Evaluation Report

OFFICE OF THE INSPECTOR GENERAL

EVALUATION OF THE DEPARTMENT OF DEFENSE POLLUTION PREVENTION PROGRAM

Report No. 98-001 **October 3, 1997**

DEPARTMENT OF DEFENSE

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Acronyms

DUSD(ES)	Deputy Under Secretary of Defense (Environmental Security)
EO	Executive Order
EPA	Environmental Protection Agency

INSPECTOR GENERAL
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October 3, 1997

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE
(ENVIRONMENTAL SECURITY)
ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, LOGISTICS, AND
ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY
(INSTALLATION AND ENVIRONMENT)
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Evaluation Report on the DoD Pollution Prevention Program
(Report No. 98-001)

We are providing this evaluation report for review and comment. We did not receive comments from the Assistant Secretary of the Navy (Installation and Environment); however, comments from the Deputy Under Secretary of Defense (Environmental Security) and the Department of the Army, Assistant Chief of Staff for Installation Management were considered in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Deputy Under Secretary of Defense for Environmental Security and Department of the Army were responsive. As a result of management comments, we deleted draft Recommendation B.1., and revised and redirected Recommendation C. We request the Department of the Army, Assistant Chief of Staff for Installation Management comment on Recommendations B.1., B.2., and C., and the Assistant Secretary of the Navy (Installation and Environment) comment on Recommendations A.1., A.2., and A.3. by December 2, 1997.

We appreciate the courtesies extended to the evaluation staff. Questions on the evaluation should be directed to Mr. William C. Gallagher, Evaluation Program Director, at (703) 604-9270 (DSN 664-9270) or Mr. Michael R. Herbaugh, Evaluation Project Manager, at (703) 604-9294 (DSN 664-9294). See Appendix D for report distribution. The evaluation team members are listed inside the back cover.

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Assistant Inspector General
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Office of the Inspector General, DoD

Report No. 98-001 **October 3, 1997**
(Project No. 6CB-5017)

Evaluation of the Department of Defense Pollution Prevention Program

Executive Summary

Introduction. This report focuses on the effectiveness of pollution prevention plans and programs. This evaluation was initiated by a request from the Office of the Deputy Under Secretary of Defense (Environmental Security) to review segments of the DoD pollution prevention program. Currently, the DoD pollution prevention program is in its early stages of implementation. As a result of our evaluation survey, we decided to conduct an evaluation that focuses on the effectiveness of Military Departments' pollution prevention plans and programs.

Evaluation Objective. Our objective for this evaluation was to determine whether the Military Departments are adequately implementing the pollution prevention requirements of Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements" and the DoD Comprehensive Pollution Prevention Strategy. Specifically, we determined whether:

o Military Departments established policy in accordance with the DoD Comprehensive Pollution Prevention Strategy,

o DoD installation pollution prevention programs are being effectively and efficiently managed, and

o DoD installation pollution prevention plans have been published and include a priority/risk based approach for decisionmaking.

Evaluation Results. The Military Departments have developed strategic plans to comply with the pollution prevention requirements of the Executive Order and the DoD Comprehensive Pollution Prevention Strategy. However, 43 of the 51 organizations surveyed have not adequately addressed those requirements, resulting in pollution prevention plans not being finalized and program deficiencies occurring in funding, training, and awareness. As a result, the DoD has missed opportunities for cost avoidances through reduced health risks, decreased hazardous waste disposal, and lower compliance costs.

Summary of Recommendations. We recommend that the Assistant Secretary of the Army (Installations, Logistics, and Environment), and the Assistant Secretary of the Navy (Installation and Environment) develop procedures for oversight of pollution prevention audits, training pollution prevention personnel on their Service business based investment strategy, and formal training and awareness of pollution prevention personnel. We recommend the Assistant Secretary of the Army (Installations, Logistics, and Environment) require Army installations with draft pollution prevention plans to publish those plans. Finally, we recommend that the Assistant Secretary of the Army (Installations, Logistics, and Environment) establish an internet web page to publicize available Army supplemental environmental projects to all DoD entities.

Management Comments. We received comments from the Deputy Under Secretary of Defense (Environmental Security) and the Department of the Army, Assistant Chief of Staff for Installation Management. Management partially concurred with the finding and recommendations. The Army concurred with Finding A and has implemented the recommendations. The Army did not agree with Finding B and the recommendations because the Army recognizes the existence of a draft pollution prevention plan as meeting the requirements of Executive Order 12856. The Deputy Under Secretary of Defense (Environmental Security) did not agree with the recommendation to Finding C and suggested that the supplemental environmental project information be maintained by the Army. See Part I for a complete discussion of management comments and Part III for the complete text of those comments.

Evaluation Response. Management comments were responsive. The Army has initiated actions to implement the recommendations to Finding A. The Army partially concurred with Finding B, stating that Army installations having a draft pollution prevention plan met the requirements of Executive Order 12856. A draft plan does not meet the Executive Order requirements to have a published plan by the end of 1995. The Assistant Deputy Under Secretary of Defense (Environmental Security) stated that supplemental environmental projects are solely used by the Army and that the Army should maintain a repository of the supplemental environmental project details for information purposes. Recommendations to Findings B and C have been revised to reflect management comments. The Army is requested to comment on the final report by December 2, 1997. The Navy was not responsive to the draft report and is requested to comment on the final report by December 2, 1997.

Table of Contents

Executive Summary i

Part I - Evaluation Results

Evaluation Background 4
Evaluation Objective 5
Finding A. Pollution Prevention Programs 6
Finding B. Army Pollution Prevention Plans 15
Finding C. Supplemental Environmental Projects Program 19

Part II - Additional Information

Appendix A. Scope and Methodology 24
Scope 24
Methodology 25
Management Control Program 26
Organizations and Individuals Visited or Contacted 26
Appendix B. Summary of Ongoing and Prior Reviews 27
Appendix C. Criteria 32
Appendix D. Report Distribution 37

Part III - Management Comments

Assistant Deputy Under Secretary of Defense (Environmental Quality) Comments 40
Department of the Army Comments 41

Part I - Evaluation Results

Evaluation Background

Discussion. Over the past few years, pollution prevention has evolved from a recommended environmental management approach into a primary part of many laws, policies, and regulations. Federal laws such as the National Environmental Policy Act, the Pollution Prevention Act, and the Federal Facilities Compliance Act require Federal agencies to include environmental protection as part of their decisionmaking process. Besides those Acts, executive requirements such as those in Executive Order (EO) 12856, mandate that agencies commit to pollution prevention through source reduction in facility management and acquisition decisionmaking. The Military Departments have embraced pollution prevention and issued directives, instructions, and regulations that specifically describe program implementation requirements.

Executive Order 12856. The President signed EO 12856 on August 3, 1993, "Federal Compliance with Community Right-to-Know Laws and Pollution Prevention Requirements." The order requires Federal agencies to lead pollution prevention efforts by managing materials, procurement practices, and supporting development of innovative pollution prevention programs and technologies. EO 12856 directs Federal agencies to place a high priority on funding to reduce pollution by identifying and eliminating or reducing requirements for toxic chemicals, and by incorporating pollution prevention objectives into purchasing decisions.

DoD Comprehensive Pollution Prevention Strategy. The Secretary of Defense issued a memorandum on August 11, 1994 establishing a "Comprehensive Pollution Prevention Strategy," designed to implement the requirements of EO 12856. The DoD strategy emphasizes integrating pollution prevention into installation and weapon systems management, fostering an environmentally educated work force, and support for pollution prevention technology programs. Main objectives of the strategy include:

o promote and instill the pollution prevention ethic through comprehensive education, training and awareness in all mission areas;

o incorporate pollution prevention into all phases of the acquisition and procurement process;

o achieve and preserve environmental quality for all activities, operations, and installations through pollution prevention; and

o develop, demonstrate, and implement innovative pollution prevention technologies.

The Secretary of Defense directed each of the Military Departments to develop and submit a milestone plan detailing implementation objectives to the Under Secretary of Defense for Acquisition and Technology by November 1994. The Under Secretary of Defense for Acquisition and Technology has responsibility

for overall program implementation. The Military Departments provided copies of their pollution prevention strategy, to include milestone plans, to the Deputy Under Secretary of Defense (Environmental Security).

The requirements of EO 12856 and the Pollution Prevention Act are discussed in Appendix C.

DoD Instruction 4715.4. The Under Secretary of Defense for Acquisition and Technology issued DoD Instruction 4715.4, "Pollution Prevention," June 18, 1996. The instruction provides guidelines and implements DoD policy to manage pollution prevention programs throughout the DoD.

DoD Instruction 4715.6. DoD Instruction 4715.6 "Environmental Compliance," April 24, 1996, requires Military Departments to use supplemental environmental projects, preferably pollution prevention, to offset fines and penalties where appropriate and allowed by fiscal law.

Military Departments. Military Departments have published pollution prevention policy. For the purpose of this report, DoD Military Departments include the Army, Navy, and Air Force (see Appendix C).

Evaluation Objective

The evaluation objective was to determine whether the Military Departments are adequately implementing the pollution prevention requirements of EO 12856 and the DoD strategy. Specifically, we determined whether:

o Military Departments established policy in accordance with the DoD Comprehensive Pollution Prevention Strategy,

o DoD installation pollution prevention programs are being effectively and efficiently managed, and

o DoD installation pollution prevention plans have been published and include a priority or risk based approach for making decisions. Pollution prevention policy is discussed throughout this report. Pollution prevention program effectiveness is discussed in Finding A. Pollution prevention plans and priority or risked based approaches are discussed in Finding B.

See Appendix A for the Evaluation Scope and Methodology and Appendix B for a discussion of prior audits and other reviews related to the evaluation objectives.

Finding A. Pollution Prevention Programs

Although Military Departments have established policy and installations have developed plans, 43 of 51 organizations surveyed have pollution prevention programs that do not fully address the requirements of EO 12856. Requirements have not been addressed because of:

- o inadequate program oversight, and
- o deficiencies in funding, training, and awareness.

As a result, the goals and objectives established by the EO and DoD guidance will be difficult to achieve, and DoD installations may miss possible opportunities to reduce or eliminate pollution and reduce costs associated with waste disposal.

Background

Program Effectiveness. To ensure pollution prevention program effectiveness, installations and organizations need:

- o clear policy guidance,
- o reasonable and effective oversight, and
- o sufficient funding support.

Policy Guidance. A summary of the provision of EO 12856 and of DoD and Military Departments implementing policy for the creation, implementation, funding, and execution of pollution prevention programs is found in Appendix C.

Evaluation Survey

We developed and distributed a survey that addressed the DoD guidance and each requirement of EO 12856. Of the 58 organizations, 51 responded to the survey. Of the 51 respondents, 43 did not fully implement the requirements of EO 12856. Specifically, EO 12856 deficiencies were found in 17 Army, 17 Navy, and 9 Air Force pollution prevention programs. Six survey respondents were from Defense Logistics Agency and United States Marine Corps. Those Defense Logistics Agency and United States Marine Corps organizations responding to the survey complied with the requirements of EO 12856. Appendix A provides a breakdown of the organizations surveyed and their

response rate. We also compared the requirements of the EO to the DoD guidance. EO 12856 and the DoD guidance mirror each other with the exception of two EO key elements not addressed in the DoD guidance. The two elements are audits and internal reviews, and funding.

Audits and Internal Reviews

The EO requires Federal agencies to monitor pollution prevention compliance through audits and internal reviews. Those audits and internal reviews verify compliance to laws and regulations, evaluates the effectiveness of current systems, and assesses the health and regulatory risk associated with hazardous material practices in facilities. Audits and internal reviews are not included in the DoD guidance because each Military Department has an environmental compliance audit program that includes pollution prevention criteria.

Audits and internal reviews for environmental compliance are different from the internal audits and internal reviews required by DoD Directive 7650.3. Pollution prevention audits and internal reviews are performed by state and Federal environmental offices, Military Departments and Defense Agency environmental offices, and installation environmental offices. DoD and Military Department audit agencies do not normally perform environmental audits and internal reviews.

The requirement to perform pollution prevention audits and reviews is included in DoD Instruction 4715.4. We determined that the Military Departments have an internal audit and review process for environmental compliance to DoD, Federal, and state regulations. Criteria for pollution prevention is included in that compliance audit process; however, the compliance audit process does not include procedures for oversight and follow up of pollution prevention program deficiencies or weaknesses identified by the audit. As a result, pollution prevention plans have not been published, pollution prevention program projects are not budgeted and funded, and local community and installation personnel are not aware of DoD pollution prevention programs and projects.

Army. The Army audit and internal review program is called the Environmental Compliance Assessment System. The Army established the system in FY 1992 as part of its Environmental Compliance Achievement Program. The purpose of the Environmental Compliance Assessment System is to identify deficiencies and areas of noncompliance prior to a regulatory inspection. The audits assess compliance with Army, Federal, state, and local regulations.

Of the 17 Army organizations surveyed, 8 reported that Environmental Compliance Assessment System audits were conducted. Three of the 17 organizations stated they have conducted self assessments but no formal Environmental Compliance Assessment System audit. The remaining 6 Army organizations stated that they were never audited because they did not have pollution prevention programs, that having an audit program was not applicable

to them, or they did not respond to the survey question. Management comments to the draft report from the Assistant Secretary of the Army (Installations, Logistics and Environment) stated that Army records indicate that the 21 Army installations that mailed surveys were externally assessed under the Army Environmental Compliance Assessment System program prior to January 1996.

Navy. The Navy Environmental Compliance Evaluation program evaluates installation environmental and natural resources. Installations conduct annual self assessments. Major commands and Naval Facilities Engineering Commands conduct assessments using criteria from the Environmental Compliance Evaluation program, and the Navy Inspector General performs an environmental oversight inspection.

Of the 19 Naval organizations surveyed, 14 reported Environmental Compliance Evaluation pollution prevention audits, 8 of the 14 reported performing pollution prevention self assessments, and 2 organizations reported Navy Inspector General pollution prevention oversight inspections. Two of the 19 Naval organizations stated that their pollution prevention programs were never audited or internally reviewed. One organization did not have a pollution prevention program.

Air Force. The Air Force started the Air Force Environmental Compliance Assessment Management Program in 1986. Air Force policy requires audits once every three years for every installation with an environmental program. The audit is to assess installation environmental program compliance including pollution prevention according to Air Force policies and Federal, state, and local regulations. The Air Force supports all environmental programs by publishing instructions and technical directives.

Of the nine Air Force installations surveyed, eight reported that their pollution prevention programs were audited by self assessment and the Environmental Compliance Assessment Management Program. One Air Force installation stated it has not had an environmental compliance audit but performs a self-assessment audit annually.

Audit Effectiveness. The Army and the Navy have structured audit programs. Our analysis determined that more support from the Military Departments, the major commands, and installation environmental offices to conduct the audit and internal reviews would support the pollution prevention effort and meet the requirements of the EO. The Air Force stresses the importance of the environmental audit and self-assessment process by providing the necessary resources for the Environmental Compliance Assessment Management Program to ensure success and accomplishment of established goals.

Procedures developed by the Military Departments to monitor the results of the pollution prevention audits would ensure that installations support and execute pollution prevention programs. Pollution prevention audits and self-assessment

oversight by the DoD and the Military Departments would identify program weaknesses. Deficiencies and weaknesses in a pollution prevention program result in :

o the loss of opportunities for the elimination of toxic or hazardous pollutants,

o increased fines and penalties associated with violations of regulations covering hazardous materials and wastes, and

o increased exposure to hazardous materials and waste resulting in risk to human health.

Conclusion. The Military Department environmental compliance audit programs include an audit of pollution prevention programs. Criteria for pollution prevention is included in that compliance audit process; however, the compliance audit process does not include procedures for oversight and follow up of pollution prevention program deficiencies or weaknesses identified by the audit. Pollution prevention audit and self assessment oversight by the DoD and the Military Departments would identify program weaknesses and ensure that those weaknesses would be corrected.

Funding Support

The EO requires Federal agencies to place high priority on obtaining pollution prevention funding resources by identifying, requesting, and allocating funds through line-item or direct funding requests. The EO states that Federal agencies should make requests, as required in the pollution prevention planning process and through agency budget requests, as outlined in the Office of Management and Budget Circulars A-11 and A-106. The EO states that Federal agencies should apply life-cycle analysis and total cost accounting principles to all projects. Funding was not included in DoD guidance because funding information is discussed in detail in the planning, programming, and budgeting system instructions for all Military Departments.

The DoD strategy does not address the funding issue. DoD Instruction 4715.4 requires the heads of Military Departments to plan, program, budget, and execute pollution prevention programs according to DoD guidance and fiscal policy.

Executive Order 12856 states:

> Federal agencies shall place high priority on obtaining funding and resources needed for implementing all aspects of this order, including the pollution prevention strategies, plans, and assessments required by this order, by identifying, requesting, and allocating funds through line-item or direct funding requests.

Survey Results. Of the 51 organizations responding to our survey, 35 stated they experience funding problems with their pollution prevention program. DoD installation personnel indicated that they do not receive sufficient funds necessary to execute pollution prevention projects. Respondents replied, unfunded pollution prevention projects are a direct result of unrequested funds or management's decision not to fund lower priority projects. Our surveys and interviews determined that installation personnel are not aware of the planning, programming, and budgeting system (Defense Planning Guidance) for obtaining pollution prevention funds.

Army. Of the 17 organizations responding to our survey, 11 reported that funding was not requested for pollution prevention projects during 1994. Five of those 11 organizations stated that their pollution prevention projects were assigned low priority in FY 1994. Three of those 11 organizations indicated that their pollution prevention program did not start until FY 1995. The remaining organizations did not provide a cost analysis because the program was not active, lacked personnel resources to identify projects for funding, or the pollution prevention manager failed to provide requested information. Five organizations did not request pollution prevention funding for FY 1996. Army pollution prevention managers stated their problems result from a lack of support from major commands and installation management, projects are not assigned a high priority, and not included in budget submissions. Managers mentioned the following funding problems:

- o Limited overhead budgets.
- o Requests are not supported by the installation logistics office.
- o Process is hampered by the uncertainty of future funding support.
- o Not an installation operating strategy priority; therefore, specific funding for pollution prevention was not available.
- o It is difficult to fund projects between fiscal years when total funding requirements are not budgeted in the same fiscal year.
- o Installations are reluctant to use the A-106 document process because the process is not effective and seldom generates funding. The A-106 requirements process relates to the OMB Circular A-l06. The purpose of A-106 is to establish funding priorities for agency environmental projects as required by EO 12856. However, those projects are assigned a lower priority and receive no funding when competing with the compliance program.

Even though Army organizations responding to our survey stated that their pollution prevention projects received low funding priority, recent Army environmental funding guidance from the Office of the Assistant Chief of Staff for Installation Management titled, "Classification of Environmental Program Requirements," January 8, 1997, rates pollution prevention projects with a 5-year or less payback as a "must fund" requirement. The Army has a centrally managed pollution prevention investment fund for which major commands compete for funding based on the cost-benefit payback period.

Navy. Of the 19 Navy organizations responding to our survey, 14 indicated they experienced problems with pollution prevention funding. A Navy headquarters environmental manager stated that all Navy pollution prevention program funding requests are categorized as Class I, a "must fund" requirement. Navy pollution prevention managers mentioned such problems as:

o Installation personnel do not have the knowledge of what funds are available or how to request them.

o The difficulty in funding pollution prevention projects between fiscal years when a large funding amount is required.

o Pollution prevention projects do not have separate funding sources. The pollution prevention plan includes all the tenant organizations on an installation; however, funding is provided through the installation's budget on a limited basis. For example, a pollution prevention project for an Army tenant organization on a Naval base would be funded through the base budget.

o A Pollution Prevention Committee is not officially organized and operating. The committee is responsible for pollution prevention program advocacy.

Navy major claimants are required by OPNAVINST 5090.1B to "program, budget, and allocate funds for all facility pollution prevention projects identified in installation pollution prevention plans with a payback period of 3 years or less."

Air Force. Of the 9 Air Force installations surveyed, 100 percent stated that they received funding for pollution prevention projects. Analysis of the survey indicates that funding for pollution prevention projects had improved over the past 2 years. However, eight of the nine Air Force installations surveyed expressed the following funding concerns on their survey form:

o identifying and programing funds for future pollution prevention initiatives,

o experiencing substantial delays in obtaining pollution prevention funding,

o competing for programmed funding with other organizations,

o obtaining the correct type of funds necessary to execute pollution prevention programs, and

o shrinking budgets.

Investment Strategy. The Air Force uses an investment strategy process to fund pollution prevention projects. The Air Force developed that strategy in response to shrinking resources and budgets. The business-based approach of the strategy requires pollution prevention projects to have both environmental and economic benefits. Air Force funds are used for programs that have a positive impact on pollution through source reduction, recycling, and waste reduction. The Air Force considers funding projects that include partnering with other organizations such as EPA, and private industry, or those that demonstrate high potential for exportability or economic benefit.

The Military Departments have funding strategies, policies, and procedures in place; however, our survey information indicates that those individuals responsible for pollution prevention budget requests are not aware of all elements of the process.

Training and Awareness

EO 12856 and DoD guidance stresses the need to promote and publicize pollution prevention through education, training, and awareness. Personnel with pollution prevention responsibilities at all levels should receive training. Pollution prevention training is not provided to all levels of DoD personnel.

Army. Of the 17 Army organizations that responded to our survey, 8 stated that their environmental personnel had not received formal training in pollution prevention. The other seven Army organizations stated they received limited training. Two organizations did not respond to the survey. Our research and analysis determined that the Army does not have a formal pollution prevention training program. One Army environmental manager stated that full management support was needed for the training in order to complete the installation pollution prevention mission.

Navy. OPNAVINST 5090.1B encourages pollution prevention training and indicates what shall be incorporated into Navy training; however, our analysis determined that training is not consistent throughout the Navy. Of the 19 Navy organizations surveyed, 5 stated that their environmental personnel had not received pollution prevention training. One environmental manager stated that affordable, high quality training was not available. Our survey identified five organizations received pollution prevention training. The remaining nine organizations received minimal training. As an example, organizations reported receiving 2 to 8 hours of training in subject areas like environmental awareness, Emergency Planning and Community Right-to-Know Act, hazardous waste refresher training, as well as conference and seminar attendance.

Air Force. The Air Force is proactive when providing pollution prevention training to its environmental personnel. Of the nine installations surveyed, only one installation indicated that training varies for its personnel. Environmental personnel stated that they attended courses at the Air Force Institute of Technology and numerous conferences. This method of training reflects a very positive pollution prevention training program.

Summary

All Department of Defense organizations surveyed have pollution prevention programs; however, 43 of 51 DoD organizations have not effectively established:

- o policy for pollution prevention program reviews and compliance verification,
- o pollution prevention program funding procedures, and
- o pollution prevention training and awareness.

The goals and objectives established by the EO and DoD guidance will be difficult to achieve. Lack of a comprehensive business based investment strategy has resulted in those deficiencies occurring in the pollution prevention program. As a result, reduction or elimination of possible sources of pollution may be missed, and costs associated with obtaining or renewing permits, and the disposal of wastes may not be reduced.

Education, training, and awareness of pollution prevention programs are paramount to achieving a successful pollution prevention program. Some potential benefits are command and community support, resource allocation, access to existing technology, and new ideas and suggestions. An alternative for addressing needs is establishing policy for continuing training similar to the program recently established by the DoD Acquisition Education, Training and Career Development office. This program provides education and training opportunities to members of the acquisition community for 40 hours annually or 80 hours over a 2-year period. The Deputy Under Secretary of Defense for Acquisition and Technology issued memorandums on August 7, 1996, establishing education and training policy.

Recommendations, Management Comments, and Evaluation Response

A. We recommend that the Assistant Secretary of the Army (Installations, Logistics, and Environment) and the Assistant Secretary of the Navy (Installations and Environment):

1. Establish oversight and follow up procedures for the results of environmental compliance audits and internal reviews of installation pollution prevention programs.

2. Establish procedures for educating installation personnel on identifying, requesting, and executing a business based investment strategy approach for funding pollution prevention projects and programs.

3. Establish pollution prevention education, training, and awareness requirements similar to the program established by the Deputy Under Secretary of Defense for Acquisition and Technology emphasizing 40 hours of continuing pollution prevention education for all personnel having oversight or management responsibilities for an installation pollution prevention program.

Department of the Army Assistant Chief of Staff for Installation Management Comments. Assistant Chief of Staff for Installation Management concurred with the recommendations and stated that the Army had already initiated action to change the Army Environmental Compliance Assessment System to address oversight and follow up; published guidance from the Assistant Chief of Staff for Installation Management in February 1997 identifying that a business based approach is necessary for the success of the pollution prevention program in the Army; and had taken steps to improve Army pollution prevention training.

No Comments Received. The Navy did not respond to the draft evaluation report published on July 1, 1997. The Assistant Secretary of the Navy (Installation and Environment) is requested to comment on this final report by December 2, 1997.

Evaluation Response. The Army comments were responsive. During the preparation of this report, the Army initiated pollution prevention program actions that incorporates Recommendations A.1., A.2., and A.3.

Finding B. Army Pollution Prevention Plans

The Navy and the Air Force have published pollution prevention plans; however, the Army did not meet the EO 12856 requirement to have pollution prevention plans published by the end of 1995. Of 17 Army organizations responding to our survey, Fort Bragg, North Carolina; Fort Drum, New York; White Sands Missile Range, New Mexico; Fort Myer, Virginia and Fort McNair, District of Columbia (combined plan); Fort A.P. Hill, Virginia; Fort Belvoir, Virginia; and Fort Meade, Maryland have draft pollution prevention plans projected for publication in mid-to-late 1997. Those pollution prevention plans have not been published because the Army considered a draft pollution prevention plan as meeting the requirement of the EO to publish a pollution prevention plan by December 1995. As a result, opportunities for potential operational cost savings, reduced health risks, and reduced liabilities may have been missed.

Background

Introduction. EO 12856, Section 3-301, "Federal Agency Strategy," requires each Federal agency to develop a written pollution prevention strategy to achieve the requirements specified by the EO. The EO also states that each Federal agency must apply all of the provisions of the EO to each of its covered facilities. The DoD strategy directs all Military Departments to prepare individual pollution prevention plans that describe how the plans for each component should implement its program and accomplish goals.

Specific Plan Requirements. EO 12856 requires that each "covered Federal facilities" must have a written pollution prevention plan by the end of 1995, which sets forth the facility's contribution to the goal established in Section 3-302(a). The DoD strategy requires installations to "develop, maintain, and implement pollution prevention plans at each installation and facility."

Survey Results

Pollution Prevention Plans. Of the 21 Army organizations contacted, 17 responded to the survey. The survey revealed that 14 completed their pollution prevention plans by the required December 1995 deadline. The remaining three installations, Fort Bragg, North Carolina; Fort Drum, New York; and White Sands Missile Range, New Mexico, stated that their plans were only in draft format.

In addition to those installations surveyed, we contacted Army organizations in the vicinity of the Military District Washington to determine the status of their plans. Of the five local Army organizations required to publish pollution prevention plans, four organizations have plans in draft and one organization ceased plan publication because it is closing. The Army organizations with draft plans are Fort Myer, Virginia and Fort McNair, District of Columbia (combined plan); Fort A.P. Hill, Virginia; Fort Belvoir, Virginia; and Fort Meade, Maryland. Fort Richie, Maryland is the organization that will be closing. Organizations with draft plans projected publication by June 1997.

Army Policy. The Army published "Pollution Prevention Opportunity Assessment Protocol" in October 1994 and a "Model Pollution Prevention Plan" in February 1995.

The Army considered a draft pollution prevention plan as meeting the requirement of the EO to publish a pollution prevention plan by December 1995. The Army based that policy on a lack of funding which resulted in large part from the timing of when the EO was initiated versus the constraints of the DoD planning, programming, budgeting, and execution process. EO 12856 signed in the last quarter of FY 1993 after the budget was set, imposed deadlines on what the Army considered relatively complicated and detailed plan preparation process. The Army completed most plans by the EO deadline despite the lack of time to program funding. The Assistant Chief of Staff for Installation Management stated that 83 of 95 Army installations required to have pollution prevention plans have published them.

Risk and Priority Assessment. We reviewed 22 pollution preventions plans to determine if organizations identified pollution prevention program priorities according to risk and established criteria. Criteria included benefits, available technology, compliance, and return on investment. Our evaluation determined that 17 of 22 DoD installation pollution prevention plans do establish criteria for prioritizing pollution prevention projects.

o Of 10 Army pollution prevention plans reviewed, 5 plans established risk and priorities for the pollution prevention program.

o Of six Navy and Air Force pollution prevention plans reviewed, all the plans established risk and priorities for the pollution prevention program.

Summary

The Army did not meet the EO 12856 requirement to have pollution prevention plans published by the end of 1995. Three Army installations had draft pollution prevention plans projected for publication in mid-1997. Those pollution prevention plans have not been published because of inadequate funding resulting from the timing of the Executive Order 12856 and the constraints of DoD planning, programming, budgeting and execution. The Army considered that a draft pollution prevention plan met the December 1995

deadline for pollution prevention plan completion. As a result of final plans not being published, opportunities for potential operational cost savings, reduced health risks, and reduced liabilities may have been overlooked.

Recommendations, Management Comments, and Evaluation Response

Deleted, Renumbered and Revised Recommendations. Based on the Department of the Army management comments, draft report recommendation B.1. was deleted, draft report Recommendation B.2. was revised, and Recommendations B.2. and B.3. have been renumbered to B.1. and B.2. respectively.

B. We recommend that the Assistant Secretary of the Army (Installations, Logistics, and Environment):

1. Administratively provide deadlines to verify that Fort Bragg, North Carolina; Fort Drum, New York; White Sands Missile Range, New Mexico; Fort Myer, Virginia and Fort McNair, District of Columbia (combined plan); Fort A.P. Hill, Virginia; Fort Belvoir, Virginia; and Fort Meade, Maryland as well as other organizations that have not published pollution prevention plans take immediate action to fund and publish a plan.

Department of the Army, Assistant Chief of Staff for Installation Management Comments. The Department of the Army, Assistant Chief of Staff for Installation Management has reviewed the status of all Army pollution prevention plans and identified 12 Army installations that only have draft pollution prevention plans. The Army considers a draft plan as meeting the requirement of EO 12856.

Evaluation Response. Availability of funds and shortness of time for publication of pollution prevention plans do not absolve the Army of the requirement to comply with the EO. A draft pollution prevention plan does not meet the intent of the EO requiring the publication of a pollution prevention plan.

2. Direct all installations to review their pollution prevention plans and to incorporate the risk and priority assessment process element if it is missing.

Department of the Army, Assistant Chief of Staff for Installation Management Comments. The Assistant Chief of Staff for Installation Management concurred and has implemented the recommendation. The Army pointed out that draft report Recommendation B.3. was not supported by policy requirements, the Executive Order 12856, or DoD Pollution Prevention Strategy; however, the Army has incorporated such a risk based approach to the Army pollution prevention program in Army funding guidance.

Evaluation Response. The comment was responsive. We agree with the Army that policy does not require a risk based approach for pollution prevention programs; however, we consider it important to the success of the Army pollution prevention program. This is not a compliance issue.

Finding C. Supplemental Environmental Projects Program

Military Departments are using supplemental environmental projects to reduce or eliminate environmental fines and penalties; however, the DoD and the Military Departments are not sharing the details for those projects. The details of supplemental environmental projects are not being centrally collected and monitored by the DoD. Consequently, the innovative approaches associated with supplemental environmental projects are not being shared among the Military Departments. As a result, regulatory approved supplemental environmental projects are not being used by other DoD installations and opportunities are missed to reduce or eliminate environmental fines and penalties.

Background

Policy and Guidance. DoD Instruction 4715.6, "Environmental Compliance," April 24, 1996, requires Military Departments to use supplemental environmental projects, preferably pollution prevention, to offset fines and penalties, where appropriate and allowed by fiscal law.

Supplemental Environmental Projects. Supplemental environmental projects are environmentally beneficial projects that a violator agrees to undertake to settle an enforcement action, but the violator is not legally required to perform. The EPA encourages the use of supplemental environmental projects. Enforcement actions play an important role in environmental protection by deterring violations through monetary penalties; however, supplemental environmental projects can offset those penalties by securing significant environmental or public health protection improvements. Supplemental environmental projects are not appropriate in settling of all cases, but they are an important part of the EPA enforcement program. Supplemental environmental projects are appropriate for helping achieve the DoD goal of reducing environmental and operational costs and enhancing environmental quality through effective pollution prevention initiatives. Pollution prevention is identified as one of the seven categories that may qualify as a supplemental environmental project.

Survey Results

Of 19 DoD organizations that paid fines and penalties for FYs 1994 through 1995, 14 did not initiate supplemental environmental projects to offset those fines and penalties. We determined that from 1993 to 1995, Military Departments seldom used supplemental environmental projects to settle fines and penalties. Supplemental environmental projects can potentially reduce

operating costs from fines and penalties. DoDI 4715.6, "Environmental Compliance," April 24, 1996, includes policy on supplemental environmental projects.

The DoD does not provide oversight or track supplemental environmental projects. Military Departments do not share approved environmental technology used in the development of supplemental environmental projects. During this evaluation, we found that DoD does not have centrally stored data for supplemental environmental projects; however, the Military Departments brief the DoD twice a year on the status of supplemental environmental projects. The Army and the Air Force track supplemental environmental projects and readily provide data for evaluation. Pollution prevention innovative technologies, such as alternatives to vapor degreasing or paint removal, zero-discharge metal plating systems, and solvent substitutions are examples of approved technologies that are shared among the Military Departments as supplemental environmental projects for the reduction or elimination of environmental fines and penalties.

DoD Fines and Penalties. Until the Federal Facilities Compliance Act was passed in November 1992, statistics were unavailable on assessments and payments of DoD fines and penalties. This summary is based on available Semi-Annual Environmental Quality In-Progress Review Component data provided to DUSD(ES) by the Military Departments for FYs 1993 through 1995 and the first half of FY 1996 (only). Fines and penalties without supplemental environmental projects are included in the following table.

	Army	Navy	Air Force	Total
FY 1994	$0.255	$0.509	$0.093	$0.857
FY 1995	$1.040	$0.280	$0.276	$1.596
FY 1996	$0.940	$0.000	$0.118	$1.058

Environmental Compliance Fines Paid (millions) Without Using Supplemental Environmental Projects

Benefits of Using Supplemental Environmental Projects. The use of supplemental environmental projects as an alternative to paying fines and penalties achieves long-term economic benefits. Final penalty settlements will be decreased for a violator that agrees to perform a supplemental environmental project. Supplemental environmental projects provide the following benefits:

o environmental improvements and enhancements,

o funds spent on installations instead of paying fines and penalties to the U. S. Treasury, and

o direct, substantial, and measurable environmental and public health benefits to the local community by significantly and quantifiably reducing or eliminating the creation or disposal of pollutants.

For example, on April 29, 1994, the EPA issued two Complaints and Compliance Orders under the Resource Conservation and Recovery Act Section 3008(a) to the Army for hazardous waste violations at Fort Richardson and Fort Wainwright in Alaska. The complaint for Fort Richardson assessed $1.34 million in penalties for gross mismanagement of hazardous waste at the facility that posed a substantial threat to human health and the environment. The complaint for Fort Wainwright assessed $650,000 in penalties for mismanagement of hazardous waste. On November 21, 1996, a Consent Order and Consent Agreement was signed to settle the two complaints. The settlement requires the Army to pay $200,000 to the U.S. Treasury and to perform two supplemental environmental projects. The supplemental environmental projects are for the Army to obtain hazardous waste storage lockers for use at the Army installations in Alaska and to establish a Joint Regional Environmental Training Center, making environmental training available to Federal and state agencies in Alaska. The Consent Order and Consent Agreement requires that the total expenditures for the supplemental environmental projects be no less than $1,002,920.

Conclusion

Supplemental environmental projects are environmentally beneficial projects that installations agree to undertake in settlement of an enforcement action. Supplemental environmental projects are being used by the Military Departments to reduce or eliminate environmental fines and penalties; however, the DoD and the Military Departments are not sharing the details for those projects. The details of supplemental environmental projects are not being centrally collected and monitored by the DoD. Consequently, the innovative approaches associated with supplemental environmental projects are not being shared among the Military Departments. As a result, regulatorily approved supplemental environmental projects are not being used by other DoD installations and opportunities are missed to reduce or eliminate environmental fines and penalties.

Recommendations, Management Comments, and Evaluation Response

Revised, Redirected, and Deleted Recommendation. Based on the Assistant Deputy Under Secretary of Defense (Environmental Quality) management comments, this recommendation was revised to change the repository of supplemental environmental projects from a central information system to an internet web site and that action redirected from Assistant Deputy Under

Secretary of Defense (Environmental Security) to the Assistant Secretary of the Army (Installations, Logistics, and Environment). The recommendation to publish procedures for access to the central information system has been deleted.

C. We recommend that the Assistant Secretary of the Army (Installations, Logistics, and Environment) establish an internet web site to archive approved supplemental environmental projects.

Assistant Deputy Under Secretary of Defense (Environmental Quality) Comments. The Assistant Deputy Under Secretary of Defense (Environmental Quality) disagreed with this recommendation because the number of fines and penalties assessed against DoD installations has decreased significantly over the last several years. With the exception of the Army, very few supplemental environmental projects are being conducted within the DoD. The Assistant Deputy Under Secretary of Defense (Environmental Security) recommends that the Army maintain information on supplemental environmental projects since the Army is conducting the majority of supplemental environmental projects within DoD.

Evaluation Response. The comments were responsive. We agree that the Army is the principle user of supplemental environmental projects within DoD. Details about supplemental environmental projects such as type and amount of fines and penalties defrayed, EPA region approving the supplemental environmental project, and project specifications and standards are information that may be useful to all Military Departments. An Army internet web site would provide a central repository for supplemental environmental project details. We believe that establishing an information repository with details about supplemental environmental projects is environmentally proactive in consonance with the objectives of pollution prevention, the costs are measurable and required up front while the benefits are intangible and occur over a long period of time. This recommendation is redirected to the Army; therefore, we request the Army comment on the final report.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope

Evaluation Requested. This evaluation was requested by the Office of the Deputy Under Secretary of Defense (Environmental Security) to review segments of the DoD pollution prevention program. Those segments included the following elements:

- o pollution prevention strategic plans and policies,
- o use of hazardous materials in weapon systems,
- o Military Department hazardous material management and control program, and
- o reporting requirements under the affirmative procurement program.

Scope Narrowed. As a result of the evaluation survey, we narrowed the scope of the evaluation to focus on the implementation of DoD pollution prevention strategic plans.

Questionnaire Response Rate. We sent questionnaires to 58 installations and organizations, of which 49 were classified as larger quantity generators of hazardous waste. Fifty-one of those installations and organizations responded to our questionnaire. Courtesy copies of the questionnaire were also sent to the DoD component headquarters and major commands. A copy of the questionnaire will be provided upon request. The following table illustrates questionnaire responses by DoD components.

DoD Component	Number Mailed	Number Returned	Percent Rate
Army	21	17	81
Navy	21	19	90
Air Force	9	9	100
Marine Corps	4	3	75
DLA	3	3	100
Total	**58**	**51**	**89.2**

***Large Generators of Hazardous Materials Survey Response Rate**

Methodology

We reviewed policy and guidance from the Environmental Protection Agency, Department of Defense, Military Departments, major commands and other Federal agencies. We also reviewed the adequacy and effectiveness of existing DoD policies, guidance, and plans used to implement pollution prevention strategies at the DoD installations.

Survey. We designed a survey to correspond with the requirements of EO 12856 and the DoD Comprehensive Pollution Prevention Strategy. We developed a database from the survey and determined issues and findings to develop for the report. To accomplish our objectives we:

o reviewed EO 12856 and existing DoD policy, guidance, and pollution prevention strategic plan;

o reviewed the Military Departments' pollution prevention strategic plans for implementing EO 12856 requirements and DoD guidance;

o designed a survey that focused on the following areas;

- pollution prevention plans;
- pollution prevention budget and cost;
- communications;
- mission operation; and
- education, training, and awareness, and,

o surveyed 58 DoD installations and organizations for implementation of their pollution prevention program.

Interviews. We conducted over 59 interviews at 35 locations that included the Army, Navy, Air Force, Marine Corps, and the Defense Logistics Agency. We selected installations and organizations to visit based on their heavy use of toxic and hazardous substances and geographical proximity to other high volume users of toxic and hazardous substances.

Data Analysis. Using the data gathered from interviews and questionnaire responses, we coordinated with our Analysis, Planning and Technical Support Directorate, Quantitative Methods Division to assist with analyzing the data to assess the adequacy and effectiveness of the implementation of DoD pollution prevention strategy by Military Departments.

Evaluation Period and Standards. This evaluation was conducted from November 1995 through September 1996 in accordance with standards implemented by the Inspector General, DoD.

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 provide reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of Management Controls. We did not evaluate the management control program beyond ascertaining that the DoD components have not reported any material management control weaknesses related to the pollution prevention program. This evaluation disclosed no material control weaknesses.

Organizations and Individuals Visited or Contacted

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

Appendix B. Summary of Ongoing and Prior Reviews

General Accounting Office

Report No. GAO/RCED-97-42, "Federal Facilities: EPA's Penalties for Hazardous Waste Violations," February 1997. The report provides penalties assessed by EPA against other Federal agencies for of the under Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The report indicates that from November 1989 through October 1996, EPA assessed penalties in 61 cases totaling $16.4 million against federal agencies for violating the hazardous waste management and cleanup provisions of RCRA and CERCLA. Penalties were assessed against the Departments of Agriculture, Defense, Energy, Interior and the U.S. Coast Guard. Forty-one cases having EPA-assessed penalties of $8.2 million were settled for $8.4 million, including the value of supplemental environmental projects. Agencies made settlement through direct cash payments of $2.4 million and also by agreeing to perform supplemental projects costing about $6 million. Twenty cases with assessed penalties of $8.2 million are still being negotiated, and final settlements have not been determined. The General Accounting Office (GAO) made no specific recommendations. However, the report states that the agencies (Departments of Defense, Energy, EPA) believed the report was factually accurate. However, the report further states the agencies had some concern about the interpretation of some information and wanted GAO to include additional information. GAO revised the report accordingly.

Report No. T-NSIAD-95-121, "Environmental Protection: Challenges in Defense Environmental Program Management," March 1995. The report concludes that managing DoD environmental activities is a huge job. The report states that since 1976, DoD has spent about $20 billion on environmental programs -- $15 billion of this in fiscal years 1991-94. In the budget request for fiscal year 1995, DoD estimates that another $25 billion will be needed to fund environmental activities through fiscal year 1999. This testimony discussed the overall status of the DoD environmental program and steps that needed to be taken to bolster the success of the program. The General Accounting Office made no specific recommendations.

Report No. NSIAD-95-13, "Pollution Prevention Status of DoD's Efforts," November 1994. The report concludes that DoD is in the process of gathering information on toxic chemical inventories and releases and anticipates it will have this information by July 1, 1995, the reporting date required by Executive Order 12856. The report indicates the following: (1) information is unavailable to measure the use of toxic chemicals; (2) DoD past efforts have focused on treating and controlling pollution generated from processes rather than eliminating the use of toxic chemicals; (3) DoD believed significant reductions in the use of toxic chemicals will be difficult; (4) DoD will not likely meet the Executive Order requirements to review and revise all military

specifications and related technical documents by the deadline; (5) services have not comprehensively incorporated environmental concerns in the design, development, and production of weapon systems, but are beginning to take steps to do so; (6) DoD has not, on a systematic basis, revised its procurement and acquisition regulations to address environmental concerns; (7) service officials are committed to giving priority to pollution prevention efforts and believed funding has been adequate; (8) funding pollution prevention efforts in the future would be a challenge in the current environment of Defense downsizing and declining budgets; and, (9) DoD future costs to address pollution prevention under the Executive Order will likely be higher than current estimates. The report did not include formal recommendations and the DoD did not respond.

Inspector General, Department of Defense

Program Evaluation, "Hazardous Material Management and Control Programs at DoD Installations," September 1994. The report concludes that there is a lack of effective management and control of hazardous materials on DoD installations. The report identifies a lack of coordination among acquisition, environment, and logistics staff at DoD installations. The IG, Department of Defense report recommended the following: (1) adopt standard hazardous material control practices; (2) adopt centralized management as the standard method to manage and control hazardous materials at DoD installations; (3) evaluate using Air Force hazardous material software Department of Defense wide as an interim means to meet Executive Order 12856 reporting requirements; (4) require the Defense Environmental and Logistics Corporate Information Management Offices to collaborate on the development of a Department of Defense standard hazardous material information management system; (5) improve the marketing of the Defense Environmental Network Information Exchange capabilities and potential uses; (6) require the Defense Logistics Agency to distinguish items with hazardous chemical characteristics from non-hazardous by assigning separate national stock numbers; and (7) develop quality assurance mechanisms that ensure quality Material Safety Data Sheets are received from manufacturers and entered in the Hazardous Material Information System. The report indicated that the recommendations could result in cost savings and reductions in hazardous waste and help managers meet new environmental regulatory requirements. The DoD concurred with all recommendations except recommendation 4.

Report No. 94-020, "Environment Consequence Analyses of Major Defense Acquisition Programs," December 1993. The report states that when conducting Cost and Operational Effectiveness Analyses of major Defense acquisition programs, Military Departments are not required to assess environmental impact constraints in life-cycle cost estimates. The report recommended that the Under Secretary of Defense for Acquisition and Technology revise Cost and Operational Effectiveness Analysis procedures according to DoD Instruction 5000.2, "Defense Acquisition Policies and Procedures," February 23, 1991, and DoD Manual 5000.2-M, "Defense

Acquisition Management Documentation and Reports, "February 23, 1991, to require the:

1. Military Departments to separately identify, in life-cycle costs and trade-off analyses, the environmental consequences and the mitigating measures of alternatives being considered as part of a Cost and Operational Effectiveness Analysis.

2. Joint Staff to ensure that environmental consequences of a program are considered when the Joint Staff evaluates the alternatives, organizational and operational plans, and joint-Service issues on major Defense acquisition programs.

3. Director, Program Analysis and Evaluation, ensure that the environmental consequences of a program are assessed as part of the review of Cost and Operational Effectiveness Analyses submitted in support of Defense Acquisition Board reviews.

The Director partly concurred with the recommendations and stated that:

o While environmental costs need to be incorporated into life-cycle costs and trade-off analyses, modifying DoD Manual 5000.2-M to direct the Military Departments to assess and identify those costs will result in potentially three different processes and values.

o The Director, Program Analysis and Evaluation, is analyzing this requirement, identifying resources, developing a process to assess environmental costs, and considering a study associated with including environmental costs in life-cycle cost analyses and establishing environmental cost estimating capabilities in the OSD Cost Analysis Improvement Group.

The IG, DoD, stated that the Director's comments were not fully responsive to the recommendations since he did not address coordination with the Joint Staff to ensure that environmental consequences of a program are considered during Joint Staff evaluations. The report indicated that requiring the Military Departments to assess and identify those costs will result potentially in three different processes and values as long as adequate guidance is provided.

Report No. 93-INS-06, "Hazardous Waste Minimization," December 1992. The report states that acquisition managers in the Military Departments do not consider life-cycle costs and potential liabilities associated with the use of hazardous materials when making critical acquisition decisions. The report focuses on evaluating DoD's progress in reducing hazardous waste. The report concludes that DoD has reported significant reductions in the volume but has not reduced or eliminated the sources of hazardous waste. The report recommended that DoD reduce the sources of hazardous waste and set priorities for minimizing hazardous waste. Management concurred with the recommendations.

Office of the Under Secretary of Defense for Acquisition and Technology Study "Process Action Team on Military Specifications and Standards," April 1994. The report recommends the DoD establish and execute an aggressive program to eliminate, or reduce and identify the quantities of toxic pollutants procured or generated through the use of military specifications and standards.

U. S. Army Audit Agency

Report No. AA 97-114, "Managing the Army's Pollution Prevention Program," February 1997. The report states the Army organizational structure was not conducive to resolving pollution prevention issues. The report identifies that activity pollution prevention plans were not adequate because the plans lacked key information about goals, responsibilities, baselines, and specific program guidance. Additionally, the report identifies that environmental managers lack pollution prevention training and they did not know what environmental information was available. The report recommended the following: (1) initiate action to recharter the Senior Executive Environmental Council; (2) implement a more proactive, business investment strategy Army wide that redefines project classifications; (3) make sure appropriate command levels use a standardized model to project returns on investments; (4) review, revise, and distribute specific program guidance that reflects a business investment approach and enhances planning for the pollution prevention program; and, (5) reemphasize the availability of environmental training on pollution prevention and accessibility to environmental information. The Army concurred with all of the recommendations.

Defense Science Board Task Force

"Report of the Defense Science Board Task Force on Environmental Security," October 24, 1995. The Task Force report states that although pollution prevention has demonstrated significant returns on investment, very little emphasis is placed on the program. The report states that pollution prevention projects are underfunded during budget tradeoffs. It further states that today there are insufficient incentives for cost-reducing, longer term investments. The Task Force recommended that DoD develop new incentives for pollution prevention as well as new budget mechanisms for funding pollution prevention initiatives. The report recommended the following actions: (1) strengthen the commitment of senior officials to emphasize the value added from preventing pollution; (2) incorporate pollution prevention criteria into research, development, test, evaluation, production, operations, maintenance/support and disposal program investment policies in the DoD planning, programming and budgeting process; (3) significantly increase RDT&E, production and maintenance program investments in pollution prevention -- phase in such increases over a six-year period; (4) allocate an

additional $100M/yr for pollution prevention initiatives; (5) work with the defense industry to facilitate (incentive) investments in pollution prevention; (6) allow local commands to use net savings from pollution prevention investments for other initiatives; (7) use non-appropriated funds (e.g., from recycling) and defense business operational funds to incentivize pollution prevention; (8) develop and use result-oriented metrics and benchmarks to monitor progress and manage pollution prevention programs; and (9) establish demanding goals, relate goals to investments, set the levels for individuals performers, and monitor progress.

Appendix C. Criteria

Executive Guidance

Executive Order 12856, August 3, 1993. The following paragraphs outline the key requirements of EO 12856.

3-301 Federal Agency Strategy. ". . . each Federal agency must develop a written pollution prevention strategy to achieve the requirements specified. . . The strategy shall include, but shall not be limited to the following elements:

(a) A pollution prevention policy statement, developed by each Federal Agency, designating principal responsibilities for development, implementation, and evaluation of the strategy. The statement shall reflect the Federal agency's commitment to incorporate pollution prevention through source reduction in facility management and acquisition, and it shall identify an individual responsible for coordinating the Federal agency's efforts in this area.

(b) A commitment to utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all applicable Federal, state, and local environmental requirements."

3-302(d) Toxic Reduction Goals. "...Federal agencies shall ensure that each of its covered facilities develops a written pollution prevention plan no later than the end of 1995..."

4-404 Agency Coordination. "Federal agencies shall place high priority on obtaining funding and resources needed for implementing all aspects of this order, including the pollution prevention strategies, plans, and assessments required by this order, by identifying, requesting, and allocating funds through line-item or direct funding requests. Federal Agencies shall make such requests as required in the Federal Agency Pollution Prevention and Abatement Planning Process and through agency budget requests as outlined in Office of Management and Budget (OMB) Circulars A-106 and A-11, respectively. Federal agencies should apply to the maximum extend practicable, a life cycle analysis and total cost accounting principles to all projects needed to meet the requirements of this order."

5-503 Compliance. "Each Federal agency subject to this order shall conduct internal reviews and audits, and take such other steps, as may be necessary to monitor compliance with. . . ."

5-508 ". . . the public shall be afforded ready access to all strategies, plans, and reports required to be prepared by Federal agencies under this order by the agency preparing the strategy, plan, or report. ...Federal agencies are

encouraged to provide such strategies, plans, and reports to the State and local authorities where their facilities are located for an additional point of access to the public."

Pollution Prevention Act Of 1990 (42 U.S.C. 13101-13109) (PPA). The Head of Federal agencies shall take all necessary actions for the prevention of pollution with respect to the activities and facilities of each Federal agency, and ensure each agency's compliance is according to the provisions of the Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements.

Congress articulated in the PPA its four-step hierarchy for addressing pollution, with source reduction being the highest priority, and disposal being the least preferred option. The hierarchy, which Congress declares to be national policy, is as follows (42 U.S.C., Section 13101(b)):

o pollution should be prevented or reduced at the source whenever feasible,

o pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible,

o pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible, and

o disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

The Executive Order 12856, Federal Compliance With Right-To-Know Laws and Pollution Prevention Requirements, 1993, is an extension of the Pollution Prevention Act of 1990. The Executive Order, Sections 1-101 to 1-104, delineates each Federal agency's responsibilities for ensuring that all necessary actions are taken for the prevention of pollution. The Order promotes pollution prevention and makes clear that prevention is first priority within an environmental management hierarchy.

DoD Guidance

DoD Comprehensive Pollution Prevention Strategy, August 11, 1994. The following are the key requirements of the DoD strategy.

Objective 1. Effectively promote and instill the pollution prevention ethic through comprehensive education, training and awareness in all mission areas.

o Sub-objective 1.2 Promote pollution prevention awareness through multimedia outreach/awareness programs and partnerships.

o Strengthen working relationships with environmental regulators at all levels.

Objective 3. Achieve and preserve environmental quality for all activities, operations, and installations through pollution prevention.

o Sub-objective 3.1. Develop, maintain, and implement pollution prevention plans at each installation and facility. These plans should include baselines pollution prevention assessments and investment strategies.

o Develop and implement methods to identify and quantify releases and off-site transfers of toxic chemicals to all media. (i.e., air, water, soil, surface, and ground water).

DoD Instruction 4715.4, "Pollution Prevention," June 18, 1996. The following emphasizes the use of management approaches for pollution prevention.

o D.1.b. "Reduce the use of hazardous materials, the generation or release of pollutants, and the adverse effects on human health and the environment caused by DoD activities."

o D.2.a. ". . . includ[e] improvements in energy and resource utilization, as the alternative of first choice" in achieving compliance with applicable environmental requirements and Executive Orders."

o D.2.c.(1). "Prevent pollution at the source to eliminate or minimize adverse health effects while protecting, preserving, restoring, and enhancing the quality of the environment."

o E.6.c. "Plan, program, and budget for pollution prevention programs in accordance with DoD guidance and fiscal policies."

o E.6.e. "Establish and execute cost-effective waste prevention and qualified recycling programs to reduce the volume of non-hazardous solid waste..."

o F.2.c. "Ensure that all installations maintain and execute pollution prevention plans that identify goals and cost-effective management processes or technologies to eliminate or reduce the use and disposal of hazardous materials."

Army

Pollution Prevention Programs. Army Regulation (AR) 200-1, "Environmental Protection and Enhancement," February 21, 1997, requires all major commands, installations, National Guard and Reserve commands, and civil works facilities to conduct a pollution prevention opportunity assessment and establish a pollution prevention plan. The objective of a pollution

prevention opportunity assessment is to reduce the volume and toxicity of pollutants. Pollution prevention opportunity assessment assists installations in reaching their specified pollution prevention goals and overall, the Army in meeting the goals established in EO 12856. This requirement stipulates that those plans should contain a systematic approach focusing on the reduction of all adverse environmental impacts. It further requires major commands, installations, National Guard and Reserve commands and civil works facilities to develop specific pollution prevention plans that describe how those pollution prevention programs will be implemented.

Funding. Department of the Army, Assistant Chief of Staff for Installation Management, memorandum, May 23, 1996, "Data to Support Pollution Prevention Funding," states as environmental funding decreases and environmental requirements increase, every dollar must be justified. Pollution prevention projects that reduce future compliance costs and increase efficiency present an excellent environmental funding opportunity. As an incentive to cost-effective pollution prevention, the Vice Chief of Staff encourages major command commanders to allow savings from pollution prevention initiatives to be retained by the generating installation. It further states that to compete for pollution prevention funding at the Army level, installations and major commands need to document the return on investment and waste, release or emission reduction related to each pollution prevention project.

The AR requires Army activities to develop cost-effective approaches to eliminate and reduce contamination to all environmental media by reducing energy uses and conserve natural resources. AR 200-1, February 21, 1997, requires installations to budget and fund pollution prevention projects.

Navy

Pollution Prevention Programs. The Navy pollution prevention program guidance is contained in OPNAV Instruction 5090.1B, "Environmental and Natural Resources Program Manual," November 1994. Navy pollution prevention policy and guidance are also described in Secretary of the Navy Memorandum, December 29, 1994, "Detailed Milestone Plan for Accomplishments of DoD Pollution Prevention Strategy." The milestone plan applies to both the Navy and the Marine Corps and was developed by the Assistant Secretary of the Navy (Installations and Environment).

Funding. Navy guidance for pollution prevention funding is outlined in PR-1999, "Environmental Requirements Cookbook," Chapter 10, Pollution Prevention, July 1996.

Air Force

Pollution Prevention Program. The Air Force pollution prevention program guidance is contained in the Air Force Pollution Prevention Strategy, July 24, 1995. The guidance requires each installation to develop, maintain, and implement pollution prevention plans. The plans require pollution prevention strategy to include baselines, pollution prevention assessments, and investment strategies, based on compliance with Federal regulations and health based risk assessments.

Funding. Air Force guidance for pollution prevention funding is outlined in Air Force Instruction 32-7080, "Pollution Prevention Program," May 12, 1994. This instruction gives the major commands and installations the flexibility to manage their pollution prevention programs. The instruction states integrated pollution prevention management (include procedures, education, training, and funding) at the major command level is vital to successful program execution.

Additional guidance is outlined in Air Force Instruction 65-601, Volume I, "Budget Guidance and Procedures," October 21, 1994. This instruction provides policy guidance to review, approve, manage, or use funds appropriated to the Air Force. The policy requires major commands to fully commit funds by the end of the first fiscal year, and obligate during the first quarter of the fiscal year.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Assistant Secretary of Defense (Public Affairs)
Under Secretary of Defense for Acquisition and Technology
  Deputy Under Secretary of Defense (Environmental Security)
  Director, Defense Logistics Studies Information Exchange

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
Assistant Secretary of the Army (Installations, Logistics, and Environment)
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Assistant Secretary of the Navy (Installation and Environment)
Auditor General, Department of the Navy

Department 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)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget

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

Non-Defense Federal Organizations and Individuals (cont'd)

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on 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

Assistant Deputy Under Secretary of Defense (Environmental Quality) Comments

Final Report Reference

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION AND TECHNOLOGY

August 29, 1997

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL (OAIG-AUD)

SUBJECT: Project No. 6CB-5017: Evaluation Report on the DoD Pollution Prevention Program

Thank you for the opportunity to review and comment on the DoD Office of the Inspector General report: "Evaluation Report on the DoD Pollution Prevention Program." In general, we concur with the report. However, we disagree with the recommendations directed to DUSD(ES) concerning supplemental environmental projects (SEPs). In addition, we believe a sentence in the executive summary needs to be corrected.

Deleted Redirected and Renumbered

The number of fines and penalties assessed against DoD installations has decreased significantly over the last several years. With the exception of the Army, there are very few SEPs being conducted within DoD. In addition, the Navy policy prohibits the use of SEPS. Therefore, we do not believe establishing a central information system to archive approved SEPs is worth the cost. Similarly, publishing procedures for installations to access the details of the SEPs does not add value. Because the Army is conducting the majority of the SEPs, we believe information on SEPs is best maintained by the Army.

Deleted

The Executive Summary states that "...43 of 51 organizations surveyed have not adequately executed those requirements because of a lack of published policies and program oversight resulting in pollution prevention plans not having been published and program deficiencies in funding...." The reference to lack of published policies is directly contradicted by the last sentence of the first paragraph on page 2 of the main report, "The Military Departments have embraced pollution prevention and issued directives, instructions, and regulations that specifically describe program implementation requirements." We recommend striking the phrase "lack of policies and program oversight" from the executive summary sentence excerpted above.

My staff point of contact for this action is Mr. Andrew Porth at (703) 604-1820. Please let us know if you would like to meet with us to discuss our concerns in more detail.

for Curtis Bowling
Acting Assistant Deputy Under Secretary of Defense
(Environmental Quality)

Environmental Security *Defending Our Future*

Department of the Army Comments

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

REPLY TO
ATTENTION OF

DAIM-ED-P2 (200-1i) 29 August 1997

MEMORANDUM THRU ~~DIRECTOR OF THE ARMY STAFF~~ DIRECTOR OF THE ARMY STAFF SEP 02 1997
~~ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS,~~
LOGISTICS AND ENVIRONMENT)

FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE (AUDITING)

SUBJECT: Evaluation Report on the DoD Pollution Prevention Program (Project No. 6CB-5017)

1. The Army has reviewed subject draft report. While there is some disagreement as to facts and findings, as noted in our detailed comments, the Army had already arrived at similar conclusions relative to the DoDIG recommendations. In most cases, action has already been taken to address the issues.

2. Attached Army comments are keyed to each finding and recommendation. Implementation of corrective actions has been or is being integrated in our normal management processes. The Army point of contact is Mr. George Carlisle, (703) 693-0551.

Atch

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

CF:
DUSD(ES)
DAIM-ZR
SFIM-AEC-CO

Final Report Reference

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

Finding A: Pollution Prevention Programs.

1. Audits and Internal Reviews.

a. EO 12856 requires federal agencies to perform pollution prevention program internal audits and reviews and to monitor compliance. DoD guidance does not include a requirement for internal audits and reviews because the Services have strong internal audit and review programs. The Army audit and internal review program is called the Environmental Compliance Assessment System (ECAS). Based on its survey, the DoDIG reported (p. 7):

> "Of the 17 Army organizations surveyed, 8 reported that ECAS audits were conducted. Three of the 17 organizations stated they have conducted self assessments but no formal ECAS audit. The remaining 6 Army organizations stated that they were never audited because they did not have pollution prevention programs, that having an audit program was not applicable to them, or they did not respond to the survey question."

b. The DoDIG report further concludes (p. 8) that while pollution prevention programs are included, "...the compliance audit process does not include procedures for oversight and follow-up of pollution prevention program deficiencies or weaknesses identified by the audit. Pollution prevention audits and self assessment oversight by DoD and the Military Services would identify program weaknesses and ensure that those weaknesses would be corrected."

Army Response.

Revised

a. The DoDIG summary of ECAS assessments for the 21 Army installations identified is incorrect. In preparing this response, the Army obtained a complete listing of these installations and compared this with Army Environmental Center records for the ECAS program, which show that all 21 installations were externally assessed under the ECAS program prior to January 1996.

b. The Army agrees that, at the time of the survey, the compliance audit process relative to pollution prevention was lacking in some areas. Actions completed or underway to address this deficiency are discussed below in response to specific DoDIG recommendations.

2. Funding Support. The DoDIG evaluation report concludes (p. 11) that "The Military Departments have funding strategies, policies, and procedures in place; however, survey information indicates that those individuals responsible for pollution prevention budget requests are not aware of all elements of the process.

Army Response. Concur with the DoDIG conclusion that not all individuals at the installation level are aware of the entire funding process.

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

3. Training and Awareness.

a. The DoDIG evaluation report determined (p. 12) that "...the Army does not have a formal pollution prevention training program.

b. The report also summarizes (p. 13) that "Education, training and awareness of pollution prevention programs is paramount to achieving a successful pollution prevention program....An alternative for addressing needs is establishing policy for continuing training similar to the program recently established by the DoD Acquisition Education, Training and Career Development Office."

Army Response.

a. Concur with the determination that the Army does not have a formal pollution prevention training program. However, Army policy gives Installation commanders responsibility to develop comprehensive and tailored environmental training and awareness programs to meet mission and installation specific requirements. As a minimum, these programs should provide locally-tailored guidance enabling unit commanders, and military and civilian supervisors to program training for soldiers/employees. Department of the Army Pamphlet (DA PAM) 200-1, currently under development, will provide guidance on local development of installation environmental training and awareness plans including training resource information and assistance.

b. Concur with the DoDIG conclusion that education, training and awareness are critical to achieving success.

4. Recommendations. The DoDIG recommended the following corrective actions by the Assistant Secretary of the Army (Installations, Logistics, and Environment) (p. 13):

a. Establish oversight and follow-up policy and procedures for the results of environmental compliance audits and internal reviews of installation pollution prevention programs.

b. Establish policy and procedures for educating installation personnel on identifying, requesting, and executing a business based investment strategy approach for funding pollution prevention projects and programs.

c. Establish pollution prevention education, training, and awareness requirements similar to the program established by the Deputy Under Secretary of Defense for Acquisition and

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

Technology emphasizing 40 hours of continuing pollution prevention education for all personnel having oversight or management responsibilities for an installation pollution prevention program.

Army Response.

a. Changes underway to the ECAS program will adequately address this requirement. In 1996, Army changed the ECAS protocol requiring review for pollution prevention opportunities as part of each assessment. Army is in the process of implementing additional improvements in the standard ECAS compliance audit and review process. Beginning FY98, a senior person with specific pollution prevention skills and training should be added to each ECAS team. This person will review and assess findings from other media-focused ECAS team members to identify additional pollution prevention opportunities, and to perform "root cause" analysis of compliance problems as needed. Detailed project data resulting from this additional analysis and information will be documented in final ECAS report at each installation. Follow-up responsibility will be primarily at the Major Command level. This approach has been tested by Army Materiel Command and Military District of Washington. The Assistant Chief of Staff for Installation Management will provide guidance by 30 Sep 97 directing MACOMs to incorporate these process changes in execution of ECAS assessments.

b. Army Regulation 200-1 contains policy requiring Major Commands to develop command-wide, investment oriented pollution prevention strategies. Reinforcing guidance was provided by the Assistant Chief of Staff for Installation Management in January 1997, and Major Commands are in the process of completing these plans. In addition, the Assistant Chief of Staff for Installation Management also provided installation specific guidance in February 1997 identifying business based approach to pollution prevention planning requiring installations to detail resource needs, implementation schedule, milestones, success criteria, cost-benefits, and barriers to incorporating pollution prevention into all missions. Finally, the Army has initiated a comprehensive approach to develop and provide, by the end of 1998, standard analytical tools that will enable personnel at both the installation and Major Command levels to consistently apply a business based investment approach to pollution prevention programs.

c. The Army has already taken steps addressing pollution prevention training. A broad range of opportunities are already available for Installation Commanders, who have responsibility to ensure all personnel are appropriately trained. In addition, the Interservice Environmental Education Review Board (ISEERB) identifies and recommends implementation of courses meeting environmental training requirements of the Military Services, thereby eliminating unnecessary and redundant service specific environmental training activities. As a result of ISEERB actions, in FY94 the U.S. Air Force agreed to modify two of their courses for use by all DOD Components enabling Army to avoid developing a service specific course for installation pollution prevention managers. Army will review progress of this ISEERB effort.

SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

and if/when required modifications have been completed, provide guidance to the Major Commands reinforcing the need for this type of training.

Finding B: Army Pollution Prevention Plans.

1. Background and Summary of Report.

a. EO 12856 required covered facilities to develop written pollution prevention plans by 31 December 1995. The DoDIG evaluated DoD pollution prevention plans between December 1995 and September 1996 and concluded (p. 15):

"The Army did not meet the EO 12856 requirement to have pollution prevention plans published by the end of 1995. Three Army installations *{note: presumably Fort Bragg, Fort Drum, and White Sands Missile Range}* had draft pollution prevention plans projected for publication in mid-1997. Those pollution prevention plans have not been published because of inadequate guidance and lack of oversight in the plan development process."

b. Specifically, the DoDIG found that 14 of the 21 Army installations contacted and responding had final pollution prevention plans. The DoDIG found that the following 7 of 21 installations *{Major Command also identified}* had only draft pollution prevention plans: Fort Bragg (FORSCOM), Fort Drum (FORSCOM), White Sands Missile Range (AMC), Fort Myer/McNair (MDW), Fort A.P. Hill (MDW), Fort Belvoir (MDW), and Fort Meade (MDW)

Army Response.

a. The DoDIG conclusion that Army failed to meet this EO 12856 requirement is not justified. After conducting an internal Army survey of compliance with this requirement, in May 1996, the Army Environmental Center found Army status at that time as follows:

Major Command	Complete	Draft	Exempt[1]	Unknown	TOTAL
AMC	39	1	7	0	47
FORSCOM	21	1	3	0	25
TRADOC	16	1	2	0	19
HSC	0	2	1	0	3
USARPAC	4	0	0	1[2]	5
USMA	1	0	0	0	1
MDW	0	6	1	0	7
MTMC	2	1	0	0	3
TOTAL	**83**	**12**	**14**	**1[2]**	**110**

[1] Facilities located outside the U.S. customs territory or scheduled to close by 1998 were exempt from the EO requirement.

[2] This facility was later determined to be exempt.

Final Report Reference

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

Revised

b. Army-wide, 83 of 95 installations required to complete plans had completed plans; the remainder had draft plans. While the DoDIG finding that Fort Bragg, White Sands Missile Range, and all responding MDW installations had only draft pollution prevention plans is correct, Fort Drum's plan was counted as complete as received. More important, however, is the fact that when compared to the Army Environmental Center survey, it is clear that the results of the DoDIG questionnaire lack a complete response and are not based on a representative sample of Army installations.

Revised

c. The DoDIG conclusion that incomplete plans were due to "inadequate guidance and lack of oversight" is not correct. The Army Environmental Center disseminated adequate guidance to installations in the form of a Pollution Prevention Opportunity Assessment Protocol (October 1994) and a Model Pollution Prevention Plan (February 1995).

(1) The primary reason that plans were not completed was due to lack of funding, which resulted in large part from the timing of when EO 12856 was initiated versus the constraints of the DoD planning, programming, budgeting and execution process. EO 12856 was signed in the last quarter of Fiscal Year (FY) 1993, well after the FY1994 budget was set, and imposed 1995 deadlines on a relatively complicated and detailed plan preparation process. The Army Environmental Center estimates that the average cost to develop an initial installation pollution prevention plan was $170,000. For the 95 Army installations that were required to develop plans, the total Army requirement resulting from the EO (above and beyond other EO requirements) exceeded $16 million.

(2) Given the lack of time to program funding and the fact that maintaining an installation pollution prevention plan is a dynamic and continuous process, the Army considered that a draft plan met the December 1995 deadline for pollution prevention plan completion. In spite of insufficient funding, overall Army pollution prevention plan development was good. As shown by the table above, most Army Major Commands' installations completed plans by the EO deadline. Only one Major Command, the Military District of Washington, was unable to complete a single plan by the deadline.

2. Recommendations. The DoDIG recommended the following corrective actions by the Assistant Secretary of the Army (Installations, Logistics, and Environment) (p. 16):

a. Survey all installations to determine those which have not yet published a pollution prevention plan.

b. Establish targets dates and administratively provide deadlines to verify that *{installations responding to the DoDIG survey}* as well as any other organizations determined to have no published pollution prevention plan take immediate action to develop and publish a plan.

5

Final Report Reference

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

c. Direct all installations to review their pollution prevention plans and to incorporate the risk and priority assessment process element if it is missing.

Army Response.

a. The Army has adequately implemented all recommendations. As noted above, the Army Environmental Center surveyed Army compliance in developing EO-required pollution prevention plans in May 1996. The Army Environmental Center has also completed a more thorough qualitative assessment of Army installation pollution prevention plans. The Assistant Chief of Staff for Installation Management reported the conclusions of that evaluation to Army Major Commands in a memorandum dated 11 Feb 97, subject: Installation Pollution Prevention Plans. The memorandum provided to Major Commands, for appropriate action, evaluations of their respective installations' pollution prevention plans. This memorandum stated in part:

Deleted

"....Plans considered adequate and complete are those that detail resource needs, implementation schedule, milestones, success criteria, cost-benefits, and barriers to incorporating pollution prevention into all missions....

"...the pollution prevention plan is intended to be a living document reviewed and revised as circumstances change....

"Funding for completion/updating of pollution prevention plans is classified as Class 1 by Environmental Program Requirements policy and guidance."

b. Although the DoDIG report cites as a specific evaluation objective the need to determine whether DoD installation pollution prevention plans *"include a priority or risk based approach for making decisions" {p. 3}*, the report does not cite any policy or guidance for this evaluation criteria. No specific requirement or incentive exists in the Executive Order, the DoD Pollution Prevention Strategy, or subsequent guidance to incorporate risk assessment into installation pollution prevention plans. Neither EO 12856, the 1994 DoD Pollution Prevention Strategy published in compliance with the EO, DODI 4715.4 on Pollution Prevention (June 1996), or the revised Army Regulation 200-1 contain a requirement for risk based decision-making. The reduction goals of Executive Order 12856, the DoD pollution prevention Strategy, and DODI 4715.4 are based on reducing the quantity of pollution generated, disposed of, and released without regard to relative risk. The EO, which focuses on EPCRA toxic chemicals, already incorporates the risk judgments made by the U.S. Environmental Protection Agency in compiling and maintaining the list of EPCRA toxic chemicals.

DAIM-ED-P2
SUBJECT: Response to Draft Report, DoDIG Evaluation of DoD Pollution Prevention Program, (Project No. 6CB-5017)

c. Notwithstanding the lack of basis for the DoDIG's conclusions, the Army has incorporated an appropriately risk based approach to the Pollution Prevention program. This is reflected in current environmental funding guidance ("Policy and Guidance for Identifying US Army Environmental Program Requirements," 15 June 97), which has identified the following pollution prevention projects as high priority for funding:

- Pollution prevention projects that correct non-compliance or meet new standards before compliance deadlines.
- Pollution prevention projects that substitute for compliance-based end-of-pipe or end-of-stack projects and show a payback of less than 5 years.
- Pollution prevention projects with significant and readily identifiable return on investment.
- Pollution prevention projects to reduce reported EPCRA toxic chemical release or treatment, in accordance with the EO 12856 reduction goal. *{Note: While the EO requires all federal facilities to comply with EPCRA, only 30-40 Army installations exceed reporting thresholds and are required to report toxic chemical releases or transfers for treatment--less than half the number developing plans in accordance with the EO requirement.}*
- Review and revision of weapon system documentation as required by EO 12856.
- Acquisition reform requirements.
- Pollution prevention projects required by compliance agreement, etc.
- Pollution prevention assessments and plan development and revision.

Finding C. Supplemental Environmental Programs. Directed to Deputy Under Secretary of Defense (Environmental Security).

7

Evaluation Team Members

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