs millions of dollars each year. One Navy installation identified \$56.7 million in wastewater treatment systems projects for FYs 1992 through 1999. The Air Force programmed \$106 million for 22 wastewater treatment military construction projects in FY 1993.

The management functions involved in wastewater treatment are utilities (sometimes a subgroup of infrastructure) and environmental management. The success of a long-range wastewater treatment plan relies on cooperation between these two management functions. Wastewater treatment is only one of many concerns for both functional areas at the headquarters of Military Departments, of major and intermediate commands, and of installations. From a budgeting point of view, wastewater treatment competes with all other projects for O&M funds and for a place in the military construction program. Long-range plans for wastewater treatment systems are difficult to isolate from environmental programs. It is often necessary to discuss wastewater treatment programs in a total environmental program context.

Objective

The overall objective of this audit was to evaluate the Military Services' long-range plans and program execution for wastewater treatment systems.

Scope

Guidance for wastewater systems. We reviewed funding, projects, and environmental guidance at each Service Headquarters and at 12 of 35 judgmentally selected command-level headquarters to determine the status of long-range planning for wastewater treatment systems. We reviewed wastewater treatment project documentation pertaining to randomly selected installations within each command visited. We also reviewed documentation of military construction programs and O&M programs related to wastewater treatment projects.

Audit period, standards and locations. This program audit was performed from October 1991 through April 1992 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Accordingly, we included such tests of internal controls as were considered necessary. The documents reviewed were for FYs 1987 through 2009. The activities visited and organizations contacted are shown in Appendix E.

Audit assistance. Personnel from the Technical Assessment Division, Office of the Assistant Inspector General for Auditing, DoD, helped the audit staff develop the audit steps and become familiar with the basic operations of wastewater treatment systems.

Internal Controls

We evaluated the internal controls the Services had implemented to achieve and sustain wastewater treatment plant compliance with the National Pollutants Discharge Elimination System (NPDES) permits and with the publicly owned treatment works agreements. We also evaluated the procedures used to oversee system operations, to maintain appropriate records, to submit suitable, timely projects, and to sustain environmental compliance for wastewater treatment systems. In addition, we reviewed the guidance used to identify and assign priorities to wastewater treatment systems projects.

Since no material deficiencies were disclosed by the audit, the internal controls applicable to the programs for wastewater treatment systems were determined to be effective.

Prior Audits and Other Reviews

No prior audits were performed that specifically examined wastewater treatment systems long-range plans or long-range plan execution.

Discussion

No regulation existed that required the Services to develop an official wastewater treatment system policy or a long-range plan. The programs that were established were not explicitly labeled wastewater treatment systems long-range plans, but the programs had features that corresponded to long-range planning principles.

Although the Army, Navy, and Marine Corps each used different criteria and regulations for long-range plans for wastewater treatment systems, the basic criteria were met for establishing their goals. The Air Force issued specific policy and implemented a long-range plan that provided guidance to major commands and installations for improving the environmental compliance of wastewater treatment systems.

One principle all the programs had in common, whether they were viewed primarily as a utility or as an environmental function, was the complete decisionmaking authority of the installation commander. The specific features of long-range plans within each Service are shown in Appendixes A through D.

In implementing long-range plans and programs, staff at major command-level headquarters reported that the most significant impediments were competition for project priority and long response time for new permit requirements. These impediments are discussed below.

Environment laws. The Federal Water Pollution Control Act of 1972 (known as the Clean Water Act) and individual state laws require that wastewater be treated and discharged according to a set of standards. The treatment and discharge standards are established by means of a permit issued under the terms of the NPDES Program, a program established by the Clean Water Act.

Federal, state, and local regulators are under increasing pressure to enforce Clean Water Act standards and to penalize those who do not comply. In July 1991, the General Accounting Office presented testimony before the Senate Subcommittee on Environmental Protection, Committee on Environment and Public Works, about compliance and enforcement activities under the Clean Water Act. The testimony stated that some Federal facilities remained in significant noncompliance for up to 2 years without receiving an enforcement order. The testimony concluded that the goals of environmental laws depend on effective enforcement programs and on violator disincentives.

To meet the terms of an NPDES permit, a wastewater treatment system must have the technology, the capacity, and the maintenance capability to clean the wastewater according to established standards. In recent years, NPDES permit standards have become more stringent, whereas DoD wastewater treatment systems have become older. The aging DoD wastewater treatment systems must be replaced, expanded, or upgraded in order for DoD to maintain and, in some cases, regain NPDES permit compliance.

Execution of long-range plans. The degree of emphasis by the installation commander, which is critical to executing wastewater treatment systems policy and plans, can vary, depending on the commander's perceptions and state, city, and county government environmental requirements. Different priorities for wastewater treatment generally result from the following factors.

Interpretation of policy. An installation commander's interpretation of the applicable wastewater treatment policy is a factor in executing the installation's long-range plans. Commanders differ on whether the principal policy goal is to run an efficient utility, minimize environmental pollution, or minimize receipt and correction of notices of violation. If all commanders' goals were to run an efficient wastewater utility or to minimize water pollution, then the response to a persistently exceeded pollution limitation would be the same regardless of an installation's location, whether in an environmentally aggressive state or in a less aggressive state. However, the commander who interprets the policy as one to avoid notices of violation would respond differently, by state, depending on whether the state wastewater regulatory agency is likely to issue notices of violation for exceeding wastewater pollution limits.

The Navy, for example, increased the number of wastewater treatment projects at Hawaiian installations when the state became more aggressive about issuing notices of violation. On May 2, 1991, the Department of Health, State of Hawaii, issued a report to the Pacific Division, Naval Facilities Command, that identified O&M deficiencies, safety and health issues, NPDES limit violations, and inadequate plant capacity. The report mandated an increased number of wastewater treatment projects at Fort Kamehameha. After the May report, funding priority increased for \$57.6 million in wastewater treatment projects, including one improvement project estimated at \$25.0 million. We believe that the priority given to some of these projects due to the regulatory agency's report would have been given before that May inspection had the installations been primarily motivated to comply with the standards.

Specificity of guidance. The Army inconsistently executed policy for considering alternatives for managing wastewater treatment facilities. Of the three Army major

commands reviewed, two had not surveyed their installations to determine the potential for privatizing or converting to publicly owned treatment works. The Training and Doctrine Command at Fort Monroe, Hampton, Virginia, interpreted the Office of the Chief of Engineers policy memorandum, "Army Policy for Obtaining Water Supply, Wastewater, Solid Waste, Heating, Electricity and Other Utility Services," September 5, 1991, as informational rather than directive. On the other hand, Forces Command at Fort McPherson, Atlanta, Georgia, had upgraded most of its wastewater systems 10 years earlier and considered privatization and regionalization when major upgrades and repairs became necessary. The Military Traffic Management Command, Eastern Area, Bayonne, New Jersey, had investigated the conversion to publicly owned systems but found that approach impractical for its wastewater treatment systems.

Level of funding. Available funding is another factor affecting an installation commander's execution of wastewater treatment policy and plans. For example, the availability of funds can determine if an installation commander requests assistance from technical experts through programs such as Operator Assistance Programs, Staff Assistance Visits, or Utility System Assessments (Appendixes A and B respectively) in order to identify and correct inefficient wastewater treatment operations or defective wastewater treatment systems. The availability of funds can also determine the timing of corrective procedures. If funds are readily available, inefficiencies and defects are likely to be corrected before regulatory agency intervention mandates it.

Competition for project priority. In addition to the overall availability of funds, the competition for priority among all projects impacts the execution of wastewater treatment systems policies and plans. Facility construction projects, although individually considered and approved, must compete for installation and command advocacy; therefore, wastewater treatment plants must compete with facilities such as child care centers and weapons system repair buildings for a place in the military construction program. Facility projects, including wastewater treatment, must compete for O&M funds with other interests such as salaries and transportation.

Military construction. The Military Services emphasized certain projects, which competed to be included in the military construction program, by setting priorities in planning documents and policy memorandums. For example, the Army established an order of precedence for construction projects in "The Army Plan FY 1994 - 2009," October 1991. The first priority was legal and environmental requirements and the fourth priority was critical utility systems. Wastewater treatment plants could be addressed under either category.

The Navy based its military construction priorities on programs submitted by mission resource sponsors. (A resource sponsor is an office responsible for a functional area such as logistics or air.) A wastewater treatment system could possibly have several resource sponsors because it supplied utility services to more than one functional area. Navy also had a military construction program for pollution abatement. This program was centrally managed by the Naval Facilities Engineering Command. Sponsored projects, such as wastewater treatment systems, were justified by environmental risk.

The Air Force established a policy for military construction projects for FY 1993 in a policy memorandum dated July 23, 1991. In addition to fully funding Class I (environmental conditions that violate a regulation), and Class II requirements (environmental conditions that will violate regulation if left to deteriorate), the policy gave special advocacy and priority to projects submitted for fire training facilities and wastewater treatment facilities by the Headquarters, Environmental Compliance Office.

The Marine Corps had not established formal policy for priority of wastewater treatment systems within their overall budget development. The Marine Corps contracted for a study of all their wastewater treatment systems to identify requirements and relative priority. An interim step to recommend solutions and determine the cost was planned before the study results were integrated into the military construction budget.

Operations and maintenance. A portion of the O&M budget is based on validated environmental requirements, including wastewater treatment systems, called the environmental compliance program. Although a portion of the O&M budget is justified by these environmental requirements, use of the funds is not restricted to environmental projects.

The Army distributed O&M funds to its major commands in a lump sum to be further distributed to the installations as the major command determines appropriate. The Army did not segregate and restrict environmental funds within the O&M distribution; however, the Army required quarterly reports from its major commands on environmental expenditures, which included wastewater treatment systems.

The Training and Doctrine Command, Forces Command, and Military Traffic Management Command distributed O&M funds to installations quarterly, without restricting an environmental portion. The major command utility and environmental managers did not report any project problems related to the O&M funding process. An Army audit conducted on funding showed that by the end of the year, environmental expenditures were greater than the amount requested in the O&M budget.

The Navy distributed O&M funds to major claimants through resource sponsors. (Major claimants are commands that have broad responsibilities for implementing mission assignments.) The O&M funds were further distributed to installations for routine and recurring expenses for environmental compliance, including wastewater treatment. In addition, the Navy established a centrally managed fund for pollution abatement. The Navy Facilities Engineering Command managed the O&M fund and provided for one-time investment items, unanticipated or extraordinary nonrecurring requirements, and special projects.

The Commander, Naval Supply Systems Command; the Chief, Naval Education and Training; the Commander in Chief, Pacific Fleet; and the Commander, Naval Reserve Forces used both O&M funds and pollution abatement funds to support environmental requirements including wastewater treatment. The utility and environmental managers reported no funding process difficulties related to environmental support, which included wastewater treatment systems. This was true whether the funds came from a single resource sponsor or from several resource sponsors.

The Air Force distributed O&M funds to major commands in a lump sum to be further distributed to the installations as the major command determined appropriate. Like the Army, the Air Force did not segregate or restrict environmental funds within the O&M distribution.

Air Force Logistics Command, Tactical Air Command, Strategic Air Command, and Military Airlift Command distributed funds to the installations, also without restricting the environmental portion. Major command utility and environmental personnel reported concerns about the O&M funding process, and about meeting the goals of environmental compliance and wastewater treatment systems strategy.

One environmental project to be funded through O&M funds that the Air Force established as part of its wastewater treatment systems strategy was the Operations, Maintenance, and Training Assistance Program (OMTAP) reviews. These reviews were designed to identify deficiencies early and to improve procedures for efficiently operated wastewater treatment plants. Strategic Air Command, Military Airlift Command, and Tactical Air Command cannot meet the objectives of OMTAP on a timely basis at the current planned funding rate. Strategic Air Command and Tactical Air Command each planned one OMTAP for the coming fiscal year. According to the Air Force strategy statement dated March 13, 1991, this effort would require \$2.5 million and at least 24 months. According to environmental personnel, the OMTAP could not successfully compete with other facility projects or environmental projects in the current austere budgetary climate.

The Military Airlift Command environmental staff was concerned that, as funds were released for O&M, environmental projects would not successfully compete with more visible facility projects such as office building improvements. Military Airlift Command directed its intermediate headquarters and support activities to submit integrated unfunded priority lists. According to the memorandum, "... funds for centrally managed programs such as ... environmental compliance must be integrated into a priority list with traditional requirements like supplies, utilities, or temporary duty." The integrated priority list was expected to result in more environmental projects approved towards the end of the fiscal year when compressed time schedules tend to make effective project planning and initiation more difficult.

Execution of the wastewater treatment policy and plans was impacted by the timing of funds distribution. Although environmental compliance funds justification was supported by validated requirements, Financial Management at Tactical Air Command based the initial release of funds on prior-year program execution rates rather than on the program approved in the President's Budget. For example, Tactical Air Command had an approved environmental compliance program, including wastewater treatment projects, for FY 1992 of \$29.0 million; however, the initial distribution of funds was only \$12.4 million. The environmental compliance program personnel were told that environmental Class I and Class II requirements would have to be submitted to Financial Management and compete for the O&M funds available. Although migrating funds were expected to result in program execution at the end of the year, this would mean initiating projects in a compressed time schedule.

The Marine Corps distributed O&M funds to its installations through the Commandant of the Marine Corps. The Marine Corps also established a centrally managed environmental compliance program, which was managed by the Land Use and Military Construction Branch, Office of the Commandant of the Marine Corps. The Marine Corps utility and environmental managers reported no funding process difficulties related to environmental support, including wastewater treatment systems.

Each military installation commander sets the project priorities for O&M funding. The environmental staff identifies environmental requirements, establishes the priorities among those requirements, and submits them to the installation commander. External sources, such as state regulators or citizen groups, rather than the environmental staff set the penalties for delaying an environmental project. In some instances these external sources also impede efforts to meet NPDES standards.

Response time to new permit requirements. The ability to plan long range is also severely impacted by the way new NPDES

permits are issued. DoD wastewater treatment facilities often are unable to comply with new, more-stringent requirements imposed by the state when an installation renews its permit. Permit requirements are individually established; therefore, the installations cannot predict new requirements with any degree of certainty. This is especially true when attempting to predict 5 years ahead, which is the usual cycle for approving and funding a military construction project.

For example, the Naval Computer and Telecommunication Area Master Station, Hawaii, anticipated that wastewater treatment requirements would change when it requested that alternatives for wastewater treatment be studied in 1988. In 1990, the installation was issued a new 3-year permit with standards the wastewater treatment plant could not meet. As a result, the wastewater treatment plant became obsolete. The existing plant must undergo \$110,000 worth of remedial maintenance to minimize the violations until the new system (a connection to a local municipal system) can be completed. The new system is in the FY 1994 Military Construction Program at an estimated cost of \$8.3 million. The 1990 permit expires September 30, 1993.

Summary. Wastewater treatment projects must compete against other requirements in a period of severe budget constraints. We found no material deficiencies in overall program management. However, the following penalties could occur as a result of inconsistent execution of wastewater treatment policies and plans.

- o The Services could violate the Clean Water Act and get fined or sued by a citizen group. Repeatedly exceeding the limits set by an NPDES permit without identifying and correcting the cause can result in notices of violation from the regulating agency or action from a citizen group.

- o The Services could incur additional costs for interim or accelerated repairs. Wastewater treatment plants that do not respond quickly to notices of violations can be forced to a timetable by a consent agreement that calls for penalties in case of missed milestones.

- o The Services could lose funds justified and budgeted as environmental compliance program requirements. As O&M budget requests grow, justified in part by requirements specifically identified as environmental, budget approval authorities monitor execution of the budget. Environmental O&M expenditures were identified with a specific accounting code beginning in FY 1991. If these funds, identified to environmental projects, are not spent as requested, the O&M budgets are likely to decrease.

PART II - ADDITIONAL INFORMATION

APPENDIX A - Army Wastewater Treatment Long-Range Plans and Program Execution

APPENDIX B - Navy Wastewater Treatment Long-Range Plans and Program Execution

APPENDIX C - Air Force Wastewater Treatment Long-Range Plans and Program Execution

APPENDIX D - Marine Corps Wastewater Treatment Long-Range Plans and Program Execution

APPENDIX E - Activities Visited or Contacted

APPENDIX F - Draft Report Distribution

APPENDIX A - ARMY WASTEWATER TREATMENT LONG-RANGE PLANS AND PROGRAM EXECUTION

On April 23, 1990, the Army issued Regulation 200-1, "Environmental Protection and Enhancement," which prescribes that the Army use municipal or regional wastewater collection and disposal systems whenever life-cycle cost analyses show them to be most economical. This policy is repeated in a memorandum dated September 5, 1991, and in "The Army Plan FY 1994 - 2009," dated October 1991.

In addition to conversion to municipal or regional systems the Army policy documents included the following objectives for wastewater treatment systems management.

- o Cooperate with Federal, state, and local authorities in the abatement and control of pollution of surface and underground waters (Army Regulation 200-1 and Army Regulation 420-46, "Water and Sewage," July 1, 1978).

- o Meet standards regarding contamination of surface and underground waters established by Federal and state agencies (Army Regulations 200-1 and 420-46).

- o Submit NPDES permits to the Army Environmental Hygiene Agency for review (Army Regulation 200-1).

- o Reflect consideration of innovative or alternative technology in construction programming documents (Army Regulation 200-1).

- o Meet certification requirements for operators and laboratories (Army Regulation 200-1).

The Army also implemented the following two programs to improve operations and maintenance of wastewater treatment systems.

The Staff Assistance Visit Program, defined in Army Regulation 420-10, "Management of Installation Directorates of Engineering and Housing," August 3, 1987, directed that the major command directorate of engineering and housing (DEH) staff assess installation DEH activities at least once every 2 years. The Engineering and Housing Support Center set a goal of visiting each active installation once every 5 years. Installations might also receive special visits in response to a specific problem or to a request. The Staff Assistance Visit Program applied to all DEH activities, including utility functions such as wastewater treatment. The program's main purposes were to identify and resolve site specific and systemic maintenance problems, to

APPENDIX A - ARMY WASTEWATER TREATMENT LONG-RANGE PLANS AND PROGRAM EXECUTION (cont'd)

collect and communicate technological advances and improvements, and to broaden the information base for installation DEH operations.

The Operator Assistance Program, initiated in 1984, was expressly a water and wastewater program that employed a three-phase approach. Phase I was the evaluation of the water or wastewater treatment system to identify deficiencies and corrections. Phase II was on-site operator training and preparation of site specific manuals. Phase III was reevaluation and additional assistance.

In January 1992, the Engineering and Housing Support Center submitted a draft action memorandum on facility condition surveys. The proposed action was to have installations conduct a total system analysis on all facilities, including wastewater treatment systems, and recommend corrective actions, complete with drawings, investment strategies, and consolidation proposals. The recommendations would then be developed into a 10-year plan for accomplishing the corrective actions.

The Army made the installation commanders primarily responsible for providing and maintaining wastewater treatment systems in compliance with laws and regulations. The commanders' chief ally in this effort is the DEH. The DEH gets technical assistance and functional oversight from the Engineering and Housing Support Center and the major command DEH. Environmental coordinators at command and installation level also advise the commander; however, an effectively operated and maintained wastewater treatment system is first a utility function.

APPENDIX B - NAVY WASTEWATER TREATMENT LONG-RANGE PLANS AND PROGRAM EXECUTION

The Office of the Chief of Naval Operations Instruction (OPNAVINST) 5090.1A "Environmental and Natural Resources Program Manual," October 2, 1990, stated the overall Navy environmental policy: All Navy personnel, civilian, military, or contractor, will comply with all Federal, state, local, and internal environmental policies, regulations, and requirements. Specific wastewater treatment objectives forwarded in the OPNAVINST include the following.

- o Reduce treatment needs by reducing the volume of the waste stream.

- o Use publicly owned treatment works when life-cycle costs make it economically feasible.

- o Obtain permits as required by Federal and state laws and achieve the prescribed effluent limitations.

- o Meet operator certification requirements.

The Navy provides additional guidance on facilities in OPNAVINST 11000.16A, "Command Responsibility For Shore Activity Land and Facilities," April 28, 1987. This instruction states that maintenance and repair requirements for shore facilities will be identified through a documented facilities inspection program. This instruction further states that proactive measures, such as preventive and planned maintenance, should be emphasized. The Navy established two programs to support development of the Activity Master Plan, part of the Shore Activity Land and Facilities planning process. These programs are described below.

The Utility System Assessment was set up as an on-site examination of utility plans and systems to be conducted by the Naval Facilities Engineering Command. The Utility System Assessment, which is to be accomplished at least every 6 years, would evaluate and document the condition, capacity, and reliability of an installation's utility plans and systems, including wastewater treatment systems.

The Utility Technical Studies provide detailed analyses of the deficiencies identified during a Utility System Assessment. The results of a Utility Technical Study would include technical specifications and economic analysis for the solution to the utility system deficiency in capacity, quality, safety, or reliability.

APPENDIX B - NAVY WASTEWATER TREATMENT LONG-RANGE PLANS AND PROGRAM EXECUTION (cont'd)

In August 1991, the Naval Energy and Environmental Support Activity began a survey of all Navy wastewater treatment plants. The purpose of the survey was to obtain information about the wastewater treatment plants' compliance records and to identify deficiencies so that resources could be allocated to correct those deficiencies. The final report of the survey results was issued in June 1992.

The Navy has made the commanding officer of each activity primarily responsible for resource and facilities management. According to OPNAVINST 11000.16A, the commanding officer must commit the appropriate level of funding to each function, including wastewater treatment systems. The commanding officer gets guidance, priorities, and direction for land use and facilities from the major claimant. The Naval Facilities Engineering Command provides commanding officers technical advice and professional services such as the Utility System Assessments and Utility Technical Studies. The Naval Facilities Engineering Command also serves as the primary support and adviser on environmental issues.

**APPENDIX C - AIR FORCE WASTEWATER TREATMENT LONG-RANGE PLANS
AND PROGRAM EXECUTION**

On March 13, 1991, the Air Force Office of the Civil Engineer sent all commands a wastewater treatment plant program designed to achieve and sustain environmental compliance. The Environmental Quality Directorate had already completed a baseline survey of wastewater treatment plants and had developed project definition packages for wastewater treatment plant requirements when the program was approved.

The Air Force 5-point strategy to meet its environmental compliance objectives follows.

- o Train and license wastewater treatment plant operating personnel.
- o Optimally maintain and repair wastewater treatment plants.
- o Fund and resource effective wastewater treatment plant operations.
- o Inspect, test, and evaluate wastewater treatment plant operations and compliance.
- o Identify and program wastewater treatment plant capital improvement projects.

The program document assigned responsibilities for accomplishing the program objective. The major commands and installations were assigned the responsibility to "Take specific action to identify, program, and budget for the necessary resources (funds, materials, equipment, and capital investments) to properly operate wastewater treatment plants." In the program document transmittal letter to the major commands, the Environmental Quality Directorate established a reporting procedure to monitor major commands' progress towards implementation.

**APPENDIX D - MARINE CORPS WASTEWATER TREATMENT LONG-RANGE PLANS
AND PROGRAM EXECUTION**

The Marine Corps' environmental policy for wastewater treatment systems was documented in Marine Corps Order P5090.2, "Environmental Compliance and Protection Manual," September 26, 1991. The overall environmental policy states that the Marine Corps will actively protect and enhance the quality of the environment through strict compliance with all applicable regulatory requirements. Specific wastewater treatment objectives provided in Order P5090.2 included:

- o reducing treatment needs by reducing the volume processed through such means as process changes and reduced groundwater infiltration,
- o using publicly owned treatment works when life-cycle costs make it the most economical alternative, and
- o meeting system operator certification or licensing requirements.

In May 1991, the Environmental Compliance Office, Headquarters, Marine Corps began a project to assess and analyze the wastewater treatment systems at 11 Marine Corps installations. The statement of work for this project defined the following tasks.

- o Develop a questionnaire and database of wastewater treatment plant information.
- o Gather and analyze data at Marine Corps Base, Quantico, Virginia, and provide short- and long-term plans of action.
- o Assess and make recommendations for wastewater treatment plants at the remaining 10 Marine Corps installations.
- o Prepare a final summary report that identifies and projects problems, suggests solutions, and recommends project priorities.
- o Prepare a strategic plan that addresses program goals, staffing and training requirements, and command awareness and schedules required to achieve and maintain compliance with environmental regulations.

**APPENDIX D - MARINE CORPS WASTEWATER TREATMENT LONG-RANGE PLANS
AND PROGRAM EXECUTION (cont'd)**

The Marine Corps has made the commanding officer of the installation primarily responsible for water pollution abatement through effective operation of the installation wastewater treatment system. The commanding officer is responsible for securing permits, determining the feasibility of using public treatment works, and operating a wastewater treatment system that complies with requirements. The commanding officer receives guidance and support from the Land Use and Military Construction Branch at Headquarters, Marine Corps. The environmental office of that branch is the central manager for analyzing and upgrading Marine Corps installation wastewater treatment plants.

APPENDIX B - ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Deputy Assistant Secretary of Defense (Environment),
Washington, DC

Department of the Army

Office of the Chief of Engineers (Army Environmental Office),
Washington, DC
Forces Command, Fort McPherson, Atlanta, GA
Military Traffic Management Command, Falls Church, VA
Training and Doctrine Command, Fort Monroe, Hampton, VA
Army Engineering and Housing Support Center, Fort Belvoir, VA
Directorate of Engineering and Housing, Fort Riley, Manhattan, KS

Department of the Navy

Office of the Assistant Secretary of the Navy (Installations
and Environment), Office of Environment and Safety,
Arlington, VA
Office of the Deputy Chief of Naval Operations (Logistics),
Shore Activities Division (OP 45), Arlington, VA
Pacific Fleet, Honolulu, HI
Naval Education and Training Command, Pensacola, FL
Naval Reserve Force, New Orleans, LA
Naval Facilities Engineering Command, Assistant Commander
for Environment, Safety and Health, Alexandria, VA
Public Works Department, Naval Station, Mayport, FL

Department of the Air Force

Deputy Assistant Secretary of the Air Force (Environment,
Safety and Occupational Health), Washington, DC
Office of The Civil Engineer, Directorate of Environmental
Quality, Bolling Air Force Base, Washington, DC
Air Force Logistics Command, Wright-Patterson Air Force
Base, Dayton, OH
Air Force Military Airlift Command, Scott Air Force Base,
Bellefonte, IL
Air Force Space Command, Peterson Air Force Base,
Colorado Springs, CO
Air Force Strategic Air Command, Offutt Air Force Base,
Omaha, NE
Air Force Tactical Air Command, Langley Air Force Base,
Hampton, VA
Air Force Eastern Space and Missile Center, Patrick Air
Force Base, Cocoa Beach, FL

APPENDIX E - ACTIVITIES VISITED OR CONTACTED (cont'd)

Marine Corps

Office of the Deputy Chief of Staff (Installations and
Logistics), Environmental Management Section,
Arlington, VA
Marine Corps Air Ground Combat Center, Twentynine Palms, CA

Defense Agencies

Defense Logistics Agency, Office of Installation Services
and Environmental Protection, Alexandria, VA

APPENDIX F - REPORT DISTRIBUTION

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics)
Comptroller of the Department of Defense
Deputy Assistant Secretary of Defense (Environment)

Department of the Army

Secretary of the Army
Assistant Secretary of the Army (Installations, Logistics
and Environment)
Office of the Chief of Engineers (Chief, Army Environmental
Office)
Commander, Forces Command
Commander, Training and Doctrine Command
Auditor General, Army Audit Agency
Commander, Military Traffic Management Command
Director, Engineering and Housing Support Center
Inspector General, Department of the Army (Operations Division)

Department of the Navy

Secretary of the Navy
Assistant Secretary of the Navy (Financial Management)
Assistant Secretary of the Navy (Installations and Environment)
Deputy Chief of Naval Operations (Logistics)
Director, Environmental Protection, Safety, and
Occupational Health
Commander in Chief, Pacific Fleet
Chief, Naval Education and Training
Commander, Naval Reserve Force
Commander, Naval Facilities Engineering Command
Auditor General, Naval Audit Service

Department of the Air Force

Secretary of the Air Force
Assistant Secretary of the Air Force (Financial Management
and Comptroller)
Deputy Assistant Secretary of the Air Force (Environment,
Safety and Occupational Health)
Deputy Chief of Staff (Logistics and Engineering)
Office of the Civil Engineer, Directorate of Environmental
Quality
Commander, Air Force Space Command
Commander, Air Force Materiel Command
Commander, Air Mobility Command
Commander, Air Combat Command
Auditor General, Air Force Audit Agency

APPENDIX F - REPORT DISTRIBUTION (cont'd)

Marine Corps

Commandant of the Marine Corps
Deputy Chief of Staff of the Marine Corps (Installations and
Logistics)

Defense Agencies

Director, Defense Logistics Agency

Non-DoD Federal Organizations

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

Chairman and Ranking Minority Member of the following
Congressional Committees and Subcommittees:

Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Senate Select Committee on Intelligence
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Permanent Select Committee on Intelligence
House Subcommittee on Oversight and Evaluation, House Permanent
Select Committee on Intelligence
House Subcommittee on Legislation and National Security,
Committee on Government Operations

PART III - MANAGEMENT COMMENTS

Department of the Navy

Department of the Air Force

DEPARTMENT OF THE NAVY COMMENTS

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COMMANDER IN CHIEF, U.S. PACIFIC COMMAND
(USCINCPAC)

CAMP H.M. SMITH, HANALEI 96961-8028

J053
7300
ser 419
16 SEP 1992

To: Ms. Judith I. Karas, Project Manager
Inspector General, Department of Defense

Subj: DEPARTMENT OF DEFENSE INSPECTOR GENERAL (DODIG) DRAFT
AUDIT REPORT ON WASTEWATER TREATMENT PROGRAMS
(Project No. ICG-0042)

Ref: (a) DODIG ltr dtd 07 Aug 92 (Draft Report)


1. Reference (a) provided a copy of the draft report for review and comments.

2. The Pacific Division (PACDIV), Naval Facilities Engineering Command, Pearl Harbor, provided the following comments on the subject draft report:

a. Page 4, Second Paragraph - This paragraph infers that most of the \$57.6 million in projects for improving the wastewater treatment plant at Fort Kamehameha were initiated as a result of the State of Hawaii, Department of Health's Inspection Report of 02 May 91. PACDIV does not concur with this conclusion. The records show that over \$40 million in projects were initiated prior to the 02 May 91 report. The need for expanding and upgrading the Wastewater Treatment Plant were the result of Base Realignment and Closure requirements, possible homeporting of a battleship, and studies conducted by the Navy prior to the State inspections. The State inspection report confirmed and supported the need for the projects.

3. PACDIV requests that the subject report be corrected to reflect the above comments. Questions can be directed to Mr. Orrin Wong, PACDIV, Environmental Engineering Branch at (808) 471-3948.

4. USCINCPAC point of contact is Mr. Wayson Lee (J053) at (808) 477-1182 or DSN 477-1182 or fax 477-0535


W. B. HASKETT
Captain, SC, USN
Comptroller

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PAC Pearl Harbor

DEPARTMENT OF THE AIR FORCE COMMENTS

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DEPARTMENT OF THE AIR FORCE
WASHINGTON DC 20330

OFFICE OF THE ASSISTANT SECRETARY


SEP 2 1992

MEMORANDUM FOR DEPUTY ASSISTANT SECRETARY (ENVIRONMENT)
(OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
(PRODUCTION AND LOGISTICS))

SUBJECT: Inspector General (IG), Department of Defense (DoD)
Draft Audit Report on Wastewater Treatment Programs
(Project No. ICG-0042), (Your memo dtd Aug 12, 92)
- INFORMATION MEMORANDUM

We appreciate the opportunity to comment on this draft audit report. The Air Force took aggressive action to correct level 1 wastewater treatment plant problems and we would like to see this noted in the report under Part I, Recognition, Competition for project priority, Military Construction, new 4th paragraph (draft report page 6): "The Air Force established a wastewater treatment plant initiative in FY 91 to identify and correct all existing and anticipated wastewater compliance problems. 22 projects to correct problems were identified and all are programmed in the FY92 MILCON program at a total cost of \$106 million."

Thank you for your consideration.


GARY D. VEST
Deputy Assistant Secretary of the Air Force
(Environment, Safety and Occupational Health)

List of Audit Team Members

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Wayne K. Million, Audit Program Director
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Gregory P. Guest, Auditor
Doris Reese, Administrative Support