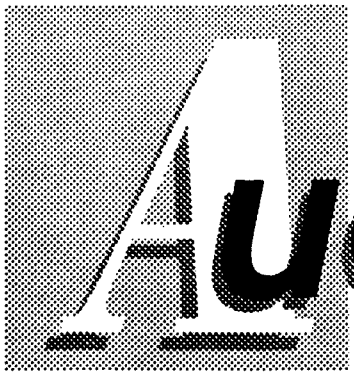

OFFICE OF THE INSPECTOR GENERAL

ENVIRONMENTAL CONSEQUENCE ANALYSES FOR THE JOINT STANDOFF WEAPON PROGRAM

Report No. 93-127 June 25, 1993

Department of Defense

Acronyms

CARD	Cost Analysis Requirements Document
CFC	Chlorofluorocarbon
DAB	Defense Acquisition Board
EMD	Engineering and Manufacturing Development
EA	Environmental Assessment
EIS	Environmental Impact Statement
FONSI	Finding of No Significant Impact
IPS	Integrated Program Summary
JSOW	Joint Standoff Weapon
NEPA	National Environmental Policy Act
OSD	Office of the Secretary of Defense
P^3I	Pre-planned Product Improvement
PEA	Programmatic Environmental Analysis
ROD	Record of Decision

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

June 25, 1993

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND TECHNOLOGY

SUBJECT: Audit Report on the Environmental Consequence Analyses for the Joint Standoff Weapon Program (Report No. 93-127)

We are providing this report for your information and use. This report resulted from our audit of the Effectiveness of DoD Environmental Consequence Analyses of Major Defense Acquisition Programs. Comments on a draft of this report were required by May 24, 1993; however, as of June 17, 1993, comments had not been received. The DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, you must provide final comments on the recommendations by August 25, 1993. See the "Response Requirements for Recommendations" section at the end of the finding for the specific requirements for your comments. The recommendations are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the material internal control weakness highlighted in Part I.

We appreciate the courtesies extended to the audit staff. If you have any questions on this report, please contact Mr. Russell A. Rau, Program Director, at (703) 693-0186 (DSN 223-0186) or Mr. Jack D. Snider, Project Manager, at (703) 693-0402 (DSN 223-0402). Appendix C lists the distribution of this report.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosure

Office of the Inspector General, DoD

Report No. 93-127 June 25, 1993
(Project No. 2AE-0048.02)

ENVIRONMENTAL CONSEQUENCE ANALYSES FOR THE JOINT STANDOFF WEAPON PROGRAM

EXECUTIVE SUMMARY

Introduction. The Navy's Joint Standoff Weapon (JSOW) is an air-to-ground missile designed to attack a variety of targets during day, night, and adverse weather conditions. The JSOW Program is comprised of a Baseline Program and a Pre-planned Product Improvement (P^3I) Program. The baseline weapon is being developed first and will be used against fixed-area targets. The P^3I variant will be used to attack blast/fragment-sensitive and moving-point targets. The Navy plans to use the JSOW on the F/A-18, AV-8B, A-6E, and future A-X attack planes. The plan is for commonality between the JSOW and the Air Force and Navy Joint Direct Attack Munition Programs. The Navy and the Air Force are also working together to integrate submunitions into the JSOW for use on the F-16 and other Air Force aircraft. The JSOW Baseline Program entered its Demonstration and Validation phase on June 29, 1989, and completed it in July 1991. In June 1992, the Engineering and Manufacturing Development (EMD) phase began for the JSOW Baseline Program, for which a Defense Acquisition Board (DAB) Milestone III, Production Approval, decision is scheduled for July 1998. The JSOW P^3I Program is scheduled for a DAB Milestone I, Concept Demonstration Approval, decision in July 1994.

Objectives. The overall audit objective was to evaluate the effectiveness of DoD environmental consequence analyses of major Defense acquisition programs. The audit also assessed compliance with provisions of the National Environmental Policy Act (NEPA) of 1969 and internal controls related to the objectives. This report concerns the objectives as they apply to the JSOW Program, one of nine programs in the audit of the Effectiveness of DoD Environmental Consequence Analyses of Major Defense Acquisition Programs.

Audit Results. The Navy did not assess and prepare required environmental documentation for the environmental consequences, including environmental costs, of the JSOW Program throughout its life cycle. The Navy failed to adequately assess the environmental consequences of the JSOW Baseline Program prior to its entry into EMD, although entry into EMD was approved by the June 1992 DAB Milestone II review. Additionally, the Navy had not initiated a programmatic environmental analysis (PEA) of the JSOW P^3I Program for the upcoming DAB Milestone I review. The Navy did not consider environmental assessment requirements to be applicable to Navy programs. As a result, the Navy is not carrying out its mission in a manner consistent with statutory and regulatory environmental policies and procedures; has not made provisions to fully fund associated environmental costs; and has not afforded the public the opportunity to review environmental documentation associated with the JSOW Program.

Internal Controls. The audit identified a material internal control weakness in that controls were not effective to ensure assessment of the environmental consequences of the JSOW Program. Part I of the report discusses these internal control weaknesses.

Potential Benefits of Audit. Potential monetary benefits are nonmonetary (Appendix A). Implementation of the recommendations will improve the internal management controls relating to the implementation and effectiveness of environmental policies. Implementation will also provide assurance that the JSOW Program will not incur costly delays and additional expenditures resulting from noncompliance with environmental policies.

Summary of Recommendations. We recommended that the Under Secretary of Defense for Acquisition and Technology:

o Conduct a DAB Program Review of the JSOW Baseline Program prior to entry into Low-Rate Initial Production;

o Direct the Navy to conduct and document PEAs and supporting environmental impact statements of the JSOW Baseline Program prior to the recommended DAB Program Review and the JSOW P^3I Program prior to its DAB Milestone I Review;

o Require the Navy to incorporate the results of the PEAs into the Integrated Program Summaries, program office and independent cost estimates, cost and operational effectiveness analyses, affordability assessments, and other DAB documentation required for the DAB reviews; and

o Direct the Navy to publicly release all NEPA documents, including environmental impact statements and associated records of decision, as well as findings of no significant impact, in accordance with DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979; DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991; and DoD Manual 5000.4-M, "Cost Analysis Guidance and Procedures," December 11, 1992.

Management Comments. Comments from the Under Secretary of Defense for Acquisition and Technology on a draft of this report were required by May 24, 1993; however, as of June 17, 1993, comments had not been received. Comments on this final report are required by August 25, 1993.

Table of Contents

The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report. Copies of the report can be obtained from the Secondary Reports Distribution Unit, Audit Planning and Technical Support Directorate, (703) 614-6303 (DSN 224-6303).

Part I - Introduction

Background

This report discusses the Navy's assessment of the environmental consequences of the Joint Standoff Weapon (JSOW) Program.

National Environmental Policy Act. The DoD must ensure, to the maximum extent possible, that it is accomplishing its mission in a manner consistent with national environmental laws and DoD policies. The National Environmental Policy Act (NEPA) of 1969 is the national charter for protection of the environment. It establishes policy, sets goals, provides a means for carrying out the policy, and contains provisions to make sure that Federal Agencies comply. The NEPA requires DoD to integrate the NEPA process with other planning as early as possible to ensure that planning and decisions reflect environmental values, to avoid delays later in the process, and to prevent potential conflicts. The DoD shall review its policies, procedures, and regulations and revise them as necessary to ensure full compliance with the purposes and provisions of the NEPA. The NEPA created the Council on Environmental Quality. The Council's authority is derived from the Environmental Quality Improvement Act of 1970 and Executive Order 11514, "Protection and Enhancement of Environmental Quality," March 5, 1970. The Council reviews and evaluates the programs and activities of the Federal Government to determine how they are contributing to the attainment of the national environmental policy, develops and recommends to the President policies to improve the environmental quality of the Nation, and issues environmental policies and procedures. The DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979, implements the Council on Environmental Quality regulations and provides policy and procedures for DoD officials to consider environmental consequences before approving major DoD actions.

Joint Standoff Weapon. The Navy's JSOW is a guided missile designed to be a multi-purpose, air-to-surface standoff weapon system. It will be used during day, night, and adverse weather conditions to attack air defense systems, exposed aircraft, parked vehicles, airfields, and industrial and port facilities, including moored ships. The JSOW Program is comprised of a Baseline Program and a Pre-planned Product Improvement (P^3I)[1] Program. The baseline weapon is being developed first and will be used against fixed-area targets. The P^3I variant will be used to attack blast/fragment-sensitive and moving-point targets. The Navy plans to use the JSOW on the F/A-18, AV-8B, A-6E, and future A-X attack planes. The Navy and the Air Force are planning commonality between the JSOW and the Air Force and Navy Joint Direct

[1] P^3I defers selected capabilities so that the baseline system can be fielded while the deferred element is developed in a parallel or subsequent effort.

Attack Munition Programs. They are integrating submunitions into the JSOW for use on the F-16 and other Air Force aircraft. As of August 1992, the Program Acquisition Cost (in then-year dollars) for the JSOW Baseline Program was about $2.97 billion for 8,800 missiles. Estimates for the JSOW P^3I Program were not included in the JSOW Program documentation.

The JSOW Baseline Program entered its Demonstration and Validation phase on June 29, 1989, and completed it in July 1991. In June 1992, the Engineering and Manufacturing Development (EMD) phase for the JSOW Baseline Program began and the name of the program changed from Advanced Interdiction Weapon System to Joint Standoff Weapon. On June 26, 1992, the Navy awarded a cost-plus-incentive-fee contract to Texas Instruments for EMD. The contract target and ceiling prices were $202.7 million and $215.6 million, respectively. Critical Design Review and Low-Rate Initial Production of the JSOW Baseline Program are scheduled for December 1994 and September 1996, respectively. The Baseline Program is not scheduled to have a Defense Acquisition Board (DAB) program review prior to Low-Rate Initial Production. Production Approval of the JSOW Baseline Program is scheduled for July 1998. A DAB Milestone I, Concept Demonstration Approval, decision concerning the JSOW P^3I Program is scheduled for July 1994.

Objectives

The overall audit objective was to evaluate the effectiveness of DoD environmental consequence analyses of major Defense acquisition programs. The audit also assessed compliance with provisions of the NEPA of 1969 and internal controls related to the objectives. During the audit survey, we determined that, in June 1992, the JSOW Program entered its EMD phase; however, the Navy had not evaluated the environmental impact of the Program as required by DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979, and DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991. Therefore, the JSOW Program's compliance with environmental policies is even more critical. We are reporting this issue separately because action is needed on the identified issue before the conclusion of our overall audit work.

Scope

We conducted this program audit of the JSOW Program (the Program) from July 1992 through February 1993 and reviewed records dated from 1989 through 1992 relative to the Program. We also discussed the issues related to environmental policy and acquisition strategy with Government personnel involved in the acquisition of the Program. The audit was made in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, and accordingly included such tests of internal controls as were deemed necessary. Appendix B lists the activities visited or contacted.

Internal Controls

The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. The management oversight and program controls were not effective to ensure an adequate assessment of the environmental consequences associated with the JSOW Program. On May 4, 1993, the Navy provided us with a position paper stating its view that NEPA is not customarily applicable to procurement of weapon systems because the programs are continuously undergoing change. Therefore, the Navy does not consider milestone decisions in the acquisition process to be "final agency actions." We disagree with the Navy and intend to address the Navy position in our summary report. The recommendations in this report and our summary report on the overall audit, if fully implemented, will correct this situation. Copies of the final report will be provided to the senior officials responsible for internal controls within the Office of the Secretary of Defense (OSD) and the Navy.

Prior Audits and Other Reviews

Since 1987, the General Accounting Office has issued one report that included the JSOW Program. However, we did not follow up on the prior audit report because it did not contain any findings or recommendations related to our objective.

Part II - Finding and Recommendations

Environmental Analysis

The Navy did not assess the environmental consequences, including environmental costs, of the JSOW Program throughout the Program's life cycle and prepare required environmental documentation. The Navy did not adequately assess the environmental consequences of the JSOW Baseline Program prior to entry into EMD, approved by the June 1992 DAB Milestone II Review. In addition, the Navy did not initiate a programmatic environmental analysis (PEA) of the JSOW P^3I Program for the upcoming DAB Milestone I review. This failure to consider the Program's environmental impact occurred because of the Navy's inadequate attention to the environmental aspects of the Program and lack of familiarity with environmental laws and DoD environmental policies. As a result, the JSOW Program Office is not carrying out its mission in a manner consistent with statutory and regulatory environmental policies and procedures, has not made provisions to fully fund associated environmental costs, and has not afforded the public the opportunity to review environmental documentation associated with the JSOW Program. Additionally, the Program could be subjected to costly delays in development, manufacturing, fielding, and disposal as a result of noncompliance with environmental laws.

Background

DoD Directive 6050.1. DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979, implements the Council on Environmental Quality regulations and provides policy and procedures for DoD officials to consider environmental consequences before authorizing or approving major DoD actions. Enclosure 1 to the Directive discusses planning considerations, environmental assessments (EAs), preimplementation actions, and public involvement.

Planning Considerations. DoD Directive 6050.1 requires DoD Components to integrate the NEPA into the initial planning stages of proposed DoD actions to ensure that environmental impacts are properly addressed and to avoid unnecessary costs or delays later in the acquisition, fielding, and disposal process. In the planning process, DoD Components will determine, as early as possible, whether to prepare environmental impact statements (EISs) based on the overall PEA, required by DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991, part 6, section I, or to prepare individual EAs in support of the PEA. An EIS provides full disclosure of significant environmental implications of the assessed program, informs decisionmakers and the public of the alternatives considered and

mitigating environmental measures being implemented on the selected alternative, and serves to ensure that the policies and goals defined in the NEPA are incorporated into the assessed program and the decisionmaking process.

Environmental Assessment. The DoD Component uses an EA to determine whether the preparation of an EIS or a finding of no significant impact (FONSI) is required, to comply with the NEPA when an EIS is not necessary, and to facilitate the preparation of an EIS when one is required. The Component should prepare an EA as early as possible after the requirement is identified. Based on an EA, if a Component determines that an EIS is not required, the Component shall prepare a FONSI. If the Component determines that a categorical exclusion exists, neither type of impact statement or finding is required.

Preimplementation Actions. The DoD Components shall ensure that the NEPA is integrated into the acquisition decisionmaking process and that the NEPA requirements coincide with all major program decision points. Relevant environmental documents, comments, and responses should accompany a proposal through DoD Component reviews to ensure consideration by decisionmakers.

Public Involvement. Public involvement is required by law. The NEPA specifically states that the public shall participate, to the amount practicable, in the environmental review process. Environmental documents must be made available to the public to assure that all interested parties have the opportunity to be informed of and comment on proposed actions before decisions are reached. DoD Directive 6050.1 requires the DoD Components to involve environmental agencies, applicants, and the public, to the extent practicable, in preparing EAs. If, as the result of an EA, a FONSI is prepared, the FONSI must be made available to the affected public. When the Component decides to prepare an EIS, it is required to publish a notice of intent in the Federal Register. The notice of intent describes the proposed action and possible alternatives, including the proposed range of actions, alternatives, and impacts to be considered in the EIS. The notice of intent also provides the name and address of a Component's point of contact. Information or status reports on EISs and other elements of the NEPA process will be provided to interested persons upon request. For each EIS, a record of decision (ROD) is required. The ROD is a concise public document that provides a record of the Government decision concerning an EIS; identifies the alternatives considered in making the decision; specifies the environmentally preferable alternatives; indicates other factors that were considered in the decisionmaking process; and states whether all practicable means were taken to avoid or minimize environmental harm and if not, why not.

DoD Instruction 5000.2. DoD Instruction 5000.2 states that DoD will design, develop, test, field, and dispose of Defense systems in compliance with applicable environmental protection laws and regulations, treaties, and agreements. Environmental analysis and planning will begin as early as

possible in the acquisition process and will examine the entire life cycle of the program. During the Concept Exploration and Definition phase, the potential environmental effects of each alternative will be assessed. DoD Directive 5000.2 requires potential environmental efforts noted in this initial environmental analysis to be integrated into the assessment of each alternative; however, DoD Instruction 5000.2 is silent on how this is to be accomplished. Since no guidance is provided on how environmental effects are to be assessed during Concept Exploration and Definition, we consider the requirements of the PEA applicable, even though DoD Instruction 5000.2 states that a PEA will begin immediately *after* the Concept Demonstration Approval milestone. We intend to address this inconsistency in policy guidance in our summary report.

The PEA contains a description of the program; alternatives to be studied; potential environmental impacts of each alternative throughout the system's life cycle; potential mitigation of adverse impacts; and the effect of environmental impacts and proposed mitigation on schedule, siting alternatives, and program cost. The PEA will be coordinated and integrated with other program plans and analyses, and it will be done regardless of the classification of the program. After each succeeding milestone decision point, the PEA will be updated as necessary. The update, called a tier, focuses on the issues for a particular decision point. The PEA should be the summarization, at the overall program level, of all EAs, EISs, and FONSIs performed on individual program segments; results in either a EIS or a FONSI for the entire program; and will be summarized in the Integrated Program Summary (IPS), Annex E. The summary will include alternatives considered, potential environmental effects, rationale for concept or design alternative chosen, mitigation measures, and conclusions. The Annex will discuss how environmental impacts and proposed mitigation measures would affect schedules, siting alternatives, and program life-cycle costs.

We consider it highly likely that at least one aspect of a major Defense acquisition program will need an EIS; therefore, we would not expect a FONSI to address the entire program. For those aspects of the program resulting in an EIS, a ROD is required. We consider a ROD necessary at the overall program level if the PEA results in the production of an EIS. Conversely, if a FONSI results, the FONSI would be the public record of the Government position at the overall program level.

DoD Manual 5000.4-M. DoD Manual 5000.4-M, "Cost Analysis Guidance and Procedures," December 11, 1992, provides guidance on the preparation of the Cost Analysis Requirements Document (CARD). The CARD is prepared by the program office and approved by the DoD Component's Program Executive Officer. The CARD is provided to the teams preparing the program office estimate and DoD Component cost analysis estimates in support of acquisition milestone reviews and is included as a separate section of the documentation for those estimates.

The CARD is divided into a number of sections, each focusing on a particular aspect of the program. One of the sections addresses the environmental conditions expected to be encountered during development, production, transportation, storage, and operation of the subsystems of the Program. The environmental conditions section also identifies any hazardous, toxic, or radiological materials that may be encountered or generated during the subsystem's development, manufacture, transportation, storage, operation, and disposal. The quantities of each hazardous material used or generated over the lifetime of the subsystem should also be estimated. The section will describe the evaluation methodology for environmentally acceptable alternatives, as well as the rationale for selection of alternatives, and will include the alternatives considered and reasons for rejection.

Assessing Environmental Consequences

The JSOW Program Office did not prepare and process a PEA or an EIS to assess the environmental consequences of the JSOW Baseline Program or support the environmental analysis provided to OSD decisionmakers in the IPS, Annex E, used at the June 1992 DAB Milestone II Review. Furthermore, the environmental analysis did not address how environmental impacts and proposed mitigation measures would affect schedules, siting alternatives, and program life-cycle costs.

Defense Acquisition Board Review. On June 8, 1992, the DAB conducted a Milestone II Review of the JSOW Baseline Program and approved its entry into EMD. Documentation provided to the Board for the review included the IPS, Annex E, "Environmental Analysis." The Annex indicated that the development and production of the JSOW Baseline Program during EMD, as well as Production and Deployment, may include the use of hazardous materials, including submunitions, at contractor facilities. Such use could result in environmental pollution. The environmental pollution could include air emissions, waste water, and solid and hazardous wastes. Also, testing of the Program may use hazardous material that may impact flora and fauna at ranges. This environmental analysis presented to the DAB was not supported by a PEA or an EIS. In fact, the analysis was merely supported by the subjective perceptions of the JSOW Program Office rather than by any formal environmental analysis. Consequently, the decisionmakers did not have adequate information to ensure that their decisions addressed environmental concerns and costs or prevented unnecessary environmental impacts. Additionally, no public disclosure of the decision was made in the form of either a FONSI or a ROD.

Environmental Analysis. The environmental analysis contained in the IPS, Annex E, addressed operational alternatives but did not include the environmental impacts of these alternatives throughout the system's life cycle.

The analysis also addressed potential environmental effects of manufacturing, testing, maintenance, logistic support, air quality, noise, and water quality; rationale for alternatives chosen; and mitigation measures. However, those areas of the analysis did not address how environmental impacts and proposed mitigation measures would affect schedules, siting alternatives, and program life-cycle costs. Annex E did indicate that continuing environmental analysis of the JSOW Program's life-cycle impact on the environment would be included in contractual documents. However, the contract only requires the contractor to comply with the Clean Air and Water Acts, identify hazardous materials to be delivered under the contract, prepare a Material Safety Data Sheet for each item of hazardous material identified, and comply with the requirements of the "DoD Contractor's Manual for Ammunition and Explosives." No contractual requirement presently exists to conduct environmental analyses of the life-cycle environmental impact of the JSOW.

Cause for Not Conducting an Environmental Assessment

The failure of JSOW program management to prepare and process a PEA or an EIS occurred because of inadequate emphasis, lack of familiarity with environmental laws and DoD environmental policies, and inaccurate information from environmental officials.

Environmental Emphasis. The JSOW Program Office's attention to environmental aspects of the Program was not adequate. The Program Office decided not to fully comply with the current DoD Instruction 5000.2 because the Office had begun to accumulate program documentation prior to the issuance of the Instruction. The environmental section of the IPS, Annex E, received less consideration because the Program Office considered other areas of the IPS to be more important. The environmental analysis in Annex E was created by consultations with various members of the Navy and OSD communities. A PEA was not conducted because the Program Office did not want to spend what the Navy estimated to be $200,000 to $250,000 for preparation of the document. The Program Office indicated that it did not plan to do any further environmental work unless a problem came to its attention and that it considered the Annex E environmental analysis to be sufficient, even though the analysis indicated a potential for environmental pollution in development, production, testing, and maintenance. The Program Office indicated that the JSOW contract contains the "standard" environmental provisions, such as compliance with the Clean Air and Water Acts; however, the contract does not address such matters as the responsibility for environmental cleanup of the manufacturing site for the 8,800 missiles in the JSOW Baseline Program. In addition, the Navy has not estimated the cost for such cleanup either independently or as a part of life-cycle costs.

The IPS, Annex E, for the JSOW Baseline Program that was presented to the DAB was reviewed by the former Office of the Deputy Assistant Secretary of Defense (Environment) (the former Deputy Assistant Secretary)[2] and the Office of the Assistant Secretary of the Navy (Installations and Environment). In a February 11, 1992, memorandum to the Director, Air Warfare, Office of the Deputy Director, Defense Research and Engineering, Tactical Warfare Programs, the Deputy Assistant Secretary's Office indicated that it had two major concerns with Annex E. One concern was the use of chlorofluorocarbons (CFCs), and the other was the Navy's brevity in its analysis of environmental permits. A copy of this memorandum was part of the documentation presented to the DAB at the time of the Milestone II Review.

Chlorofluorocarbons. CFCs are used in the development of the JSOW Program for cleaning applications involving electronics and precision manufacturing. The Deputy Assistant Secretary's Office proposed the use of alternative technologies, instead of CFCs, during the design phase and the development of specifications for system production.

Environmental Permits. Environmental permits are for varying durations, depending on location, and may even be issued on an annual basis. As a result of the Clean Air Act Amendments of 1990, which required the establishment of standards for 189 toxic air pollutants, new permit requirements could evolve, forcing curtailment or relocation of industrial operations. The Deputy Assistant Secretary's Office proposed that the manufacturing section of the analysis address the ability of selected industries to meet standards currently proposed and the impact of these standards on future production capability.

If not acted upon, environmental concerns such as those of the former Deputy Assistant Secretary's Office, could restrict or delay production of the JSOW Program. The Deputy Assistant Secretary's Office verbally addressed its concerns to the JSOW Program Office. The Program Office responded by providing a copy of a letter written by the Assistant Secretary of the Navy (Installations and Environment), dated February 11, 1992, indicating that the Assistant Secretary had no objection to the Annex E presentation; thus, the Deputy Assistant Secretary's concerns were *not* addressed by the Navy.

The concerns of the Deputy Assistant Secretary were also addressed to the prime contractor and its subcontractors. The prime contractor responded by providing general information concerning prime and subcontractor use of CFCs in the manufacturing of the JSOW and compliance with the Clean Air Act. Even though the Deputy Assistant Secretary's Office was concerned about the adequacy of the Annex E document, that office did not address the lack of a PEA or an EIS for the Program.

[2] In May 1993, the Office of the Under Secretary of Defense for Acquisition and Technology underwent a reorganization. As a result, the Deputy Assistant Secretary of Defense (Environment) position was elevated and renamed the Deputy Under Secretary of Defense for Environmental Security, reporting directly to the Under Secretary.

Environmental Laws, Policies, and Information. The Naval Air Systems Command (the Systems Command) determines whether any environmental documents, such as a PEA, EA, EIS, FONSI, or ROD, need to be generated. In the case of the JSOW Program, the Systems Command determined that Annex E was sufficient and did not require the Program Office to prepare other required documents. Ultimately, the Systems Command gave the Program Office approval to proceed with the Program because it considered the environmental risk to be manageable.

We asked officials of the Systems Command whether the use of ozone depleters and hazardous materials warranted the preparation of an EA to address the impact on the environment. The Systems Command officials indicated that ozone depleters and hazardous materials do not justify preparing an EA. We believe that this interpretation of environmental procedures by the Systems Command could place programs at risk of noncompliance with NEPA and other environmental requirements. We expressed this opinion to the Systems Command, which indicated that that Command would address the problem if such a problem arose and that it was the contractor's responsibility to comply with the environmental laws. We believe that compliance with environmental statutes and regulations is the responsibility of the Government, as well as the contractor.

The JSOW Program Office indicated that it was not able to find guidance to implement the requirements of DoD Instruction 5000.2 for completing an EA. Further, the Office was not familiar with the NEPA or its DoD implementing directive, DoD Directive 6050.1.

Effect of Not Considering the Environment

The Navy's failure to assess environmental consequences of the JSOW Program does not comply with Federal and DoD regulations and makes it impossible for the Program Office to be assured that it is carrying out its mission in a manner consistent with national environmental policies. In addition, the Program could experience significant additional cost expenditures, such as fines and program delays, for noncompliance with environmental laws in the acquisition and logistics support phases and for not properly cleaning up and disposing of resulting hazardous materials. By not ensuring that the NEPA is integrated into the acquisition decisionmaking process, OSD and the Navy are making major program decisions without due consideration of the consequences to the environment. Furthermore, decisionmakers are not able to make informed program decisions because of the lack of environmental documentation associated with the JSOW Program.

Conclusion

The Navy should initiate a PEA, and associated EISs, of the JSOW Baseline Program to be completed prior to Critical Design Review in December 1994. The Navy should also have a DAB Program Review of the Program prior to entry of the JSOW Baseline Program into Low-Rate Initial Production in FY 1996. The PEA, including related assessments, as well as environmental documentation, should have been completed prior to the DAB Milestone II Review in June 1992. Additionally, the Navy should initiate a PEA in support of the DAB Milestone I Review of the JSOW P^3I Program in July 1994.

Environmental Assessment of the Program. As of March 1993, the JSOW Baseline Program has completed 8 months of its 73-month EMD phase. We believe that, before the JSOW Baseline Program progresses too far into EMD, and before the DAB Milestone I Review, Concept Demonstration Approval, of the JSOW P^3I Program in July 1994, the JSOW Program Office must conduct required PEAs and EISs, as appropriate, of the JSOW Baseline and P^3I Programs. The PEAs and EISs would ensure that the environmental impact of the Programs could be properly considered by DoD decisionmakers and ensure that the Program is in compliance with environmental laws and policies. In particular, we are concerned that the costs associated with environmental compliance will not be adequately considered in the design and development processes and in the life-cycle cost estimates prior to the Production and Deployment phase, when it is essentially too late to properly address environmental matters.

Program Review. The approved Acquisition Strategy Report for the JSOW Program does not require a DAB Program Review prior to entry into Low-Rate Initial Production for the JSOW Baseline Program in September 1996. We consider a DAB Program Review essential prior to approving the start of production for the Baseline Program. The effect of the low-rate production decision is a significant additional commitment to the JSOW Baseline Program that should only occur after DAB-level consideration of the overall status of the Program, including the results of the Critical Design Review scheduled for December 1994. Establishing a DAB Program Review requirement as a prerequisite to JSOW Baseline Program production would provide a number of significant programmatic benefits, including facilitating resolution and decision on environmental matters and ensuring that all exit criteria for entry into Low-Rate Initial Production have been satisfactorily met. These criteria would include, for example, production readiness reviews, operational assessments, and developmental test and evaluation reports.

For both the DAB Milestone I Review of the P^3I variant and the recommended DAB Program Review, the JSOW Program Office should complete essential DAB documentation, including an IPS, Annex E, Environmental Analysis. In

addition, the Navy should formally respond to any environmental concerns cited by the Office of the Deputy Under Secretary of Defense for Environmental Security to ensure compliance with environmental laws and policies.

The procedures outlined in our recommendations for the JSOW Baseline Program are based on the previous inadequate environmental documentation and the previous failure to perform required environmental assessments. This course of action should not be considered acceptable for other programs, as we consider much earlier environmental planning an essential consideration in a development program, with both PEAs and EISs completed prior to EMD and updated as the program progresses in the acquisition cycle.

In addition, the prime contractor should be involved with the JSOW Program Office in preparing the PEAs and EISs of the JSOW Program, in order to ensure thorough and complete analyses and associated documentation, including assessments of developmental and production processes and cost impacts.

Recommendations, Management Comments, and Audit Response

We recommend that the Under Secretary of Defense for Acquisition and Technology:

1. Conduct a Defense Acquisition Board Program Review of the Joint Standoff Weapon Baseline Program prior to entry into Low-Rate Initial Production.

2. Direct the Navy to conduct and document programmatic environmental analyses and supporting environmental impact statements of the Joint Standoff Weapon Baseline Program prior to the recommended Defense Acquisition Board Program Review and the Joint Standoff Weapon Pre-planned Product Improvement Program prior to its Milestone I Review, in accordance with DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979, and DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991.

3. Require the Navy to incorporate the results of the programmatic environmental analyses into the Integrated Program Summaries, program office and independent cost estimates, cost and operational effectiveness analyses, affordability assessments, and other Defense Acquisition Board documentation required for review at the Defense Acquisition Board Milestone I Review of the Joint Standoff Weapon Pre-planned Product Improvement Program and the recommended Defense Acquisition Board

Program Review of the Joint Standoff Weapon Baseline Program. This requirement is in accordance with DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979; DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991; and DoD Manual 5000.4-M, "Cost Analysis Guidance and Procedures," December 11, 1992.

4. Direct the Navy to publicly release all National Environmental Policy Act documents, including environmental impact statements and associated records of decision and findings of no significant impact, in accordance with DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979.

Management Comments. As of June 17, 1993, we had not received comments from the Under Secretary of Defense for Acquisition and Technology (the Under Secretary) to a draft of this report issued March 24, 1993. The comments were required by May 24, 1993.

Audit Response. The DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request that the Under Secretary provide comments on the final report. See the "Response Requirements for Recommendations" section below for the recommendations you must comment on and the specific requirements for your comments.

Response Requirements for Recommendations

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.-4.	Under Secretary of Defense for Acquisition and Technology	X	X	X	IC

* IC equals material internal control weakness.

Part III - Additional Information

Appendix A. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
1. - 4.	Internal control. Will improve program oversight and compliance with environmental policies.	Nonmonetary.

Appendix B. Activities Visited or Contacted

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology, Washington, DC
  Assistant Secretary of Defense (Production and Logistics), Washington, DC
  Director, Acquisition Program Integration, Washington, DC
  Deputy Under Secretary of Defense for Environmental Security, Arlington, VA
Comptroller of the Department of Defense, Washington, DC

Department of the Navy

Assistant Secretary of the Navy (Installations and Environment), Arlington, VA
Assistant Secretary of the Navy (Research, Development and Acquisition), Washington, DC
Naval Air Systems Command, Arlington, VA
  Joint Standoff Weapon Program Office, Arlington, VA

Defense Agencies

Defense Contract Audit Agency, Dallas, TX
Defense Plant Representative Office, Texas Instruments Incorporated, Lewisville, TX

Non-DoD Activities

U.S. Environmental Protection Agency, Washington, DC
  U.S. Environmental Protection Agency, Region VI, Dallas, TX

Contractor

Texas Instruments Incorporated, Defense Systems and Electronics Group, Lewisville, TX

Appendix C. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Assistant Secretary of Defense (Production and Logistics)
  Director, Acquisition Program Integration
  Director, Tactical Systems
  Deputy Under Secretary of Defense for Environmental Security
Assistant Secretary of Defense (Program Analysis and Evaluation)
Assistant Secretary of Defense (Public Affairs)
Comptroller of the Department of Defense

Department of the Navy

Secretary of the Navy
Assistant Secretary of the Navy (Financial Management)
Assistant Secretary of the Navy (Installations and Environment)
Assistant Secretary of the Navy (Research, Development and Acquisition)
Comptroller of the Navy
Naval Air Systems Command
  Joint Standoff Weapon Program Office
Headquarters, Naval Audit Service

Department of the Air Force

Secretary of the Air Force
Air Force Audit Agency

Defense Agencies

Director, Defense Contract Audit Agency
Director, Defense Intelligence Agency
Director, Defense Logistics Agency
  Commander, Defense Contract Management Command
    Defense Plant Representative Office, Texas Instruments Incorporated
Director, Defense Logistics Studies Information Exchange
Inspector General, National Security Agency

Non-DoD Organizations

Office of Management and Budget
U.S. Environmental Protection Agency
U.S. General Accounting Office, National Security and International Affairs Division, Technical Information Center

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

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security, Committee on Government Operations

Audit Team Members

Donald E. Reed	Director, Acquisition Management Directorate
Russell A. Rau	Program Director, Systems Acquisition Division
Jack D. Snider	Project Manager
Cordelia Grace-Scott	Team Leader
Eric L. Lewis	Auditor
Scott A. Marx	Auditor